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LOYOLA UNIVERSITY CHICAGO

CHANGING MEDICAL EDUCATION:
EARLY EFFORTS TO INTEGRATE WOMEN'S HEALTH
INTO EDUCATION AND TRAINING

A DISSERTATION SUBMITTED TO

THE FACULTY OF THE GRADUATE SCHOOL

IN CANDIDACY FOR THE DEGREE OF

DOCTOR OF PHILOSOPHY

PROGRAM IN SOCIOLOGY

BY

MARY KATHERINE ROJEK

CHICAGO, ILLINOIS

AUGUST 2016

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ACKNOWLEDGMENTS

I am very grateful to my respondents for generously allowing me into their lives and giving me their time so that I might better understand the field of women's health medical education. I admire them for their longstanding commitment to improving women's health and for enduring many challenges as they addressed problems within medical education. At the time I conducted my interviews, there was much I did not know about the field. My respondents were patient, kind, and supportive. I enjoyed the time I had with my respondents. Even though many years have passed since I completed the initial interviews, I can still hear some of their voices.

As the field of women's health has evolved into the field of sex and gender based medicine, I have worked with many remarkable women on sex and gender curricular projects. These women continue their efforts to change medical education in order to improve women's health. My friends and colleagues in this community have been encouraging, including Dr. Jan Werbinski, Dr. Alyson McGregor, and the board members of the Sex and Gender Women's Health Collaborative. I was always encouraged when Jan would tell me how much she valued my ideas as a sociologist. As a result of my work in this new field, I have had an opportunity to work closely with two additional remarkable women on

various projects. Dr. Eliza Chin has been a joy to work with. Dr. Marjorie Jenkins has been an inspiration, a colleague, and a mentor.

I am also grateful to my dissertation committee. They were patient with me as I went through many life transitions while I was completing my dissertation. My dissertation chair, Dr. Judith Wittner, made me a better qualitative researcher as she reminded me to keep focusing on what people were actually doing. Dr. Anne Figert made me a better scholar because of her insightful observations. Dr. Christine George has been a friend and a mentor throughout this process. Her creative thinking enriched this work. Her encouragement helped me to get through many challenging times. My committee improved this work in many ways. Any remaining errors are my own.

I have had two additional mentors over the years. Dr. Alice Dan was my first mentor in the field of women's health when I joined her at the UIC Center for Research on Women in Gender. We first met when I had an idea about developing a series of multidisciplinary women's health education programs for physicians. She trusted me to develop the programs, and that became the start of my professional work in the field. Alice continues to be a dear friend. Dr. Bernhardt Lieberman is no longer with us, but he was always supportive of my work as I was learning to become a sociologist.

In addition to my work in the field of women's health, I've also been involved with community based participatory research projects at Loyola University Chicago's Center for Urban Research and Learning (CURL). I've

had an opportunity to develop my research skills with the assistance of Dr. Christine George and to learn about health professions curricular evaluation, both of which were helpful in my work on the current project. CURL is a unique research center that is amazingly collaborative. It is an environment that values everyone's contribution. Their support and encouragement over the years made it possible for me to complete this project. Working there has been a blessing.

A dissertation can never be completed without the support of friends with whom one can commiserate, who provide advice, and who are there to cheer one on when things become challenging. The friends who have helped me through the dissertation process are Jennifer Cossyleon, Melissa Gesbeck, Kimberlee Guenther, Julie Hilvers, Teresa Neumann, Suzanne Poirier, Chez Rumpf, Rona Spear, and Gina Spitz. Many thanks for all you've done for me and for believing in me. I also appreciate the support of family members, in particular, Donna Rojek and John Rojek. It helped just knowing you were there for me.

Finally, I wanted to acknowledge two women who have inspired me. Dr. Lila Wallis is known as the grandmother of women's health. She founded the field. Although small in stature, she has been a powerhouse in moving the field forward. I like to think of her as my fellow countrywoman and an example of what is possible. My dear friend Arlene Kolmel is no longer with us, but she inspired me with her courage and perseverance as she fought a difficult battle with cancer. She refused to give up even when obstacles continued to come her way,

and she reminded me that I should keep going. She was my cheerleader when I needed one.

PREFACE

In the early 1990s, I became aware that some physicians were not providing good medical care to women because they could not recognize the signs of a serious health problem in women, e.g. a heart attack. A popular television show enlisted male and female actors to go to emergency rooms and claim to be having heart attack symptoms. Although the actors claimed to be having the same symptoms, physicians diagnosed the men as having a heart attack, while the women were sent home for experiencing emotional distress. This difference in approach is due to physicians' perceptions that men are more likely to be at risk for cardiovascular disease than women (Mosca et al. 2005). We have since learned that while some women will have the same symptoms of heart attacks as men, they often experience different and more subtle symptoms (McSweeney et al. 2003). I reasoned that if physicians were unable to identify the problem correctly in women when it looked the same as it did in men, when it was as dramatic as chest pain, and when it was a major cause of mortality in women, then it would be even more difficult for them to correctly identify a problem in less obvious cases. Even though cardiovascular disease was the primary cause of mortality and morbidity in women, physicians frequently did not recognize the problem because they assumed that cardiovascular disease was a problem for men and they attributed emotional causes to women's physical

symptoms,, whom they perceived to be the emotional sex (Laurence and Weinhouse 1994). About twenty years later in April 2014, a woman in Toronto, Canada was experiencing numbness on one side of her body, a frozen face and slurred speech. She thought she might be having a stroke so she went to the emergency room. By the time she arrived, her symptoms had resolved. After some testing, her physicians concluded that she was experiencing stress, recommended that she do breathing exercises for her stress, and sent her home. She had another episode in the hospital parking lot after leaving the emergency room. Two days later, she had the same experience as she was driving, so she pulled her car to the side of the road and recorded her experience on her telephone (University Health Network 2014).[1] In the recording, she attempted to perform some aspects of the neurological examination she'd had in the emergency room such as smiling, touching her nose, lifting her arm, in addition to the breathing exercises her doctors had recommended. She went to an emergency room at another hospital and showed the physicians the video. She was diagnosed as having a stroke known as a transient ischemic attack and was treated. Such strokes can be a precursor to a larger stroke.

These examples show that physicians have had difficulty in recognizing serious health problems in women, often made attributions about emotional causes, and that this problem in women's medical care is longstanding. Physical

[1] The woman who experienced the stroke, Stacey Yepes, has a video of the event on YouTube and on other media.

illnesses in women have historically been attributed to emotional causes (Chesler [1972] 2005; Laurence and Weinhouse 1994).

The problems in clinical care for women and incorrect diagnoses are related to deficiencies in medical education about women's health. A national study of U.S. medical school curricula found that health issues which were more likely to be experienced by women were often not taught in medical schools, and that it was possible to graduate from some medical schools without learning about the primary causes of mortality and morbidity in women (USDHHS 1997). There have been national calls for the inclusion of women's health into medical education (USDHHS, PHS and HRSA 1995). The Institute of Medicine, a national non-profit governmental organization under the National Academy of Sciences, has issued reports noting there were many sex and gender based differences in disease which needed to be researched (Mastroianni, Faden, and Federman 1994; IOM 2010).

In 1998, I began working in the field of medical education and later in related health professions education, much of it focusing on developing women's health programs and curricula. I gained a great deal of knowledge about medical education as I developed continuing medical educational programs, multidisciplinary educational methodologies, case and problem based learning materials for physicians, curricular materials for use in a medical school, and I participated in both national and local women's health education initiatives. Many of these activities were under the auspices of a federally designated National Center of Excellence in Women's Health. The goal of these centers was

to improve women's health in a number of areas that included curriculum, community outreach, public education, research, clinical care, and to advance women in academic medicine.

In my employment, I worked with many supportive medical school faculty members who were committed to improving education about women's health. But I also experienced some resistance from faculty, especially among those in leadership positions who did not understand why I and others were suggesting that women's health should be integrated into educational programs. At the 20004 national meeting of the Society of General Internal Medicine, issues of race were identified as a priority area for inclusion in medical education, but my suggestion to also include women's health was dismissed. Afterwards, other faculty members at the meeting informed me that they had been trying unsuccessfully to get women's health on the agenda for some time.

In my early years of working in women's health medical education, I learned that individual women's health programs had been created in medical schools across the country. I began a research project to learn about the programs and curricula that had been developed. Between 2001 and 2004, I interviewed twenty nine women's health leaders across the U.S. (27 women and 2 men) about their involvement with and their development and implementation of women's health programs and curricula. Most of their work occurred between 1993 and 2004. In an unpublished study, I analyzed the data within the framework of the stages of organizational change. At that time, I did not attend to gender issues in my analysis.

Just after I conclude collecting interview data in 2004, a changed political climate resulted in the defunding of the National Centers of Excellence in Women's Health (CoEs) beginning in 2005. The CoE program was established in 1996 and had only been in place for a decade.

Since the time I conducted my initial interviews and as result of my professional and academic work, I have come to view medical education as a system and I have begun to understand that medical education is gendered. For the current study, I reexamined my interview data with attention to the role of gender in the context of curricular reform in the medical education system. Although I view medical education as gendered, it is not perceived in that way by many individuals, including many within medical education. I believe that gender is a hidden aspect of medical education; it is part of the hidden curriculum.

Despite the difficulties associated with implementing any type of change in medical education and specifically with implementing changes related to women's health, the individuals that I interviewed were able to create women's health educational programs and curricula. We can learn a great deal from their efforts. My study informs us about how such change is possible, as well as how curricular reform occurs more generally.

The approach I use in my work is interdisciplinary. It is rooted in both the mainstream and feminist literatures in the sociology of medical education, and it is informed by theories of gender. This enables me to examine the system of medical education and the process of curricular change more critically.

TABLE OF CONTENTS

ACKNOWLEDGMENTS iii

PREFACE vii

ABSTRACT xvii

CHAPTER 1: GENDER IN THE HIDDEN MEDICAL CURRICULUM 1
Introduction 1
The Environment for Women's Health, 1983 – 2002 3
Research 4
Clinical Care 7
Women in Medical Leadership 10
Medical Education 13
Theorizing about Medical Education and the Hidden Curriculum 16
The Hidden Curriculum in the Sociology of Education 17
The Hidden Curriculum in the Sociology of Medical Education 20
The Gendered Medical Education System and the Hidden Curriculum 25
A Gendered Culture 26
Training for Uncertainty 28
Training for Detached Concern 30
Assertions of Power and Authority in Medical Training 33
The Treatment of Patients Who are Women 35
Gendered Organizations, Specialties and the Marginalization of Women's Health 38
Women within the Medical Profession 39
Occupational Segregation 40
Gendered Specialties 42
Cardiovascular Disease, the Type A Personality and Gendered Specialties 44
Traditional Women's Health in Medical Education 47
Breast Health 47
Pelvic Examinations 49
Gendered Medical Knowledge 50
Medical Curricula 51
Medical Texts 52
Teaching Methods 54
Medical Research 56
Faculty Members 59
Patients 61
Medical Practices 62
Medical Work as an Interpretive Process 63

Examining Gender within the Hidden Curriculum 67
Medical Education as a System 69
My Contribution 70

CHAPTER 2: METHODOLOGY 72
Participant Observation 72
Respondents 76
The Interviews 79
The Interview Guide 82
Coding and Analysis 83
Ethical/Human Subject Issues 86
Interviewing Elites 87
Sample Selection 91
Confidentiality and Consent 96
Potential Bias 97

CHAPTER 3: BECOMING AWARE OF PROBLEMS IN WOMEN'S HEALTHCARE AND MEDICAL EDUCATION 100
The Roots of Awareness 102
Starting Points 105
Women's Health Advocates 106
Feminist identities 107
Beginning awareness 108
Early activism, volunteerism and service 112
Appointees 115
Physician and medical educator identities 115
Beginning awareness 116
Medical Reformers 117
Physician and advocate identities 118
Beginning awareness 119
The Process of Becoming Aware 126
Women's Health Advocates 127
Personal experiences 127
Professional experiences 133
Social movements and public policies 140
Appointees 141
Personal experiences 141
Professional experiences 141
Medical Reformers 151
Personal experiences 151
Professional experiences 151
Caring for patients 152
Physician educators 157

Administrators 159
Colleagues and their role in awareness 161
Other sources for awareness. 166
Sites for developing awareness. 167
Lived Experiences and Differences in Developing Awareness 170
The Problems Identified in Women's Health 171
Awareness, Lived Experience and Detached Concern 177

CHAPTER 4: THE CURRICULAR INNOVATION PROCESS 180
Learning about Women's Health 180
Educating Themselves about Women's Health 180
Working with Women 183
Defining Women's Health 186
Developing Women's Health Curricula 195
Assessing the Existing Curriculum 196
Alternative Methods of Identifying Curricular Needs 198
Searching for and Adapting Other Women's Health Curricula 201
Creating an Implementation Plan 203
Deciding on a process 203
Choosing integration vs. separation 205
Choosing teaching methods 206
Establishing the Infrastructure for Curricular Change 210
Creating Women's Health Curricula 212
Medical schools 213
Residency training 220
Fellowship programs 224
Continuing medical education 227
Building Interdisciplinary Research Careers in Women's Health 234
Evaluating Students 236
Advocating for Women's Health in Accreditation and Licensing 239
The Role of the National Centers of Excellence in Women's Health 244
Publishing Textbooks and Educational Resources 246
Establishing or Reorganizing Clinical Services 250
Responding to Patient Needs 251
Labeling and Reorganizing Services 254
Developing Community Sites 256
New Standards and Processes 257
Meeting Learners' Training Needs 258
Creating Interdisciplinary Medical Education 258
Curricular Innovation in Practice and Knowledge Exposes the Gendered Hidden Curriculum 260

CHAPTER 5: CURRICULAR INNOVATION – STRATEGIES AND RESISTANCE 266
Establishing Credibility and Legitimacy 266
Individual Credibility and Legitimacy 267
Organizational Legitimacy 268
Establishing Standards 273
Building a Constituency 274
Creating Visibility in their Organizations 278
Creating Collaborative Working Groups 280
Finding Potential Collaborators 280
Serving as Liaisons, Conduits and Connectors 284
Creating Opportunities for Collaboration 287
Mobilizing Support and Resources 289
Obtaining Leadership Support 289
Mobilizing Constituents 294
Obtaining Funding 296
Persuading Colleagues 297
Seizing Opportunities for Curricular Change 303
Advancing Women in Medicine 306
Encountering Resistance 307
The Consequences of Relying on a Normative Male Model 308
Limiting Discourse 312
Faculty Resistance to Curricular Change 314
Students' Resistance 319
Resistance in Clinical Sites 320
The Concerns of Faculty and Students (Men) 322
Resistance Due to Medical Silos 323
Gendered Perspectives on Women in Medicine 326
Fitting in and Changing Things 328
Strategies, Stalled Progress and Unmasking the Gendered Power Structure 332

CHAPTER 6: DISCUSSION AND CONCLUSIONS 337
Seeing the Unseen: Gender and the Hidden Curriculum 337
Studying Resistance 347
Moving Forward in Women's Health 349
Directions for Future Research 352
A Personal Reflection 352

APPENDIX A: ORGANIZATIONS REPRESENTED IN THIS STUDY 357

APPENDIX B: INTERVIEW GUIDE 359

APPENDIX C: TABLE OF RESPONDENTS 361

APPENDIX D: DEFINITIONS OF AND APPROACHES TO HEALTH AND WOMEN'S HEALTH..... 363

REFERENCE LIST..... 367

VITA 393

ABSTRACT

This is an historical study about the development of women's health curricula in medical education across the U.S. between 1983 and 2004, a period of a great deal of innovation. At that time, some physicians, medical educators, policy makers, and government officials became aware that most U.S. medical school curricula did not address women's health in a comprehensive manner and did not attend to many problems that were the primary causes of mortality and morbidity in women. In addition, medical research and medical education were based on a normative male model. Studies of medical education indicate that medical schools are particularly resistant to changing their curricula. It has been posited that the hidden curriculum makes curricular change difficult. My work addresses how curricular change is possible in relation to women's health. Between 2001 and 2004, I interviewed 29 women's health leaders across the U.S. about their efforts to create women's health programs and curricula, encompassing undergraduate, graduate, and continuing medical education. The empirical issues that I address are: how my respondents became aware that there were problems in women's health, what they did/created, how they did it, and what type of resistance they encountered. My respondents differed in their understanding about women's health based on their life experiences. They learned about women's healthcare and implemented that knowledge into their

teaching and curricular development and created interdisciplinary curricula. They established their own credibility, the legitimacy of their efforts, and they mobilized resources. They encountered gender based resistance from other individuals and from the system of medical education. My work contributes to our understanding of how curricular change is possible within medical education, especially as it relates to comprehensive women's health issues.

CHAPTER 1

GENDER IN THE HIDDEN MEDICAL CURRICULUM

Introduction

The time period beginning in the late 1980s through the early 2000s was a period of innovation in medical education in which a new field emerged that had the potential of leading to a paradigm shift in medicine. The field of women's health was being established wherein women's health was conceptualized as encompassing the entire body and not just as reproductive health. The 1990s were heralded as a "decade of change" in women's health medical education because many curricular initiatives were implemented, knowledge about differences in women's and men's bodies were being established, and there was an expectation that progress would continue across the U.S. (Henrich 2000). However, in 2004, the question became "Why have they stalled?" (Henrich 2004). There was resistance to further progress in women's health curricula.

Changes in medical education about women's health were first implemented beginning in the late 1980s within individual organizations on a small scale, but the first activity that was regional, if not national in scope occurred in 1993 with the implementation of the American Medical Women's Association's Advanced Curriculum in Women's Health. Many women's health projects were initiated across the U.S. Women's health programs and curricula

were created at medical schools, academic health centers, and community based residency training programs. Despite these efforts, women's health was not well integrated into medical school curricula (Henrich and Viscoli 2006).

The difficulty with integrating comprehensive women's health into medical curricula is twofold. First, medical schools have historically been resistant to any type of curricular change (Bloom 1988; Christakis 1995). It has been posited that there are underlying structural and cultural factors within medical education that affect the curriculum, i.e., the hidden curriculum, which often hinder change (Hafferty and Franks 1994). Second, there has been resistance to acknowledging the need to integrate women's health knowledge into medical education among the majority of medical educators and leaders (Verdonk et al. 2009; Risberg, Johannson and Hamberg 2011). The combination of these two factors suggests that medical education is characterized by a gendered hidden curriculum.

This study is an examination of the gendered hidden curriculum in medical education. It is based on a secondary analysis of interviews I previously conducted with women's health leaders and curriculum innovators across the U.S. about their curricular activities from the late 1980s through the early 2000s. I examine how my respondents became aware that there were problems in the field of women's health, what they did, which strategies they used, and what type of resistance they encountered. It is a story about how curricular change is possible, how the hidden curriculum functions, and how gender is a part of the hidden curriculum.

In this chapter, I begin with an overview of the environment for women's health in the U.S. for the time period that preceded and encompassed the "decade of change." I then discuss conceptual work related to the hidden curriculum in order to understand how the hidden curriculum functions within medical education. I also examine the different ways that the medical education system is gendered.

The Environment for Women's Health, 1983 – 2002

There have been several waves of women's health movements in the U.S. The two most recent were the women's health movements of the 1960s and 1970s, followed by a wave in the 1990s (Weisman 1998). The 1960s and 1970s movement was primarily a grassroots movement in which women advocated for their reproductive health needs, childbirth concerns, control of their bodies, and access to health information (Ruzek 1978; Weisman 1998). In contrast, the 1990s wave was primarily a professional and middle class women's movement aimed at changing policies and the institutional context for women's health (Weisman 1998; Auerbach and Figert 1995). The latter wave was possible because women were beginning to attain leadership positions in medicine, research, and in the U.S. Congress. During the 1990s wave, reformers focused their efforts on four main areas: research, clinical care, women's leadership in the medical profession, and medical education. In the discussion below, I identify the primary national initiatives in each of these areas over a twenty year period, 1983-2002. This time period includes the activities that preceded and contributed

to the 1990s wave of change in medical education. 2002 marks the year that I began data collection in earnest for my initial project and it coincides with the time that progress was beginning to stall nationally in advancing women's health.

Research

In the 1980s, there was a growing awareness that almost all medical research had been conducted on men which meant that there was little understanding about women's health issues. In the research community, the scope of the problem was identified as being due to:

> The failure to include women in major clinical research trials; inadequate attention to gender differences and analysis in medical research; inadequate funding for research for diseases and conditions primarily affecting women; and the dearth of women investigators in senior positions in the scientific community. (Skolnick 1992:1813)

Women were excluded at all levels of research from being subjects to primary investigators. When women had been included in research studies, the research practices were often unethical (Corea1985; Laurence and Weinhouse 1994; Worcester and Whatley 1988).

Initial federal attention to problems in women's health research began with the establishment of the Public Health Service (PHS) Task Force on Women's Health Issues in 1983 (USDHHS, PHS and NIH 1999). This resulted in a 1985 report which determined that there was a lack of scientific data about women's physical and mental health, and about the social aspects that affected their health (Auerbach and Figert 1995). Subsequently, the National Institutes of Health (NIH) issued a policy statement in 1986 urging that women be included in clinical trials; the policy took effect the following year (Hazeltine 1997). In 1990, a

study by the General Accounting Office showed that little progress had been made with including women in research studies (Johnson and Fee 1994a,b). This led to the establishment of the NIH Office of Research on Women's Health (ORWH) in 1990 (Kirchstein 1991). In 1993, the NIH Revitalization Act was passed which mandated the inclusion of women and minorities in NIH funded research. That same year, the FDA reversed its prior policy of excluding childbearing women from clinical trials, but it did not require that women be included (Johnson and Fee 1997a,b). All of these initiatives were shepherded by women in the U.S. Congress and women leaders in science and medicine.

After the publication of the 1985 PHS report, a series of national meetings was held to examine the research needs related to women's health issues. These meetings were led and attended by women's health leaders in medicine and the scientific community. In 1991, public hearings were held in Hunt Valley, MD to define the parameters of women's health and to set an initial national research agenda. These meetings came to be referred to as the Hunt Valley meetings (USDHHS, PHS and NIH 1999). That same year under the leadership of Dr. Bernadine Healy, the first woman director of the NIH, the pioneering Women's Health Initiative was created to study heart disease, breast and colorectal cancer and osteoporosis in women (Primmer 1997). The findings from this research challenged longstanding beliefs about women's bodies and provided a basis for subsequent advocacy for additional research and changes in practice and medical education. In 1996 and 1997, another series of meetings

was held across the U.S. to set a women's health research agenda. These meetings built on the prior Hunt Valley meetings and came to be known as Beyond Hunt Valley. The meetings culminated in a series of reports that set forth a plan for future women's health research (USDHHS, PHS and NIH 1999).

The U.S. Congress requested that the Institute of Medicine (IOM) examine the issue of the lack of research in women's health (Primmer 1997). The IOM affirmed that historically, there had been bias by the medical profession against research about women. They provided guidelines for researchers for including women in research studies (Mastroianni, Faden and Federman 1994). In a subsequent report, the IOM stated that sex and gender were both relevant to health and illness and that both should be considered by researchers (Wizemann and Pardue 2001). The IOM noted that biological research showed that every cell had a sex, which meant that sex had a much more profound effect on health and illness than had previously been recognized (Wizemann and Pardue 2001).

The National Centers of Excellence in Women's Health (CoE) program, established in 1996 by the U.S. Department of Health and Human Services (USDHHS) Office on Women's Health, had as one of its goals the promotion of women's health research. Other goals included improved clinical care for women, changes in medical education, and the advancement of women in academic medicine. There were six designees in the first year of the program and new designees were added annually. However, in 2005, the CoE program was defunded. Prior institutional awardees were eligible to apply for a new federal

designation, the Ambassadors for Change, with an annual allocation of $625,000 to be shared among the expected 18 designees (Federal Grants 2014). The defunding of the CoEs contributed to a decline in the national momentum to advance a women's health agenda.

Clinical Care

There were both structural and attitudinal problems with how the medical profession addressed women's health in clinical settings. Women's health was traditionally viewed as synonymous with obstetrics and gynecology, so that this subspecialty provided the majority of primary healthcare services to women who were under the age of forty five (NCHS 1995; Weisman 1998). Some women supplemented their healthcare by also seeing a family physician or an internist for medical care that was not related to their reproductive systems. The artificial structural separation of women's primary healthcare into reproductive and non-reproductive services that required two physicians came to be referred to as the fragmentation of women's health (Clancy and Massion 1992; Weisman 1998). Given that there were few woman physicians at the time, most women's health care was provided by male physicians.

Gendered attitudes about women resulted in many problems for them when they sought healthcare. In clinical practice, women have commonly experienced that physicians have:

> Not listened to them or believed what they said; withheld knowledge; lied to them; treated them without their consent; not warned of risks and negative effects of treatments; overcharged them; experimented on them or used them as 'teaching material'; treated them poorly

> because of their race, sexual preference, age or disability; offered them tranquilizers or moral advice instead of medical care or useful help from community resources (self-help groups, battered women's services, etc.); administered treatments which were unnecessarily mutilating and too extreme for their problem, or treatments which resulted in permanent disability or even death; prescribed drugs which hooked them, sickened them, changed their entire lives; performed operations they later found were unnecessary and removed organs that were in no way diseased; [and] abused them sexually. (Boston Women's Health Book Collective 1992:652)

Physicians often misattributed the cause of women's health problems as having a psychological basis rather than a physical one, resulting in inappropriate health care practices and treatments. Consequently, women received different medical treatment than men for the same illness (Kiefer 1988; Stark and Flitcraft 1988; Laurence and Weinhouse 1994; Scully 1994). In many cases, women's physical problems did not get addressed at all.

There were also many situations in which women's health concerns received too much medical attention. Natural processes in women's lives and bodies were medicalized. This meant that rather than being understood as natural events, they were viewed as medical problems requiring a medical solution – and often a highly technological one. Some of the commonly issues that were overly medicalized included menstruation, childbirth and menopause (Corea 1985; Worcester and Whatley 1988; Martin 1992; Laurence and Weinhouse 1994; Lorber 1997; Love with Lindsey 1997).

Federal policies and programs were limited in their ability to change clinical services to better address women's health needs, but there were a few initiatives. The Women Veterans Health Program was created in 1988 to better

and more efficiently address women veterans' health needs (VA 2016a). It was led by Dr. Susan H. Mather (VA 2016b). In 1994, a Center for Women Veterans was established by law, and its first director was Joan Furey. This was followed by various targeted efforts to address women veterans' specific health needs.

In 1991, the Office on Women's Health was established within the U.S. Department of Health and Human Services to improve women's health (USDHHS 2016a). In 1996, this office announced the creation of the National Centers of Excellence in Women's Health (CoEs) at academic medical centers (USDHHS 2016b). One of the goals of these centers was to create a one-stop shopping clinical model to decrease the fragmentation of women's health so that women could receive their healthcare services in one location. The quality of care women received at the CoEs improved (Anderson et al.2002). In 2000, the OWH announced a similar program for community based health organizations, the National Community Centers of Excellence in Women's Health (CCoEs) (USDHHS 2016c). Their goal was to reduce gender based and other health disparities for women in community settings.

In 1997, a group of physicians established the American College of Women's Health Physicians (ACWHP). ACWHP was a national organization whose goal was to create a new specialty in women's health so that women would be able to receive care from physicians who were trained to provide them with comprehensive care. Dr. Karen Johnson, a leader within ACWHP, argued that "medicine is based on a male paradigm that does not permit high quality

comprehensive care for women within existing medical specialties" (Johnson 1992). In her view, although there were specialties that appeared to address women's health, i.e., Obstetrics and Gynecology, Family Practice, and Internal Medicine, they did not and could not do so adequately. Training in OB/GYN was primarily surgical and limited in its scope; Family Practice was too broad because it also provided care to men and children; and Internal Medicine was oriented toward technology and relied on the male body as the norm. There was a great deal of opposition to ACWHP's efforts to create a new women's health specialty within the medical profession (Harrison 1992; Wallis 1992).

Women in Medical Leadership

Historically, women experienced many barriers to their professional advancement in medicine (Kirchstein 1991; NIH 1992, 1997; Pinn 1999; Skolnick 1992; Morrisey and Hoersch 2004). Medical schools had placed limits on the number of women they accepted, and it was not until after these restrictions were removed that women began to enter the medical profession in greater numbers in the 1980s (Carnes, Morrissey and Geller 2008). However, women were encouraged to enter into lower paid primary care specialties and were discouraged from subspecialty training (Fugh-Berman 1988; More 1999). Although the number of women in the medical profession began to increase significantly beginning in 1980, women rarely advanced into leadership positions within academic medicine (Bickel et al. 2002; Carnes, Morrissey and Geller 2008).

Gender bias was manifested in a multitude of ways. Women physicians and researchers experienced a lack of mentors and role models, an atmosphere of exclusion, diversion into less-prestigious specialties, a push into clinical and less professionally rewarding medical practices, difficulty obtaining grant support, difficulty obtaining first authorship on papers, fights for lab space or receiving less lab space than male researchers, a lack of secretarial help, biases in the tenure process, difficulties juggling medicine and motherhood, pay disparity, racial disparity, discrimination by search committees, under-representation in leadership positions, sexual harassment, the glass ceiling, and channeling into clinical and teaching careers rather than research careers (Harrison 1992; Laurence and Weinhouse 1994; Elders and Chanoff 1996; Conley 1998; Morrissey and Hoersch 2004). Women on clinical tracks were paid less than men on research tracks, and women's careers were hindered because research-oriented careers had greater professional rewards than clinical careers.

At the federal level, the gender bias experienced by women physicians was addressed in a report by the Council on Graduate Medical Education (COGME) (USDHHS, PHS and HRSA 1995). In this report, the barriers to women's advancement in medicine were characterized as also being a barrier to improvements in physician education about women's health, and thus to quality healthcare for women. In September 1998, a National Centers of Leadership in Academic Medicine program was created to "promote gender equity in medicine and leadership advancement of junior faculty" (USDHHS 2005). Subsequently, in

an effort to help women advance in scientific careers and promote women's health research, the NIH Office of Research on Women's Health established a junior faculty training program entitled Building Interdisciplinary Research Careers in Women's Health (BIRCWH) in 2000 (NIH 2016). While this was targeted at faculty development for women scientists, the broader problem of women's advancement in medicine remained.

A national conference was held in 2002 to examine the nature of the problems that women experienced and to develop strategies for change. The Beyond Parity conference, coordinated by the University of Illinois at Chicago National Center for Excellence in Women's Health, led to the creation of a workbook to assist individuals and institutions in addressing the barriers to women's advancement into leadership positions in academic medicine (Morrissey & Hoersch 2004). The advancement of women in academic medicine was also one of the goals of the National Centers of Excellence in Women's Health. in 1998 the Office on Women's Health (OWH) began to designate sites as National Centers of Leadership in Academic Medicine to advance women in medicine.

On a national level, two universities sponsored leadership programs in which some of my respondents had participated. The Harvard Macy Institute was established in 1994 to assist innovators in health education in becoming leaders within their institutions (Harvard Macy Institute 2016). Drexel University offered an Executive Leadership Program in Academic Medicine (ELAM). Drexel's

program was founded in 1995 and was specifically targeted at women in medicine (Drexel 2016).

Medical Education

In the 1980s, women began to develop women's health curricula at their institutions, either individually or in collaboration with a small number of colleagues. It was not until the 1990s that the lack of comprehensive women's health in medical education began gaining national attention (Wallis 1994). The problem in medical education was due to both a lack of knowledge about women's bodies as well as to a male bias within medical education.

> Because of a lag in research on women's health, and because almost all medical schools use the 70-kilogram man as their model, women's health is not integrated into general training. (Lowey 1994)

While some problems in medical education were due to the exclusion of women, others resulted from presenting information about women in a biased manner. Traditional and gender-biased depictions of women in medical textbooks were very common.

> In a 1994 study in the *Journal of the American Medical Association (JAMA)*, five women researchers noted that in physical diagnosis textbooks, females were portrayed in nearly three-quarters of the illustrations relating to reproduction, but only 9 percent of non-reproductive depictions. This reinforces the idea of women as vessels of reproduction and conveys the message that the male body is the norm, the female body an anomaly. (Laurence and Weinhouse 1994:xi)[1]

[1] See also Mendelsohn et al., 1994.

There were also problems with how medical students were taught to perceive and to treat women. In medical school, students:

> Continuously encounter the demeaning and objectifying way women patients are presented in classrooms, textbooks, and actual clinical settings. … Often women are portrayed as hysterical or as nagging mothers or as having trivial complaints. Men are almost never pointed to as having a psychological component to their illnesses." (Boston Women's Health Book Collective 1992:666)

Women's secondary status was reinforced in many ways in teaching materials. A 1981 medical textbook advised medical students about female sexuality and stated "the female should be advised to allow her male partner's sex drive to set their pace and she should attempt to gear hers satisfactorily to his" (Boston Women's Health Book Collective 1992:667).

At the national level, the Council on Graduate Medical Education issued a report that addressed the need to specifically train physicians about women's health (USDHHS, PHS and HRSA 1995). The initial intention of the report had been to identify physician competencies for medical education, but COGME was unable to do this because they determined that there was not enough knowledge about women's bodies (Henrich 1997). Instead, they offered general guidelines for the next steps for physician training.

At the same time that COGME was beginning its work on women's health in medical education, a national survey of all U.S. and Canadian medical schools was implemented to determine the extent to which sex specific content was a component of medical school curricula. The results of this survey were reported to Congress (USDHHS 1997). The findings showed that while many women's

health topics were included in the medical curricula of the majority of the responding medical schools, in many cases, the primary causes of mortality and morbidity for women were not required components of the curriculum. In addition, women's health was rarely integrated into basic science and clinical education. Only 12% of medical schools reported that they had implemented a women's health curriculum across the clinical disciplines.

In an effort to improve the quality of medical education in relation to women's health, in 1994, the National Academy of Women's Health Medical Education (NAWHME) was formed by women's health leaders who were physicians, educators, in the federal government, and other professionals. Their goal was to improve medical education for medical students, residents, and practicing physicians. They advocated a wide range of changes in medical education, including adopting a multidisciplinary approach, a preventive medicine approach, addressing gender issues, and a shift in attitudes toward women patients. For NAWHME, gender and cultural sensitivity were viewed as important competencies for physicians to possess. NAWHME published a resource guide for faculty to assist them with their efforts at curricular change (Donoghue 1996).

The CoEs were also involved in changing medical curricula, which was one of the program's goals. Individual CoEs initiated projects within their home institutions, while other initiatives were conducted as a national partnership among the CoEs such as the Heart Truth professional education campaign. An early evaluation of CoE successes found that the primary progress in

professional education was to train a cadre of women graduate students (Collins 2002).

It is in the context of changes in the field of women's health in the areas of research, clinical care, and women's leadership in medicine that I focus on changes in medical education in my work. I begin with an overview of the relevant literature about medical education and the hidden curriculum.

Theorizing about Medical Education and the Hidden Curriculum

Research in the sociology of medical education has traditionally focused on issues of socialization, but there have been calls to examine medical education more broadly and to attend to organizational issues (Light 1988; Brosnan and Turner 2009). The problem of curricular reform has been a central concern among scholars. One of the challenges in discussions of curricular reform has been under-theorization (Brosnan and Turner 2009). There are three primary theoretical approaches that have been used within the sociology of medical education. These include the neo-structural/functionalist theory of hidden curriculum which was introduced by Hafferty (Hafferty and Franks 1994; Hafferty 1998; Hafferty and Castellani 2009), the structural/cultural model of language codes from sociologist of education Basil Bernstein (Bernstein 1971, 1977; Atkinson and Delamont 2009), and Bourdieu's structural/cultural model of social reproduction (Bourdieu 1977, 1984; Brosnan 2009). The concept of the hidden curriculum has been widely applied within the field of medical education in the U.S. both within and outside of sociology.

The Hidden Curriculum in the Sociology of Education

The concept of the hidden curriculum has roots in the sociology of education. A general definition of the hidden curriculum is:

> The elements of socialization that take place in school, but are not part of the formal curricular content. These include the norms, values and belief systems embedded in the curriculum, the school, and classroom life, imparted to students through daily routines, curricular content, and social relationships. (Margolis et. al. 2001:6)

Broadly speaking, it refers to what is learned during the educational process, i.e., the products of education, which may differ from the formal curriculum. It includes values, attitudes, beliefs, knowledge and skills.

Early work on the hidden curriculum was from a functionalist perspective. Jackson observed that students learned a great deal about what was necessary to be successful in schools and they developed skills such as self-control, being punctual, cooperating, and keeping busy (Jackson 1968). What they learned in schools enabled them to participate in adult society (Dreeben 1968). Marxist scholars noted that education taught students things that would reproduce the existing social structure. In what came to be known as the correspondence thesis, the hidden curriculum was viewed as serving the interests, and especially the economic interests, of dominant social groups and institutions, thus reproducing social relations (Bowles and Gintis 1976). This perspective could also be applied to gendered relations in that gendered educational systems reproduce gendered social relations.

It is not just educational institutions that teach students via a formal and a hidden curriculum. Individuals experience early socialization within the home, including social and cultural learning, and they bring that into educational settings. The educational system then reproduces certain forms of knowledge and ways of being which preserves cultural and class distinctions (Bourdieu 1984). When this perspective is applied to gender, education reproduces and naturalizes gender based distinctions and differences. The language used within educational settings also reproduces distinctions between groups of individuals, which for British education scholar Bernstein were class based (Bernstein 1977). When applied to gender, the use of terms such as “he” as a default pronoun defines males as the normative human. Ethnographies done in the symbolic interactionist tradition have also illuminated how meanings are created in educational settings (Ball [1980] 2011; Hillyard 2010). Although many of these scholars did not use the term “hidden curriculum,” their work identifies how the educational system teaches more than just academic subjects and the consequences of the hidden curriculum.

These theories of social and cultural reproduction leave little room for theorizing about opposition or challenges to the existing power structure and they are limited in being able to inform us about the process of curricular reform. This led to the emergence of resistance theories (Giroux 1983). Willis (1977) found that students do not all respond to education in the same way, and some find ways to resist compliance with behavioral and attitudinal norms. But even when

students do not comply, social relations can still be reproduced. In his study, the working class boys who were oppositional in school did not do well academically and later were only fit for working class jobs. However, there can be contradictions within the educational system that open up spaces and possibilities for reform (Giroux 1983; Apple [1979] 2004, 1982; hooks 1989, 1994). Theorizing about resistance within the hidden curriculum has not progressed and most studies adopt structuralist or functionalist approaches rather than one of resistance (Margolis et. al. 2001). This is also true within the sociology of medical education. In addition, most studies within the sociology of education have focused on primary and secondary education but not on higher education.

Beginning in the late 1970s, scholars began to attend to how the educational system was gendered. There has been a great deal of scholarship in this area, and I will cite only a few examples. A comprehensive examination of the Canadian education system was conducted and gendered aspects were found to exist throughout the system (Gaskell and McLaren 1987; Smith 1987). The educational process created gendered divisions which encompassed “the authority structure of the school, staffing patterns, and the ways in which the curriculum [was] transmitted, and the systems of rewards and ‘correct’ behavior” (Kelly and Nihlen 1996). Gender is present in education at all levels, from early education to graduate education. Thorne found that gender roles are reproduced in classrooms and on playgrounds via language and educational practices

(Thorne 1993). At the graduate level, race and gender are hidden within the curriculum, creating barriers to academic success and stratifying opportunities for women of color (Margolis and Romero 1998). Thus, it is not just gender and class that are reproduced within education, but the reproduction of race occurs simultaneously (hooks 1994).

The Hidden Curriculum in the Sociology of Medical Education

Within the field of medical education, the concept of the hidden curriculum was introduced by Hafferty and Franks (1994) and has often been applied to studies of the medical socialization process. Other scholarship has examined how a specific aspect of the curriculum is related to students' attitudes. However, the hidden curriculum can also be viewed as a theoretical construct. The hidden curriculum is "a set of influences that function at the level of organizational structure and culture" within the context of a learning environment (Hafferty 1998). The learning environment includes the classroom, laboratory, clinics, and the organization itself which has its own structure and culture. At an organizational level, the following domains are relevant to studying the hidden curriculum: policies, evaluation procedures, resource allocation decisions, institutional vocabulary and slang (Hafferty 1998). Policies may be found in handbooks, contracts, marketing materials, or other publications. They convey hidden messages about an organization's values which may either support or contradict its stated values. Evaluation occurs on many levels within medical education, and the criteria used to assess performance indicate organizational

values. This can range from accreditation at the organizational level, promotion and tenure for faculty, and various modes of student assessment. Resource allocation occurs in many forms such as monetary, space, staffing, and various forms of support for programs, education, teaching or research, all of which convey a hierarchy for what is most and least valued. Hafferty and Franks (1994) have argued that any efforts to change the curriculum must consider and address the hidden curriculum because the unintentional messages being sent to students may be opposed to specified curricular goals. Attending to the hidden curriculum "draws our attention to, among other things, the commonly held "understandings," customs, rituals, and taken-for-granted aspects of what goes on in the life-space we call medical education" (Hafferty 1998:404).

A similar definition of the hidden curriculum is offered by Lempp and Seale as "a set of influences that function at the level of organizational structure and culture including, for example, implicit rules to survive the institution such as customs, rituals, and taken for granted aspects" (Lempp and Seale 2004:770). This alternative definition elicits a somewhat different perspective on the hidden curriculum. Survival strategies are learned and developed by students, but survival is a different motivation than comprehensive learning. This suggests that students experience competing objectives in the educational process. In both definitions, the hidden curriculum is taken for granted and is unlikely to be apparent to those within the institution. There is much more that is learned beyond an organization's explicitly stated goals. Both Hafferty's and Lempp and

Seale's approach to the hidden curriculum address how one learns to become a physician, the type of learning that is really going on, the types of physicians that are being produced by the educational system, and how clinical care is practiced. Although most attention has been given to student learning, ongoing learning is also taking place for others such as faculty who are responsible for implementing the formal curriculum and who participate in the hidden curriculum. Faculty members' behaviors can be counterproductive in relation to the formal curriculum. For example, residents' observations of unprofessional behavior (deviance) may have a negative impact on their own professionalism (Billings et al. 2011). Bringing awareness to an organization's hidden curriculum can allow it mitigate undesirable aspects and reinforce desired aspects in efforts at curricular change.

The hidden curriculum is generally viewed in contrast to or in opposition to the formal curriculum. The formal curriculum is composed of courses, programs, and explicitly stated learning objectives and competencies. There is also an informal curriculum, which in medical education refers to the learning that occurs outside of the classroom during ad hoc conversations with faculty or other students within clinics, meeting rooms or hallways. Formal, informal, and hidden curricula are the three primary types of curricula, although there are many other types that have been identified by education scholars. For example, the null curriculum refers to that which is not taught (Eisner 1995). Each of these types of curricula is an aspect of the learning environment. While the term "hidden

curriculum" is commonly used within studies of medical education, it has often been used interchangeably with the informal curriculum, in reference to what students learn in clinics and other unstructured settings. Hafferty and Castellani (2009) indicate that this usage is incorrect.

The hidden curriculum can be conceptualized in two ways, either as a process or a theory. First, it can be used to refer to one of the processes by which student learning occurs. For example, a study of case materials found that representations of patients with regard to sex, race, sexual orientation and ethnicity did not correspond with the distribution of disease in the general population, potentially undermining the goals of the formal curriculum because the cases conveyed information that was inconsistent with social reality (Turbes, Krebs, and Axtell 2002). Case presentations were found to reinforce negative racial stereotypes (Finucane and Carrese 1990). Residents' witnessing of unprofessional behaviors in a hospital setting was related to cynicism and burnout, potentially hindering residents' professional development (Billings et al. 2011). In these examples, the hidden curriculum is used as an analytic concept rather than a theory. Although correct, it is a narrower understanding of the term and does not adequately represent Hafferty's theoretical objective (Hafferty 1998). From a theoretical perspective, the hidden curriculum is about how learning occurs within the complex system of medical education in which an organization's structure and culture facilitate certain types of learning and

preclude or hinder others. It is this latter approach that is relevant to my study of educational reform.

Hafferty and Franks' (1994) and Hafferty's (1998) work provided a framework and a foundation for understanding the hidden curriculum in medical education. These works were very influential among medical educators as they attempted to understand and revise their institution's curricula (O'Donnell 2015). Despite efforts at substantive change, and although curricular content often changed after the specification of new or revised learning objectives and competencies, cultural change was more difficult to accomplish (O'Donnell 2015). The hidden curriculum literature has illuminated the barriers to learning in various settings. However, it has not yet captured the many variables that affect the type of learning that occurs (Baldwin 2015). The application of these early foundational works has now expanded to apply to health professions education (Hafferty and O'Donnell 2015). Medical educators have given special attention to issues of culture and have applied a hidden curriculum approach to understand and integrate issues of central concern into medical education such as professionalism, humanism, ethics, and patient-centered care. Their efforts produced mixed results, and in some cases, led to outcomes that were the opposite of what they had intended. I believe that a primary reason for the limited success of their efforts was because scholars assumed that these topics were gender neutral and thus did not attend to issues of gender and the gendered

culture of medical education. My work fills this void and moves the discussion forward to explicitly consider issues of gender in medical education.

The Gendered Medical Education System and the Hidden Curriculum

Even though educational institutions tend to be viewed as neutral (Apple 1982), the medical education system is gendered just as organizations are gendered (Acker 1990). Studies of medical education generally portray the content and the practitioners as either male or gender neutral and assume that gender is irrelevant. That is incorrect. Gender is integral to the culture, organization, knowledge and practices of medical education and the medical profession.

In 1995, the Council on Graduate Medical Education (COGME), an advisory board established by Congress to the U.S. Department of Health and Human Services (USDHHS), issued a report entitled *Women in Medicine* that was critical of the medical profession's approach to women's health. The report stated that an overall problem with medical education was that it lacked "an appreciation of the *basic* (emphasis added) biological differences between the genders as well as demographic, psychosocial, economic, and environmental factors that affect women's health" (USDHHS, PHS and HRSA 1995). The report also noted that health care for women has traditionally focused on reproductive issues, and thus could not "take into account the broad spectrum of women's health concerns or the relative differences between men and women in terms of health behaviors, morbidity, disability, and mortality" (USDHHS, PHS and HRSA

1995). The report recommended policies for curricular reform and outlined a basic set of competencies in women's health for the desired knowledge, skills, and attitudes for physicians (USDHHS, PHS and HRSA 1995). The COGME report's description of the state of medical education indicated the existence of significant gender bias in medical education and practice.

A Gendered Culture

Within sociology, the foundation for our understanding about physicians and about the gendered nature of medical and caring work originates with Talcott Parsons. Parsons primary contribution to medical sociology was his development of the concept of the sick role (Parsons 1951). Parsons and Fox delineated women's role and physicians' roles in healing (Parsons and Fox 1952), where the primary actors are the physician, the patient, and the mother of the patient who provides the actual care to the child. The physician in this model is assumed to be male because the physician occupied the breadwinning role which has traditionally been perceived as a male role, while a woman does the majority of caring work. Within medical institutions, this corresponds to the roles of a man as physician and a woman as nurse.

Early work in the sociology of medical education examined anticipatory socialization, how students made career decisions, and how they developed professional attitudes (Merton, Reader and Kendall 1957). Because most of the students were male, this was a study of male socialization within a profession. Similarly, Becker et al. ([1961] 2007) noted that while they observed a few

women medical students, most were men, so that in their work, they “talk mainly of boys becoming medical men.” Our understanding of medical students is based on the characteristics of white men as medical students (Lorber 1975; Riska 2009). In the idealized model of a physician, the physician possesses masculine characteristics and is a member of a masculine culture (Katz 1999). The idealized model of a physician is that of a heroic surgeon who is a pioneer and scientist, and who is filled with bravado, self-assurance, invulnerability, rationality, and a commitment to abstract values (Davis 2005). If women are permitted to be there, they conform to the culture (Cassell 1998).

In a study of the hidden curriculum, medical students’ views about model teachers and poor teachers exhibited gendered characterizations of their role models (Lempp and Seale 2004). Men physician educators were characterized as knowledgeable, powerful, and having authority, while women physician educators were perceived as being tolerant, possessing integrity, respectful and supportive of students, i.e., more “human” qualities (Lempp and Seale 2004). This suggests that students’ prior views about gender differences between men and women are applied to the context of medical education. In addition, the characteristics ascribed to men physicians are those that are consistent with leadership roles and masculine medical culture. The characteristics ascribed to women physicians are more consistent with supportive roles in medicine. Lempp and Seale (2004) also found that medical school culture was competitive which is consistent with masculine culture. However, Becker et al. ([1961] 2007) found

instances of both cooperation and competition among medical students. Overall, medical culture is a masculine culture.

Training for Uncertainty

One of the early findings from studies of medical socialization was that students were being trained for uncertainty, i.e., learning how to deal with uncertainty (Fox 1957). There were three primary sources of uncertainty. First, there was an immense amount of information that students needed to master. It was more than was possible and they could not learn everything. There was uncertainty caused by limits in the state of medicine, in what could be known and what could be done. As students progressed closer to graduation, they had uncertainty about whether their knowledge and skills were lacking or whether the source of their uncertainty was from limitations in the state of medicine. One of the ways that students dealt with uncertainty because of the amount of work was to determine what the faculty member actually wanted, i.e., what would suffice to maintain a positive image, and that is what they worked to achieve (Becker et. al. [1961] 2007). Light argues that while uncertainties are experienced in medical training, students actually adopt mechanisms to control that uncertainty (Light 1979). He views students' goal as gaining control. Students do this by presenting an image of competence to superiors, gaining clinical experience, focusing on acquiring only the knowledge that is necessary, focusing on mastery of techniques, and eventually gaining autonomy. In the process, they also project a sense of certitude with patients.

Evidence based medicine, i.e., making clinical decisions based on scientific research, was found to create a new form of uncertainty stemming from the process of searching for and interpreting the evidence in the literature (Timmermans and Angell 2001). Students responded in different ways to this uncertainty. Some avoided research, while others used what they found via their research to justify clinical choices, and others requested clarifications about the research from attending physicians. In each case, they were attempting to reduce the amount of uncertainty they experienced.

The various strategies adopted by students in dealing with uncertainty are attempts to adopt a “cloak of competence” (Haas and Shafir 1977). Students’ portrayals of competence when there is uncertainty are attempts to present an image of certitude or infallibility. Not only do they engage in this behavior with faculty, but also with their patients. The expectations within the learning environment are aspects of the hidden curriculum that encourage students to project the aura of knowledge, skill and authority. While these facilitate an action orientation within clinical medicine, they are also characteristics associated with physicians’ power and with the masculine medical culture. Katz notes that avoiding uncertainty and projecting an image of certitude and infallibility can create a false image of certitude (Katz 1984). This can lead to a lack of awareness about limits in one’s own knowledge and skills, an inability to acknowledge one’s limitations, and to clinical errors.

Even when mistakes are made, physicians in training do not lose authority. There are mechanisms for self-correction, one of the most important being mortality and morbidity conferences. At these presentations, students and faculty discuss medical failures and patient deaths. While there can be penalties for students based on the nature of the failure, especially if a resident did not act in accordance with an attending's directives, there is also a mechanism for correction and a return to one's standing. When attending physicians experience medical failures, they acknowledge the mistake, indicate the lessons learned, indicate that it will not be repeated, and caution others to avoid similar cases. The process has been termed "forgive and remember," i.e., to forgive an honest mistake, but to remember so that the mistake is not repeated (Bosk 1979).

Training for Detached Concern

A second main finding of early medical socialization studies was that students were being trained for detached concern (Lief and Fox 1963). Learned over time, this refers to a strategy in which students learn to distance themselves from patients, enabling them to provide care without emotional involvement. Thus, they learn to think rationally rather than respond emotionally. One of the most important locations for this learning was in anatomy laboratories where students came to view their cadavers as other than human (Fox 1989). This is the site where the body is perceived as a teaching tool (Hafferty 1991). Body parts may be unceremoniously discarded if they are viewed as providing little teaching material, such as the breast (Fugh-Berman 1988). Training for detached

concern is reinforced when students work on autopsies and when they practice on each other. Such experiences help students learn to create a distance between themselves and their patients. The distance that students experience with patients is evident in the disparaging terms they use for different types of patients such as “crocks” and “gomers” (Becker et al. [1961] 2007), and in the depersonalized manner in which they present cases in a ritualized format to attending physicians (Anspach 1988). Clinical training focuses on the disease and the technical aspects of medicine rather than on the patient as a human being, further contributing to depersonalization (Conrad 1988).

There have been efforts to train physicians to respond to their patients with more empathy. The dominant approach to this is “clinical empathy” in which empathy is experienced cognitively rather than emotionally (Halpern 2003). Halpern notes that this follows from the medical tradition of emotions being viewed as unreliable such that only rational thoughts and behaviors are perceived as appropriate for physicians. Halpern views empathy as an emotional skill which should be encouraged because it enables one to connect with patients, develop associative reasoning (understanding which enables a physician to address patients’ concerns), provide better care, and has therapeutic benefits. Detached concern and clinical empathy both maintain distance between patients and physicians and preserve a physician’s power and authority. The more “feminine” approach of true empathy in clinical encounters is rejected. Not only are emotional responses viewed as inappropriate, but they are

dangerous because there is concern that they will result in poor clinical judgment. Emotional responses, i.e., acting in ways that are traditionally perceived as feminine, are antithetical to medical professionalism.

More recent trends in medical education that address acculturation and the hidden curriculum also indicate the existence of a preference for masculine values. Concerns emerged within medical schools about professionalism in the wake of changes in the healthcare environment, declines in students' moral reasoning, and perceived losses of professional autonomy (Hafferty 1998). Thus, one important basis for concerns about professionalism was due to a potential loss of status and power for members of the profession. The Liaison Committee on Medical Education (LCME) developed accreditation standards requiring medical schools to teach professionalism (AAMC 2014a). The concept of professionalism is complex (Hafferty and Castellani 2010), but it is rooted in knowledge and skills about communication, ethical and legal understanding, humanism and cultural competence, and scientific knowledge as applied to patient care (Arnold and Stern 2006). These have generally been conceived of as abstract concepts and principles rather than specific practices that bridge the gap between physicians and patients.

Another trend in medical education has been training in medical ethics (Hafferty and Franks 1994). This training is rooted in ethical philosophies and abstract principles rather than individual subjectivities. This approach encourages a position of detached concern.

A third trend has been teaching humanism in medicine. This approach was intended to increase students and physicians awareness of their own humanity and thus connect with their patients' humanity (Marcus 1999). Goldberg (2008) notes that humanism is rooted in universalism and egalitarianism. However, humanism could also be conceptualized as increasing intersubjectivity between patients and physicians. Humanism has been offered as a potential component of professionalism which could be used to regain public trust for medicine (Wear and Bickel 2009). It may be difficult to combine humanism rooted in subjectivity with professionalism, but not abstract humanism with professionalism. The former has a different agenda and is rooted in different value systems, goals, and rationales. The different types of humanism create different types of professional identities for physicians (Goldberg 2008). Although humanism could be conceptualized as experiencing emotional awareness and empathy, both of these are discouraged by medical education's hidden curriculum. For example, interns and residents are encouraged to get rid of patients (Mizrahi 1985). This perpetuates depersonalization and detached concern.

Assertions of Power and Authority in Medical Training

The ways that power and authority are exerted in medical education are also aspects of the hidden curriculum. Compliance with authority is expected (Bosk 1979). Expressions of power and authority are often not benign. Many students experience medical education as abusive. In one study, over 80% of

senior medical students indicated that they had experienced abuse while in medical school, with over two-thirds noting it was a serious and upsetting incident (Silver and Duhl Glicken 1990). In another study of abuse, more than one-third of medical students had considered dropping out of medical school (Sheehan et. al. 1990). Abused students may subsequently abuse their patients and colleagues (Kassebaum and Cutler 1998). Abuse also contributes to cynicism about the medical profession. It appears to be a pervasive and integral aspect of medical education.

While there are similarities in how women and men experience abuse in medical training, overall, women experience it differently and they experience it at all levels of medical training. Most women medical students have either witnessed or experienced sexual harassment (Wear, Aultman and Borges 2007). The types of sexual harassment they experienced included comments that are stereotypical, sexist, sexually offensive or explicit, embarrassing, and inappropriate touching (Witte, Stratton and Nora 2006). Students perceived both gender discrimination and sexual harassment as most prevalent in the specialties of surgery and obstetrics-gynecology (Nora et at. 2002). A study of residents found that 73% of the woman respondents had been sexually harassed either in medical school or during residency training (Komaromy et al. 1993). While men students also reported harassment in this study, women students were more likely to note that the harassment came from someone of higher professional status. Women physicians also experienced sexual harassment by patients. A

Canadian study of practicing physicians found that 75% of women physicians had been sexually harassed by a patient (Phillips and Schneider 1993). Sexual harassment is more prevalent in medical training than in other occupational settings, with 42% of women experiencing sexual harassment in other occupations, but approximately 73% experiencing it during medical training (Charney and Russell 1994). In most cases, the harassment was not reported but it had a large impact such as affecting specialty choice (Wear, Aultman and Borges 2007). In one prominent case, a woman neurosurgeon at Stanford University experienced egregious sexual harassment by her colleagues, publicly described the extent of the harassment, and left her job (Conley 1999). Many women who experience harassment in medical education attribute the discomfort they feel to their own sensitivity rather than to an abusive and misogynistic learning environment (Hinze 2004).

The Treatment of Patients Who are Women

There is much evidence of negative attitudes toward women in how they have historically been treated by the medical profession. The medical profession has a history of egregious and gender biased treatment of women patients. Within psychiatry and psychology, women who did not conform to traditional gender roles were labelled as mentally ill and many were institutionalized. Many were also sexually abused by their therapists, hospitalized against their wills, given shock therapy, and lobotomized (Chesler [1972] 2005). Their physical symptoms and problems were dismissed as mental illness or as emotional

problems. Psychologists and psychiatrists' view of women has often been that "they are probably imagining their pain, that their illness is all in their heads" (Chesler [1972] 2005:10). Twenty five years after the publication of *Women and Madness*, Chesler believed that many of the problems she originally noted within medical practice remained. Within obstetrics-gynecology training, women experienced abusive therapies and unnecessary surgical interventions when residents needed to practice techniques (Scully 1994). Minority women have fared even more poorly within the medical system. Within psychiatry, they have been treated with more hostility than white women (Chesler [1972] 2005). Minority women were also more likely to be sterilized without their consent (Andersen 1993).

There may be a double standard in how physicians view a healthy adult. An early study of psychiatrists', psychologists' and social workers' perceptions asked respondents to identify behaviors and characteristics of a healthy adult (sex not specified), a healthy adult male, and a healthy adult female (Broverman et al. 1970). The characteristics of the healthy adult and the healthy adult male were found to be essentially the same, i.e., they were independent, logical, active, and adventurous. In contrast, a healthy woman was dependent, emotional, passive, illogical and subjective. These were the same characteristics as for an unhealthy adult. This study was replicated, with some finding little to no gender differences among mental health practitioners (Philips and Gilroy 1985), while a subsequent study had very similar findings to Broverman et al. (1970)

(Seem and Clark 2006). Although psychological theories have traditionally pathologized women, many of women's mental health problems are rooted in social inequality (Carmen, Russo and Miller 1984) and are produced by sociopolitics and misogyny (Ussher 1991). There continues to be "a tendency to pathologize the mental health of women" (Hill and Needham 2013).

The medical profession's failures and biases with respect to women led to the emergence of women's health movements. Participants in the women's health movement of the 1960s and 1970s objected to what they characterized as the patriarchal treatment of women. They objected to the lack of safe birth control and the frequent over-use of hysterectomies. They advocated for abortion rights and for the reform of childbirth practices. They were critical of the lack of available information regarding these topics, physicians' reluctance to inform them about their medical problems and treatments, and physicians' disrespect of their wishes. One of the most enduring women's health groups that emerged during that time was the Boston Women's Health Book Collective (BWHBC) which continues its work now as Our Bodies Ourselves.[2] Eventually, disease specific movements also emerged. The many organizations that collectively comprise the breast cancer movement have been among the most successful of the disease based groups (Kasper and Ferguson 2000). By the 1980's, there

[2] This group reorganized in 2004 as Our Bodies Ourselves. They published the groundbreaking self-help book, *Our Bodies, Ourselves* which has been translated into over 20 languages. It has been adapted for women in different countries and cultures and is regularly updated in new editions.

was a shift from grassroots activism to professional activism, including activism by women physicians (Ruzek 1978, 1998; Weisman 1998).

Gender has been and is an integral part of the hidden curriculum in medical education and culture. Not only are masculine characteristics ascribed to physicians/professionals, but medical training promotes masculine characteristics, values, ways of being, and practices. In addition to rejecting feminine characteristics, there are negative assertions of power and authority in the form of abuse, sexual harassment toward women who are physicians, students and patients. Medical perspectives about women patients are pathologizing, while medical practices result in misdiagnoses and maltreatment of women patients.

Gendered Organizations, Specialties and the Marginalization of Women's Health

An organization's structural aspects are also part of the hidden curriculum, and medical organizations are gendered and raced. On the most obvious level, physicians tend to be white men while nurses and clerical staff tend to be women, and orderlies and aides are more likely to be minorities. This is significant because one's daily work life, and thus one's daily reality, is experienced as a gendered and racial hierarchy. Medicine is also gendered in other ways. The structure of medicine is gendered in relation to the presence and location of women physicians in medicine, the structure of medical specialties,

and the marginalization of traditional women's health (breast and reproduction) within primary care.

Women within the Medical Profession

Historically in the U.S., women have been excluded from medical education. Elizabeth Blackwell became the first woman physician in the U.S. in 1849. She applied to 29 medical schools and was rejected by all (Spartacus Educational 2014). Eventually she applied to smaller schools and was accepted. She graduated first in her class, but was prohibited from practicing in any U.S. hospital. Medical schools generally rejected women applicants, but as economic pressures increased, some were willing to expand their student pool and accepted women. Once women obtained medical degrees, they were usually denied hospital internships, teaching jobs, and the ability to practice in many areas. Such exclusionary practices continued well into the 20th century (Morantz-Sanchez 2000). Once state medical licensing was implemented, women experienced difficulty in becoming licensed. Women were also excluded from many professional societies which provided support and referrals from colleagues.

At the time of Merton et al.'s (1957) and Becker et al.'s work ([1961] 2007), approximately 5% of medical school graduates were women (Snyder 1993). The percentage increased to about 10% in 1973/74, 20% in 1977/78, 30% in 1984/85, and 40% in 1995/96 (National Center for Education Statistics 2014). By 2003/4, women were 46.4% of medical school graduates in the U.S, peaking

at 49.3% in 2008 and declining to 48% in 2013.[3] As increasing numbers of women entered medicine, there were concerns about the "feminization" of the profession, which was viewed as a potential threat to physicians' status (Riska 2008, 2009). Although the number of women in medicine has increased substantially, there has not been a corresponding increase of women in leadership positions (Bickel 2000, Bickel et. al. 2002).

Occupational Segregation

Women have experienced occupational segregation in the medical profession in a number of ways: the locations in which they provided care, the types of patients they cared for, and the specialties they entered. In each of these areas, women have been marginalized. In the 19th and throughout much of the 20th century, once women obtained medical degrees, they were generally denied hospital internships, teaching jobs, and the ability to practice in many areas (Morantz-Sanchez 2000). This led them to seek employment in asylums and reformatories rather than mainstream hospitals and clinics. In these sites, they provided care to marginalized populations. Historically, women have also provided care to those among the lower social strata such as immigrants as well as to women and children. Women physicians who either had or were able to obtain resources established their own hospitals and clinics.

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[3] National Center for Education Statistics (2014). After the 2003/2004 year, the National Center for Education Statistics reported first professional degree data by sex in conjunction with other doctoral degrees, including those in the social sciences and humanities. Data for subsequent years are available from the Association of American Medical Colleges. For 2004-2008 data, AAMC (2014b). For 2009-2013 data, AAMC (2014c).

Women physicians have also been precluded from entering higher status specialties. Early on, “female physicians largely confined themselves to what became feminine specialties – obstetrics and gynecology in the nineteenth century, pediatrics, public health, teaching, and counseling later on” (Morantz-Sanchez 2000:61). When women were excluded from medical practice and midwifery, obstetrics and gynecology became a field dominated by men (Ehrenreich and English 1973; Wertz and Wertz 1994; Morantz-Sanchez 2000). This exclusion has been ascribed to patriarchy and capitalism (Witz 1992). Women have traditionally been encouraged to enter into lower paid primary care specialties and have been discouraged from subspecialty training (Fugh-Berman 1988; More 1999). The tracking of women into certain specialties begins during undergraduate medical education, i.e., medical school, with women reporting an increased amount of gender discrimination and sexual harassment in their clinical clerkships compared with pre-clinical years (Nora et al. 2002). One study found that residency choices for almost half of women and one-sixth of men were affected by gender discrimination and sexual harassment (Stratton et al. 2005). When men experienced gender discrimination, it was most likely to occur in obstetrics and gynecology. Men were increasingly experiencing patient refusals for access to their bodies in clinical settings, and midwives have, at least in some cases, been more receptive to teaching woman physicians (Lempp and Seale 2004). Similarly, women have had limited access to men patients in urology (Bickel 2001). Among men whose specialty choice was impacted by

discrimination, they viewed their discriminatory experiences as being more significant in their choice of specialty compared with women (Stratton et al. 2005). Women experienced more sexual harassment in surgery than in any other subspecialty (Hinze 2004; Stratton et al. 2005), a specialty where women have been highly underrepresented (Riska 2009). Gender segregation across specialties occurs cross culturally (Riska 2009).

Discriminatory practices have also limited women's ability to conduct research. In the late 19th and in the 20th century, women were denied access to internships, which meant that they were more likely to do clinical work rather than research (Morantz-Sanchez 2000). Women physicians were represented in higher numbers among clinical faculty at medical schools compared with research faculty. This is due to the difficulty they experienced in finding mentors (Bickel 2001), accessing information, and promotion and tenure policies which reflected the needs and experiences of an unencumbered male worker or a male worker with domestic support at home (Morrissey and Hoersch 2004).

Gendered Specialties

The structure of medical specialties is gendered. Obstetrics and gynecology are specialties that focus on women's reproductive health problems, while urology is a specialty that focuses primarily on men's urological problems. Other primary care and sub-specialties take care of both women and men. However, obstetrics and gynecology provide both primary/routine reproductive health care and sub-specialty care. For younger women, an obstetrician-

gynecologist is often the only physician they see for their primary health care needs. In this bifurcated system, a primary care physician such as a family physician, internist or general practitioner is responsible for the majority of a woman's body, while obstetrician-gynecologists are responsible for reproductive organs and hormones. In contrast, primary care physicians are responsible for all of men's primary health care needs. Specific training for primary care and sub-specialty practice occurs at the level of post-graduate education. Undergraduate medical training exposes students to different specialty areas during their clerkships.

Professional boundaries between specialties discourage physicians from encroaching on each other's territories (Abbott 1988). This norm creates an environment in which disciplinary divisions encourage thinking about various health problems as the appropriate domain of certain specialty areas. It encourages thinking of women's bodies in fragmented ways, where reproductive organs and hormones are separated from the rest of a woman's body. There is an additional division in which psychiatry and psychology address mental and emotional issues. This separates health problems and clinical thinking about health problems as either having physical or mental/emotional causes. Such fragmented (rather than integrative) thinking is reinforced by the physical differentiation of spaces in which care is provided, with each specialty having its own clinic, office and/or area of the hospital. The artificial fragmentation of women's bodies and the separation of the body and mind are replicated in

gendered views about women and men, with women being viewed as emotional due to their hormones, while men are viewed as rational and stoic. Thinking in these ways allows men's maladies to be attributed to physical causes while women's maladies are attributed to emotional causes. Thinking in narrow disciplinary and gendered ways is resistant to change.

Cardiovascular Disease, the Type A Personality and Gendered Specialties

The case of cardiovascular disease provides an example of how gendered ideas are integrated into specialties. It was traditionally believed that men were susceptible to heart disease but women were not. Researchers had been examining the causes of cardiovascular disease for decades, and in 1974 that crystallized into the Type A personality (Friedman and Rosenman 1974). The Type A personality was defined as:

> An overt behavior pattern or style of living characterized by excesses of competitiveness, striving for achievement, aggressiveness (sometimes stringently repressed), time urgency, acceleration of common activities, restlessness, hostility, hyperalertness, explosiveness of speech amplitude, tenseness of facial musculature and feelings of struggle against the limitations of time and the insensitivity of the environment. This torrent is usually, but not always, channeled into a vocation or profession with such dedication that Type A persons often neglect other aspects of their life, such as family and recreation. (Jenkins, Rosenman and Zyzanski 1974)

The Type A personality associated with cardiovascular disease was clearly defined as masculine, if not hyper-masculine, and was identified most frequently with professionally successful men. In contrast, "The converse of this pattern, Type B, is marked by an absence of these characteristics" (Jenkins, Rosenman and Zyzanski 1974). Given the dualism ascribed to gender characteristics,

gender roles and women's exclusion from the paid labor force at the time this study was published, Type B refers to women. Women who were viewed as having nurturing, maternal characteristics or who did not assert themselves strenuously would be unlikely to be perceived as being at risk for cardiovascular disease.

The concept of the Type A personality provided a gendered framework for understanding cardiovascular disease, and it was integrated into clinical practice and medical education. Primary care physicians and cardiologists knew to be aware of the Type A personality as a risk factor for men. Even though cardiovascular disease was the primary cause of mortality for women, it was not viewed as a woman's problem. Dualistic gendered thinking allowed physicians and women to assume that some aspect of being a woman protected them from heart disease. Eventually, estrogen was ascribed with possessing protective cardiovascular effects. At that time, women were commonly prescribed hormone replacement therapy for menopausal symptoms which was believed to confer cardiovascular benefits to women (Baxter and Prior 2009). However, estrogen did not protect women from cardiovascular disease (Grady et al. 2002). In addition, some women who received hormone replacement therapy were at increased risk of heart attacks (Baxter and Prior 2009). This drug was marketed heavily by pharmaceutical companies and was immensely profitable for them.

Primary care physicians had been taught little about estrogen or hormones as that was the domain of obstetrician-gynecologists. Conversely,

obstetrician-gynecologists did not know much about cardiovascular disease. Most of their patients were of childbearing age, and their menopausal patients were at a young enough age that cardiovascular disease would not have manifested in very many. Hormone replacement therapy was prescribed inappropriately by both types of practitioners for menopause, while physicians were underdiagnosing cardiovascular problems in women. Disciplinary boundaries, specialized clinical sites, and gendered views about illness, women, and men constrained physicians' capacity to think in an integrative manner.

In contrast, the specialty of urology is very familiar with the problem of cardiovascular disease in men (Feldman et al. 1994). It is believed that erectile dysfunction and cardiovascular disease are related, and that erectile dysfunction might be an early indicator of cardiovascular disease (Thompson et al. 2005). Urologists have an important role in the prevention and early detection of cardiovascular disease (Yassin et al. 2011). Urologists' patients tend to be older, so that it is common for many of their patients to have cardiovascular disease. At the same time, they address problems that are perceived as indicators of declining masculinity, which are especially significant for the professionally successful patients who are more likely to have access to urological subspecialists. In such an environment, it is easier to reach the conclusion that there is a connection between erectile dysfunction and cardiovascular disease compared to recognizing that hormone replacement therapy might cause heart attacks in some women. Thus, gendered stereotypes about illness (the Type A

personality), a gendered specialty (urology), and gendered views about men facilitate making certain types of conceptual linkages, and thus diagnosing and treating these problems. It also reinforces gendered views about masculinity.

Traditional Women's Health in Medical Education

Women's health issues gained increasing attention within the medical profession after the women's health movements of the 1960s and 1970s. Within medicine, the two primary areas that the medical profession focused on were those that are most closely linked with femininity, i.e., the breast and the reproductive organs. The specialty of obstetrics-gynecology focuses on reproductive organs, while several different sub-specialties attend to breast health issues. Despite the increased attention, medical education and training did not prepare physicians adequately to meet their female patients' health care needs in these areas of practice.

Breast Health

Despite the fact that breast cancer and breast feeding gained attention over the past decades, there continued to be significant deficits in medical education about both. Women's breast cancer activism contributed to substantial funding for research and helped to eliminate or reduce traditional approaches to care that were distressing to women. This included standard practices such as the radical mastectomy, the performance of biopsies under anesthesia followed by the immediate removal of the breast without a woman's knowledge, and the

use of high dose chemotherapies (Ehrenreich 2001).[4] Activism and increased funding contributed to improvements in detection, treatment, and to an expansion of sub-specialty training in breast surgery, radiology and oncology. In primary care, the main detection method was the clinical breast examination which could sometimes detect cancers that were not evident on mammography (Barton, Harris and Fletcher 1999). Although there were improvements in medical training, Madan et al. (2002) found that "Medical student training in clinical breast examination is deficient at most medical schools" (P. 637). Clinicians often reported that they were not comfortable with their clinical breast examination skills or they did not know how to perform the exam, which may be due to a number of factors (McDonald, Saslow and Alciati 2004). There is a great deal of inconsistency in training materials about how to perform the exam. Clinical skills may decline over time, with third year medical students performing better on examinations than first year surgical residents. A thorough breast examination is estimated to take between 6 and 8 minutes for both breasts which may be more time than students and clinicians believe they can allocate.

Many physicians did not feel confident in their knowledge about breast feeding and problems associated with breastfeeding. A national study of residents and physicians in the specialties of pediatrics, family medicine, and obstetrics-gynecology found that on a number of measures, "all groups demonstrated significant deficits in the knowledge of breast-feeding benefits and

[4] First Published in *Harper's Magazine*, November 2001.

clinical management" (Freed et al. 1995:472). This included patient counseling as well as treatment for jaundiced infants and breast abscesses. The majority of physicians believed their medical training had been inadequate and only about half felt confident in counseling women about breast feeding. Those who felt confident were likely to have had either a personal experience or a spousal experience with breast feeding.

Despite the significant attention given to breast health issues for women, medical training continued to be inadequate, particularly in primary care specialties. Given the relevance of breast cancer and breast feeding to the majority of women, the inadequacy of medical training indicated that it was a low priority among medical educators.

Pelvic Examinations

Women commonly receive routine gynecologic care which is viewed as a basic aspect of primary care for women (Goldstein et al. 2005), but training in these exams has been inadequate. A pelvic examination was considered accurate if students could do three things correctly. They needed to be able to assess the contour of the uterus, uterine size, and identify the presence of masses (Padilla, Radosevich and Milad 2005). In a comparison of student proficiency with that of fourth year gynecological residents and board certified gynecological attending physicians, all conducted under ideal clinical circumstances (an anesthetized patient with an emptied bladder), significant deficits in students and physicians' skills were found. The three main aspects of

the pelvic examination were done correctly by 57% of medical students, 64% of residents, and 70% of attending physicians (Padilla, Radosevich and Milad 2005), which is low. Rates of successful examinations would be lower in normal clinical encounters because they would not be performed under 'ideal' conditions. These scholars hypothesized that an increased reliance on imaging technology would lead to diminishing pelvic examination skill levels. In addition, internists reported relatively little gynecological training for common problems during their residencies (Coodley, Elliot and Goldberg 1992), while family medicine residents rarely performed pelvic examinations (Morris and Morris 1988).

The inadequate training that medical students and residents received in how to perform pelvic examinations contributes to viewing patients as teaching material and to performing unnecessary procedures. During residency training in obstetrics-gynecology, patients often had unnecessary surgical procedures done so that residents could improve their skills and learn (Scully 1994). On a national level, there was a more than five-fold increase in caesarean sections over a 20 year period, growing from 4.5% in 1965 to 34% in 1986 (Sakala 2003).

Gendered Medical Knowledge

Gendered medical knowledge is a significant component of the hidden curriculum and is integrated into the sources of knowledge, production of knowledge, and in daily practices. The primary sources of medical knowledge include curricular content, teaching materials such as texts, research studies, faculty, patients, and medical practices. Knowledge production in medical

education involves an interpretive process of using standards, technology and clinical reasoning. Gendered knowledge is integrated into daily practices throughout medical education. Daily gendered practices are resistant to change (Ridgeway 2011). These daily practices are all components of the formal, the informal, and the hidden curriculum.

Medical Curricula

Medical curricula and texts are gendered in two primary ways, i.e., the content - both what is included and what is excluded, and biased representations of women and men. Historically, many aspects of women's health have been excluded from medical curricula (Dan 1994; Wallis 1994; USDHHS 1997). A Congressional report of U.S. medical school curricula shows mixed results related to the inclusiveness of women's health topics (USDHHS 1997). This study was based on self-reports from U.S. and Canadian medical schools. The findings included the following: 84% of medical schools reported that they included sex and gender differences in their overall curricular approach. Of 100 women's health topics listed on the survey, 57% of the schools indicated that they taught at least 90% of the survey topics. The mean number of topics taught was 84 out of 100. However, only 7% of the schools reported that they had implemented a basic science women's health curriculum, and only 12% reported that they had implemented a women's health curriculum across the clinical disciplines. Furthermore,

> Up to 15 percent of schools did not include gender-specific information about heart disease, lung cancer and stroke, the leading causes of death in women across the lifespan. (USDHHS 1997:32)

In many other programs, information about these topics was part of an elective and was not required. Thus, up to 25% of students could graduate without learning gender specific information about the leading causes of mortality in women. In addition,

> Up to one-third of responding schools did not teach about chronic medical disorders that disproportionately affect women, such as temporomandibular joint disease, chronic fatigue syndrome, interstitial cystitis and fibromyalgia. (USDHHS 1997:32)

Medical Texts

When curricula and texts included information about women, they tend to be based on the disease processes, symptoms, and treatments in men. The 70-kilogram man was used as the normative human model (Lowey 1994). Students learned this early in the educational process during anatomy education. Anatomy texts have traditionally only used images of men, except in reference to women's reproductive organs (Giacomini et al. 1986). A historical analysis of Grey's anatomy texts found that the male body was represented as a universal standard (Petersen 1998). A study of anatomy texts throughout the 20th century concluded that biased representations of women and men helped to produce and maintain sex and gender as binary categories (Moore and Clarke 1995). The situation has improved to some degree and images of women's bodies can be found throughout more recent anatomy texts. However, a commonly used anatomy text is entitled A.D.A.M. Student Atlas of Anatomy (Olson and Pawlina 2008). While

A.D.A.M. is an acronym for Animated Dissection of Anatomy for Medicine, it is also the name of a man and it reinforces the notion that men's bodies are normative.

Images of women in medical texts have primarily represented women with respect to reproduction. Women were commonly represented in illustrations related to reproduction, but rarely in non-reproductive depictions (Laurence and Weinhouse 1994). One of the significant problems related to these curricular materials is that they "define much of what will and will not be taught in the classroom," as well as leading students to "assume that what is depicted in the text is normal and what is absent is abnormal or irrelevant" (Mendelsohn et al. 1994).

There was a significant response to the 1994 *JAMA* article. In 1995, *JAMA* published 11 response letters. Of these, nine letters were highly negative and exhibited anger and hostility toward the journal for publishing the article, toward the topic itself, toward the authors, and toward the government for funding the study. One letter was relatively neutral, and one was slightly positive. Even though the lack of attention to women's health was beginning to receive national exposure by 1994, the topic itself elicited a highly emotional response from many within the medical profession, suggesting that the letter writers felt personally affronted by the study and the topic. It was an indicator of the difficulties that would follow and the pressure that would emerge in efforts to maintain the status

quo when faced with an attempt to address women's health issues within medical education.

Images of women in medical texts have traditionally represented women as emotional and unreliable (Chesler [1972] 2005). In medical school, students:

> Continuously encounter the demeaning and objectifying way women patients are presented in classrooms, textbooks, and actual clinical settings … Often women are portrayed as hysterical or as nagging mothers or as having trivial complaints. Men are almost never pointed to as having a psychological component to their illnesses. (Boston Women's Health Book Collective 1992:666)

Gender biased representations of women were also found within gynecology texts (Scully and Bart 1973).

There was also bias in clinical guidelines for medical practice which are also used in medical education and are generally considered a reliable source of information.

> Clinicians, encouraged by professional societies and guidelines, have been using medications, procedures, or preventive measures in vain. For example, percutaneous coronary intervention performed for stable coronary artery disease and hormone therapy prescribed for postmenopausal women cost billions of dollars and supported the existence of entire specialties for many years. (Prasad, Cifu and Ionnidis 2012)

Teaching Methods

The commonly used method to teach medical students to learn to do pelvic examinations was on anesthetized patients without the patient's knowledge or consent (Wilson [1972] 2002). A 2003 *Chicago Tribune* article indicated that this educational teaching method continued in medical schools (Markoe 2003). Medical students learned to do pelvic examinations in their third

year clerkships. They often approached their first pelvic examinations with a great deal of trepidation (Buchwald 1979). While medical students may have had qualms about conducting these examinations without consent prior to their clerkships, after they completed their clerkships, their views about the need for patient consent diminished (Ubel, Jepson and Silver-Isenstadt 2003). They began to objectify their women patients and prioritized their own learning needs while discounting patients' needs.

Standardized patients are commonly used in medical education to teach medical interviewing. Standardized patients are actors who are trained to present themselves with typical histories and symptoms that students must elicit. This reflects the notion of a "standard human" which is constructed via a male body (Epstein 2007). Other innovations in medical education included the use of mannequin simulators and virtual reality simulators, including simulators for pelvic examination instruction. These have been criticized for encouraging reductionist anatomical thinking, perpetuating a one-sex body, and depersonalization without teaching communication skills or cultural values and practices (Riska 2009). As previously noted, case materials also commonly had gendered and racial biases. Problem based learning materials, which are less comprehensive than case materials because they focus on a narrow "problem" area, encourage a disease based and depersonalized view of patients.

Medical Research

An important source of information for students, residents, and faculty is medical research, even though it may be inconclusive, contradictory and create uncertainty for learners (Timmermans and Angell 2001). Accessing and learning to interpret research is essential to learning and to practicing evidence based medicine. However, significant biases existed related to women's health research including: the exclusion of women from clinical trials, ignoring gender differences and analysis in research, the lack of funding for women's health, and few women in senior positions in science (Skolnick 1992). In fiscal year 1982, "funds dispersed on grants related to women's health were less than 1.3% of the NIH budget ($54.5 million out of $4.2 billion)" (Wallis 1998). A slightly more optimistic picture was presented in a General Accounting Office (GAO) study. The 1987 GAO study of NIH expenditures found that 13.5% of funds supported research on women's issues, and 80% of funds supported research that affected both men and women (USDHHS, PHS and HRSA 1995.) However, the GAO study also found that women were highly underrepresented in research that affected both sexes. The problem went beyond clinical research and extended to laboratory research. Biological differences in health and illness were rarely addressed at the molecular or cellular level, and studies have primarily relied on male laboratory animals, both of which have contributed to additional bias (Wizemann and Pardue 2001).

For many years, researchers excluded women from clinical trials in the misguided attempt to protect them from being exposed to experimental medications (Mastroianni, Faden, and Federman 1994). There were concerns that experimental medications might harm a potential fetus. At the time, both lay women (including many women's health activists) and medical researchers believed that protecting women from such harm was desirable. In addition, researchers often argued that including women in research studies was too complicated and too expensive because of hormonal fluctuations in women's bodies, which would make it difficult to interpret study results and would invalidate the research (Laurence and Weinhouse 1994). Bias also occurred toward women research subjects when researchers established inclusion criteria that served as barriers to participation and enrollment. For example, a study might require "reproductive-age women to be sterilized or use two forms of birth control" to participate in the research (Laurence and Weinhouse 1994:x). Consequently, few resources were devoted to women's health issues and there was a lack of knowledge about many aspects of women's health.

When research was conducted on women or about women's health issues, the studies were at times designed inappropriately or unethically. In one egregious case, a study at Rockefeller University attempted to examine the effects of obesity on estrogen and the consequences for breast and uterine cancer; but all of the research subjects were male (Johnson 1992). Laurence and Weinhouse (1994) provide numerous examples of other problems related to

women's health research. A government funded study was conducted with prostitutes who serviced U.S. military men at a military base in the Philippines. Although the women were tested for HIV, some of the women who tested positive for HIV were not told the meaning of their diagnoses and they did not receive medical treatment (Laurence and Weinhouse 1994). Instead, they were given jobs and encouragement. The researchers wanted to examine the effect of positive thinking on the disease. Unfortunately, these examples are neither isolated incidents, nor are they atypical in the history of women's health. Other examples of the unethical experimentation on women and gender bias in medicine and research are described by Seaman ([1969] 1995), Corea (1985), Worcester and Whatley (1988), and numerous other authors.

The NIH Revitalization Act of 1993 required that women and minorities be included as subjects in NIH funded studies unless there was a compelling reason that women should be excluded, e.g. studies diseases that only occurred in men such as prostate cancer. The FDA did not require a similar inclusion in private studies. While this increased the number of women in federally funded studies, women continued to be underrepresented in clinical trials. In addition, researchers often neglected to analyze their data based on sex differences so that progress in the development of knowledge about women's health slowed (IOM 2010). Overall, this has had negative consequences for women's health. Not only do women tend to have more adverse drug reactions compared with men, but a federal report noted that most drugs withdrawn from the market had

increased toxicity and excess deaths in women (General Accounting Office 2001). A similar issue emerged with medical devices that were not designed for women's bodies. Researchers had not considered that women might have different risks for adverse events due to body size, hormones, or other biological, environmental, or social factors (Pinnow et al. 2014).

More recently, attention has been given to the exclusion of female cells and female animals in laboratory research. Almost all research has been conducted using male laboratory animals (Zucker and Beery 2010; Beery and Zucker 2011). The extent of gender bias in medical and health research is substantial. It has been characterized as scientists "shirking their responsibilities to half of the human population" (Mogil and Chandra 2005). In May 2014, the NIH announced that beginning in October 2014, it would start to define policies requiring the inclusion of female laboratory animals in research and female cells in cellular studies (Clayton and Collins 2014). One researcher predicted that there would be resistance and hostility toward these policies.

> "Margaret McCarthy, a neuroscientist at the University of Maryland School of Medicine who studies sex differences, agreed that the new policies will meet resistance. "The reactions will range from hostile — 'You can't make me do that' — to, 'Oh, I don't want to control for the estrous cycle.'" (Rabin 2014)

Faculty Members

Some of the bias in medical education occurs because of what and how faculty members teach in laboratories, classrooms, hospitals and clinics. In a *New York Times* article "Dr. Adriane Fugh-Berman, a general practitioner in

Washington, says that on her first day in medical school a few years ago, a lab instructor told students to cut off the female cadaver's breasts and discard them" (Lewin 1992). At best, this sent a clear message to medical students that woman breasts are medically useless and uninteresting and that their removal makes the cadaver more normal, i.e., more like a male body. At worst, it sent the message that mutilation and abusive treatment of women's bodies is acceptable. Women's health issues, such as concerns about breast cancer, the medical issues associated with this disease, or the importance of this body part for women and its significance within our culture were viewed as irrelevant. Even within the specialty that has traditionally been defined as the women's healthy specialty, obstetrics-gynecology, gender bias has been prevalent in training, as was the case with teaching pelvic exams without patients' knowledge or consent.

Faculty members rely on their own clinical experience and the knowledge and practices they acquired during their own medical training, as well as on research in their fields. Given the historic gender biases in each of these domains, their own knowledge is also biased. This bias is conveyed to students and residents. Because students and residents are still learning and are attempting to project an image of competence to faculty, they hesitate to challenge their faculty members in clinical matters. Students want to avoid poor evaluations and punishment. In addition, students and residents experience a great deal of uncertainty about their own knowledge and skills, making it unlikely

that they will disagree with faculty members. The pressure to submit to authority is compelling.

Patients

Patients and their bodies are sources of information for students, and this information is transformed into knowledge. Students learn to interview patients, obtain medical histories, and document information in medical records in a specific format known as SOAP notes. SOAP is an acronym for subjective, objective, assessment and plan. The subjective component is the patient's chief complaint, followed by a review of body systems, medical history, surgical history, family and social history, current medications and allergies. The objective component refers to measurements of vital signs, findings from the physical examinations and any laboratory or test results. Assessment refers to the differential diagnosis in which possible problems are identified in order of likelihood. Plan refers to plans for additional testing, treatment, or management. The student's task is to create the medical record and then present the case to superiors. Students' task is to elicit information that will facilitate the completion of the medical record. This structured format decontexualizes information about patients because it limits information about a patient's home and community, even though they may have a role in the disease or have an impact on treatment. The structure of the medical record and case report are both decontextualizing and depersonalizing (Anspach 1988). They obscure gender specific information about women and their lives.

Language is used in case reports to indicate the subjective nature of what patients say, e.g. “reports” or “denies”, while objective measures are presented as fact. When patients are women, attributions about women’s emotionality and limited rationality enable students to view that information as suspect. Both the structure of the interview process in which students elicit what they perceive as relevant information in a specific order (Mishler 1984, 1996) and the case presentation serve to increase the distance between physicians and patients. This promotes the adoption of detached concern and reduces the possibility for connectivity and empathy, both of which are perceived to be feminine characteristics.

Patients’ bodies are important for professional identity formation. As students act on patients bodies via the performance of examinations or treatments, it allows them to adopt the role and identity of a physician. It is an authoritative position in relation to the patient.

Medical Practices

Medical practices are also gendered, and students and residents learn these practices during their training. Episiotomies (a surgical cut in the perineum) are one of the most common surgical procedures and they were used in more than 30% of childbirths in the U.S., even though there was no evidence to support the belief that they were beneficial to women (Lede, Bellizan and Carroli 1996; Thorp and Bowes 1998). Episiotomies were a medical practice introduced in the eighteenth century. Many reasons had been cited for the need for

episiotomies in childbirth, but studies ultimately determined that none of the reasons were supported, and in fact, the procedure caused more harm than good (Stein 2005). Episiotomies were more common among first time mothers, with between 70 and 80 percent having the procedure done. Obstetrician-gynecologists finally studied the issue and determined that “the routine use of episiotomy should be abandoned” (Lede, Bellizan and Carroli 1996). While episiotomy rates declined slightly in some areas of the world after that, they continued to be a routine practice (Graham et al. 2005). Episiotomies provided a greater benefit to obstetrician-gynecologists than they did to most women.

There is also an extensive history of the medicalization of women’s lives, including childbirth, sexuality, women’s emotions and behaviors, and of life stages such as menopause (Sherwin 1998; Bell and Figert 2010; Rojek Kleinman and Dan 2013). The tendency to medicalize women’s lives results in the over use of technologies which are implemented daily in the clinical care of women, and which students are expected to learn and apply in their own work.

Medical Work as an Interpretive Process

Knowledge is produced in clinical settings via a process of clinical reasoning in which information associated with a specific case is integrated with scientific knowledge and clinical experience (Montgomery 2005). Technology is used to acquire information and then standards are applied to interpret that information. This is the daily work of clinical medical education and medical

practice. It is an interpretive process. It is in these daily practices that gender is reproduced and reinforced.

Although clinical reasoning integrates the art and science of medical practice, it is assumed that certain aspects of the information being used are objectively true. For example, there are standards for what is considered normal and healthy for adults. Ranges are specified that distinguish between a healthy and potentially unhealthy adult and which clinicians use to interpret data from the patient's body to assess whether there is a problem. The ranges are generally assumed to apply to both men and women equally. However, that may not be an appropriate assumption. For example, algorithms that are used for cardiac monitoring that apply to men may not apply to women. This can result in errors such as the misidentification of the absence or presence of illness.

Scientific knowledge is also produced using technologies that are assumed to be gender neutral, but which may not be. Medical equipment tends to be created for male bodies and may not work in the same way in women's bodies. Traditional catheters are better suited for men's larger blood vessels and will not produce equivalent results in women. Consequently, the higher complication and mortality rates among women may be an artifact of the equipment that is used and may not be an absolute difference.

Standards, technologies, clinical guidelines and research are integrated into the interpretive process of clinical reasoning, as is reliance on clinical experience, either one's own or that of others such as faculty members, peers,

and those further along in the educational process. Medical education is an apprenticeship where you “see one, do one, teach one” (Light 1988). The expected level of knowledge or skill acquisition is incorporated into formal curricular competencies and learning objectives which specify whether the objective is that one knows something, can do something, or will know the information adequately and be able to convey it to others. During mortality and morbidity conferences, presenters teach when they caution their colleagues to avoid similar problems (Bosk 1979).

In the clinical setting, students learn how to do things based on how faculty members do things. They learn to perceive patients and problems the way that faculty members perceive patients and problems. When faculty members offer their unconscious patients to students to learn to perform a pelvic examination, it teaches students that this is an acceptable way to treat women. With women patients, if things appear to work well or well enough, they are repeated. The repetition of these practices creates a foundation of clinical knowledge for students and faculty. Both students and faculty are unlikely to be aware that their perceptions and knowledge are filtered through a model of a normative male body which affects the construction of the differential diagnosis, and which then guides assessment, treatment and management. This makes it more difficult to incorporate information that is not part of the normative model, such as which sex is prone to specific illnesses, the incidence of illness between sexes, what constitutes typical symptoms, how the disease process works, how

drugs and treatments work, what appropriate dosages are, and what normal side effects are for each sex. In the case of cardiovascular disease (CVD), there are many incorrect assumptions based on sex. It is often assumed that it is primarily a male problem even though it is the primary cause of mortality and morbidity in U.S. women. The greatest risk with CVD is believed to be a heart attack, even though in women it is stroke. The disease process is thought to be the same in both sexes even though men tend to have plaque buildup that creates blockages while women tend to have a more diffuse narrowing of the arteries. It is believed that aspirin therapy prevents heart attacks, even though it only prevents them in men but not in women. Men's symptoms define the problem, even though women tend to have different symptoms. When historically there has been and continues to be such a misunderstanding about the primary cause of mortality and morbidity in women, it indicates the magnitude of the lack of understanding about women's bodies and about illness in women more generally.

When women's complaints and health concerns do not fit into the established clinical knowledge base, then one fallback is to rely on gendered perceptions of women, i.e., that they are experiencing emotional or mental issues. This is a characteristic of the reliance on aphorisms, maxims and old saws in clinical reasoning (Montgomery 2005). These are sayings and rules that are used in clinical reasoning to help make sense of a clinical problem, such as Occam's razor which is the rule of parsimony or "nothing is ever 100%." These sayings may not be consistent.

> Contradictory rules are the old saws, adages and aphorisms that concern the clinical encounter. They embody the practical wisdom of experienced clinicians, and almost every one of them can be opposed by another maxim, rule of thumb, or old saw of equal weight and counterforce. (Montgomery 2005:104).

Clinicians can also rely on metaphors and models such as Type A and other gendered schema about men and women. With women patients, a clinician might conclude “it’s all in her head.”

Examining Gender within the Hidden Curriculum

Within medical education, gender is part of the hidden curriculum. It is a component of daily educational experiences in classrooms, laboratories, clinics, hospitals, and while providing patient care. Gender is also central to both professional and personal identities. As a professional identity, being a physician is based on a set of masculine attributes and values. Gender is a foundation for medical knowledge in which men are normative. Gendered knowledge is produced and reproduced daily in the process of clinical reasoning and in doing clinical work. It is in this context that women’s health courses, programs, and curricula were developed.

The gendered nature of medical education makes it difficult for insiders to perceive that there are problems in knowledge about or in clinical practices related to women. Yet the curricular efforts of those involved in women’s health medical education reform indicate that for them, cracks emerged in the system. They started to become aware of the gendered hidden curriculum. My first

research question addresses this point. How did they become aware that there were problems in medical education related to women?

Beginning in the late 1980s, women's health courses, clerkships, residencies, fellowships and continuing medical education programs were created under the auspices of various organizations including medical schools, hospitals, and professional societies. Curricula were also created which identified the knowledge and skills that physicians should possess about women's health. Women's health clinics were created to address health issues beyond breast and reproductive health, and new groups and alliances were established. Beginning in 1996, the USDHHS began designating academic medical centers and community health clinics as National Centers of Excellence in Women's Health. It was a time for innovation. While many of these projects were primarily undertaken by one individual, many were also collective endeavors. This meant that there were spaces within the system and structure of medical education where these could projects could exist, or at least they could exist under certain conditions. My second research question addresses this point. What were these women's health leaders able to create? This encompasses how their innovations fit into the medical education system, the process they used to develop curricula, and how their efforts fit into disciplinary boundaries.

The changes that they implemented were done at an organizational level even though organizations tend to be resistant to change. The gendered aspects of medical organizations are maintained by inequality regimes which are

"interlocked practices and processes that result in continuing inequalities in all work organizations" (Acker 2006:441), making them resistant to change. This includes the daily gendered practices associated with medical education and clinical care. This leads to my third question. Given these significant challenges, how did they do it? What were the strategies and that they employed and the processes that led to organizational change? What types of resistance did they encounter?

Medical Education as a System

I adopt the perspective of medical education being a system which is advocated by Hafferty and Castellani (2009). It is only by examining undergraduate medical education, postgraduate medical education, and continuing medical education together that we can see how the hidden curriculum operates. Most studies only examine a narrow aspect of medical education such as a specific course, specialty, or level of education. Other studies consider specific learning contexts such as mortality and morbidity conferences, journal clubs, grand rounds, laboratories, clinics, didactic courses, small group learning – both problem based and case based, and informal contexts such as hallways, meeting rooms, and other social settings. My respondents were involved in creating a wide range of programs at multiple levels of medical education which reflects the fragmented way in which women's health was initially integrated into medical education. They represent many different specialty societies. Most studies only focus on one organization or one

specialty. In contrast, my work includes women's health leaders from across the U.S. This allows me to generalize about the process of curricular reform and the gendered hidden curriculum within the system of medical education. While these other works are informative, they are limited in their ability to help us understand how broad systemic or cultural changes might be possible.

My work also differs from most studies in medical education in that I focus on faculty and other leaders in women's health rather than on learners. As part of the system of medical education, faculty members embody the hidden curriculum and implement it. They are central actors in curricular reform efforts. If medical education is to change, then it will need to happen at all levels and will require faculty members' participation. In considering medical education as a system, this means that individuals who have a close relationship with it but are not insiders are also relevant. This includes members of professional societies, government officials, and lay individuals, all of whom were involved with curricular development about women's health. Most, but not all of my respondents are insiders. Lay individuals and government officials are part of the extra-organizational environment that is relevant to curricular reform. Altogether, my respondents represent various components of the complex medical education system in the U.S.

My Contribution

My work contributes to various literatures in sociology. Given that gender is a central aspect of my study, it contributes to our understanding of gender

within medical education and as an aspect of the hidden curriculum. Because I am using the hidden curriculum as a theoretical construct rather than merely viewing it as a process, my work expands our approach to theorizing about hidden curricula, an area that needs theoretical development. In examining the strategies that my respondents used to integrate women's health curricula, my work also contributes to understanding how resistance to the dominant biased and gendered paradigm in medical education operates. In addition, the strategies used by my respondents and the resistance they encountered can inform us about the medical education culture. On an applied level, my work contributes to understanding how we might learn from those involved in early curricular changes and how advocates for women's health curricula could proceed forward. My work can inform policy makers, curriculum developers, and women's health activists about how they might contribute to improving medical education about women's health.

CHAPTER 2

METHODOLOGY

My understanding of the period of curricular innovation in women's health comes primarily from two sources, my own work in developing women's health curricula and interviews with leaders in women's health medical education from across the U.S. For this study, I rely on two research methods, i.e., participant observation and interviews.

I began working in the field of women's health education in 1998 and I gained a great deal of experience and knowledge about medical education. As I worked in this field and as the field of women's health was becoming established, I wanted to understand how curricular change in women's health was possible. I interviewed women's health leaders across the U.S. about their work for a previous, unpublished study. For the current study, I conducted a secondary analysis of the interview data within the framework of the hidden curriculum in order to address the questions of how these leaders came to understand that there was a problem, what they did, and how they did it.

Participant Observation

There are many different types of participant observation, but in general, the participant observer does not influence the research setting and s/he takes field notes about what occurs in the setting. It is a formal research method and in

that sense, I was not a participant observer. I learned about the medical education environment because I was employed in that environment, but I did not take notes on my observations because it was not part of the study design of the initial research project. My observations were neither systematic nor formal for the purposes of research, as is the case when participant research is used as a research method (Musante and DeWalt 2011). However, I was a participant observer in the sense that I worked in the field and acquired insider knowledge about the field. In my employment, I was also an observer-participant which is an outsider stance (Tedlock 1991), so that I was both an insider and an outsider. I was an insider because I actively worked on developing women's health curricula, I was accepted in that role, and I had a leadership position in that role. I influenced the direction of and approach toward curriculum development. However, I was also an outsider because I am not a physician and most individuals who work at the highest levels of medical curriculum development are physicians.

I was employed in the field of women's health medical education from 1998 through 2008. I subsequently continued to work in that field in a volunteer capacity, and I continue that work to this day. My initial employment was at a National Center of Excellence in Women's Health (CoE) where I developed a model for multidisciplinary continuing medical education, which was a new educational methodology in the field at that time. I eventually became the

curriculum co-chair for the CoE. In that capacity, I had the opportunity to develop and lead many projects. I developed a family planning curriculum for medical students and residents. I chaired the committee that developed an interdisciplinary graduate concentration in women's health. I led the development of one component of the national Heart Truth professional education campaign. I developed new methodologies for multidisciplinary physician training. I was centrally involved in writing several components of the BIRCWH grant for our university, and many other projects. While employed at the CoE, I participated in meetings both within our organization and nationally, and thus learned about curriculum development, curricular projects across the U.S., and about the individuals who were national leaders in women's health medical education. To a lesser extent, I also learned about the challenges and progress in the areas of women's health research, clinical care, and the advancement of women in medical leadership.

The CoE where I was initially employed was not in a medical school, but it partnered with an academic medical center on many projects. When I was later employed in a medical school at the same university, I continued my curricular involvement with the CoE. I was employed in both a medical education department and an obstetrics and gynecology department. In the former, I learned about many aspects of medical education and its complexity, I worked with subspecialists to develop curricular materials, and I attended the national

Association of American Medical Colleges conferences where I learned much more about how medical education works. In the latter department, I learned about obstetrics and gynecology in a way that broadened my understanding beyond feminist critiques of the specialty. I observed the high degree of concern for patients and faculty members' efforts to provide culturally sensitive care. I observed at early morning meetings with interns and residents in the hospital. In my positions, I was involved in curricular development at all levels of medical education, including undergraduate, residency, fellowship, and continuing education. I participated in journal clubs and attended grand rounds. I was involved with research training for fellows, teaching medical students and residents, and faculty development. I applied different educational methodologies which included multidisciplinary, didactic, case based, problem based, computer assisted, and train the trainer.

My women's health volunteer work began in 2008. I was one of the first members of a working group sponsored by the American Medical Women's Association whose goal was to develop a women's health curriculum for undergraduate medical education. Over time, this group changed its objective to establishing women's health digital resource materials for faculty members in order to advance women's health in medical education. As the field of sex and gender based medicine began to emerge, the working group evolved into a separate organization, the Sex and Gender Women's Health Collaborative, of

which I am an executive and board member. This group continues to promote women's health in medical education, but through a sex and gender lens. Its various projects are national in scope such as reviews of licensing exams for the National Board of Medical Examiners.

Over the past several years, I have worked in the field of health professions education. I have been conducting a process and outcomes evaluation of curricular changes at two dental schools. This involves multiple research methods with multiple stakeholders. This work has also provided me with insights about health professions education and has also informed the current project.

Respondents

I conducted interviews with twenty nine women's health leaders throughout the U.S. between 2001 and 2004. These data were archived in my home office and were available for this project. The individuals I interviewed were actively working toward curricular reform within medical education. IRB approval was obtained for the initial data collection and was obtained again to conduct the secondary analysis. Two individuals who were contacted for the initial interviews refused to participate, citing time constraints. In 2000, one respondent informed me that her colleague who had refused to be interviewed was "burned out" from her efforts at curricular change.

All respondents in this study were professionals. The majority were physicians and were also medical educators, but other professionals were relevant and are extra-institutional actors in the medical system. Respondents' institutional settings included the federal government at various senior administration levels, community hospitals, academic medical centers, National Centers of Excellence in Women's Health, and medical professional societies. Respondents included deans, medical education program directors, CoE directors, clinicians, medical professional society administrators, senior government officials, and women's health activists. Academic fields represented in this study include family medicine, internal medicine, obstetrics and gynecology, psychiatry, pharmacy, nursing, public health, and sociology. My respondents' diversity reflects the system of medical education.

Respondents were dispersed across the U.S., including the East coast, the Midwest, and the West coast. There were no respondents from the South or the Southwest, primarily because most of the early curricular efforts did not originate in these parts of the country. Almost all respondents were women (27 out of 29). Four of the twenty nine respondents were in senior positions in the federal government, and included both physicians and non-physicians. Two women's health activists who were involved in the women's health movement in the 1970's, and who continued to be involved with women's health activist organizations participated. The ages of respondents ranged from approximately

their mid-30s to the 80s. Almost all respondents were Caucasian. Most were born in the U.S. Respondents were not asked their sexual orientation, but some referred to husbands, wives, and some women respondents referred to their women life partners. About 10% self-identified as lesbian during the interview. Many respondents shared information about their families, spouses, partners and children.

Feminist activists were included as respondents in this study because the women's health movement influenced women's health in medical education and because these individuals worked on women's health curricula. Interviews with these women provided an opportunity to better understand the context for women's health. In addition, these respondents have strong links with the medical community and provided an alternative perspective on what was occurring within the medical community. They were involved with policy, research, program development, many educational initiatives and programs, and political activism on behalf of women's health. They offered a unique and valuable perspective about the issues within the medical profession related to women's health. Some lay women's health activists began with the idea that much of women's lives was normal and did not need to be medicalized, so they began with the assumption of normality rather than deviance or illness. Although most respondents in this study could be characterized as women's health activists, the two lay activist respondents differed to some extent from the

critical/feminist voices within academic medicine because they did not live with the medical model in the same way as the others. Their primary identification is with women and the women's health movement rather than with the medical profession. These interviewees helped to keep me from "going native," i.e., from accepting what the physician respondents were saying as fact, and thus enabled me to examine physicians' responses more critically as I was conducting the interviews and also in this analysis. This suggests that when primarily studying one group, a useful research strategy is to include interviews with informed individuals who are outside of those groups. A table of respondents' pseudonyms, field, type of organization, and respondent type is in the Appendix.

The Interviews

Interviews were open-ended and were directed by the interview guide. Interviews averaged one hour and fifteen minutes in length, and ranged from 23 minutes to 2 hours and 56 minutes. Lengthier interviews allowed for an in-depth discussion of various women's health issues and experiences. Interviews were usually conducted at the respondent's office or in a conference room near their office, but interviews were also conducted in one respondent's home, in a hotel room, over lunch, in meeting rooms at professional conferences, and while respondents were attending to other professional responsibilities such as medical students and residents. I adapted the interview to the format that was most comfortable, convenient, feasible, and amenable to each respondent. For

example, we may have planned to meet in the respondent's office, but upon arrival, the respondent was supervising residents in a clinic, so we met in a room near the clinic. The respondent and I moved to a quiet area of the room where we would not be overheard, but where others entered occasionally to check something on one of the computers, and where residents came to ask questions. With each interruption, the interview paused. Not knowing how many interruptions there might be, I had to make sure that I was focused on the central and unique things this respondent could tell me. In two cases, respondents had agreed to a one hour interview, but upon arrival, I was informed that I would have half an hour. In these cases, I had to focus on my central questions. After half an hour, one of these respondents indicated that she could give me another half an hour of her time.

Initially, interviews were designed to be one and one half hours in length, but it became apparent that some respondents were hesitant to allocate that amount of time to an interviewer that they were unfamiliar with, especially given the extraordinary demands of their schedules. The proposed duration of the requested interview was reduced to one hour, and the interviews became more targeted to elicit the unique information that could only be provided by that one individual. On two occasions, respondents unexpectedly had other emergencies that they needed to attend to, and the interview time was reduced to

approximately half an hour. In the majority of cases, respondents were willing to spend additional time beyond the requested hour.

All interviews were audio recorded, except in one instance when the respondent preferred that no audio recording be made. I asked all respondents if making an audio recording was acceptable to them. I took notes at all interviews with the subject's permission. Interviews were transcribed.

Interviews with all of the respondents focused on the issues set forth in the interview guide (see Appendix), but time and other constraints meant that each interview had to be adapted to the particular respondent. The interviews began with a few common questions about how the respondent became interested in the field of women's health, followed by a set of questions that were specific to the respondents' organizations and their work in women's health education. I continued conducting interviews until there did not appear to be any new information about the process of curricular reform. My last few respondents had experiences that were similar to those of prior respondents.

All interviews began with a brief discussion about how the respondent became aware of women's health issues and started to work in the area of women's health. When I posed this question, the interview proceeded normally with most respondents. However, in the interviews with male respondents, these same questions seemed to imply that they needed to justify their interest in and credibility as a women's health leader. The implication was that a male

physician's interest in women's health might not be natural in some way. This hidden meaning was unintentional, and respondents did not appear to be insulted. Both provided justifications, and they were kind and helpful during the interview.

The Interview Guide

I developed the initial interview guide (see Appendix) to provide information about cognitive, structural, relational and motivational aspects of the development and implementation of women's health initiatives, and to provide a context in which to interpret these components. Questions were asked about the respondent's background, their involvement in and knowledge about women's health, their understanding of the problems in women's health and how they defined those problems, how their understanding evolved, the kinds of solutions that they envisioned, and what they actually did to create educational initiatives about women's health in medical education. During the actual interviews when time was short, the focus of the interview was on what they actually did and how they did it. I also focused on the unique information that each respondent was able to provide rather than have each respondent discuss information that was readily available, unless I determined that I needed to have them make such statements in their own words explicitly for the purpose of this interview. The interview guide was used as a true guide for the types of questions that I asked of each respondent and for the issues that I focused on. Each interview was

targeted to address each respondents' specific area of expertise, accomplishments, what the respondent did and how she or he did it.

Coding and Analysis

I used a modified grounded theory approach to code and analyze my data (Glaser and Strauss 1967; Schwartz and Jabobs 1979; Charmaz 2014). Schwartz and Jacobs (1979) describe grounded theory in the following manner:

> In grounded theory, data collection, observation, coding and categorizing the data, and developing theories all tend to go on simultaneously and to mutually support one another. In this way, several levels of analysis are constantly feeding back into one another. Schwartz and Jacobs (1979:28)

With this approach, the focus is on the data and all analyses are rooted in the data. For this study, I used archival interview data so I could not simultaneously I code and analyze the data. However, when I collected my data, if a particular respondent raised a point that I had not encountered before, I integrated the new information into subsequent interviews.

My approach to coding and analysis is a modified grounded theory approach in that my focus was on my respondents' experiences, meanings and perceptions. Because I was employed in the field of medical education for many years and because I continue to be involved in a national sex and gender and women's health education project, I have a better understanding of how the medical education system works and of my respondents' worlds and meanings. On the other hand, I was and am an outsider to that world, so I carefully attended

to how my respondents experienced events and which aspects they took for granted.

The focus of my interviews was on how individuals came to understand that women's health was an issue, what they did, and how they did it. Rather than imposing categories on my data, I analyzed the data based on the patterns, themes and categories that emerged from my data and my respondents' experiences and understanding. The general concept of the hidden curriculum served as a sensitizing concept and a guide to analyzing my data (Blumer 1954; Bowen 2006), as do the concepts of structural and cultural factors. These concepts served as a guide, but I did not limit my coding and analysis to them. As I began analyzing my data, I began to wonder how it was possible that my respondents became aware that there were problems in the medical profession's approach toward women's health, while the majority of those in the medical profession continued to be unaware of the problems. I then began to code my data for how my respondents became aware and what their initial position was when they became aware. In this work, I refer to this initial position as a starting point.

In coding my data, I endeavored to identify the processes that were going on, the context in which the processes occurred, and how my respondents viewed these processes. I coded line by line, and as I examined what my respondents have told me, I continually asked myself "what is going on here?" I

coded in terms of processes as much as possible and I used active terms for the codes. If no process seemed apparent, then I coded with a descriptor. As the coding progressed and as I attained a better understanding of what was happening, I recoded descriptors in terms of processes whenever possible. In general, my approach to coding was open coding in that the codes emerged from respondents statements rather than being imposed by me on the data.

I grouped the codes that appeared to go together and determined if the code was the correct code or if there was better terminology for the code. As I developed better terminology and more precise codes, I went back and recoded the prior data. Grouping the codes allowed me to identify various dimensions of the processes that were occurring and relationships between the codes and the processes. The coding of the data is a constant comparative process (Glaser and Strauss 1967; Strauss and Corbin 1990). Glaser and Strauss (1967) indicate that "By comparing where the facts are similar or different, we can generate properties of categories that increase the categories generality and explanatory power." I compared codes to each other to determine if the codes were capturing the data, and I grouped codes to examine how they fit into the concepts that appeared to be emerging from the data. I also wrote memos for each interview with codes, quotes, tentative analyses, and questions that emerged.

My first research question addressed how my respondents became aware that there were problems within medical education about women's health. In my

coding and analysis, I focused on the structural and experiential aspects of developing awareness, but I also examined whether other factors and processes were present.

My second research question addressed what my respondents actually did and what they created. I attempted to determine the process they went through to create women's health curricula. The focus of my analysis was on the structural aspects of medical education and the locations in which medical education occurred. My respondents created programs, curricula, courses, clerkships, residency program and tracks, fellowships, and continuing medical education programs. The focus of this analysis was on identifying the process of curricular development within medical education.

My third question addressed how my respondents were able to implement curricular change. This encompassed the strategies they employed within their organizations and with other relevant parties. I also examined the resistance they encountered in their efforts, and both the structural and cultural aspects of this resistance.

Ethical/Human Subject Issues

I obtained IRB approval for a related study at the University of Pittsburgh, which provided the basis for the archival data for my current study. As the interviewer, I obtained informed consent from the respondents. Interview data were transcribed and were stored in a de-identified manner on a password

protected computer in my home. No other individual used, uses or had access to this computer.

In reporting the findings of my analysis, I do not identify any individual by their real names to preserve their confidentiality. These respondents continue to work in the field of women's health.

Interviewing Elites

The majority of my respondents were elites and there are specific issues that arise when interviewing elites. Interviewing elites involves a great deal of preparation that is beyond what is necessary for interviews with other types of respondents. An interviewer who was not prepared would be wasting the time of the elite respondent and would be disrespectful. If an interviewer is not prepared for the interview, it is unlikely that the interview would produce the type of information needed, or the depth of information that is needed for a study such as this. In addition, an elite respondent cannot be expected to be forthcoming if the interviewer demonstrates ignorance about their history when such information is readily accessible. In order for my interviews to be targeted to address the process associated with various curricular developments, it was necessary for me to know about the projects that the respondent has been involved in. In general, preparing for each interview involved, whenever possible, learning about the respondent's history, the organization(s) that they worked in and where they were leaders, the major curricular initiatives that they were

involved in and an understanding of what those projects were about, their major accomplishments, a select review of their professional publications, and interviews that were published about them or their work in either local, professional or national publications. Much of this information was available online, through their organizations, and at libraries. While I used this information as background preparation, I did not assume that all of the information was correct. Preparation for each interview ranged from a minimum of more than 10 hours to approximately 30 hours. The average length of time spent preparing for each interview was more than 20 hours. The comments of several elite respondents indicated that they had expected me to prepare for our meetings. At times, they expected me to know dates or aspects of their history that they could not remember. Preparation for interviews with elites was designed to avoid asking questions to which the answers are obvious, unless it was important that they state that which is obvious in their own words. Even though my interview preparation was designed to help focus the interviews, the open-ended interview format allowed for additional information to be discussed that had not yet been made public.

There was one difficulty associated with interviewing elites that was relatively unique to this population, i.e., it is much more difficult for an interviewer to be directive with elite respondents. For example, respondents may have a pre-conceived idea of the way in which they were willing to provide information, and

they may prefer to provide a long narrative rather than shorter responses. Especially when there is a status differential, as there was in my case being a student who was interviewing national women's health leaders, many of whom were nationally renowned, it was difficult to interrupt and point out to the respondent that they were addressing tangential issues. In such cases, I adapted as much as possible. I interjected questions that were relevant to the respondent's story but which would elicit the necessary information, and I used our remaining interview time to ask the most central questions. In order for an interviewer to be able to adapt to such occurrences, the interviewer must be prepared and be very clear about the central issues that must be addressed within each interview. If specific goals are established for each interview, it is more likely that they will be achieved. Instances in which respondents provided a lengthy narrative were beneficial, even if much of what they said was not directly relevant. These interviews provided a context for the issues of central concern and provided information that I had not previously considered.

In the following example of interviewing an elite respondent, although it was a unique situation, I demonstrate some of the difficulty associated with interviewing elites. In this situation, I did my usual extensive preparation for the interview. There were many published articles that contained information about this respondent's life story and her many accomplishments and honors in different professional domains. In this instance, the respondent had indicated in

advance that she would only grant half an hour for an interview (unlike other respondents who agreed to the longer format). When I arrived and asked an initial question about her background, this respondent spoke extremely quickly for approximately 15 minutes about her background, accomplishments, and influence in the field of women's health within the U.S. She spoke so quickly that I did not have an opportunity to interject. Much of the information she provided was already known to me, including information about her mentors and her family background, which included a maternal illness. After that, I was able to proceed with additional questions based on my interview guide. This particular respondent became engaged in the process, and was willing to grant additional time, so that the interview was approximately one hour in length as originally intended. It is not clear why she decided to spend more time, but it is likely that it was because I was prepared and demonstrated my awareness of her life story.

One challenge associated with interviewing elites is that because there is a status differential, an interviewer may want to present herself in a positive light and avoid alienating the elite respondent and avoid making her or him uncomfortable in any way. This could result in accepting statements made by elites without adequately continuing to question them, and consequently drawing incorrect conclusions from one's data. In order to avoid this situation, the interviewer must be vigilant to avoid compromising the goals of the interview

process. The skills of self-awareness, self-reflexivity, and political skills are useful for avoiding these pitfalls (Reason 1994).

There is one additional problem associated with open-ended interviews that may be more common in interviews with elites. In some cases, respondents answered the question that they want to answer and not the question that was asked. This could be because they were tired, for political reasons, for self-promotion, not wanting to present themselves or others in a negative light, misinterpreting the question, or lack of clarity in the phrasing of the question(s). Some respondents preferred to respond to questions in a roundabout manner by providing stories which ultimately addressed the issues, but which may not have appeared to be doing so at the time. Their replies were rich with information, but they were not succinct. In such cases, I needed to determine if the response was adequate, verify the implied meaning, and assess the likelihood of obtaining a clearer response.

Sample Selection

The purpose of my research was to understand curricular change, so it was essential to identify the relevant groups and individuals involved in the process (i.e., medical professional groups at the local and national level, government officials, activists, and educators). I determined the actual number of groups and the number of interviews to conduct based on a saturation of information (once new information was no longer being obtained, and information

was redundant), and based on completeness of the study population (i.e., all relevant groups within a category had been studied). This is a commonly accepted criterion for data collection using a Grounded Theory approach. I selected respondents who I expected would know about the process as well as the context of curricular change. The focus was on individuals who were responsible for the development of national model women's health curricula. All respondents were women's health leaders.

I first identified the most important national women's health curricula, then the primary organizations that were involved with women's health curricular development and the individuals who were responsible for creating the women's health programs and curricula. I examined listings of curriculum directors to identify the chairs or leaders of these initiatives. I also obtained information about national women's health leaders in medical education during an informal encounter at a women's health conference with Dr. Vivian Pinn, who at that time was the Director of the Office of Research on Women's Health at the NIH.[1] This resulted in the first level of identifying a potential national sample.

I also used my own personal contacts to identify individuals to interview. Over the years, I met and worked with many different women's health leaders. Because of my work in medical education and women's health, I attended local

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[1] This informal discussion occurred after the Gender Matters: A Conference on Issues in Women's Gastrointestinal Health, June 3, 1998 in Chicago, IL., sponsored by the Women's Board Gastro-Intestinal Research Foundation.

and national conferences, where I met other women's health leaders. At the time of data collection, I was employed at a National Center of Excellence in Women's Health. I believe this provided me with additional credibility in the field of women's health and made those I contacted more willing to grant me the time for an interview.

I divided the potential national sample into two groups. The first group included leaders who were well known and who adopted a significant leadership role on a national level. These were individuals who directed the development of curricula that were intended to have a national impact and that were intended to be adapted for other organizations. These individuals were identified as essential for inclusion in this study. The second set of potential respondents included individuals who were nationally known and whose programs had national significance, but whose programs were developed within specific organizations to educate their own students and residents. In some cases, I interviewed more than one respondent from the same organization. My objective in selecting a respondent population was to have as diverse a representation as possible, and to ensure that there were an adequate number of representatives from all of the relevant medical groups.

Of the population of respondents that were relevant to this study, I identified a smaller sample as possible respondents based on likely access, meaning that I could be physically present in their city to interview them.

Although I travelled to some cities to conduct interviews because of an individual's significance in curricular reform, the majority of respondents were located in cities where I was traveling across the U.S. either because I was attending a conference or because I was travelling for personal reasons.

The variety of respondents in this study provides depth and breadth to the study of women's health curricular development. There is depth within a few individual organizations or medical specialty groups, providing multiple perspectives for comparison, as well as repeated information to attain saturation. There is breadth in the number of groups, disciplines, curricular education levels, and areas of the country that are represented. This ensures that a number of unique perspectives are represented and provides a continuum of information about how various processes work in medical education. It contributes to saturation of information across groups.

Potential respondents were informed of the study and their participation was requested in a number of ways. Those who were personally known to me were contacted in person or by email. Other potential respondents were approached at professional conferences. An additional group of respondents, those with whom I had had no previous contact, were approached by email. In some instances, respondents suggested others for me to interview. If those subsequent contacts were made, I maintained the confidentiality of the referring party's participation in this project.

There are a small number of women's health leaders who are not represented among my respondents and who would have been desirable to include. In certain instances, both time and financial constraints limited the number of respondents who could be included when I collected my data. One individual responded affirmatively to a request but required a phone interview, and then became unavailable for participation citing time constraints. One individual refused to participate because she was no longer focusing on women's health professionally. In both of those cases, I interviewed another individual from their organizations. There was one additional person I wanted to interview but I was not able to contact her and travel to her state before I concluded my data collection. Although I would have liked to include her in my study, there were other respondents who participated in the curricular initiatives in which she participated. In addition, she was retired at the time of the interviews. The only way to obtain her contact information would have been to ask another respondent, but that would have been a breach of confidentiality about the identity of the respondents in my study. Even though I was able to obtain adequate information from others about the curricular initiatives that I was interested in, if these individuals had been included in my subject pool it would have enriched my study.

Confidentiality and Consent

My respondents' participation in this study was confidential. In some instances, respondents identified someone that they thought would be important for me to speak with, and would often ask if I had already done so. I would reply that I could not respond to their question because participation was confidential. The degree of confidentiality I used provides a barrier to the snowball method of identifying potential respondents.

In many cases, respondents had administrative assistants who maintained their appointment schedules. Many informed their secretaries that I wanted to interview them and asked them to schedule a time for me. In those cases, the respondent was the one that informed the secretary about the subject of our interview. The assumption was that office staff maintained their employer's confidentiality.

Each respondent was informed about the content of the informed consent form. Interestingly, many respondents, especially those who were researchers, did not care about the Institutional Review Board (IRB) issues and just wanted to sign the forms and get on with the interview because they were very familiar with and comfortable with the process. Other respondents, especially those who were not researchers conducting empirical studies, had many questions and requested additional information about my project. All questions were answered fully and to the respondent's satisfaction before the interview proceeded.

Respondents were informed that the content of their interviews would remain confidential. When I use quotes in the report of this study, I omit any identifying characteristics and I do not include the names of any specific individuals that they mentioned if it would by potentially identifying to the respondent. When I use a quote that is specific to an organization and which could potentially identify an individual, I alter the wording in my discussion and use general terms in order to protect my respondent's confidentiality. One respondent indicated that she wanted her name to be associated with any quotes I used from our interview, but in order to be consistent with how I represent my data, I omitted her name.

Potential Bias

There are a number of ways in which bias may be introduced into this study. I am not an impartial interviewer. I have a desire to present myself as competent and to be regarded in a positive manner, partly because this is a common objective within social settings for almost all individuals, and partly because there is a likelihood that I will work with many of my respondents in the future. Despite my awareness of the potential future contact with these individuals, I asked the questions that I thought were necessary even if it created a slightly unfavorable impression. For example, a discussion with a prominent obstetrician-gynecologist was a little uncomfortable when we discussed primary

care training in her field because she viewed it as adequate and I was quite aware that much of the women's health literature adopted the opposite position.

Given how this project was designed, most of the focus was on respondents' accomplishments. There was far less attention to their failures and difficulties, although these were discussed as well. Most respondents were quite frank. Focusing the interviews in this way had the potential of missing certain components of the curricular reform process, particular regarding the resistance respondents' encountered as they attempted to create and implement curricula. This is an unfortunate limitation in my data and becomes apparent in my relatively shorter discussion of the resistance my respondents encountered.

Working in the medical education field provided me with insider information. While useful, it also provided an intensive experience of one environment. This creates the possibility that I might make inappropriate generalizations based on knowledge of my specific work site. There is also a potential of "going native" due to having worked in the same environment that I am studying. These tendencies were balanced by incorporating respondents from a range of professional fields. Interviews with activists were especially useful in providing balance as I interpreted my data.

This research may also be biased because the sample of respondents is not randomly chosen. In fact, many of the respondents were personally known to me. This results in a group of respondents who share similar perspectives and

may emphasize certain aspects of the curricular reform process while ignoring others. One offsetting factor is that respondents represented all relevant groups to the curricular change process. In the years since I collected this data, I continued to work in the field of women's health medical education on a national level. I have not become aware of any important omissions in my sample.

CHAPTER 3

BECOMING AWARE OF PROBLEMS IN WOMEN'S HEALTHCARE AND MEDICAL EDUCATION

In this chapter, I examine how my respondents became aware of problems with how the medical profession addressed women's health issues clinically and in medical education, the factors that facilitated their awareness, and challenges to becoming aware. The experiences that led them to become aware of these problems indicate some of the ways that the medical profession was not meeting women's health needs. They also point to cracks in the U.S. healthcare system for women. For most of my respondents, their awareness of problems emerged well before they began working on curricular issues. Their understanding evolved because of both personal and professional experiences. Becoming aware was an ongoing process.

The individuals that I interviewed can be grouped into three main categories, with each following different paths in how they became aware of the problems in the field of women's health. I label these three groups as women's health advocates, appointees, and medical reformers. I created these categories based on my respondents' initial experiences related to and primary perspectives toward women's health. Women's health advocates are those individuals who had participated in the women's health movement, had advocated for women's

rights, or had substantive volunteer or community based experiences related to women's health prior to their work on curricular issues. Their work adopted the perspective of lay women's health needs. Appointees are those individuals who were appointed to lead a women's health program and had not intended to be reformers, but who were charged with the task of curricular reform or creating a training program. Medical reformers are those who did not begin their professional lives expecting to be reformers, but as they had experiences with the medical education system or clinical care, they ultimately decided that curricular reform was necessary. Both appointees and medical reformers are primarily aligned with the perspective of the medical profession, but medical reformers are also influenced by women's health needs as they came to understand them.

The majority of the women's health advocate respondents had participated in the women's movements of the 1960s and 1970s. However, two were much younger and were too young to have participated in those movements. These two respondents engaged in other forms of advocacy such as lobbying for women's rights or volunteering in women's health related organizations that were also involved in advocacy. I categorize six of my respondents as women's health advocates. They were all woman.

Three of my respondents were appointees. They would have been teenagers or young adults during the women's health movement of the 1960s

and 1970s. They did not mention the movement during our interview. Two had been in academic medicine for their entire careers, while one was in private practice but had also taught residents as an adjunct faculty member. Two of the appointees were men and one was a woman.

Twenty of my respondents were medical reformers and all were women. The majority of these were physicians, but the three who were not physicians were in senior positions related to medical education at medical professional organizations. Only one of the medical reformers was in a junior faculty position. All others were in senior positions in their organizations, be it academic medicine, the government, or a medical professional society.

In the discussion below, I examine how respondents in each of these categories became aware that there were problems in the field of women's health. Becoming aware is a process which has a starting point, and the starting point differs across the three categories of respondents. For each category of respondent, I examine their starting points and their processes of becoming aware. I then discuss the range of problems related to women's health that were identified by respondents.

The Roots of Awareness

In one sense, all of my respondents may be viewed as reformers in that they were attempting to implement curricular changes within their organizations. Those that I categorize specifically as women's health advocates and medical

reformers were challenging and attempting to change medical education in a way that was met with some resistance in their organizations, while those categorized as appointees were tasked with implementing specific reforms. Reformers are individuals who are undertaking a project that is risky. They are making public claims that an institution is malfunctioning in some way and needs to change. Efforts at reform often come at a cost and in some cases, there may be substantial sanctions. All of my respondents understood that some aspect of medical education was inadequate and needed to change. This raises the following questions – How is it possible that these individuals understood that there was a problem in the field of women's health, while most others in the medical profession did not see the problems? What is the process by which these individuals came to understand that there was a problem? When did they first become aware in a way that led to their willingness to engage in reformist behaviors? In the first section of this chapter I will explore the beginning of my respondents' awareness, while in the latter section of this chapter I will address the process they went through of becoming aware.

Examining the roots or the starting points of reformers' awareness of problems in women's health is important because it provides a foundation for their understanding of the issues and influences their future actions. Respondents were asked the general questions: How did you get involved with women's health? How did you become aware that there were problems in the

area of women's health? These questions were intended both as icebreakers and to help me understand their perspectives. While these questions address the issue of the beginning of awareness, they also raise a number of epistemological issues. First, the responses to the questions cannot adequately describe all of the components involved in becoming aware. They cannot address how human awareness actually works from the perspective of consciousness. While the question has a temporal component, making sense of respondents' accounts and engaging in temporal interpretation is complex. First, respondents are making claims about what they know and when they knew it, but this may be unknowable. Second, respondents' accounts may not be accurate because they are reinterpreting their histories and emphasizing certain issues or events while ignoring or minimizing other things. Third, the way that they present their accounts of events at the time that I posed the question may differ from how they would have understood things at another point in time. In addition, due to a number of constraints which include interview time constraints, their accounts of the past will be incomplete. Finally, my task here is to interpret their claims about events in their lives while their narratives are themselves interpretations of these events presented to me at a specific point in time and context, so that multiple levels of interpretation are occurring simultaneously. Despite the many challenges involved in examining my respondents' accounts, the issue of the basis for their willingness to engage in risky (reformist) behavior is significant and

is worthy of an analysis. Humans are sense-making beings. My respondents engaged in sense-making activities which led them on a path of reformist behaviors. Starting points provided an impetus for their actions. In order to be able to understand how curriculum reform occurs, it is important to understand what propels individuals to be willing to undertake risky actions.

Methodologically, discerning respondents' awareness or the starting points for their awareness is challenging. For example, in some cases there may appear to be more than one starting point or there may be inconsistencies in respondents' accounts. The approach I adopt here is a grounded theory approach in examining respondents' claims. While I do not accept respondents' claims uncritically, I assume that the accounts reflect their experiences to the best of their recollection. Their claims reflect what they view as being salient or significant, and I accept their claims about the most important factors that propelled them toward future action. Their accounts reflect respondents' perspectives at the time of the interview as the impetus for their actions.

Starting Points

Starting points refer to the situations in my respondents' lives when they initially became aware of inequities toward women, which in most cases were related to the medical profession, health care, and medical education. These situations later influenced them to address the problems. Starting points are the beginning of becoming aware. In some cases, they are pivotal experiences that

led to a reinterpretation of previous life experiences. In other cases, new views about the world emerged and operated as a guiding framework for action. Starting points may be based on one's own lived experience in either one's personal or professional life, or they may come from observing others' experiences.

Respondents were asked the general questions of - How did you get involved with women's health? How did you become aware that there were problems in the area of women's health? Their narratives were wide-ranging. Some respondents talked about their childhoods while others spoke solely of professional experiences.

Women's Health Advocates

Six of the twenty nine respondents were women's health advocates, all women. Three had doctorates and three had master's degrees at the time of our interviews. One of the respondents completed a doctorate a few years after our interview. Two of the women's health advocate respondents were executive directors of National Centers of Excellence in Women's Health, two were senior government officials for a federal women's health agency, and two were primarily lay women's health advocates who had tackled many issues, including maternal healthcare and breast cancer. The latter two women had also been among the founders of prominent national lay women's health organizations. At the time of

my interviews, all of my respondents were responsible for the development of innovative women's health curricula for physicians.

Feminist identities. All of the respondents who were women's health advocates identified themselves as being feminists either as young adults or earlier in their lives. Feminism provided a framework within which to make sense of their life experiences.

> My whole life I've been a feminist - even as a little kid. I've always been fighting for women's rights. Even in fifth grade, and before. I've always thought that anything boys could do, girls could do as well.
>
> *Hannah, Women's Health*[1]

One respondent grew up with a mother who was a feminist, but for other respondents, their feminism came from attempting to make sense of their lives and their place in the world.

> I belonged to that transition generation of women who weren't sure what we were really entitled to, and feminism struck a chord with me.
>
> *Katherine, Sociology*

There are many varieties of feminism and my respondents approached feminism in different ways. While the varieties of feminism were not the focus of our discussions, there were differences among my respondents in what they

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[1] For each respondent, I indicate their professional field with their quotes. Women's health refers to the field of women's health broadly. Medical fields include internal medicine, family medicine, obstetrics/gynecology, and psychiatry. Other fields represented include nursing, sociology and pharmacy. A listing of respondents and their fields is in the Appendix. If a respondent is listed in the appendix with more than one field, only their primary field is associated with their quotation. When it is possible and relevant in order to indicate the time period that is being referenced, I also indicate an approximate time period for respondents' experiences.

attended to. This included viewing men and women as equal, fighting for women's rights or for justice, or critiquing patriarchal religion.

> [I] had always had sort of a critique of the patriarchal orientation [and of patriarchal] understanding that God is male.
>
> *Robin, Women's Health*

These feminist perspectives shaped women's health advocates' understanding of the problems with health care for women. They helped respondents link their understanding about society with women's health and the medical profession.

> A lot of theology informs our understanding of women's bodies, our understanding of how we practice medicine and everything else.
>
> *Robin, Women's Health*

For these self-identified feminist respondents, their critiques of patriarchal society ultimately included a critical view of how the medical profession addressed women's health.

Beginning awareness. Women's health advocate respondents varied in how they became aware that there were significant problems in the field of women's health, but in all cases, they had experiences that affected them profoundly. For some it was because of a personal health need, while for others it was what they learned in a professional or volunteer capacity.

Three of my respondents spoke about personal health needs that the allopathic medical community was not able to meet, all related to childbirth or maternal health. One woman wanted to have her husband present in the delivery room, but this was at a time that husbands' presence was prohibited. She

decided to have a home birth so that he could be with her. Another respondent wanted a natural childbirth free of anesthesia or twilight sleep, but her physician refused to provide obstetric care if she did not consent.

> When I came to the moment of actually giving birth, I immediately encountered the full weight, I would say, by the [19]50s, the full weight of the emerging, surgically driven, obstetrical machinery was thoroughly established. … something that they called normal birth, which involved anesthesia. I mean, normal birth equals anesthesia was the standard of the day. General anesthesia… Twilight sleep was then institutionalized in full force..... twilight sleep, which was slightly less deadly, certainly in terms of actual risk and morbidity than general anesthesia… The first thing I did was refuse to sign the legal permit… In the end, I signed a permit, because he [the doctor] said he wouldn't take care of me if I didn't. *Sylvia, Women's Health, 1950s*

The third respondent wanted to breastfeed her child in the hospital after delivery at a time that it was frowned upon. In the 1970s, the hospital made it difficult for her to do so, which caused health problems for her.

> I had natural childbirth and I wanted to breastfeed, … and the hospital where I delivered her was not too keen on any of that, so they didn't bring her to me every couple of hours, which is what you need when you breastfeed. They brought her to me on the same schedule as bottle-fed babies, which didn't work very well. You know, I wound up having indurated breasts and an infection because I wasn't getting rid of the milk fast enough to prevent that from happening.
>
> *Katherine, Sociology, 1970s*

Another women's health advocate respondent stated that as a young woman, she needed an abortion but it was not legally available at the time.

Three women's health advocate respondents did not have children, but they had professional experiences which affected them deeply and led them into

the world of women's health advocacy. One was troubled by the abusive gender-based treatment experienced by adolescent girls in the juvenile justice system.

> Young women were receiving pretty very biased treatment from the justice system. They were going through strip searches and things that, you know, really were much more about their sexuality than about their crimes. *Robin, Women's Health, 1970s*

Respondents were troubled by the barriers women experienced related to their reproductive health. One respondent discussed the lack of access to information due to repressive policies such as abortion gag rules and the limits on the number of condoms that sex workers were permitted to have without being jailed.

> [It was]1990, which was right after the Webster decision, and Webster had a gag rule, a state gag rule, so you couldn't talk about abortion if you were in a state-financed institution. And I was at a public university, and we had a women's health center there, but we couldn't talk about abortion. *Wendy, Women's Health*

> There were regulations or laws that if women carried more than five condoms at any given time, they could be picked up for prostitution. *Wendy, Women's Health, 1990s*

Public policies not only made life more difficult for the women seeking care, but it also made my respondents' work more challenging because they had to comply with the law while finding alternative ways to meet patients' needs.

> Young college girls would come in; they'd get their pregnancy test; and then we would meet them after work - so at five when we got off - to give them their test results, because we couldn't give them to them while we were on the university's dime, because we couldn't talk to them about abortion. So, just again, everything's just so broken about the way in which women's healthcare was allowed to be offered in that state. *Wendy, Women's Health, 1990s*

One woman had been in medical school briefly, but once she realized the degree of gender bias in medicine, she concluded that women could not have personal lives until after residency was completed. She believed there were more constraints on women than on men and she decided to leave.

> Women specifically … couldn't have any kind of external life right at that point, and certainly not while you were in school and not while you were doing your residency. *Hannah, Women's Health, 1980s*

In this case, her initial awareness was about gender bias more broadly within medical education rather than women's health care related bias. More specific awareness of women's health issues would emerge later in her professional life. For this respondent, one component of the gender bias that she found troubling was the sexual harassment that was prevalent in medical education.

> They [students] felt that there was one professor, in particular, who was intentionally harassing them, you know, but nobody wanted to say anything. "I'll just live through it. I'll just live through it."
> *Hannah, Women's Health, 1980s*

Two respondents indicated that their initial awareness about women's health also came from reading about reproductive health issues for women. One became aware of the possibility of natural childbirth after having read Grantly

Dick-Read's book as a young woman in the 1950s.[2] Another had read Barbara Seaman's work and Gena Corea's work.[3]

For the three respondents whose childbirth experiences were unsatisfactory, they began to see that the medical profession was not meeting women's health needs. As young women, the other three respondents had already concluded that the healthcare system disadvantaged women and did not meet their needs. They observed how public policies limited the health care that was available to women. Their experiences were components of the starting points to their awareness.

Early activism, volunteerism and service. Early in their lives, all of the women's health advocate respondents became aware of the inequity in the healthcare system related to women. They acted in various ways to remedy the inequity such as by participating in social movements, volunteering, or doing community based work. Three of the six respondents had participated in the women's health movement in the 1970s and one of these had also participated in the civil rights movement. Among the two younger respondents, one had lobbied

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[2] Grantly Dick-Read was a British physician who wrote a number of books about natural childbirth beginning in the 1930s. His work, *Childbirth without Fear* (1953) became an international bestseller.

[3] Barbara Seaman's book, *The Doctor's Case against the Pill* (1969), was one of the works that inspired the women's health movement. Gena Corea's book, *The Hidden Malpractice: How American Medicine Mistreats Women* (Corea 1985) exposed a great deal of gender bias in medical practice, while much of her other work addressed reproductive health issues such as in *The Mother Machine: Reproductive Technologies from Artificial Insemination to Artificial Wombs* (Corea 1986).

on behalf of girls while she was in elementary school. The other had obeyed the letter of abortion laws and reproductive health policies in her state, but not their spirit as she found ways to circumvent them. For example, she met with young college women in the evenings to provide them with information about their reproductive health needs when a state gag rule prevented her from providing this information in the clinic. All of the respondents indicated that they engaged in some form of opposition to societal rules, laws, or institutional practices even though their actions may not have been in the form of traditional political activism.

As young adults, four of the respondents either volunteered or worked with women's health organizations or groups. Two of these volunteered with lay women's health advocacy organizations and two volunteered with Planned Parenthood. Three of these respondents worked with community based organizations that provided health care services to women such as mental health or other services. Some were involved in various forms of community activism early in their lives.

> I had worked in a number of community activist kinds of things, even locally on some healthcare groups here and elsewhere.
>
> *Katherine, Sociology, 1970s*

Respondents commonly referred to involvement with more than one type of activity, such as providing community based health services in addition to social movement participation or volunteerism.

The types of issues that initially engaged my respondents varied considerably. For three respondents, it included abortion. One protested in support of abortion rights and two volunteered with Planned Parenthood while in college. For one of these women, this was at a time when abortion clinics were being bombed and clinic staff members were being shot.

> When I went to college, I started volunteering at Planned Parenthood… That was the late '80s, which was the high-violence movement for the anti-abortion groups. *Wendy, Women's Health*

Other issues that prompted advocacy or volunteerism among the women's health reformer respondents included juvenile justice, domestic violence, childbirth, gender inequality in postgraduate education, and health insurance for women.

The women's health reformer respondents followed different professional routes in their lives, enabling them to engage in activities that were critical of the existing health care system for women and to change that system. Two entered academics, two worked for a federal agency that focused on promoting women's health, and two continued to work with lay women's health advocacy organizations throughout their lives. The two women who worked with lay advocacy organizations had central roles in establishing national lay women's health organizations which exist today, the Boston Women's Health Book Collective and the National Women's Health Network.

Appointees

Three of the twenty nine respondents were appointees, i.e., they were appointed to direct a women's health curricular program at their institution. Two were men and one was woman. They were midway through their careers and were in their 40s and 50s. One respondent was appointed to develop and direct a women's health residency track in internal medicine, another was a curriculum director at a National Center of Excellence in Women's Health and was beginning to work on revising the medical school curriculum to integrate women's health, and the third was asked to develop a women's health fellowship in family medicine. These respondents did not have a prior commitment to curricular reform about women's health issues. They may be similar to other medical educators in the U.S. more so than the women's health advocate or medical reformer respondents.

Physician and medical educator identities. Two of the appointee respondents' primary professional roles were as physicians and medical educators in academic medical centers. One was a private practice physician affiliated with a teaching hospital. Their secondary roles were as researchers, administrators, and as a part-time residency educator. None of these respondents referred to themselves as either feminists or reformers. In their positions, they had either been tasked with curricular reform or they had agreed to develop a curriculum, and thus they had specific objectives that they wanted to

achieve. The task for one respondent was to establish a women's health curriculum in an internal medicine women's health track with a primary focus on developing a clinical rotation experience that gave residents exposure to a range of women's health issues. The second respondent's task was to integrate women's health into the medical school curriculum for medical students. The third respondent was asked to develop a women's health fellowship program.

Beginning awareness. All three of the appointee respondents believed that their awareness about women's health issues developed primarily as a result of taking care of women patients. For the woman physician, her patients were drawn to her for care because of a perceived commonality based on sex:

> Clinically, being a woman, a lot of my patients turned out to be women. So you kind of develop a clinical expertise in women's issues.
> *Debra, Internist*

One respondent had a special focus in his clinical practice on women's and adolescents' health needs, enabling him to develop expertise in their care.

> My practice is focused towards women's health. I have a very strong interest in maternity care, and one of my special interests is in adolescent health care, and specifically sexual activity and maternity care of adolescents. *Frank, Family Physician*

For Steven, a family physician, "a big part of [his] practice" included women's health and taking care of women patients.

In addition to clinical work, the appointee respondents' interest in women's health developed from other women's health related activities. One respondent conducted breast cancer prevention research, another volunteered at a home for

teen mothers and their children, and the third supervised residents who were learning obstetrics and gynecology and taught them colposcopy and other women's health procedures.

None of these respondents indicated that there was a pivotal moment leading to an early awakening about problems related to the care of women. Instead, as physicians, their understanding of women's health needs evolved because of their clinical work with their patients (women). The primary framework in which their understanding emerged was from their experiences as clinicians rather than from the perspective of their patients (women). Their starting point was as clinicians. Notably, none of these respondents indicated that their understanding of women's health needs emerged during their own medical education.

Medical Reformers

I categorize twenty of my respondents as medical reformers. All but four were physicians and all were women. The medical reformers were represented across specialties as follows: three in psychiatry, seven in internal medicine, five in obstetrics-gynecology, two in family medicine, and one in pharmacy. At the time of the interviews, three physicians did not represent a specific specialty because they worked for large national medical organizations which represented or supported all medical specialties, but their medical training was as follows: one in obstetrics-gynecology, one in internal medicine with additional sub-specialty

training, and one in psychiatry. The majority of those in internal or family medicine indicated that they also provided gynecological care, and in some cases they also provided routine obstetric care. My respondents were located in a range of workplaces. Nine were physicians in academic medical centers, three were physicians in community based hospitals or health centers, one was a physician in a school of public health, one non-physician was in a school of pharmacy, two physicians were in senior positions in the federal government, and one physician and three non-physicians were at other medical professional organizations.

Physician and advocate identities. The primary orientation of the medical reformers was toward the medical profession. Sixteen (80%) had attended medical schools and had completed residencies, with some also completing fellowships.[4] Their primary professional identity was as physicians. The non-physicians' professional identities were as physician advocates and they were aligned with the medical profession. One non-physician respondent was in a school of pharmacy and earlier in her professional life, she had worked with physicians to provide clinical care. Thus, seventeen medical reformer respondents had been involved in direct patient care. The other three non-physicians were in positions at medical organizations that were devoted to

[4] Respondents were not asked if they completed fellowships, so an exact count is not possible.

promoting and supporting the medical profession's interests. In all of these cases, the primary lens used by these respondents was that of the medical profession and the physician. Few reported that they adopted a patient-centered approach in their work so that they also attended to women's health needs in the context of women's lives. Most did not adopt the lens of the fact that they were women or that of their women patients, but among those who did, they stated that one component of their interest in women's health was because "I'm a woman." I did not ask respondents if they were feminists, but five of the medical reformers self-identified as feminists; four of these were physicians. Although it is possible that a greater number were feminists, they did not identify themselves as feminists in the context of discussing their professional lives and their work to promote women's health. This suggests that medical reformers' primary orientation and commitment is toward medicine and the medical profession.

Beginning awareness. All but one of the medical reformers became aware of inequity or problems in women's health during the formative years of their professional development or careers. Four were aware of problems prior to entering medical school, five became aware while they were in medical school, for one it was during residency, for six it was early in their professional careers of providing clinical care, and for three it was early in their non-clinical professional careers. Only one respondent began to develop her awareness at a later stage of

her professional life while she was in a leadership position in her academic department.

Four respondents became aware of inequities prior to entering medical school. They became aware of challenges that others' experienced in receiving medical care. As a child, one respondent had observed the limits in her mother's care which contributed to her death. Another became aware as a youth that the poor and the Native American women in her community had difficulty accessing medical care. Another respondent had participated in women's self-help groups in college. The fourth joined a reproductive health peer counseling group in high school.

The two most common time periods for awareness to begin to develop were either during medical school or when respondents began their clinical practice after completing their medical training. Helen, a family physician, noted that she became aware of a bias immediately upon entering medical school when she realized that "All the research studies were done on men." One respondent repeatedly experienced overt hostility from both male faculty members and other male students.

> We went through training at a time where people who were uncomfortable that there were going to be more women physicians, some of them felt very free to harass us, because they said, you know after this, there are going to be too many women to really do this and get away with it. People would say that. To your face and then proceed. *Carol, Internist, 1970s*

There was no consistent pattern with the issues that led my respondents to start developing their awareness during medical school. While in medical school, they noted that they became aware of the lack of inclusion of women in medical studies and the dearth of research studies about women's issues.

> All the research studies were done on men… they assumed it was impossible to study women, especially during childbearing years, and that it didn't matter anyway since men and women function the same.
>
> *Blanche, Psychiatrist, 1980s*

> All of medical school essentially… every example, every, and still to this day [2004], every example is the 70 kg white man.
>
> *Barbara, Internist*, *1990s*

During their clinical rotations, respondents learned about the challenges women experienced in receiving comprehensive information about family planning which included abortion, the seemingly punitive treatment of ethnic minority woman patients who did not speak English, and a general lack of attention to women's health needs.

> Some of the horrific things that happened… This one mom had an infection… didn't get antibiotics for a bladder infection. [Her] baby's burn[ing] with fever. You separate both, you work 'em up; that's the standard of care. This one woman was 3 days after delivery. I walk in, and they're like, she's being a pain in the ass. She's agitated, go calm her down cause she's being a total pain in the ass. So I said "Good morning", and she says to me "You people have killed my baby." And I said "What?" And she says, "I know the drill. I have him, I hold him, and I'm out. This time, you people took my baby. I haven't seen my baby in 3 days. You killed my baby." I'm like, "Nooo." I take her over and I showed her her child. No one in 3 days, cause it's to punish her for not speaking English, no one in 3 days had taken her and said "There's your kid."
>
> *Nancy, Internist, 1980s*

In some instances, it wasn't a specific case that stood out as much as it was a general attitude toward women patients that was dismissive of women and their concerns. According to one physician:

> The way women patients were treated, how often it seemed like they were blown off, and I was told it was because they were crazy or because they were malingering or … It's all variations on "She's hysterical" that were very obvious from the very beginning.
>
> *Patricia, Family Physician, 1980s*

When physicians are responsible for patient care as residents and when they experience challenges in providing care, they may become aware of problems in the field of women's health. They may experience their patients receiving incorrect diagnoses, problems resulting from inappropriate treatment, and a general lack of knowledge about women's bodies and health. One respondent became aware of such problems during her residency when she experienced challenges in providing care to women psychiatric patients who had common or multiple problems.

> For the psychoanalysts, the recommendation was for women not to get pregnant, because it would interfere with the psychoanalysis and all kinds of things. So, very little was known about that. And it was very difficult actually as a resident to get any guidance of what to do with women that had, you know, particularly, sexual abuse history, had maybe some kind of personality disorders and then were going through pregnancy and postpartum and so forth.
>
> *Stephanie, Psychiatry, 1980s*

The remaining clinicians became aware of problems in the field of women's health early in their professional careers. The most common issue was that they were unable to provide the type of care that they wanted for their

patients, and thus were unable to adequately fulfill their roles as physicians. Most wanted to provide comprehensive care to their patients but were unable to do so because they had not been trained to do so. For some, comprehensive care included gynecological care. They had not been trained to do this work, and yet their patients wanted them to provide it.

> [I] ended up seeing a lot of women patients clinically. And I became quite aware of many of the concerns and problems that they had from that perspective. … I was seeing a lot of gynecologic and early obstetric problems, which was interesting, because in those days internists were not trained to deal with those kinds of issues. But I kind of self-trained to do those things and then ended up with a hugely women-centered practice. *Nora, Internist, 1980s*

One respondent noted that her medical training did not prepare her to provide care for many of the issues that women patients experienced.[5]

> I found that many health needs that my patients, mostly women, articulated, I was not very helpful. *Wanda, Internist, 1960s*

Only one respondent noted that she became aware of problems in how the medical profession addressed women's health issues at a later point in her career.

> I was the director of a general inpatient psychiatry unit … in the midst of a tremendous [institutional] financial crisis. … One of the unmet needs was handling pregnant mentally ill women on an inpatient level. … Knowing nothing about that field [mentally ill women] and having

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[5] Although the lack of training about women's issues was a contributing factor for these respondents, it is not clear if their emerging awareness was due to their own ability to discern patients' needs, their patients' willingness to communicate more information to these physicians, or both factors. Patients are more likely to communicate their needs to physicians who are not dismissive of their concerns and experiences.

> no prior training in that whatsoever, I quickly studied what there was to study, which was a paucity of information. *Marcia, Psychiatrist, 1990s*

Several respondents noted that women patients were often drawn to them as care providers. This provided them with opportunities to consider how to meet their patients' needs. All respondents who provided clinical care to women except for one respondent in obstetrics-gynecology indicated that they became aware that there was little knowledge about how to care for their women patients. The act of focusing attention on a specific patient population, i.e., women, highlighted for them how little knowledge existed about women's bodies and how women's bodies should be cared for.

> It became very obvious to me as I worked with women, primarily at that time who were pregnant women, and knowing that number one, there were very few drugs that were recommended for women during pregnancy, and that was the same way it was in pediatrics at that time. And number two, the doses that we gave to pregnant women was the same as you would give to a man or a non-pregnant woman. There was no differentiation. And people really didn't know what to do. So consequently when a pregnant woman needed a medication, I was called on many times to work with physicians in that area, although I primarily was in pediatrics, but I worked across, sort of across both populations. So that made me very aware early on, even before we knew about pharmacogenomics, that on a pharmacokinetic basis and also dynamic basis… And knowing that age made a difference, and then the question that came to mind was, well, does sex make a difference too? *Sarah, Pharmacy, 1970s*

Only two of the medical advocate respondents commented that their awareness of women's health issues was partly because they were women. One of these respondents was a physician and the other was a manager in a professional society.

For most of the medical advocate respondents, their awareness about problems related to women's health emerged over time rather than being related to a situation that led to a dramatic change in understanding. Only two respondents noted a specific pivotal case that led to a shift in their awareness. For one respondent, it was the death of her mother when she was a young woman. For another, it was observing the mistreatment of a minority patient after the woman had given birth.

Most of the medical reformers did not indicate that they had any community based experiences related to women's health, with only four physicians indicating that they'd had any such experiences. One had provided care to the wounded during World War II in Europe. One was involved in abortion advocacy efforts during high school. During medical school, one physician had a community rotation in a free clinic that provided abortions. Another physician had been involved with the women's self-help movement during college.

> I discovered a passion for women's health when I was in college through becoming involved with the women's self-help movement and the desire to inform women more about their bodies, and more about how to use that information to empower themselves to make decisions about their health and healthcare. *Michelle, Ob/Gyn, 1970s*

For most of the medical advocate respondents, their awareness of problems in the field of women's health emerged over time and in the context of their medical training or medical practice. The community in which they participated was a medical one, rather than a woman centered group or a

community based organization. These respondents were unlikely to have any community based health experiences. This meant that their efforts to make sense of any inequities or problems would either occur in isolation or with information provided by others in the medical profession. Thus, one physician noted that she "kind of self-trained" to provide routine gynecological or early obstetric care, while another noted that "it was very difficult, actually, as a resident to get any guidance of what to do," and that she had some "disconcerting" experiences in seeking help from faculty in that there was little information available.[6]

The Process of Becoming Aware

Becoming aware that there are problems in how the medical profession addresses women's health does not occur all at once. It is a process that happens over time. Even for those who had a pivotal experience that led to an initial awakening, subsequent experiences expanded their understanding, and their views about women's health continued to evolve. For some respondents, it was a result of both their personal and professional life experiences, while others spoke only of professional experiences.

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[6] It was more common for respondents to indicate that their awareness emerged during medical school rather than during their residencies. It is possible that there is more latitude to question what is happening during medical school in comparison to residency. My interviews did not allow for an in-depth analysis of these issues due to interview time constraints.

Women's Health Advocates

*Personal experiences***.** For most women's health advocate respondents, experiences in their personal lives such as childbirth, breastfeeding and other reproductive health needs were important to their initial awareness of the inadequacy of the dominant medical approach to their health. Later in their lives, other health issues emerged and provided additional opportunities to learn about specific women's health issues. Two of the women's health reformer respondents discussed their experiences with breast lumps. One woman discovered a breast lump and asked a physician in her family to examine it. He examined her and claimed she was fine even though it was not his area of medical expertise, and he dismissed her concerns. She subsequently saw a breast surgeon who examined her and monitored her, and eventually concluded it was a problem related to her early breastfeeding experiences. For her, this experience made her aware of physicians' sense of their own power, even when they did not have relevant knowledge or experience. It led to skepticism about medical claims about women's bodies.

> There was something about that sense of power that he wore that I think so many physicians still wear that's dangerous. There's a kind of humility that's missing… the sense of power that physicians will wield when they feel so assured of themselves, when I think personally they should be somewhat less so. *Katherine, Sociology, 1980s*

Another respondent was diagnosed with breast cancer at a time when mastectomies were the standard of care in the U.S., but lumpectomies were

being performed successfully in other countries. She was aware of this, insisted on a lumpectomy, and in the process, altered the meaning of her condition from one of having breast cancer to a breast lump.

> Well, it became a lump, because I insisted on lumpectomy. I was the first lumpectomy that my surgeon had ever done.
>
> *Sylvia, Women's Health*

Personal experiences with menstruation and menopause that differed from dominant medical views also contributed to skepticism of medical claims. As one respondent went through menopause, her personal experience provided her with a source of knowledge about the transition. She also studied the issue, interviewed other women, and learned about how women experienced it rather than how the medical profession defined the experience. She concluded that:

> They [physicians (men)] didn't know what they were talking about. They had never lived through it, and yet they were writing about us and telling us how we felt and should feel and what to do and all that… I've now decided that all of that [the medical view of menopause] is rubbish, that it's [menopause] a very uniquely individual thing like menarche itself.
>
> *Sylvia, Women's Health, 1980s*

The women's health advocate respondents learned from other women. One respondent met a prominent feminist theologian who inspired her and supported her views about the environment and its impact on women's health, contributing to her adoption of a more holistic perspective about women's health. Others learned from the experiences of community women either as a result of their women's health advocacy work or their research. One respondent learned

from abortion rights activists in her city about the challenges women experienced in obtaining an abortion when it was illegal. Another learned about the challenges in obtaining an abortion from students at her high school. Another respondent knew women who were involved in the birth control movement of the 1960s.

> [These women were] trying to expand birth control into part of healthy medicine. … The technology was so limited, so then a married woman could get a diaphragm. Indeed, I was offered a diaphragm, but unmarried people couldn't get anything. And the condom was all there was out there. *Sylvia, Women's Health, 1960s*

In the 1960s and 70s, my respondents often learned of women's healthcare problems from elite women who were unhappy with the care they'd received, such as the women who became advocates for better childbirth experiences.

> The early group of women who actually started this work in Boston, for example, some of them were the wives of physicians … because they really felt deeply that something was wrong. They expected a much better experience than they had … the paying, private patients [in contrast to the poor clinic patients]… it was women from that group, who were supposed to be getting the best, who were making the first critiques. *Sylvia, Women's Health, 1960s*

These early critiques of childbirth experiences eventually led to a childbirth advocacy movement composed primarily of white and upper middle class women in which one of my respondents participated.

> We didn't see, certainly, immigrant groups coming there, and we didn't see blacks coming there. It was, you know, the dominant culture movement. *Sylvia, Women's Health, 1960s*

When the older women's health reformer respondents had health problems or experienced transitions such as menopause, they sought out other women with whom to discuss these issues and learned from others' experiences. One woman who was diagnosed with breast cancer spoke with other women about mastectomies.

> I had already interviewed loads of women with mastectomies.
> *Sylvia, Women's Health*

Although women's health advocates often learned from other elite women, two of my respondents often conducted research on women from disadvantaged communities. They learned about the many challenges that poor women experienced within the healthcare system, including the economic impact of healthcare on poor women.

> There was a woman [who received] radiation treatments, and they billed her. Of course, she didn't have the money and didn't have any health insurance, and she told them. And they said, "Well, that's too bad, because you're going to have to pay this." They threatened to take away her house. *Katherine, Sociology, 1990s*

For this respondent, it was an example of the many ways that the healthcare system was biased against women, ranging from the clinical setting to a system that did not meet their needs.

Those who had volunteered with Planned Parenthood learned of the challenges, violations, and abuses that their clients experienced when seeking healthcare services. The respondent who had volunteered with Vista learned of

similar problems under the criminal justice system. For example, teenage girls were subjected to strip searches and prostitutes were harassed by the police.

In all of these cases, whether it was their own experience or whether they were affected by others' experiences, my respondents noted that women were being disempowered, denied agency and denied decision making authority. Although these outcomes were primarily implemented by those in the medical profession and were examples of the profession's control over women's lives, it was also often an indication of how the medical profession implemented state policies such as restrictions on contraceptive access and abortion.

Books and magazines were also sources of information for women's health reformer respondents and contributed to their growing awareness of women's health issues. Three of the women's health reformer respondents specifically discussed books and literature that influenced them as young women. This included works about natural childbirth in the 1950s, Betty Friedan's *The Feminine Mystique* ([1963] 2010), feminist theological literature, the pioneering *Our Bodies, Ourselves* (1973), and feminist women's health literature by authors such as Barbara Seaman ([1965] 1995) and Gena Corea (1985, 1986).[7] These works presented women with feminist or alternative models of women's health and feminist perspectives about women's issues.

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[7] *Our Bodies, Ourselves* was written by members of the Boston Women's Health Book Collective and was groundbreaking in providing lay women with information about their bodies and health.

Magazines also influenced some respondents. The *Reader's Digest* had published articles about natural childbirth which offered an alternative model for childbirth. One respondent noted that magazines published articles that pointed out problems with the type of medical care that women received. The *Ladies' Home Journal* (*LHJ*) had published articles about problems in maternity care for women, hospital based infections as contributors to infant morbidity and mortality, the lack of trained birth attendants and the need for nurse midwifery.

> They [*LHJ*] published an article called "Cruelty in Maternity Wards"… And in the history of the magazine at the time, they had never received so much mail. They were deluged, so then they began publishing these letters… The second article… was an exposé of what people in medicine knew at that time, but the general public did not know, which was that the hospital environment had bred a unique organism called *staphylococcus aureus* and that it was killing babies.
>
> *Sylvia, Women's Health, 1950s*

This respondent also noted that a former president of the American College of Obstetricians and Gynecologists (ACOG) published an article in the *Ladies' Home Journal* stating that half the population was giving birth with untrained birth attendants (midwives, interns, residents, and physicians with little training) which led to high infant mortality rates. He advocated for trained nurse midwives to deliver babies. This respondent learned from others that the ACOG leadership ultimately contacted the *LHJ* and asked them to stop publishing these articles.

> The head of the ACOG and the Council of OB Educators and all of that group - came *to Ladies Home Journal* and asked them to stop

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It was first published commercially in 1973. There have since been many revisions to this work. It continues to be an important resource for women today.

> doing any more work on that issue. Just to let it die…. And they did.
> *Sylvia, Women's Health, 1950s*

Although magazines published articles that were critical of the medical establishment, they also published articles that advanced the medicalization of women's health. The medicalization refers to the process by which conditions which are natural in women, such as childbirth or menopause, come to be viewed as medical problems and thus under the auspices of the medical profession (Sherwin 1998, Bell and Figert 2010, Rojek Kleinman and Dan 2013). One respondent recalled how troubled she was by a gynecologist's writing about menopause.

> The book, *Feminine Forever*, and it was serialized in the *Ladies Home Journal*, which of course I read. And I remember reading that thing and thinking, "What is this horrible thing that's going to happen to me? How can that be?" *Sylvia, Women's Health, 1960s*

By the time she was menopausal herself, she was skeptical of portrayals of women's health issues by those within the medical establishment.

> [At] the [Boston Women's Health Book] Collective… If we didn't have any experience ourselves, we were not going to write about this, because that's what the doctors do. They didn't know what they were talking about. They had never lived through it, and yet they were writing about us and telling us how we felt and should feel and what to do. *Sylvia, Women's Health, 1960s and 1970s*

She and others in the collective did their own research about women's experiences with menopause and learned that it differed from medical accounts.

Professional experiences. The women's health reformer respondents' professional work provided them with many opportunities to learn about women's

health issues. Of the six women's health advocates, two were in the same career for their entire lives, one was in academics and one was in a government position, although the latter woman had briefly attended medical school. In their professional work, they came into contact with women from many communities. The remaining four respondents had worked for a wide range of organizations during their lives, and ultimately made substantive contributions to women's health curricula. These positions included being a leader in the International Childbirth Education Association group, administering psychiatric health services and working with community organizations on services for former psychiatric patients in community settings, directing a women's health unit for a state department of public health, being a manager at Planned Parenthood, being a quality improvement manager for an obstetrics -gynecology department in a large public hospital, working on projects related to Social Security reform and their impact on older women, organizing a national conference on women and national health insurance, helping to establish the Boston Women's Health Book Collective and the National Women's Health Network, and working on a national health insurance project entitled the Campaign for Women's Health. In these positions, especially those that were national in scope, they had opportunities to learn about others in the U.S. who were working on women's health curricula which led to their own contributions in this area. They developed expertise about women's health issues and leadership skills. They learned about how the

healthcare system worked and how it did not work well in meeting women's health needs. For example, they obtained direct knowledge of the challenges that women experienced in obtaining information about contraception and abortion or in obtaining abortion services. They learned of the inadequacy of Social Security and Medicare for older women since those were both established based on assumptions about men's needs and lifespans. They learned of women's conditions in psychiatric facilities, their mental health needs, and the challenges in meeting those needs. They learned of the wide range of challenges that women experienced in having a natural childbirth. They learned of the cooptation of women's health by pharmaceutical companies.

> When I was at the Campaign for Women's Health, the company that makes Fosamax, Merck, was getting ready to market Fosamax. And they basically came in and offered so much money to the Older Women's League, which is where the Campaign for Women's Health was housed, that they became, you know, direct owners of the organization. And the Older Women's League became a practically, a wholly owned subsidiary of Merck and Company.
>
> *Katherine, Sociology, 1970s*

Irrespective of whether they had worked for multiple organizations or one organization, their professional experiences exposed them to alternative models of women's health and women's health services that were rooted in women's needs. Three had conducted research that specifically focused on women's experiences. When one respondent studied women, she learned, as had others, that women's actual health experiences differed from how these experiences had been portrayed in the medical literature.

> I gradually became aware that my work really had more in common with Women's Studies than with a lot of the [medical] literature that was available on the menstrual cycle. *Jane, Nursing, 1970s*

All of these respondents had worked with community based organizations that attempted to meet women's health needs. This enabled them to continue to learn about the health needs of women in the context of the communities in which they lived.

> I have volunteered and worked with community health centers in my neighborhood in Boston, so have stayed kind of involved with some of the grassroots healthcare movement at the community level. *Sylvia, Women's Health*

> Because I can't be the expert in all these areas, I rely very heavily on working with a group of community-based organizations or culturally appropriate providers. *Hannah, Women's Health*

In their employment, my respondents learned from the women who sought healthcare services, from the women who were the subjects of their research, from their colleagues, and from representatives of community groups who informed them of the needs of the women they served. All of these situations continually challenged my respondents to be intellectually rooted in women's actual experiences and women's needs in the specific context of their lives. For the five respondents who were or had been educators, their students challenged them to further consider how the healthcare system met women's needs.

> I always had undergraduate students… They put up with no bullshit… They can be like, "Well, why?" And you have to think, "Hmm. I don't know. Hold on, let me find out. *Wendy, Women's Health, 1990s*

As they were teaching, they became aware of the lack of texts for training physicians about specific women's health issues.

> We were working with [abortion] training programs, and a number of our faculty were training, you know, either at the General, or here, or at Planned Parenthood or somewhere. And we're saying, "You know, there's nothing to give, we've nothing to give the residents. Like, we can give them a book, but we really need something, you know, that guides their training." *Wendy, Women's Health, 1990s*

Another respondent reiterated the problem of the lack of texts for medical training.

> Lila [Wallis] touched the right button, that she knew there was nothing like this, where there was a comprehensive look at women's health in one textbook that could be used in medical school training where, let's say, reluctant educators were having trouble figuring out how to "add women and stir." *Katherine, Sociology, 1990s*

One respondent who was involved with an international women's health training program learned that the standard approach to medical education was not effective and a better approach need to be developed.

> The international training program has also taught us a ton about what isn't working in the way we teach… They've [the participants] never been exposed to a kind of sort of PowerPoint-driven lecture approach that we use in medical school, and they're not very tolerant of it. They've really pushed for more experiential learning, you know, more cross-national sharing, and reflexivity, like things that we know from adult education in non-medical school settings that work.
> *Wendy, Women's Health, 2000s*

It led this respondent to reconsider the teaching methods that were used in medical education and to participate in developing and implementing new

methods. This respondent had also been a director of a National Center of Excellence in Women's Health and learned from her colleagues at other Centers.

> I think in the first three years, I visited almost every CoE. I wanted a site visit, to see how the other CoEs were structured, to get a sense of what people were talking about. *Wendy, Women's Health, 1990s*

Her colleagues at her medical school also identified areas of women's health that they had previously not considered addressing as a CoE.

> One of the first meetings with the CoE …we had pushed the envelope here to have the women's health now be not just reproduction and not just breasts, but bones and hearts and all those kinds of things. You know, and she said, "Well, what about the geriatric, the really older population?" and we realized we weren't doing anything that really addressed the aging issues. *Wendy, Women's Health, 1990s*

For the two women's health reformer respondents who were directors of National Centers of Excellence (CoE), nationally organized meetings enabled the directors to speak with their colleagues about how they were implementing their programs and the challenges they were experiencing.

> We had much good, better meetings in those days. Because it was a smaller group, there was a lot of desire to share information across CoEs, and it was much more manageable. And the conference call was six people. *Wendy, Women's Health, 1990s*

In addition to learning from others, all of my respondents continued to learn about women's health issues by reading academic literature. For those in academics, it was an integral part of their work. The respondents in senior federal positions also read academic literature to gain a better understanding of the multiple issues facing women.

> [My] reading of the literature and realizing that the rate of incarceration among women has doubled, better than doubled, in the last ten years; looking at the services [health and other services] that they get versus the services that they need; the importance of services for women and how there should be some gender differentiation between what incarcerated men get and women. *Hannah, Women's Health, 2000s*

> How much more evidence do we need to show, to demonstrate and get people to believe that telling a young woman about how to have safer sex is not going to lead her to have sex? I mean, there's one study after the next. *Hannah, Women's Health, 2000s*

The respondent who had been in medical school briefly learned that there were problems in the system of medical education on a number of levels. She viewed medical education as a "hazing process." She knew women who'd been subjected to sexual harassment. Some faculty members were dismissive to concerns about the harassment.

> A male on faculty, uh, at one institution commented to me that, "Oh, that's, you know, that's just part of the process. We all have to go through that. You know, they just need to buck up."
> *Hannah, Women's Health, 1990s*

She became interested in the issue of sexual harassment as an area of study and was influenced by physicians who had experienced and written about it.

> Some of her [Frances Conley][8] articles had come out right about that time, and that's what, in some ways, precipitated it (my interest in the topic). *Hannah, Women's Health, 1990s*

She also noted that there were problems with the content of medical education.

> In the curriculum that I had when I was in medical school, there was no nutrition [education]. *Hannah, Women's Health, 1990s*

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[8] Frances Conley is a neurosurgeon who resigned from Stanford University in 1991 due to egregious sexual harassment (Conley 1998).

She was also critical of how modern medicine was practiced regarding defensive medicine where additional tests were ordered that might not be necessary, but which served to reduce legal liability.

> The Utilization Review, you know, was awful. And people weren't able to practice as an art at all anymore. It was so, um, defensive medicine and cost savings at the expense of patients.
>
> *Hannah, Women's Health, 1990s*

Social movements and public policies. Lastly, the women's health advocate respondents' awareness was also influenced by national women's movements and state public policies. Four of my respondents had participated in the women's health movements of the 1960s and 1970s, and two had been leaders in those movements. Their activities brought them together with other women who were critical of the medical profession's treatment of women. This provided a foundation for their beliefs that women's health should be rooted in women's own experiences.

The two younger respondents were aware of these movements but were not influenced by them to the same degree. One was primarily focused on women's health issues in the several states that she was responsible for in her federal position. The other younger respondent was influenced by the state implemented barriers that women experienced in obtaining information about abortions and abortion services. She lived in Missouri at the time of the Webster decision, *Webster v. Reproductive Health Services*, which prohibited any

organization that received state funds from providing women with information about abortions, providing abortion services on demand, or in using state facilities for these purposes. She was employed in a position where she was directly affected by this policy and which limited the care that could be offered to patients. These experiences led her to be committed to ensuring that women had access to a full range of reproductive health services throughout her career.

> I've just had a commitment to it [to women's health broadly and to reproductive health]. *Wendy, Women's Health*

The same was true for the other women's health advocate respondents. There personal and professional experiences led them to become committed to advocating on behalf of women's health.

Appointees

Personal experiences. The appointee respondents did not indicate that there was anything in their personal backgrounds that was related to their understanding of women's health issues, including for the one woman respondent.

Professional experiences. The appointees' understanding of women's health issues emerged as a result of their professional experiences. The primary way that they learned about women's health problems was through their clinical work in caring for women. They believed that they developed what one respondent referred to as "clinical expertise in women's issues." One respondent was an internist and only provided care to adult patients, and thus developed

expertise in adult women's clinical problems. The other two respondents were family physicians who provided care to women across their lifespans. One of these physicians had an additional interest in adolescent health and viewed adolescent patients as needing care geared toward them as a distinct population. Some of his work occurred in clinical settings that focused specifically on adolescents. In contrast, the other family physician did not view adolescents as a distinct population with specific needs, but rather, "we tend to deal with it more from just like taking care of their diseases." In his clinical practice, he provided care to women for many different health issues ranging from non-reproductive health issues to obstetric care. In his view, the family medicine approach was "to have a focus on preventive health care and be more comprehensive," which is how he approached women's health.

Clinical expertise is developed within the context of a medical encounter and a medical organization which provides a physical site and a structured interaction for developing clinical expertise. As specialty women's health clinics emerged, e.g. breast clinics, osteoporosis clinics or polycystic ovarian syndrome (PCOS) clinics, they provided a structure in which clinical expertise could be developed. This organizing framework for clinical services at one appointee's medical school also defined the domain of women's health for her.

> When you hear about women's health, you're kind of excluding or talking about subjects that are more specific to women … That would be the breast center, osteo- bone clinic… the PCOS Clinic.
>
> *Debra, Internist*

This respondent understood women's health in terms of diseases and conditions (osteoporosis or polycystic ovarian syndrome) or body parts (breasts). Organizing disease based clinics specific to one sex, such as breast cancer and osteoporosis clinics for women, reinforces the idea that these are women's health problems, but it may suggest that only women are subject to these problems. This makes it less likely that breast cancer or osteoporosis would be diagnosed in men.

The appointee respondents had moved beyond equating women's health solely with obstetrics-gynecology and reproductive health issues and had some awareness of gender bias in medicine. One of the appointees discussed the broader effect that medicine's orientation toward men had on physicians' understanding of women's health and on the framework they used in approaching their woman patients.

> The general issue is that health care in the United States has been organized around the 70 kilo white male for decades, and only in the past little amount of time has anybody thought about the concept that maybe the 70 kilo white male is not the same person that sits in front of you every day. *Frank, Family Physician*

This respondent was aware that medical knowledge and the majority of research that had been conducted at that time were based on men and that the normative patient in medicine was a man.

> And the good thing is that people are asking the questions now. And the challenge is that it changes the way we do business in terms of caring for folks. *Frank, Family Physician*

The other two appointees did not indicate awareness of gender bias in medicine to the same extent and never referenced anything related to the medical profession's reliance on men as normative. However, another appointee respondent discussed the exclusion of women from medical research and the challenge it created.

> It takes doing research differently. It takes, the whole system has to be looked at differently. Because if you don't employ, or don't involve women in research projects as subjects, you can't say, here's what works in men and apply it to women because biology is enough different that you can't guarantee that it's gonna be the same. So I guess what I've seen in the last 8 or 10 years is that people have started to recognize that. *Steven, Family Physician*

As one of my respondents was developing a women's health curriculum, sources of reliable information about women's health came from having access to specific clinical settings and having physician colleagues in those settings.

> Women's Rehab, that was one I wasn't so certain of until I talked to a physiatrist and a rehabilitation medicine specialist about whether there really were gender differences in that. And he just instantly felt that there were and that women stroke patients were dealt with differently, and women with different rheumatologic conditions that needed kind of more advanced physical medicine therapies had very different needs. So he convinced me that there were significant gender differences in Physiatry. *Steven, Family Physician*

> After working with the people in the eating disorders clinic, and the domestic violence fields, I have a better appreciation even than I had before of how important those things are to be part of the curriculum. *Steven, Family Physician*

Science was also an important factor in how my respondents understood or did not understand women's health. One of the appointees was a researcher

whose work primarily focused on breast cancer and who developed expertise in this area. Another appointee was not directly involved in clinical research at the time, but discussed the limitations of physicians' understanding of women's health due to the majority of research having been conducted on men. This respondent noted the consequences on his own and on other physicians' understanding due to a lack of research on women, for example with cardiovascular disease and hormone replacement therapy.

> Things like cardiovascular disease [in women], we just haven't understood period. *Frank, Family Physician, 2000s*

> Things that we thought were true are no longer true. … In my career we've had 4 changes in the belief system around hormones, and my guess is we'll probably have several other changes over time as well. *Frank, Family Physician, 2000s*

At the time of the interview, emerging research about hormone replacement therapy indicated that it was not the panacea that physicians had believed it was, and that it might actually harm women.

> I think that's part of why physicians have been so challenged by the hormone related issue, because then it really became a focus of getting everybody on hormones because it was going to lower the risk of cardiac disease, and then we found out that it actually increased the risk of heart disease, and then we're finding out that it raises the risk of a whole bunch of other problems. *Frank, Family Physician, 2000s*

This respondent recognized that the consequences of beginning to include women as subjects in clinical studies had implications for clinical practice and medical education. It meant that medical knowledge about women was in its

early stages and physicians were just beginning to recognize that they needed to ask different questions when it came to caring for woman patients.

> Now we're just learning that there's a difference in the way we need to approach women as opposed to approaching men.
>
> *Frank, Family Physician, 2000s*

Another appointee discussed how research studies that were conducted primarily in one sex should not be generalized to the entire human population.

> A lot of studies have said, have now, where they would in the past, they would generalize, well we did this study and it was all done in men but it must apply to women. Now they're putting at least, and for several years, have been putting in disclaimers that this study was only done in men, and should only apply to them. Or some that have been in women. The big nurse's study on colon cancer was like that, where there were 10,000 women on aspirin or some anti-inflammatory, and this only applies to women.
>
> *Steven, Family Physician, 2000s*

Two of the respondents were located at prominent academic medical centers and had colleagues who were nationally and internationally renowned women's health researchers, administrators and clinicians. Both respondents identified one such individual within their organization who was influential in developing their understanding of women's health, especially as it relates to curriculum.

> She's also provided us with [curricular] materials on some things that they've done at the institution where she came from, has provided us with a compilation of a lot of the research that's going on.
>
> *Debra, Internist, 2000s*

> Having [her] here means that I have been exposed to the work that ACOG did because she is on the task force. I have a notebook which I

> can go and pull out and look at those sorts of things.
>
> *Frank, Family Physician, 2000s*

The third respondent was located at a regional academic/community health center, and for him, trusted colleagues who directed clinical services were sources of information about women's health issues and needs. This could be in either specialized clinics with a clientele primarily composed of women such as an eating disorders clinic, or a subspecialist who provided care to both men and women but who was aware of differences in patients based on sex, such as in physiatry. All of the appointees relied on local experts that they knew for information about specific women's health issues, and in almost all cases these local experts were physicians.

The appointees were also aware of authoritative national reports related to women's health which discussed deficiencies in medical education and knowledge, but for the most part, they were not significantly affected by the reports. All three were aware of the two Institute of Medicine (IOM) reports which addressed the need to include women as subjects in medical research (Mastroianni, Faden and Federman 1994) and the importance of addressing sex and gender factors in healthcare (Wizemann and Pardue 2001). They viewed these reports as important in terms of indicating the future direction of healthcare. However, the degree of perceived relevance of the IOM reports varied across my respondents. For one respondent, the report was noteworthy but directed toward the future.

> I think any time the Institute of Medicine comes out with a report, people take note and it sets kind of an agenda for research areas and change in medicine. *Debra, Internist*

For another, it provided external validation for his current efforts to develop a women's health fellowship in addition to pointing toward broader problems within medicine related to women's health. He stated:

> I think the whole topic is very significant, and that is one reason to have fellowships like this and to disseminate the information and make people aware of the differences. It will take a significant curricular change - and starting in medical school. More than that, it takes doing research differently. It takes, the whole system has to be looked at differently. *Steven, Family Physician*

One of the appointees was affected much more by a general report from the Institute of Medicine, *Crossing the Quality Chasm* (IOM 2001) rather than reports that specifically focused on women's issues. The IOM's *Quality Chasm* report addressed the extent of medical errors in the healthcare system, including errors made by physicians which harmed patients.

> The [IOM] *Quality Chasm* report was a more generalized report, and that's the one that really challenged the entire profession of medicine. *Frank, Family Physician, 2000s*

On a personal level, the report about medical errors had a large impact on this respondent in conjunction with new research that was emerging about the problems that physicians had caused by placing menopausal women on hormone replacement therapy.

> We found out that it [hormone replacement therapy] actually increased the risk of heart disease, and then we're finding out that it raises the risk of a whole bunch of other problems, and yet you've got all these

> women that you've educated, brainwashed over the years about the importance of this. And how do you maintain credibility that you try to do the right thing for them now? It's really a challenge. It's really a challenge. *Frank, Family Physician, 2000s*

In addition to the effect on the relationship of trust between this physician and his patients, the emerging science about hormone replacement therapy also challenged the core moral imperative associated with being a physician.

> So that challenge, when you couple that with the Hippocratic oath to try to do no harm, and then to have so much data indicating that we are doing harm. *Frank, Family Physician, 2000s*

Only the respondents at national academic medical centers were aware of the Council on Graduate Medical Education's Fifth Report (USDHHS, PHS and HRSA 1995) about the need to address women's issues more comprehensively in medical education, but they did not see it as significant.

> I think it [COGME 5th report] raised the awareness of establishing programs and looking at gender differences. I guess, practically speaking, [the impact was] not that much. *Debra, Internist*

> It [COGME 5th report] would not necessarily stand on its own. … It's a matter of momentum that a question is raised and an issue is raised and it gets talked about or addressed, and then another study or another position paper or another newspaper article comes out, and the tipping point eventually gets met, and things start moving more rapidly. *Frank, Family Physician*

The respondent at the regional academic and community medical center was not aware of the COGME report even though he was involved with graduate medical education.

The appointee respondents were also aware of some of the curricular initiatives from various specialty organizations, but they were more knowledgeable about initiatives within their own specialties. One family physician knew that the Society of Teachers of Family Medicine had a number of groups that focused on women's health, but did not indicate any direct involvement with those groups. The other family physician was aware of the Future of Family Medicine project that addressed the desirability of fellowships in family medicine, including women's health fellowships. Both of the family physicians also had a general awareness that the Association of Professors of Gynecology and Obstetrics (APGO) had curricular initiatives. One did not know much about APGO's initiatives beyond the materials provided by a colleague, while the other was an APGO member and had briefly reviewed their curricular materials. The latter physician also had clinical expertise in women's reproductive health issues and taught residents basic gynecological techniques. The other family physician addressed adolescent reproductive health needs, among other issues. The respondent who was an internist was involved with a women's health education special interest group within the Society of General Internal Medicine (SGIM) and with some of this group's curricular initiatives. Colleagues who were members of the SGIM women's health education special interest group were also a source of information about women's health issues and about curriculum development for her.

Medical Reformers

Personal experiences. The medical reformers rarely discussed personal experiences that led them to become aware of problems in women's health. Of the twenty respondents, only three discussed personal experiences. Two medical reformers had mothers who had been ill when they were young women. Both mothers had received inadequate medical care. One eventually passed away. These experiences had been an impetus for their interest in medical careers. As they progressed in their medical careers, they began to understand the problems that women encountered in receiving appropriate healthcare. Both of these respondents were in senior government positions.

One medical reformer spoke about her abortion rights advocacy work while she was in high school and the numerous gender based discriminatory experiences she had beginning with the time that she was applied to an elite science focused high school.

> They had the entering class [for the high school] by taking all the grades of the entry exam for women and men in separate piles, and taking the top 2/3 of the quota from the male pile and the top 1/3 from the women's pile. *Carol, Internist,1960s*

Professional experiences. For the medical reformers, their understanding of issues related to women's health evolved over time and were primarily affected by their professional lives rather than from experiences in their personal lives. In the initial stages of their emerging awareness, for many respondents it was because they were unable to meet their patients' clinical needs. As they

began to learn more about women's health, their colleagues, particularly those in other specialties and in allied health professions contributed to their understanding.

Caring for patients. Twelve out of sixteen physicians and one pharmacist noted that their understanding of women's health evolved during their clinical practices. For eleven out of thirteen of these clinicians, it was based on the difficulty they had in meeting their patients' needs. The two other clinicians spoke about a general awareness that emerged from their women's health clinical practices in the same way that the appointee respondents had, i.e., because they gained expertise in providing clinical care to woman patients.

Several factors contributed to respondents' inability to meet their patients' medical needs. Their patients needed basic gynecological care or early obstetric care and expressed this need, but most respondents had not been trained to provide this care. Many respondents wanted to provide comprehensive care to their patients, but were unable to do so. This problem is related to what has been referred to as the fragmentation of women's health (Dan 1994; Laurence and Weinhouse 1994; Wallis with Betancourt 1999; Weisman 1998). It refers to the provision of medical care to specific areas of the body by clinicians in distinct specialties. The specialty of obstetrics-gynecology is responsible for women's reproductive health while another physician such as an internist is responsible for the rest of a woman's body. In the case of family medicine, many of these

physicians provide basic obstetric or gynecological care so that less fragmentation in women's health is apparent within this specialty. The dominant way that women's healthcare was provided required women to meet their primary healthcare needs by seeing two physicians.

> I found out for women to get really integrative care, at least at an HMO in California, it was truly challenging. She had to go through many steps. She could see an internist for one issue, an OB/GYN for another. There was very little coordination. *Lisa, Internist, 1990s*

This is further complicated when it is unclear which specialty has authority over a specific health issue. In the case of osteoporosis, the condition is affected by hormones and is perceived as a women's health issue, and thus could potentially fall under the domain of obstetrics-gynecology which is the women's health specialty. However, osteoporosis affects the bones of the body, and that is the domain of internal medicine. Because osteoporosis is related to hormones, it is also under the domain of the subspecialty of endocrinology. It becomes difficult for physicians to negotiate these boundaries. One internist reported having difficulty in addressing gender based health issues that crossed two domains when gender based care was the domain of obstetrics and gynecology.

> It was very hard to fractionate care. They were getting their gender specific health in one place, but I wanted to talk about osteoporosis. And it's very hard to fractionate it. *Melanie, Internist, 1990s*

An additional problem in providing care to patients occurred when subspecialists were not interested in accepting referrals or providing consultations. In one organization when internists referred patients to

obstetrician-gynecologists, these subspecialty physicians preferred to do surgical work rather than provide the routine gynecological care that most patients needed.

> We referred our patients to gynecology for their preventive health, their pap testing. [It] was not working because our gynecologists, at least in that setting, were not interested in doing routine exams. They wanted to see, they were surgical oncologists and they were coming up to the VA for subspecialty care. So their interest did not match our needs. *Melanie, Internist, 1990s*

Another physician had difficulty in obtaining a neurological consultation for a patient whose medical state made her uncommunicative. This patient's primary language was Spanish, so that both sex and ethnicity were factors inhibiting access to care.

> This 18 year old woman, post code, who was intubated, they couldn't do a neurologic exam because she spoke Spanish. The woman had a tube in her mouth. She had IV's. She was on blood pressure medicines. I just wanted to see whether or not from their perspective there was neurologic post-code. Is there anybody there? Do we need to sort of, is she brain dead or whatever? And they literally told me they could not come to see her to tap on her legs because she spoke Spanish. *Nancy, Internist, 1990s*

In their early practices, the eldest and the youngest physician respondents who had more than a forty year difference between them indicated that their patients informed them of the need for health care services that met women's health needs.

> My patients were telling me, "Why is it that you do a pelvic that doesn't hurt? And you tell me what you feel and you tell me what you see. While when I go to another gynecologist," they took me for a gynecologist, it doesn't matter - she would say "It always hurts when I

> come out. I'm embarrassed and it hurts everywhere, and I don't know what they're saying. *Wanda, Internist, 1960s*

> I just found my patients telling me that there was a need. And I just felt like there wasn't anybody out there doing it. *Barbara, Internist, 1990s*

While it was most common for physicians to indicate that they experienced challenges in providing care to their own patients, early on in their practices, eight out of sixteen physicians perceived the problem to be a more general one of physicians providing care to women as a category of patients. For some, it was related to a specific sub-group of women such as pregnant psychiatric patients.

> So, when I started as an attending on the psychiatric inpatient unit here - which are short term, inpatient units where we mostly treat involuntarily hospitalized, severely mentally ill patients, uh, we also started to get a number of pregnant, psychotic women that we had to take care of. And, again, literature review revealed absolutely nothing at that time in 1983, '84, and so all the decisions regarding what medications to use, how to really set up a treatment plan, how to provide prenatal care, how to evaluate when it was safe to have a woman leave the hospital, what would happen in the postpartum; all of these questions were open at that time.
>
> *Stephanie, Psychiatrist, 1980s*

Patients expanded physicians' understanding about the perspectives and health needs of diverse patients.

> I had this really fabulous transgender patient … and he said, "Sex is what you're born with, and gender is the imposition of certain cultural norms, like it wasn't an appropriate thing to wear pants last century, and it is this century. So, you know, that's gender, and you can choose your gender, but you can't choose your sex." I mean, it was really interesting the way he saw it, and he was born female and he changed to male, like, at age 25. So, he considers himself male gender. *Rebecca, Ob/Gyn, 1990s*

Many of my respondents searched for information so that they could provide care to their patients, but they often learned that the information did not exist.

> Also to realize at that time, that there were very few studies in women in diseases other than involved the reproductive organs. So if you were looking at asthma, or if you were looking at cardiovascular disease, anything that was out there, there was very little data in women. *Sarah, Pharmacy, 1980s*

The lack of research about women's health led many of my respondents to develop research agendas about specific populations or specific topics, which enabled them to develop expertise in these areas and to build careers based on that work.

> I first did research on sex differences in mental illness, and then I did research on eating disorders. *Blanche, Psychiatrist, 1980s*

> My research has primarily focused on reproductive and gynecologic problems and those issues as they impact later health. *Nora, Internist, 1990s*

> Knowing nothing about that field [pregnant mentally ill women] and having no prior training in that whatsoever, I quickly studied what there was to study, which was a paucity of information, and came to be very, very interested in this population. And realized how much more needed to be studied and could be studied, and ended up veering off in that direction in terms of a career path. *Marcia, Psychiatrist, 1990s*

My respondents' understanding of women's health evolved as they practiced medicine, and for those who were also researchers, it evolved as they conducted research.

Physician educators. Four respondents spoke about learning more about women's health in general and about women's health within medical education more specifically because they worked with students and taught them. Awareness of women's health issues emerged from the dual roles of being a clinician and educator of the next generation of physicians.

> I basically grew into women's health as an obstetrician/gynecologist, a teacher, with a natural affinity for education. *Mary, Ob/Gyn, 1980s*

Faculty noted that students requested training that was not part of their standard curriculum or that would help them to develop the skills they desired to have in order to be able to care for women.

> My women medical students at [our medical school], came to me and said, "We don't know how to do pelvic exams." And I knew that because many of my students had told me "I don't know how to do pelvic exams. I have to wait until the surgery elective, then I go to the clinic and the doctor does a physical pelvic exam and I stand there and I don't know where his hands are. And I intend to do it. And I don't know what I'm doing." … The students who were being taught in the OR [operating room] said, "How do I know what I'm feeling? I know that something is abnormal because the patient is [there], but I don't know what. The patient doesn't respond, doesn't tell me where it hurts." *Wanda, Internist, 1980s*

Such experiences point to the inadequacy of certain aspects of medical care for women, attitudes toward women patients, and inadequacy in medical education. These patients were unable to communicate with students because they were

anesthetized and this aspect of training was done without patients' knowledge and consent.[9]

When faculty members assessed the curriculum and surveyed students to identify areas of deficiency, they learn about additional women's health issues that were not being adequately addressed, such as domestic violence.

> When we asked the students in their third year, "Have you seen any domestic violence?" a lot of them hadn't. And, of course, it's an epidemic and it's everywhere. *Rebecca, Ob/Gyn, 1990s*

Faculty members also learned information related to women's health and sex and gender medicine when they supervised students' research projects, as one faculty member did in relation to transgender patients.

> We had the first Internet survey with a medical student who was in this MPH program in [university]; and she found out that only 3 percent of the F to Ms [female to males] had bottom surgery, and only, like, 25 percent had top surgery. *Rebecca, Ob/Gyn, 1990s*

Faculty and students jointly searched for information and explored the literature either as part of their academic work or as part of caring for patients. For residency training, journal clubs provided an environment where information and knowledge about women's health was assessed.

> We're evidence based, we run a research fellowship, I mean that's what our journal club is. We critically review articles. Does this article really mean what it says, should we conclude [it is true]? *Melanie, Internist, 1990s*

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[9] This was the standard approach for pelvic education in medical schools.

In other cases, learning occurred in the context of supervising residents who were taking care of patients and determining how to assess and apply existing knowledge to patient care.

> There's much less of this "well, we know there's no evidence to support it, but this is what we do" kind of stuff that you get in some specialties. ... The modification that has to be made is an understanding of the lack of research that we have in a lot of areas, and what then do you do when you have to decide on the applicability of a study that didn't have enough women in it? So, that what we find ourselves talking about is - Okay, we have studies that show that aspirin works in men. The results are coming on whether or not aspirin works on women. They've at least recognized they need to do the study. In the meantime, what can we take from the studies on men? Why might it work? Why might it not work? And what should you be telling your women patients? *Patricia, Family Physician, 2000s*

Administrators. For the three respondents who were in administrative roles and were not clinicians, their understanding of women's health issues evolved from their interactions with the physicians with whom they worked. For one respondent, her physician colleagues served as mentors. Another respondent had frequent contact with women physicians who taught in medical schools and she learned about their needs, which included a need for curricular materials related to women's health.

> People called my office for all kinds of things, and then this started to emerge, the discussion of women's health started to emerge. My office just attempted to, if I learned there was something in the literature, in a book related to women's health, I would include a summary of it, that kind of thing. *Belinda, Professional, 1990s*

Two non-physician respondents commented on the gender bias that women physicians reported experiencing in the medical profession and in academic medicine.

> I've heard many minority women say they've had more of a problem because of their gender than their minority [status].
>
> *Kim, Professional, 1990s*

In their professional work, these respondents also learned about constraints to teaching women's health in medical education. There was a lack of research about women, a lack of appropriate curricular materials for faculty, and full schedules in medical schools that did not easily allow for additional time to be devoted to teaching about women's health.

> How much [little] time that they have to really in all of medical school, [to] gain the knowledge to take care of men and women.
>
> *Rhonda, Professional, 2000s*

The type of knowledge that these non-physician medical reformers acquired about women's health was related to the tasks that they needed to accomplish for their organizations. One respondent learned of the emerging literature about women's health issues which she then conveyed to women faculty members. Another learned about the breadth of women's health information that was missing in medical education when the organization she worked for decided to make a concerted effort to address women's health in medical education in a more comprehensive way beyond obstetrics- gynecology.

> [Our specialty society] was looking in the direction of putting more women's health in the curriculum besides the reproductive health

> issues that they already had in the clerkship.
>
> *Rhonda, Professional, 1990s*

Another respondent learned about emerging women's health issues so that she could help her organization establish policies related to women's health and to make decisions about whether the organization should engage in advocacy.

> But in this case, advocacy, the political realities, that sort of thing, pushing the agenda, I would be involved in that on a women's health sort of thing. *Kim, Professional, 1990s*

Colleagues and their role in awareness. For the medical reformer respondents, colleagues played an important role as a source of information about women's health, but in unexpected ways. In almost all cases, support and information came from other women physicians and health professionals.

In the early stages of their careers, respondents explicitly stated that either there were no other women in their educational programs or there were very few women. They may have been the sole woman in their residency program. As a young faculty member, there may have only been one or two other women faculty members in their medical schools. In the early stages of their careers, as many of them began to question how to appropriately care for women patients, they did not have colleagues with similar perspectives or questions. Similarly, most did not report that they had mentors to provide support. Only two respondents indicated that they had mentors, and in one case, the mentor was a researcher who was a man. One respondent who expected to be mentored by a leader in the field of women's health discovered that it did not happen because

this leader was not supported in her medical school. As they began developing their professional careers, two additional respondents noted that they had the support of the leadership in their organizations, but the support was in the form of being permitted to pursue their interests rather than more direct or proactive involvement. In one of these instances, permission was given to pursue funding for women's health services at the V.A.

> The guy who was our chief supported me in going for these monies… [for] comprehensive women's health centers… partly because we had nothing, and partly because we were given a green light by our immediate supervisor. *Melanie, Internist, 1990s*

Physicians, particularly those in academic medicine such as my respondents, usually align themselves most closely with others in their specialty. They identify themselves as being internists, family physicians, obstetrician-gynecologists, or members of a specific subspecialty. They tend to interact primarily with others in the same specialty. Among the physician medical reformers, only about one-third indicated that early in their careers, they communicated about women's health issues with colleagues in their specialty. This was more likely to be true for obstetrician-gynecologist respondents. When they communicated with their same specialty colleagues, they often did so with colleagues in other institutions. For example, when a psychiatrist decided to develop a women's health curriculum, she travelled across the country to meet with a colleague who had done work in this area. Others found colleagues with similar interests in their region who were at other institutions, as was true for an

internist and an endocrinologist. One respondent joined an organization that was attempting to create a separate women's health specialty which included peers in her specialty area and in other specialties.

Medical reformers also learned about attitudes towards women's health within the medical profession. One physician noted that her colleague had been fired for taking too long with her appointments with women. A second had expected to be mentored by a prominent women's health leader but discovered that this physician was not supported in her institution. A third indicated that when her colleague published an analysis of gender bias in medical textbooks, she received hate mail from physicians.[10]

> When [she] did her article reviewing anatomy textbooks, she got hate mail. She got hate mail on letterhead, on prescription pads from orthopods saying, you feminist bitch, you should just go shopping. … They got hate mail from all of these guys because they identified that early on, anatomy books to be made interesting for men in medical school were basically Playboy magazine. And that the only thing that was basically, that you saw in terms of women versus men was … the perineum. *Nancy, Internist, 1990s*

One researcher spoke about encountering resistance among her colleagues to her research on women's health topics.

> First I tried to explore new frontiers in a field, such as sex and mental health. I worked to expose inequities in the 1980's… At first, there was not much support available for this work, which indicated that there must be inequities… I fostered a science base. Then I met up with resistance and barriers. *Blanche, Psychiatrist, 1980s*

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[10] Of the three physicians referenced here by my respondents, I invited two to participate in this study. They were the only two who declined my request.

Just as there was little communication about women's health with colleagues in one's own specialty, there were few opportunities to learn about women's health at one's specialty professional meetings. Few medical reformers reported substantive women's health activities within their specialty organizations. The main exception was in obstetrics-gynecology which focused on reproductive health issues and only relatively recently had started to consider broader women's primary health care needs. Over time, some specialty based opportunities for communicating about women's health issues were created in which a couple of my respondents participated. The American College of Physicians offered an Update in Women's Health to share information about emerging women's health research. A special interest group for women in medical education was created within the Society of General Internal Medicine (SGIM). SGIM is the association for internal medicine physician educators.

Although early in their careers medical reformers did not have a network of colleagues in their own specialty areas with whom to discuss women's health, they discovered opportunities to work with colleagues in other specialty areas or in allied health professions. Almost all medical reformers had such opportunities, although one community based family physician did not mention having such communications. In most cases, respondents worked with physicians in other medical disciplines on women's health curriculum related projects including curriculum assessment, competency development, and course development. In

some cases, these activities occurred early in respondents' careers and were initiated as small projects, while others were undertaken under the auspices of their organization's National Center of Excellence in Women's Health designation. These various educational initiatives are discussed in the next chapter. Sites that had been designated National Centers of Excellence in Women's Health had incorporated into their structures cross-departmental communication and collaboration. Respondents also communicated cross-disciplinarily for other purposes including providing primary care services to women at a VA, conducting collaborative research across a woman's lifespan, developing research agendas for the National Institutes of Health, advocating on behalf of career development for women physicians, assessing how to provide woman-centered psychiatric services, and efforts to create a separate women's health specialty. In most of these cases, collaboration occurred across medical specialties, however, one respondent wanted to develop appropriate psychiatric services and worked with social workers, nurses, and other staff when there was no other interest in such services at her institution. Although many of these collaborations occurred within individual medical schools and health care facilities, the majority of respondents also participated in national interdisciplinary conferences and committees. A few also served on interdisciplinary women's health related advisory boards. Respondents who worked at the federal level also had opportunities to communicate with individuals at various women's health

related organizations - both academic and non-academic, with other agencies, leadership at medical schools and CoEs, global women's health projects, and the U.S. Congress. These cross-disciplinary communications and collaborations created opportunities to develop interdisciplinary knowledge about women's health.

Other sources for awareness. Medical advocate respondents rarely mentioned having communications about women's health outside of their professional medical network. However, there were some exceptions. As one respondent was beginning to work on a women's health curricular project, she met with leaders from the Boston Women's Health Collective for their input on how to approach the issues and how to proceed. This physician was interested in developing a program that would reflect women's health needs from the perspective of lay women. One respondent indicated that while she was involved with a self-help group in college, her group used *Our Bodies Ourselves*, published by the Boston Women's Health Book Collective (1973), as a resource. No other medical advocate respondent mentioned using any lay publications. Two other respondents indicated that they were influenced by their women partners. One respondent's partner was a feminist theologian who provided her with a feminist framework for interpreting healthcare for women. The other respondent's partner was a healthcare professional who provided her with

information about the health needs of underserved minority women that were not being addressed within her medical school.

The primary way that science shaped medical reformers' awareness of women's health issues was due to the lack of research and knowledge about women's health. When they searched the medical literature about specific issues, they found little or no information.

> I actually looked in the medical literature. There was all of 4 articles.
> *Nancy, Internist, 1990s*

> I quickly studied what there was to study, which was a paucity of information.
> *Marcia, Psychiatrist, 1990s*

> [A] literature review revealed absolutely nothing at that time.
> *Stephanie, Psychiatrist, 1990s*

While this was the initial situation for many respondents, over time research about women's health issues emerged. The Women's Health Initiative research program began in 1991 under the leadership of Bernadine Healy, MD, the first woman director of the National Institutes of Health. It was designed to examine health issues in postmenopausal women including heart disease, breast and colorectal cancer, and osteoporosis. In the late 1990s and early 2000s, results from these research initiatives started to be published. By the time of the interviews, all respondents were well aware of these finding that were now challenging prior knowledge and practices related to women's bodies.

Sites for developing awareness. Medical reformers learned about women's health in a variety of environments and all of these had a specific focus

on women's health. For some, this occurred early in their careers while for others, they did not work in or with a woman focused organization or department until later after such entities were created. A majority of respondents provided clinical services in settings that focused on women. This included a VA women's primary care clinic, a teen clinic, a women's hospital, women's health clinics within large academic medical centers, and women's psychiatric inpatient services. Half of the respondents were also involved with the National Centers of Excellence in Women's Health (CoEs) at their universities. Two additional respondents provided psychiatric women's health services within organizations that had been designated CoEs, but they did not have any involvement with their CoEs. One of these respondents knew very little about the CoE at her institution. Two respondents were leaders of academic women's health departments at medical schools. One of these was located within an internal medicine department while the other was a separate entity within the medical school. One respondent established a women's health policy organization which enabled her to work with colleagues across the U.S. Several respondents worked in women's health offices either at the federal level, in academic medical professional organizations, and for one, at a national medical society.

In most cases, those who provided women's health clinical services worked with colleagues in other disciplines on women's health projects. Similarly, those who were involved with their CoEs were members of an interdisciplinary

group of scholars. Medical reformers working at the federal level or for professional societies worked with physicians in multiple specialty areas. These experiences provided opportunities for medical reformers to work interdisciplinarily and develop a broader understanding of women's health. Even so, most of the medical reformers communicated primarily with other physicians in these settings so that their understanding of women's health developed from the perspective of the medical profession.

For medical reformer respondents, the primary context in which they learned about women's health issues was from the medical profession. Most learned about the problems in the context of a clinical encounter and they further developed their understanding as a result of their curricular work in interdisciplinary teams. A few noted that they learned from their colleagues within their organizations or those who were in the same specialty within other organizations. As medical reformers searched for medical information that would help them to care for their patients, they learned that existing medical knowledge was inadequate and that their training had not prepared them to provide comprehensive care to their women patients. Despite these challenges, the medical reformers determined that the medical profession could provide a solution, and they trained themselves, developed protocols for patient care, conducted research, and attempted to meet their patients' needs. For them, even

though medicine was found wanting, they believed that there was a medical solution to their problems.

Lived Experiences and Differences in Developing Awareness

There were differences in how my respondents became aware of issues in women's health and in medical education, but for all of them, it was based on their lived experiences. For women's health advocates, they learned from their own immediate healthcare needs, the experiences of other women they knew, and the women they encountered in community settings when conducting research or when providing health and social services. They learned about how the medical profession was not meeting women's healthcare needs and how medical views about women did not reflect their own experiences. For them, learning occurred in both informal and formal settings.

Appointees learned about women's health primarily by providing clinical services to their women patients. For the needs that they could not meet, they relied on their subspecialty colleagues. Their own experiences and that of their colleagues was the primary source of their knowledge. For them, the medical profession was meeting women's healthcare needs, although there was room for improvement.

Medical reformers learned about women's health primarily from their professional experiences. However, their experiences were unsettling. They became aware of various forms of gender bias during medical education and

during their clinical practice. They had difficulty meeting their patients' healthcare needs because they had not been trained to provide comprehensive care to women. They learned about women's healthcare needs in the process of attempting to meet those needs. Medical research that was specific to women was often lacking. In the majority of cases, their immediate colleagues in their own departments were not sources of support for providing more comprehensive clinical care. They began to establish relationships across disciplines which enabled them to develop a different approach toward women's health. They became women's health physicians and supporters of women's health physicians. From their perspective, the medical profession was not meeting women's healthcare needs in many ways, but they believed it could.

The Problems Identified in Women's Health

As increasing numbers of women entered the medical profession, it began to expose the cracks in the healthcare and in the medical education systems in relation to women. Collectively, my respondents identified a wide range of problems in women's health from the individual level to a broad societal level that encompassed many different institutional contexts. These ranged from a lack of attention to the needs of individual women to social policies that affected women more broadly. The problems they identified spanned many years and included issues that were present before the women's health movements of the 1960s

and 1970s. Even so, many aspects of these early problems continued to be present at the time the interviews were conducted between 2001 and 2004.

A fundamental critique of the medical profession, particularly among women's health advocates, was that it did not address women's health needs as these needs were experienced by women. Instead, physicians defined women's health problems and medicalized normal aspects of women's life experiences, for example, childbirth or aging. When the medical profession began to attend to certain women's health problems and concerns such as breast cancer or menopause, the broader health needs of subgroups of women such as minority women, poor women, and those in the LGBT community were not acknowledged. The fact that medicine did not reflect women's experiences, lives and concerns was manifested in many ways, but women often experienced these problems in clinical settings in which the physician/patient relationship was hierarchical and paternalistic. Physicians often withheld information from women which did not allow them to make informed decisions about their lives and their health.

The problems that women encountered in the clinical setting reflected physicians' gendered attitudes about women. This was manifested when physicians were dismissive of women's concerns or attributed them to women's hysteria. As women began entering the medical profession, they experienced these sexist attitudes. They faced harassment in various forms, including sexual

harassment by men who were faculty, students and colleagues. They experienced a lack of support for their professional work and a lack of mentorship, which inhibited their career progress. As they began to develop women's health curricular materials and model curricula, most were not supported within their institutions or the specialty societies of which they were members. As women entered the medical profession, it created an opportunity to increase recognition for many of the problems related to women's health.

One of the fundamental and universally acknowledged problems was the lack of research about women's health which continued to be a significant problem at the time of the interviews. Respondents stated that medical research had historically been done on the normative 70 kg white male. Research on men was then generalized and assumed to apply to women. This was a problem because many drugs worked differently in women and caused side effects, illness and in some cases, death. This problem was not limited to clinical research. Even basic science research was done using male lab animals and male cells.

> They only studied male rats for muscle tissue and anatomy, and then they generalize it to men versus women.
>
> *Nancy, Internist, 2000s and long before*

> Many of the studies that are done, for example on epithelial cells, have been done on male epithelial cells.
>
> *Corinne, OB/GYN 1990s and 2000s*

Even when women were included in research studies, researchers frequently did not analyze their data based on sex, but these research studies were considered appropriate for publication in prestigious journals without a sex difference analysis. One physician noted that the results of a drug study had been published by the *New England Journal of Medicine* which showed that the drug was an enormous improvement over the prior class of drugs and had a much lower mortality rate. The study included women, but the data were not analyzed based on sex; a problem which continues to this day. Later, another researcher examined the same data and discovered that all of the deaths associated with the drug occurred in women. The results of this subsequent study were published in a less significant medical journal, ensuring that this information would reach a limited audience.

An additional problem occurred when researchers included women as subjects but conducted their research in an unethical manner.

> Unethical research had been done with women… like the DES business… and there were birth control studies where women hadn't been told that they were taking placebos.
>
> *Jane, Nursing, 1950s and 1960s*

The wide range of problems related to the lack of research on women's health and unethical research meant that physicians were frequently harming their patients as they provided healthcare services.

Most respondents believed that the fragmentation of women's health services was problematic. A woman would see an obstetrician-gynecologist for

reproductive health services and another physician such as an internist to address issues with other parts of her body. This system reflected the traditional erroneous assumption that women's bodies were like men's bodies except for differences in reproductive organs, and also that women's reproductive health issues were separable from other health issues. This system made it difficult for women to obtain healthcare services because they had to see multiple physicians for primary care services. For women of reproductive age, they often only saw an obstetrician-gynecologist for their healthcare, but this specialty was ill equipped to provide primary care services because it is a surgical specialty. It led to many women receiving care that was limited in scope in what one respondent referred to as "bikini medicine." In her view, this reflected the medical profession's general perspective about women's health, i.e., that the only way that women differed from men meaningfully was in the bikini area. This medical division of women's bodies made it difficult for some primary care physicians to address women's health needs when there were health issues that encompassed women's reproductive systems and other parts of women's bodies, and in which there was a clear interrelationship between the two.

There were also problems associated with the financing of women's health services which limited women's access to health services. Public financing was limited in scope in ways that did not meet women's health needs. The Centers for

Disease Control project to screen women for breast cancer, the Breast Cancer Early Detection Project provided:

> Money from the CDC for screening services… pap smears and mammograms for women who didn't have insurance… but it didn't have a treatment component … You could find out you had cancer, but then there was no service or treatment.
>
> *Wendy, Women's Health, 2000s*

There were also disparities in reimbursements for physicians for procedures performed on men as compared with women. This created "fairly negative economic incentives" to providing services to women.

> If you look at primary care, it's poorly reimbursed. If you look at Ob/Gyn and look at similar surgical procedures in men and women, for men they're reimbursed at a greater rate than for women.
>
> *Corinne, Ob/Gyn 2000s*

Younger and older women both had difficulty accessing healthcare services because of policies and practices in the public and private the insurance system.

> [Women are] disadvantaged in the insurance system… [when] young prenatal care mothers who are dropped off any sort of health care coverage, and the very elderly women who have access only to Medicare, and often cannot afford healthcare.
>
> *Corinne, OB/GYN 2000s*

Given that the focus of my interviews was on medical education and my respondents were working to change medical education, they were well aware of many problems in this area. They found that medical texts were oriented towards a male gaze and often depicted women in degrading ways. Medical case materials always used a male patient as the example unless the issue was women's reproductive health. All of the research studies that were cited were

about men. These issues meant that there was a lack of appropriate curricular materials for faculty to use when teaching women's health. During clinical training, medical students and residents observed women being treated dismissively, as had been the case in the example of the woman patient who needed a neurological consult. The lack of knowledge about women's health led to incorrect or missed diagnoses. Other faculty members were resistant to including women's health in the curriculum and cited the lack of curricular time to add more content into their courses. Disciplinary boundaries were also commonly identified as a barrier to integrating women's health into the curriculum.

> You'd have one department teaching a course, then another department teaching the same kind of subject matter, but putting a different kind of spin on it, so to the students it appeared that the information was just backwards. *Sarah, Pharmacy, 1990s*

As my respondents worked to develop women's health curricular materials and model curricula, and as they implemented these curricula, their efforts occurred in the context of a system that was characterized by gender bias at all levels as described above. In the next chapter, I examine the process by which my respondents began to make changes in medical education related to women's health.

Awareness, Lived Experience and Detached Concern

I categorized my respondents into three groups, women's health advocates, appointees, and medical reformers. Each of them came to understand women's health in different ways, depending on their own life

experiences. The life experiences of women's health advocates and the other women they communicated with led them to understand that medicine as it was being practiced did not reflect or meet women's needs. Through their work, the appointee respondents were aware that women had been excluded from research studies, but because they provided care to women in their clinical practices, they had much more faith in medicine than other respondents. As needed, they relied on experts to help them provide care to women. In their view, the medical profession was on its way toward a better understanding of health and illness in women. There was nothing in their experiences that challenged their belief in medicine, although for one physician, the multiple and changing beliefs related to hormone replacement therapy were unsettling. Most of the medical reformers learned that medical education did not reflect women or their health needs at the time that they were in medical school, during residency, or early in their clinical practices when they found their training did not prepare them to provide comprehensive care to their patients. They learned about women's medical needs from their patients. Some also reported experiencing gender bias and harassment in medical education, but this was not a focus of our interviews. These life experiences began to expose cracks in the system of medical care for women and also in medical education. Medical reformers still had faith in medicine, but they knew that it needed to change to meet women's healthcare needs. The appointees, and in particular the appointees who were men, did not

have similar life experiences that would have enabled them to see the cracks in the system much earlier in their careers. Because my women respondents lived gendered lives, they experienced medical education and practice differently than their peers who were men.

Medical reformers learned from their patients. For some respondents, what they learned went beyond their patients' medical needs. One medical reformer stated, "I identified with my patients." This physician could understand not only the fact of inadequate care but its meaning for her patients. She empathized with her patients' suffering. True empathy more so than clinical empathy produced a different type of knowledge for her about women's healthcare needs. True empathy is an emotional experience while clinical empathy is a cognitive experience. In addition, when she identified with her patients, she subverted the norm of detached concern. In doing so, she was acquiring knowledge in the clinical setting that was based on the feminine value of connectedness. Although this was the only physician who clearly stated that she identified with her patients, other physicians spoke with passion about their experiences and their commitment to women's health, leading me to believe that many, if not most of them had similar experiences. Training for detached concern is part of the gendered hidden curriculum in medical education.

CHAPTER 4

THE CURRICULAR INNOVATION PROCESS

Once my respondents became aware of the many ways that medical education about women's health was deficient, irrespective of how they became aware of the issues, they all embarked on a path of curricular innovation in women's health as I discuss in this chapter. There were five main categories of activity involved with curricular innovation. First, they engaged in activities that allowed them to learn about women's health. Second, they defined how they understood women's health. Third, they began to develop women's health curricula for different levels of medical education. Fourth, they created curricular materials for teaching. Lastly, they established or reorganized clinical services because these are the sites for medical student and resident clinical training.

Learning about Women's Health

Educating Themselves about Women's Health

Most of my respondents learned that the medical profession was not meeting women's health needs while they were young women and when they were students, residents, or young mothers. They actively attempted to learn more about their own health or that of their patients. Women's health advocates joined women's self-help groups, women's health activist groups, and they discussed health information with their peers.

> People interested in various aspects of Women's Health on our university campus began to get together, began to meet regularly. … Then we opened it up, and we had a women's health network that met on campus here that included faculty from medicine and public health and students, graduate students. *Jane, Nursing, 1980s*

Women's health advocates met and worked with feminist leaders. Individually, they all pursued graduate education, with five focusing on women's health issues and another focusing on feminist theology. For those who worked with community groups, they met with these groups' leaders to learn more about their constituencies' experiences and concerns. Their focus was on lay women's experiences and health needs.

In contrast, appointee respondents primarily consulted with medical experts and sub-specialists that were already known to them, and who had expertise in a specific area of women's health in order to obtain the information they needed. These were usually other individuals within their own institutions, but for one respondent it also included other experts in his community.

> After working with the people in the eating disorders clinic and the domestic violence fields, I have a better appreciation even than I had before of how important those things are to be part of the curriculum. We've actually expanded some time on some of those things for next year. *Steven, Family Physician, 2000s*

The physicians who were medical reformers initially decided to gain the medical knowledge and develop the skills that they believed they were lacking via independent learning. They did this in a variety of ways. They read as much information as they could find. Some took courses and obtained additional

information from colleagues who had sub-specialty expertise in women's health, such as obstetrician-gynecologists, endocrinologists, or neurologists.

> So I took some CME courses. I asked for a colleague, an Ob/Gyn, gynecologist, to just help me get information. *Wanda, Internist, 1950s*

Another physician taught herself the knowledge and skills she needed.

> I was seeing a lot of gynecologic and early obstetric problems, which was interesting, because in those days internists were not trained to deal with those kinds of issues. But I kind of self-trained to do those things. *Nora, Internist, 1980s*

Two respondents were able to create their own educational program within their institutions to gain the knowledge and skills that they needed. One created a fellowship program while another focused on women's health during her residency elective. Another physician created a series of luncheon programs about women's health while she was in medical school. To the extent that literature was available, they read and self-trained.

> Knowing nothing about that field [of women's health] and having no prior training in that whatsoever, I quickly studied what there was to study. *Marcia, Psychiatry, 1990s*

After she had been working in the field of women's health, one physician took a course on evidence based medicine which helped her to analyze research more critically about whether and how it applied to women.

> I took a course on evidence based medicine… and began to learn a skill set that I didn't previously have. And it improved my ability to critically analyze the literature, and frame questions, and asses the literature. And that, understand a little bit more about sub-group analysis both its possibilities and pitfalls. And it's really clear that

> unless you ask the right question, you won't get the right answer.
>
> *Carol, Internist, 1990s*

Working with Women

My respondents learned about women's health by working with women in many different ways. Women's health advocates all worked with women in ways that illuminated women's wide ranging health needs. Those who had worked in community settings directed programs that provided services and counseled women. They assisted women in obtaining abortions and contraception, empowered women to have the childbirth experiences they desired, provided support for young women in the juvenile justice system, and helped to meet the needs of women in community health facilities. Those who worked in academia conducted research to identify women's health needs and experiences from women's perspectives. Those who were in government positions provided support for community efforts to provide a wide range of women's health services, including services to women in prison.

Appointee respondents learned about women's health primarily by providing clinical care to their women patients and they all provided services that were specific to women's needs. In general, they did so in ways that were typical for their specialties. The family physicians included basic obstetrics and gynecology in their practices. The internist did not specify whether she also did this, but the residencies and fellowships she completed did not include training in women's health. In her research, she studied clinical breast exams and

mammography and also taught these skills to residents, so these were a normal part of her practice. These skills go beyond most internists' training at that time. The appointees all provided clinical services that reflected a more traditional perspective on comprehensive care, but they were incorporating new research findings into their practices, such as research about hormone replacement therapy.

Medical reformers worked with women primarily in their role as physicians, but they differed from appointees in that they were more likely to offer services to their patients based on the needs that their patients expressed. The internist medical reformers listened to their patients and began providing gynecological care when they were requested to do so. Over time, they learned to handle an increasingly broad range of health issues when their patients asked them to.

> One of the staff became pregnant and developed gestational diabetes - who was my patient, and she said, "Well why aren't you taking care of me? Why do I have to see them about the diabetes?"
>
> *Carol, Internist, 1990s*

These physicians also integrated knowledge about the reproductive system with care for the rest of a woman's body and considered, for example, the role that hormone replacement therapy would have on a woman's cardiovascular health or bone health. The gynecologist medical reformers began to expand the services offered in their clinics to include issues that were common in women such as sexual abuse and domestic violence. They began to address their patients' psychosocial needs and they shared information with their patients to

empower them. They made their clinics more comfortable and woman-centered. The medical reformer physicians began to expand their views about women's bodies, see them as an integrated whole, and see that the context of women's lives had an impact on their health. A family physician described how this was integrated into teaching residents:

> When a patient comes in and the resident's precepting a case where she's got three kids; her husband's out of the picture; her mother's in a nursing home, whatever. They know how to focus on caretaker burden and talk about that as part of the precepting encounter.
>
> *Patricia, Family Physician, 2000s*

Bringing this context of a patient's life back into the clinical encounter was a way to recontextualize the patient. It was a departure from the decontextualizing and depersonalizing aspects of case presentations (Anspach 1988).

By listening to their patients and attending to the context of their patients' lives, the medical reformers were providing patient centered care, although they were not always aware that they were doing so.

> If you're smart enough, and listen hard enough, your patients will tell you what is going on. So you have to really sort of be totally connected, be clinically extremely astute to be a good clinician. And so being a really good clinician, this sort of role model that was drilled into you at [X medical school], which I took into what I wanted to aspire to be. So as I was describing what I did with my female patients. It's like, that's what any good doctor would do, and they're [feminist colleagues] like, "No, no, that's patient centered care. That's women centered care." And I'm like, oh, ok. It's like, "How did you learn to do feminist care?" It's like, because that's good patient care.
>
> *Nancy, Internist, 1990s*

The medical reformers who were not physicians provided support to the physicians who were members of their medical societies or who were their academic constituents. In the process of working with these physicians, they became aware of these physicians' educational needs as they were attempting to provide more comprehensive health care to their women patients.

My interviews did not focus on the research conducted by appointees or reformers. However, to the extent that research was mentioned by my respondents, medical reformers were more likely to conduct research on health issues in women that had not yet been addressed by the medical profession such as eating disorders or mental health. In contrast, appointees were more likely to conduct research on areas that were well established within medicine such as breast cancer.

As they were educating themselves through self-directed learning or through their professional work with women, my respondents learned about women's health. With one possible exception among the appointees, they all began to examine critically what they'd been taught about women's health and began to develop a new understanding about women's health, albeit in different ways and to different degrees.

Defining Women's Health

Curricular innovation in women's health depends on having an understanding about what constitutes women's health. Sarah, a pharmacist,

noted that it was important to have a clear definition of women's health, "a defining statement" because "if you're putting together a curriculum, you have to have a statement of what it's about," and that definition becomes "your driving principle." For my respondents, curricular innovation was guided by a vision of what woman-centered healthcare would look like. Rhonda, a non-physician medical reformer explained, "[we had a] whole vision of what we would want the world to look like if we could change women's health." Michelle, an obstetrician-gynecologist stated, "we were about expanding women's health beyond reproductive health… philosophy of care… research that was being done in various places across [health professions schools]."

There were a number of definitions or approaches that were used by respondents and/or by their organizations which provided a direction for curricular innovation. The specific definitions discussed in this section may be found in the appendix. There was no single perspective that was dominant among respondents. Some individuals used the definition of women's health developed by the collaborative group, the National Academy of Women's Health Medical Education (NAWHME) (Donoghue 1996). Seven of my respondents, both advocates and reformers, had participated in NAWHME. The NAWHME perspective includes prevention and wellness, is patient-centered, culturally sensitive, multidisciplinary, attends to a woman's life-cycle, and is based on the feminist principle of empowering women. According to NAWHME, women's

health addresses conditions which are “more common” or “more serious” in women (Donoghue 1996). This perspective is a response to the historic deficits in the medical profession’s approach to caring for women. However, men are implied in this definition because the referent to “more common” or “more serious” is the normative man.

One commonly used approach toward women’s health was developed by the American Medical Women’s Association (AMWA) and was a life phase approach (Donoghue 1996, USDHHS 1997). One of my physician respondents was centrally involved in developing this model and three of the non-physician respondents had input into this model. This approach is based on the assumption that women experience relatively unique health issues that cluster in certain periods of their lives. The phases include early years, young adult, midlife, mature years, and advanced years. This is similar to the life phases of adolescence, adulthood, perimenopause, and post-menopause which were articulated by Wallis and Betancourt (1999). The AMWA model was developed by a multidisciplinary group of individuals and reflects a patient-centered approach in which the woman is a partner in her care. It challenges the idea that the relationship between a physician and a patient should be a hierarchical one. The “life phase” was referred to as the “life-cycle” in the NAWHME definition of women’s health (Donoghue 1996).

Some respondents referred to the definition created by the Office of Research on Women's Health (ORWH) at the National Institutes of Health's (NIH) which was articulated at the 1991 Hunt Valley, MD meetings that outlined a national research agenda for women's health (NIH 1992). At these meetings, women's health was defined in terms of uniqueness, prevalence, severity, or difference from men, and was understood primarily in biomedical terms. However, differences in morbidity across a woman's lifespan were acknowledged, as were social factors that affected women's health including socioeconomic, ethnic and racial diversity, and behavioral factors. The respondents in my study who referred to the NIH approach interpreted women's health broadly to include issues beyond biomedical ones, in contrast to the majority of the medical profession which has focused primarily on biomedical concerns. Debra, an internist and appointee who was influenced by this definition interpreted women's health as "talking about subjects that are more specific to women." Sarah, a pharmacist, referred to women's health as "unique to women, different in women, more common in women; and also those who were stakeholders [patients, researchers and clinicians]." The NIH definition of women's health was further articulated to distinguish between sex and gender by

Dr. Vivian Pinn, former the director of the NIH ORWH (Pinn 1999). She categorized sex as a biological construct and gender as a social construct.[1]

In some cases, different definitions of women's health were combined to guide curricular development. One physician indicated that while developing the Association of Professors of Gynecology and Obstetrics' (APGO) Women's Health Competency project (APGO 2002), they incorporated both the NAWHME definition of women's health and the NIH Office of Research on Women's Health's definition. APGO's approach ensured that gender issues were explicitly addressed during curricular development. Two of my respondents were centrally involved in the APGO project.

Many respondents expressed conflicting feelings about equating women's health with sex and gender medicine or with gender based biology. A few respondents believed that gender based medicine suggested a more equitable approach to addressing women's health concerns, meaning that it referred to both men and women. Respondents who were aware of the emerging field of gender based biology appeared to be more biomedically oriented in their approach to women's health than others. In contrast, some respondents favored

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[1] Dr. Pinn's distinction between sex and gender was one of the first specifications of women's health in these terms in the U.S., and in particular, it appears to be the first by someone in a federal agency. Subsequently, an Institute of Medicine report published work which also distinguished between sex and gender (Wizemann and Pardue 2001). Dr. Marianne Legato published a foundational text about sex and gender medicine (Legato 2003). Collectively, these efforts contributed to establishing a new area of medicine known as sex and gender based medicine.

the term “women’s health” because it clarified previous areas of deficiency and reflected their philosophy of care, as well as the fact that the majority of their patients were women. Very few respondents understood the complexity of the differences among these concepts and most respondents used the terms sex and gender interchangeably.

One physician had a more holistic view of women’s health which reflected the guiding principles of the American College of Women’s Health Physicians (ACWHP). ACWHP adopted a holistic approach to medical education, medical care, research, and the administrative organization of healthcare environments.[2] This model was holistic in the sense of incorporating psychosocial factors, listening to patients, and critically examining the healthcare environment. Of the various models created by physicians, this model had the most patient-centered approach. It included a number of guiding principles such as multidisciplinarity, diversity, complexity, activism, eclectic healing practices, and individual and organizational well-being. This physician respondent believed that it was important to be explicit about the meaning of multidisciplinarity.

> I think multidisciplinary has turned into a little place that they can lump a bunch of important stuff and then not pay too much attention to it. And what I like about the guiding principles is it spells each of them

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[2] The American College of Women’s Health Physicians is no longer in existence. This organization’s focus was to create a separate women’s health specialty. Some of the members of this organization became leaders in the Sex and Gender Women’s Health Collaborative, an organization that focuses on medical education issues in women’s and men’s health and endeavors to assist faculty with integrating this information into curricula.

> out and really makes you think about it instead of one idea that you can blow past pretty easily. *Patricia, Family Physician, 1990s*

Most respondents who were in government positions (but no other respondents) referred to the U.S.D.H.H.S. *Healthy People 2010* report as providing one important model for health overall and specifically for women's health (USDHHS 2000). These respondents were represented among both the women's health reformers and medical advocates. The goals of this federal project were to increase quality and years of healthy life and to eliminate health disparities by using a prevention and public health approach. From this perspective, social factors, communities, as well as individual behavioral factors are all seen as contributing to health and illness. These respondents also referred to the World Health Organization's definition of health either implicitly or explicitly as one approach they used to conceptualize women's health. According to this model, "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity (WHO 1948).[3] A non-physician government respondent described her perspective on health as follows:

> It's not just purely the absence of disease. It's women who are sustainable with respect to income and livelihood and that they're actually genuinely healthy. *Hannah, Women's Health*

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[3] Preamble to the Constitution of the World Health Organization as adopted by the International Health Conference, New York, 19-22 June, 1946; signed on 22 July 1946 by the representatives of 61 States (Official Records of the World Health Organization. 1948. No. 2:100) and entered into force on 7 April 1948.

The women's health advocate respondents placed a greater emphasis on women's health needing to reflect the actual experiences and needs of women. Jane, a professor of nursing and a women's health advocate noted that any definition of women's health should be woman-centered, that is, "from a woman's perspective in context," i.e., within the complete context of a woman's life. Two women's health advocates noted that women's health was an evolving and expanding concept and that it would need to be reexamined periodically.

These various definitions of health or of women's health reflect my respondents' different backgrounds, perspectives and interests. The women-centered approach promoted by women's health advocates reflects the value that they placed on women's own experiences. The NIH model which was primarily articulated by physicians reflects the dominance of biomedical research within that institution. However, even at the NIH there is at the least an implicit recognition of social factors and life span issues in women's health. Among physicians, the appointees were the least likely to have a well-articulated definition of women's health. The NAWHME model was an attempt to bridge feminist and medical perspectives on women's health. Respondents whose work had a public health component had a public health perspective toward health issues that reflected a belief in the breadth and complexity of factors that affected health. Respondents who adopted a public health view modified it to highlight

women's issues and gender issues as being especially important in this comparatively holistic model.

Although several respondents were clear about how they defined women's health, most respondents were not clear about the definition. The ambiguity about women's health is reflected in Henrich's (2004) call for the medical profession to define women's health so that the field could move forward. The lack of a specific definition did not prevent respondents from engaging in curricular innovation. Respondents referred to women's health in terms of a range of issues that included some subset of physical problems, mental health, reproduction, behavioral health, social factors, culture, ethics, psychosocial factors, emotions, hormones, psychology, spirituality, cultural diversity, science, normal transitions in women's lives (such as childbirth or menopause), specific issues such as eating disorders, social problems such as violence and sexual abuse, anthropology, health system problems, special populations, population based approaches, legal issues, life phase, sex and gender, and patient-centered concerns. Most respondents spoke of women's health in relation to a small subset of the aforementioned factors. This is partly due to the constraints of the interview process and time, but also because I asked them to identify some of the main problems in the field of women's health. However, the specific issues that individuals chose to discuss reflected their own priorities and views about women's health. A few respondents noted that a re-evaluation of the

doctor/patient relationship was an important aspect of women's health. The majority noted that women's health encompassed areas of knowledge that were broader than the traditional medical approach. The most common reference was to the interdisciplinary nature of women's health, although a few discussed women's health as being multidisciplinary, and a few discussed women's health as being comprehensive.

Developing Women's Health Curricula

Developing medical curricula is a process involving several stages. It is more than just adding information into a course.

> Often when people say curriculum, what they mean is a slide set, and I just don't think that's a curriculum. *Wendy, Women's Health*

Formal curriculum development is a systematic process and it is not the way it is often conceptualized or the way it is implemented in practice.

> See one. Do one. Teach one. It's not a very systematic way of going about it [to ensure all important issues on a topic or area of medicine are addressed.] *Wendy, Women's Health*

When approached systematically, the existing curriculum is first assessed and a need for change is identified. This may be followed by a search to see if the desired curricular content or educational models already exist. When curricular development begins, desired competencies and learning objectives are specified. An implementation plan is created. Next, courses, lectures, training programs, and other educational programs are developed and implemented. This is

followed by evaluation and curricular revisions. Curricular change in medical education requires a comprehensive and systematic effort.

Assessing the Existing Curriculum

One of the first steps involved with a systematic approach to curricular change is to conduct an assessment of the existing curriculum. A curricular assessment can provide information about strengths, weaknesses, and curricular needs related to women's health. One appointee respondent explained:

> One of the things we have to do is figure out what our baseline is. And then decide at our baseline, are there areas that we're missing? Are there areas we need to put more emphasis on? Are there ways that we can expand the content? … How can we use our time most efficiently? And develop a methodology and then evaluate it, and then revise it. *Frank, Family Physician*

Four organizations represented among my sample engaged in an overall assessment of the undergraduate medical education (UGME) curriculum by reviewing the content of the curriculum, three being designated National Centers of Excellence in Women's Health (CoE) and one additional medical school.[4] According to one physician, the process was as follows:

> [To] look across all four years to say - What do we need to get covered? Where can it be covered? Where is it being covered? And have you balanced it out to ensure that those topics that need to be touched are touched in the appropriate amount of time across medical students' experience? *Frank, Family Physician*

[4] Undergraduate medical education is the terminology that is used to refer to medical school education.

At times, medical schools engaged medical students to assist them with assessing the status of women's health within the curriculum. They discovered that other faculty members in their departments and schools were more responsive to student queries than to those of other faculty. Students were selected who had just completed either their basic science training or their clinical rotations to assess the respective parts of the curriculum. According to one physician, this involved interviewing course directors about the following:

> How they define women's health… what was the emerging knowledge in the field and how were these various components addressed in a sex and gender specific way. *Michelle, Ob/Gyn*

Another approach to comprehensive curricular assessment involved examining the amount of time that is devoted to various women's health topics, the location of those topics in the curriculum and how it is taught. Sarah, a pharmacist indicated that at her organization, when examining the UGME curriculum, they were interested in discovering "Was it a course? Was it a lab session? Was it on a rotation?" They also adopted a patient-centered approach to their overall curricular evaluation and considered patient needs by reviewing emergency room and other medical visits. They then evaluated the extent to which common patient needs were addressed within the curriculum.

An alternative to evaluating the content of the entire curriculum is to review certain components such as competencies. Competencies are formally defined statements about the skills, knowledge and attitudes that learners are

expected to acquire. Learning objectives refer to the many specific aspects of knowledge, skills, and attitudes that comprise each competency. In order to be competent in one area, physicians need to meet many different learning objectives. For a residency training program, Mary, an Ob/Gyn, indicated “We pulled the competencies out of the courses and revised the assessment for that.” A competency based assessment is consistent with adopting or incorporating competency based curricula.

Another approach to curricular assessment is to review educational tools that are used such as case materials or teaching methods. A physician observed that existing case materials could be evaluated to ensure that they are gender based and that they address cultural competency. Evaluating case based materials, standardized patients, and how standardized patients were trained were viewed as especially effective for assessing interdisciplinary curricula because knowledge and skills from different disciplines was applied when learners worked with real or virtual patients cases.

Alternative Methods of Identifying Curricular Needs

Individual educational organizations can be proactive about assessing their curriculum and identifying curricular needs, but these needs can also be identified by other organizations and entities and can be used by individuals as a rationale for curricular change. For example, the establishment of the National Centers of Excellence in Women’s Health had as one goal, the development and

implementation of women's health curricula, which was one of the objectives of the U.S. Department of Health and Human Services (USDHHS). This served as an impetus for curricular assessment and innovation at the medical schools associated with the CoEs which are represented in this study. The Council on Graduate Medical Education's (COGME) Fifth Report identified a need for the integration of women's health into medical curricula (USDHHS, PHS and HRSA 1995). COGME is an entity established by the U.S. Congress to advise Congress and the USDHHS about medical training needs, among other things. Some of my respondents who were involved in residency education were aware of this report. Individual states can also identify specific health issues that they want to focus on which can lead to curricular innovation. In 1998, the State of Illinois identified specific women's health issues that they wanted to focus on such as breast cancer, heart disease in women, and domestic violence. A women's health advocate indicated that this served as an impetus for the development of physician continuing medical education programs in the state and by her CoE. Some of these programs were implemented in conjunction with the Illinois Academy of Family Physicians specialty society which had also identified these women's health issues as an educational need and had implemented an educational needs assessment with their members.

Individual medical specialties can also identify a need for curricular change. Residency review committees within each specialty can determine

standards and evaluate whether programs meet educational objectives. One of the obstetrician-gynecologist respondents had served on a residency review committee when the specialty determined that residency education should include primary health care for women beyond reproductive issues. Within internal medicine, a physician respondent indicated that the specialty's leaders had resisted establishing comprehensive women's health as a goal. At the time the interviews were conducted, family medicine had a women's health component in their residency requirements, although the focus was primarily on obstetrics and gynecology training.

Two other medical professional organizations identified a need for women's health curricula. In the 1980s and 1990s, members of the American Medical Women's Association (AMWA), including one of my respondents, began to identify education about women's health as a curricular need. AMWA represents the interests of women's physicians. Beginning in 1993, AMWA sponsored a series of comprehensive continuing education programs about women's health in which my respondent was a leader. It also created the Reproductive Health Initiative Model Curriculum for medical schools in 1996 (Wilhelm et al. 2004). Similarly, one of the obstetrician-gynecologist respondents who identified herself as a women's health educator and physician led an effort in her specialty to develop women's health curricula. This occurred following the National Conference on Cultural Competence and Women's Health Curricula in

Medical Education, held in October 1995. She became a leader within the Association of Professors of Gynecology and Obstetrics (APGO) which developed a comprehensive women's health curriculum. These activities were all part of the initial development of the field of women's health within medicine. They were marked by a number of federally sponsored conferences, meetings sponsored by medical societies and within academia, and collaborative efforts established for this purpose.

Medical students and residents can also identify a curricular need and convey that to faculty and medical school leadership. Student identified needs were reported by seven respondents, among both women's health advocates and medical reformers. There were many sources for ideas about women's health curricula.

Searching for and Adapting Other Women's Health Curricula

Curricular development involves delineating competencies, learning objectives, identifying resource materials, and choosing evaluation methods which may either be developed from scratch or may be adapted from existing sources. In many cases, the need for women's health curricula was identified collectively as outline above. However, in a few cases, especially in the earliest stages of curricular innovation within the field, individual women identified a need for women's health curricula as a result of their professional experiences or

professional needs. They began to search for other curricula to use within their own institutions, as discussed by two physician respondents.

> Well, the very beginning was me writing or calling any other program I could identify that already had one [women's health program] and just gathering other people's information … [I] got copies of other people's curricula, and I started just kind of combining those and trying to pull out what the main ideas were. *Patricia, Family Physician, 1990s*

> I remember specifically when I was designing [it]… I went point for point down their published women's health curriculum … and modified it according to the needs of this particular site and this particular level of training, and used it really as a template.
> *Marcia, Psychiatrist, 1990s*

In general, there were few resources available to help respondents develop curricula or evaluate the curricula within their institutions. Existing curricula that were cited by respondents as useful were the NAWHME resource guide (Donoghue 1996), the content areas and curricular guidelines published within the USDHHS curricular evaluation report (USDHHS 1997), the Family Medicine Residency curriculum in women's health (AAFP 1998), AMWA's Advanced Curriculum in Women's Health (USDHHS 1997), AMWA's Reproductive Health Initiative curriculum (AMWA 1997), and the gender based curriculum developed for psychiatric residency training (Spielvogel, Dickstein and Robinson 1995, USDHHS 1996). When respondents used these resources, they adapted them to meet the curricular goals of their individual institution, as discussed by one physician:

> When you build a curriculum, you start with the goals and objectives, and then you build the methodology around them. Certainly the

> curriculum that [APGO] created is one take on what's important. So I've used that, and I've integrated information from other sources for parts of our curriculum. *Frank, Family Physician*

Respondents also found curricula which had been developed and which were useful at other organizations for their own educational programs such as residency programs, residency tracks, and fellowship programs. Some respondents found existing curricula to be too cumbersome to use, particularly for adaptation into undergraduate medical education, so they developed materials which were more appropriate for their own organizations and level of learner. In general, this did not involve developing comprehensive curricula for their medical schools. Instead, their curricular initiatives were smaller in scope such as coordinating women's health library materials and case materials that could be used by everyone, or developing a course, rotation, or program area in women's health.

Creating an Implementation Plan

When developing a plan for curricular change, respondents indicated that they determined a process for change, considered whether the new curriculum would be integrated or separate, determined which teaching methods they would use, and made plans for curricular infrastructure which included evaluation, faculty development, and an office.

Deciding on a process. At two medical schools, one which underwent and another which was undergoing curricular change, and also at a specialty society

which was developing a curriculum for undergraduate medical education, the first implementation step was deciding on the process that the organization would use. Respondents from these organizations believed that it was important to decide on the process for how women's health curricula would be developed and how faculty would be involved.[5] This would ensure a degree of legitimacy among curriculum directors and faculty. One appointee physician believed that their educational philosophy about the learning process should be kept in mind when determining how to proceed.

> One of the focuses of our curriculum has been about process as opposed to content [in order to] reduce the distance between the knowledge that students had and their ability to apply it.
>
> *Frank, Family Physician*

Medical advocates with experience in curricular development issues also had clear ideas about how the process of curricular development should proceed within their organizations, but they applied different approaches such as interdisciplinarity, collaboration, and group process strategies.

> For curriculum change in general, there are guiding principles that I use. One is interdisciplinarity. The second is thinking toward competency. *Mary, Ob/Gyn*

> From the very beginning, as we thought about and designed the work in women's health, we wanted to be the site where there could be collaboration. *Corinne, Ob/Gyn*

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[5] Agreement on a process may be more important when individuals from different disciplines or specialties are involved, or when the application of the project is broader in scope than an individual organization.

> So the principles [that we used with our faculty] … were interdisciplinary, group work, group product, and blending new knowledge … presentation of both statistical data that we analyze probabilistically, and the descriptive story - felt experience which we interpret. *Mary, Ob/Gyn*

Choosing integration vs. separation. Respondents needed to decide whether their curricular goal was to integrate women's health throughout the curriculum or whether it was to create a stand-alone course or program. Most, but not all respondents believed that women's health should ultimately be integrated into all aspects and levels of medical education and the curriculum. The exception was one appointee respondent. One women's health reformer believed that women's health should be integrated throughout the curriculum as well as being separate within the curriculum.

> We still think we have to choose between vertical and horizontal integration rather than some combination of vertical and horizontal. I don't know why we get into this either/or, but for some reason, we continue to have this battle about which is better. *Wendy, Women's Health*

In the short run, the objective for many respondents was to create an individual course, residency track, fellowship or continuing medical education (CME) program. Their specific curricular innovations are discussed in a later section of this chapter.

Curricular integration may come with its own problems. One medical school began with a separate women's health curriculum and the course materials for this were later integrated into the overall medical school curriculum.

The result was that the integration of women's health content became dependent on the knowledge, interest and comfort of the individual faculty who were teaching the courses. Some faculty omitted the women's health content. Once integration occurred, it made it difficult for students to be aware that women's health was included in some parts of the curriculum.

> [They integrated] women's health into the curriculum without labeling it "women's health," which was a little unfortunate because the students really wanted to learn women's health, and they don't recognize it or it isn't being taught because other people are in charge of the curriculum. *Rebecca, Ob/Gyn*

In many ways, the issue of whether a separate course or program in women's health should be created or whether women's health should be integrated throughout the curriculum parallels the debate within the medical profession occurring at the time about whether or not women's health should be a separate specialty, or whether it should be integrated into medical education (Harrison 1992; Johnson 1992; Wallis 1992). That debate was not resolved at the time of the interviews. As of this writing, the primary organization that advocated for a separate specialty, the American College of Women's Health Physicians, ceased to exist. This group could not mobilize enough physicians to support their efforts. In addition, one physician informed me that to establish a new specialty, it would cost three million dollars and they did not have the funds.

Choosing teaching methods. Curricular development involves choosing appropriate educational methods that will enable students to acquire the intended

competencies. Medical education has traditionally utilized a didactic approach and laboratory work to teach basic science material, while clinical rotations and clinical case presentations enabled students to acquire clinical skills. This approach reflected and maintained traditional medical disciplinary boundaries. Given the interdisciplinary nature of the field of women's health, these methods are less effective for teaching women's health. Curricular innovators often used other teaching methods.

One of the goals of women's health education, according Nancy, an internist, was "to open eyes, change attitudes, change awareness." These goals were achieved more easily when students had an opportunity to actively engage in learning or when learning was personalized. Stephanie, a psychiatrist, stated "You not only have to do … knowledge based [education], you really need an experiential approach." This can be accomplished in many ways. A commonly used teaching method is a small group format. At one medical school, they changed their overall curriculum, including the women's health component, so that the "curriculum went from traditional eight hours a day, four days a week sitting in the lecture hall, to half didactics, half small groups," according to Frank, a family physician. Small group learning allowed educators to use different teaching methods such as case based and problem based learning. Rebecca, an obstetrician-gynecologist, stated that cases permitted the integration of "science plus psychosocial aspects" because these two areas of knowledge were "woven

together so tightly [in real life] that, to try to teach them separately is a disservice to women." According to her, student response to this particular curricular change was very positive. Small group learning allowed students to engage in self-directed learning, and some institutions increased the amount of time in their curriculum devoted to self-directed learning. Frank noted that small groups "give students more independent learning time and let them experience medicine, not just memorize it." Rebecca explained that small groups permitted activities such as role play in which students took turns being "the doctor, the patient, and the observer." Physicians who utilized small group learning believed that they were effective at enhancing students' communication skills, their attitudes, and their knowledge base.

Another teaching technique that was used by one of my respondents included role reversal which could be based on sex, sexual orientation, or on a number of other factors. Respondents also discussed developing longitudinal cases which modelled the recurring nature of health problems over a woman's life span. Reading groups were created which focused on clinical problems and encouraged students to search for health related information in places that they might not have considered. Carol, an internist, stated, "We never found there wasn't literature. We just found it wasn't generally known." A strategy adopted by Nancy, an internist, was to encourage literature searches of both non-medical literature and "very hard core basic science kind of stuff," thus validating both

forms of knowledge as relevant to medical education and medical care. Films and videos were used as teaching materials, both independently and as a component of case materials. Some medical schools had clinical skills laboratories with various stations that enabled students to practice and acquire clinical skills before they encountered patients. Standardized patients were also used to introduce students to women's health. Standardized patients are individuals (often, but not always actors) who are trained to exhibit certain signs, symptoms, demeanors, and affects associated with specific illnesses or conditions. Students conduct assessments on these 'patients'.

The field of women's health can also teach students clinical reasoning skills of increasing complexity over time. Nancy, an internist, explained that in her experience, students initially had limited reasoning ability and a limited knowledge base, but could be taught in a "simplified [way] that it's about women's health," then could proceed to "the complexity to understand issues of gender difference," and finally to "do sex based biology and gender difference [for] advanced learners." According to her, the field of sex and gender based biology is complex, and there is "a lot we don't know cause we're really at the forefront." Women's health provided students with an opportunity to learn how to "problem solve."

The teaching of the pelvic exam is a special case in women's health education. Some schools trained lay teaching associates or pelvic educators to

become medical educators for their students. This was a relatively new approach to teaching the pelvic exam and was not used in all medical schools. Many schools continued to rely on anaesthetized patients to provide educational opportunities for students. In some cases, the teaching associates for breast and pelvic exams were trained to instruct students about how to teach their future patients so that as Wanda, an internist stated, “Each pelvic exam is a way of teaching the woman her anatomical self.” In one prestigious medical school, faculty objected to patients being taught about their anatomy, including how to conduct self-breast exams. As Wanda explained, in the 1980s, “Instruction of the patient in breast self-exam was only sporadically approved of.”

Establishing the Infrastructure for Curricular Change

Curricular development is a laborious and time consuming process. Successful curricular innovation is achieved most effectively when the appropriate organizational infrastructure is in place. My interviews with respondents did not address infrastructure issues very much, but a few respondents discussed the types of infrastructure changes that they were able put in place in their organizations. The way that programs were funded mattered, including which department was responsible for the curricular funds and how funds were allocated. At one medical school, grant funds for curricular innovation were assigned to the dean responsible for the sex and gender curriculum rather

than to a specific department. At another school, the funding structure was changed to allow for a shift to cross-disciplinary and team teaching.

> The funding structure for education [changed] so that we would be able to fund interdisciplinary courses. We'd be able to allocate to departments their contributions to interdisciplinary courses.
>
> *Mary, Ob/Gyn*

One respondent joined a medical school which had a women's health office. One of the foci of this office was to develop and implement women's health curricula. This respondent believed that having a specific site that could be easily identified within the organization facilitated curricular innovation.

> [Having] an entity, it will do something incredibly unique in the medical culture, which is [to] have an identified place where interdisciplinary things exist and are rewarded. *Nancy, Internist*

The National Centers of Excellence in Women's Health were also distinct entities within medical schools. They were sites that could draw resources, staff and financial support, provide collaborative opportunities, and be a visible presence within medical schools. Even so, they had a difficult time obtaining resources.

> Talk about exploited labor. Like, in the beginning of the CoE, we had no staff and no money, so we did all of our work as internship-based projects. *Wendy, Women's Health*

Several respondents indicated that faculty development was also important for curricular innovation, although only a few were able to implement it. The respondents who spoke about it stated that they did it informally by referring to women's health during departmental grand rounds, journal clubs, or by

providing faculty with suggestions about how to improve their lectures or case based materials, and by providing resource materials to support curricular changes.

> But we sort of infiltrated. And one of the strategies we would do is the guy who's a biochemist who talks about nutrition and talks about milk, and we would sort of have a chat in the cafeteria and talk about lactation. And so all of a sudden, just bouncing back and forth in terms of educational creativity, came up with a lecture that was a nursing mom who comes in and talks about principles with a lactation counselor [and] here's the nutrition of milk. And suddenly the students, who in his previous lecture were like comatose are suddenly like "Cool!" And of course the basic science person is like "They loved my lecture.", and so they're happy. So now, here we have something in the curriculum that's not ours. We don't do it. We facilitate the doing of it, but we don't do it. *Nancy, Internist*

> [We used a] stealth strategy of, you know, finding within the various silos of people who are interested in championing this as an issue and facilitating their ability to do that. *Michelle, Ob/Gyn*

For Mary, an obstetrician-gynecologist, curricular innovation involved creating better evaluation methodologies such as "technology based evaluation" which provided information that could be used to guide her faculty and her medical school in curricular change.

Creating Women's Health Curricula

In this section, I discuss my respondents' primary curricular activities and innovations as well as the state of curricular innovation in women's health at each level of medical education within the U.S. between the late 1980s and early 2000s. They developed curricula for medical schools, residency programs and tracks, fellowship programs, continuing medical education (CME), and medical

specialty organizations. In the various levels of education that comprise medical education, the most difficult place to integrate women's health curricula has been within medical schools for undergraduate medical education. The discussion below identifies the ways that my respondents engaged in curricular innovation at each level of medical education. Due to interview time constraints, the focus of the interviews was on respondents' primary accomplishments and innovations, and thus their more modest efforts could not always be addressed.

Medical schools. Within medical schools, curricular change can occur in many different ways. Women's health topics can be identified and added into existing courses or a specific lecture can be devoted to women's health. It can be integrated into case based and problem based learning. Women's health electives and clinical rotations can be created. Breast and pelvic exam courses can be updated or created. Women's health can be fully integrated throughout the curriculum, or a national model curriculum can be created for medical schools.

In an assessment of women's health courses and clinical electives in the U.S., Henrich found that a minority of institutions had such courses and that the percentage increased slightly between 1994 and 2002 (Henrich 2004). Rebecca, an obstetrician-gynecologist explained that electives "often cover gaps that the regular curriculum doesn't address." Henrich analyzed the results of six surveys of women's health curricular activities in U.S. medical schools (Henrich 2004).

The percentage of schools offering an elective course in women's health, or providing some unspecified women's health experience in a clinical rotation varied from 28% in a 1994 survey to 28% in 1999-2000, to 34% in a 2002 survey (Henrich 2004). One of the surveys she analyzed was the 1999-2000 Liaison Committee on Medical Education (LCME) survey which had a 100% response rate and may be considered a good indicator of medical school curricula. However, this survey did not specify the meaning of women's health, which could potentially result in some schools interpreting this in a traditional manner as obstetrics and gynecology. Obstetrics/gynecology and reproductive health are the interpretations that were used by many medical schools in the University of Cincinnati survey of women's health electives.[6] If a medical school offered one elective course in women's health or dedicated part of a rotation to women's health, it would suffice to count as an affirmative response.[7]

Among my respondents, the most common way that women's health was integrated into the curriculum was by identifying women's health topics that needed additional attention in the curriculum and then either adding that information into an existing lecture or course, or by creating a stand-alone lecture

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[6] Women's Health Program University of Cincinnati and the Women's Healthcare Office Association of Professors of Gynecology and Obstetrics. A Guide to 4th year medical student electives in women's health. Results of a survey of Association of American Medical Colleges member institutions, 2002 Retrieved January 4, 2004. ⟨http://www.apgo.org/binary/electives2.pdf⟩.

[7] Additional information about many of the women's health electives are available on the APGO website: http://www.apgo.org.

or educational experience about the issue. Ten respondents indicated that they had created or facilitated the creation of lectures about women's health topics. The individuals who were involved in this level of curricular innovation were represented among all three categories of respondents. Three of these respondents discussed integrating women's health into case materials for teaching, both individual cases and longitudinal cases in which students encountered the same patient with a different problem at a future date, as well as into problem based learning cases. Topics included childbirth, gender specific cardiac disease, life stages, adolescence, geriatrics, death and dying, interviewing skills, domestic violence, sexuality, sexual identity, among others. When topics were added to existing courses, it often occurred after a curricular assessment had determined that the curriculum was deficient in some specific area. Although adding women's health information into a lecture or changing a case to be that of a woman patient may appear to be a relatively simple change, this only happened after a comprehensive curricular assessment had occurred at many of my respondents' institutions.

Women's health information can also be added into the curriculum via the creation of courses that focus on women's health, electives, or clinical women's health rotations. Six respondents created separate courses. These included a multi-site elective clinical rotation, a lecture series, training in breast and pelvic exams, and other women's health courses and rotations.

Four respondents from three medical schools discussed the full integration of women's health into their curriculum. One of these schools was in the early stages of integrating women's health into didactic teaching, self-directed learning, and clinical experiences. The second school had integrated women's health via a sex and gender curriculum. In both of these cases, organizational changes were required to make this possible. Courses were often taught in teams of faculty from different disciplines to make the educational experience interdisciplinary. This required changing the funding streams for departments.

> [We have] monetary flows that criss-cross rather than go directly to a specific department. *Corinne, Ob/Gyn*

> I worked with some other folks to change the funding structure for education so that we would be able to fund interdisciplinary courses; we'd be able to allocate to departments their contributions to interdisciplinary courses. *Mary, Ob/Gyn*

This is difficult to accomplish because traditionally, departmental and individual faculty prestige is related to the amount of time that one has within the curriculum. There is a hierarchy for faculty within the medical profession. Research faculty are at the top of the hierarchy while clinical faculty are at the bottom. Teaching faculty occupy the middle strata. Women in medicine are underrepresented at the highest levels and are more likely to occupy clinical positions.

The third medical school to integrate women's health into their curricula had been the first to so for all years of undergraduate medical education. Their

courses were taught interdisciplinarily, but my respondent did not discuss whether they also altered their funding streams to make this possible. Curricular development and implementation was funded in part by a grant from the U.S. Department of Education's Fund for Post Secondary Education (FIPSE), with additional support coming from the medical school. They developed a number of teaching materials, educational tools, and recommendations for evaluation. This school had 2 separate educational tracks, a traditional symptom based track and a Program for Integrated Learning (PIL) which relied primarily on problem based learning. Women's health was first integrated into their Program for Integrated Learning because it was easier to integrate women's heath into medical cases than into a more traditional educational structure. All faculty members were responsible for teaching women's health. Women's health education also occurred during journal clubs, grand rounds, a colloquium series, and online bulletin boards. A fourth year women's health elective was offered. Subsequently, women's health leaders at this school worked with faculty at other medical schools to assist them with the integration of women's health into their curricula.

Four medical reformers from two different organizations were centrally involved with creating national curricular models for undergraduate medical education. One of these was sponsored by the Association of Professors of Gynecology and Obstetrics (APGO). APGO created a Women's Health

Education Office (WHEO) to coordinate the development of an interdisciplinary project to identify women's health competencies and learning objectives for medical students. In the first stage of this project, APGO created the *Essential Learning Objectives in Women's Health* (APGO 1996) which identified a broad range of knowledge and skills that physicians who care for women should possess. The next stage of curricular development resulted in the creation of booklet entitled *Women's Health Care Competencies for Medical Students* (APGO 2000). This was followed by a project in which a template was designed to develop learning objectives and identify evaluation tools for the specific competencies. The result of that effort was the publication in 2002 of *Women's Health Care Competencies: Sample Learning Objectives for Undergraduate Medical Education* (APGO 2002).[8] This document delineated the knowledge, skills, and attitudes that physicians needed in order to develop competencies for curricula in women's health. This project utilized the new Accreditation Council for Graduate Medical Education (ACGME) competencies as a framework and applied them to undergraduate medical education. Subsequently, in a more comprehensive effort, learning objectives were specified for all remaining women's health competencies that had not yet been addressed. The result was the development of an online educational tool, *Women's Health Care*

[8] This is often referred to as the "purple book."

Competencies for Medical Students that specified competencies, learning objectives, suggested modes of evaluation, and resources which could be used by any faculty member who wanted to incorporate women's health into their teaching (APGO 2004). This tool became available online in 2004 at the APGO website.

A respondent from a federal agency was one of the individuals primarily responsible for a national assessment of content about women's health in the curriculum. This project led to a 1996 Congressional Report about women's health curricula in the U.S. and included recommendations for curricular content primarily for undergraduate medical education (USDHHS 1997). The recommendations were developed by a working group which was established by several federal agencies. They adopted a multidisciplinary approach and included both psychosocial and behavioral components, gender issues, a public health approach of education and prevention, and the life span perspective (USDHHS 1997:70). The report reiterated the women's health competencies that had been developed by the Council for Graduate Medical Education (USDHHS, PHS and HRSA 1995), as well as strategies for implementing women's health curricula. Several examples of model curricula at all levels of medical education were included in the report ranging from individual courses through curricula for specialties that provide care to women.

An additional curricular project related to women's reproductive health was undertaken by the American Medical Women's Association (AMWA). This project, the Reproductive Health Initiative (RHI), was first designed to be a one-month clinical elective rotation (AMWA 1997). It was implemented to varying degrees in many medical schools in the U.S. The project began in 1993, and was piloted in 1995. My respondents did not include representatives from this project because when I first collected my data, my focus was on those who were trying to expand women's health in the curriculum beyond reproductive health. In addition, at the time I did not recognize that there were deficiencies in medical education related to reproductive health.

Residency training. Physicians acquire and refine most of their clinical skills during residency training, the goal of which is to enable them to practice independently. This period of training is often referred to as graduate medical education (GME), and residents are physicians who are in training after completion of the M.D. degree in medical school. Residents' educational experiences and training occurs in various locations, including academic medical centers, teaching hospitals and community hospitals. There were few opportunities for residents to develop comprehensive women's health skills because few programs existed to provide these educational opportunities. Henrich examined the number of residency programs in the U.S. between 1995 and 2003 (Henrich 2004). The number of women's health residencies increased

over time, and then decreased. In 1995, there were 4 residency programs in women's health. In 1999-2000, the number had peaked at 11, and by 2003, it had declined to 8 programs.

Residency programs obtain students through a match process in which students and potential educational institutions rank each other, and students and institutions are "matched up." Thus, residency programs compete with each other to obtain the best residents. This is significant for curricular development because programs must "market" themselves to appeal to desirable students, particularly in areas of medicine that have lower status or offer lower levels of remuneration, as does primary care medicine. This creates an incentive for residency programs to adapt their offerings based on the preferences of potential residents, as noted by respondents. An appointee stated that her chairman wanted to have a women's health residency track created because "It might attract candidates that otherwise weren't applying to our program." This would allow residents to pursue any specific women's health interests they might have after they began their training. However, the appointee's department wanted to maintain the overall program as it existed because they wanted to continue to appeal to the quality of applicants they were receiving.

> We are very happy with our match and the candidates that we attract. … There might be some concern that, and I don't know that there's any research to back this up, that the candidates wouldn't be as well qualified somehow [if we had a separate women's health match], so that because we do such a good match, I think we're going to keep it that way. *Debra, Internist*

Women's health can be integrated into residency education in a number of ways. A separate track or rotation can be created, it can be integrated into the general residency curriculum, or a separate training program can be created that is one component of residency education. Eight of my respondents were involved in creating women's health curricula for residents. Three respondents created women's health tracks within their institutions. These were optional tracks that interested students could choose if they had a specific interest in women's health. The track could be limited to specific topics in women's health such as breast cancer, polycystic ovary syndrome, and bone health, or it could be a more comprehensive track that addressed issues in the entirety of a woman's body. Two of the three residency tracks were comprehensive, both created by medical reformer respondents, while one track primarily focused on a limited set of health issues that were specific to women and was created by an appointee. All three of these were internal medicine tracks. Two respondents integrated women's health into their residency programs' curricula. One was in an outpatient community based family medicine department, while the other was in a hospital based internal medicine service – otherwise known as a categorical residency track. Three respondents created resident rotations in women's health. One was in psychiatry, one was a primary care life cycle block for Ob/Gyn residents, and one was an optional abortion training rotation. The first two were created by medical reformers, while the last was created by a women's health advocate.

Women's health residency tracks and programs generally teach both primary women's health care and obstetrics and gynecology. According to my respondents, internal medicine and obstetrics and gynecology programs cross trained each other's residents because existing faculty in individual departments did not have adequate expertise in both areas of medicine. This required crossing traditional disciplinary boundaries and working together. One respondent stated that one of the challenges in establishing the residency track was that internal medicine faculty members were interested in choosing residents who had good communication skills, while the obstetrics-gynecology faculty members were interested in students who had good hand skills.

> The internists were choosing people who had good communication skills and were bright, but not necessarily good hand skills, while the gynecologists used that as one of the ways to decide who could do what. And so there was consensus that as they supervised the individual residents, they would make an assessment of their hand skills to decide what hand tasks were reasonable to teach that individual person, because that wasn't really any of the process for internal medicine. *Carol, Internist*

Women's health residency tracks provide longitudinal educational experiences, that is, residents establish a patient panel for whom they were responsible throughout all years of their residency. With the exception of psychiatry, they receive primary care women's health training in every year of their residency program.

Residency education has an impact on undergraduate medical education because medical students' clinical rotations are often in settings in which

residents are providing care to patients. Whether or not a residency program has integrated women's health information into the curriculum will affect whether that content or perspective is integrated into medical student education.

> They [med students] get a good experience, in part, because the residents are getting a great experience. They get it by default, but it's not as developed. *Wendy, Women's Health*

Fellowship programs. The Accreditation Council for Graduate Medical Education (ACGME) defines a fellow as "a physician in a program of graduate medical education accredited by the ACGME who has completed the requirements for eligibility for first board certification in the specialty. Such physicians are also termed subspecialty residents. Other uses of the term "fellow" require modifiers for precision and clarity, e.g., "research fellow" (ACGME 2005). Fellowship programs offer sub-specialty training within specific areas of medicine. Henrich's review of women's health fellowships indicates that the number of women's health fellowships increased over time, and then decreased in a manner similar to that of women's health residency programs (Henrich 2004). In 1995, there were 16 fellowship programs in women's health. In 1999-2000, these numbers had peaked at 18, and by 2003 they had declined to 13 fellowship programs.[9]

[9] Interestingly, there were more fellowships than residencies in women's health.

In family medicine during the time period relevant to this study, the only fellowships that offered a certificate of added qualification upon completion were sports medicine and geriatrics fellowships. As a point of comparison, in May 2005, there were 251 different fellowships listed on the American Academy of Family Physicians (AAFP) website (AAFP 2005). Of these, 69 were offered in sports medicine, 38 in faculty development, 33 in geriatrics, 24 in obstetrics, and 21 in research. There were seven fellowships listed as women's health or primary care women's health and which had a broad orientation toward women's health. Additional available women's health related fellowships were primarily focused on reproductive health issues. For example, one fellowship was offered in each of the following areas: maternal and child health, research and women's health, family planning and reproductive health, and reproductive health programs research. Many of these programs only accepted one fellow per year, so that the number of physicians who were acquiring expertise in addressing a broad range of women's health issues was very small in comparison with the number of women and the number of physicians in the U.S. Comparable data were not available for the relevant time period for other areas of medicine, but are likely to be similar, especially considering that there were only a total of 13 women's health fellowships in the U.S. in 2003.

One challenge in creating or maintaining women's health fellowships is that they are not accredited by the ACGME and women's health is not officially

recognized as a medical specialty. This provides little incentive to pursue this field professionally unless one has a specific interest and commitment to it. When searching for employment after completion of such a fellowship, fellows may encounter situations in which they need to explain what women's health is, as noted by one respondent. On the other hand, because these programs are not accredited, there is a great deal of curricular flexibility for those who are interested in creating fellowship programs.

A number of women's health fellowship programs were created in the mid-1990s, partly as a result of grant funding from the Veterans Administration. Over the years, programs were created in all primary care specialty areas, including internal medicine, family medicine, obstetrics and gynecology, and psychiatry. The fellowships are located within academic medical centers as well as at community hospitals. The impetus for the development of these programs came from interested faculty, other leaders within the institution, and residents who desired additional training in women's health, which was the case for one of my respondents. Fellowship programs reflected the strengths and resources available within the sponsoring institution as well as the interests of individual fellows.

Eight of my respondents created women's health fellowship programs, seven by medical reformers and one by an appointee. Two fellowships were in family medicine, with one being a newly established fellowship program and one

being a formalization of an existing fellowship program. The former was created by an appointee and the latter by a medical reformer. All of the following were created by medical reformers. One women's health fellowship program was created in psychiatry. One additional psychiatry respondent created a women's health curriculum for the general psychiatry fellowship. One internist created an interdisciplinary primary care fellowship which was one of the first women's health fellowship programs created in the U.S. One obstetrician/gynecologist created a women's health research fellowship. One internist created a Veteran's Administration Women's Health Fellowship at her institution. In addition, she was in the process of creating a clinical women's health research track for her internal medicine fellowship program.

Continuing medical education. Continuing medical education (CME) is a far simpler method of developing women's health education programs in comparison to the curricular innovations discussed above. All physicians must complete a certain number of hours of CME annually for licensing purposes; the specific number varying by state and by specialty area. Although CME programs must be accredited by the Accreditation Council for Continuing Medical Education (ACCME), they do not require the same level of coordination among multiple faculty members across departments. CME programs provide opportunities to present recent medical research to a group of physicians, or they can help physicians acquire or improve their skills within an area of medical

practice. CME programs may be brief as is the case with one hour grand rounds programs, they may be more involved and be a few hours in length, or they may be very complex activities and be several days long. CME activities may be developed by interested faculty members, by an administrator with faculty support, by professional societies, by medical schools, and by other health care facilities and organizations.

CME programs can be expensive to develop when programs are offsite, if they require substantive marketing efforts, if they require the development of new educational resource materials, or if they use multiple educators who must be compensated. Historically, pharmaceutical companies have subsidized CME programs, but concerns about the potential for bias in educational content that is introduced by this support resulted in increasing restrictions on the use of pharmaceutical funds for educational programs. The lack of funding constrained the developmental pace for women's health CME, particularly for topics that do not have a substantial pharmaceutical component such as domestic violence. Other likely or potential sources of funds are public sector grants, foundation grants, and health center grants which cover costs that exceed any income from registration fees.

The typical approach to continuing medical education is through educational sessions which are led by an expert in the field. In women's health, this was constrained by the limited number of individuals with expertise in

women's health. CME courses generally used a didactic approach, although case based and problem based learning was increasingly being utilized. For courses in which the objective was developing hands-on clinical skills, other modes of training were used such as standardized patients or lay pelvic educators.

Because educational innovation is easiest to do in CME programs and can deliver information to practicing physicians quickly, this was one of the first areas in which women's health curricular development was conducted by many groups. Much of this work was done by professional associations. Every area of medicine that provided primary health care services to women - internal medicine, family medicine, and obstetrics and gynecology developed CME programs in women's health. The following is an overview of CME curricular initiatives in women's health. It is not a complete listing, because complete historical information is not available.

The earliest comprehensive and coordinated effort to teach women's health to practicing physicians via CME programs was initiated by the American Medical Women's Association (AMWA). This project was spearheaded by Dr. Lila Wallis of Cornell University. The project began when a group of physicians were brainstorming at a November 1990 AMWA annual meeting. The group received a seed grant from Upjohn Pharmaceutical Company, which enabled them to coordinate a planning meeting in 1992. The first Advanced Curriculum on

Women's Health was offered in two parts in 1993 and 1994 in New York City and Philadelphia respectively (Donoghue 1996; USDHHS 1997). This was one of the first attempts to develop a systematic curriculum to address all aspects of women's health. The curriculum was structured based on a woman's life phase, and the content included specific health issues that women would experience at each point in their lives: early years (birth to 18), young adult (19 - 39), mid-life (40-64), mature years (65-79) and advanced years (89 and beyond) (USDHHS 1997; Wallis 1998; Wallis with Betancourt 1999). The program was designed to be conducted every 3 years. It eventually became an international conference with physicians attending from around the world. One of the medical reformer respondents was the primary force in creating these programs. AMWA also created various other curricula related to specific women's health issues which included the *Reproductive Health Initiative* for medical schools (AMWA 1997; USDHHS 1997).[10]

All of the primary care medical specialty groups offered women's health CME courses over the years. The American College of Physicians (ACP) offered a session entitled "Update in Women's Health" at its annual meetings and beginning in 1996, published a summary of the information from these sessions in its *Annals of Internal Medicine*. One of the medical reformers was involved in

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[10] This document was also known as *AMWA's Fourth-Year Elective Curriculum in Reproductive Health.*

establishing this program. Similar updates were conducted at meetings of the Society of General Internal Medicine (SGIM) which is a professional society for internal medicine faculty. One of the appointees was involved with coordinating women's health sessions at these meetings.

ACP also sponsored a women's health clinical skills course for its members that began in the summer of 1999 in Philadelphia and which was subsequently offered across the country. The course focused on pelvic exam skills and used lay pelvic educators, but it also addressed osteoporosis, heart disease in women, breast cancer, domestic violence, and other topics (Gesenway 1998). Other teaching methods at these sessions included objective structured clinical exams (OSCE). One of the medical reformers was pivotal in creating this program. Although the program was successful, it was expensive to produce and was discontinued.

The American Academy of Family Physicians (AAFP) sponsored numerous CME programs about women's health topics over the years. The AAFP offers, as do all medical specialty societies, CME programs for its members. In 1995, out of a total of 6,790 that were accredited by AAFP, AAFP identified 69 courses as being women's health courses, or approximately 1%. By 1998, both the number and the percentage of women's health CME courses had doubled to 125 out of 5,879, which is approximately 2% of all CME programs (AAFP 2000). In 2003, 117 women's health CME courses were offered out of

8,080, or approximately 1.5% (AAFP 2003). AAFP also coordinated an annual weekend educational offering in order to enhance physicians' clinical skills in a course entitled "Women's Health in Primary Care."

The American College of Obstetrics and Gynecology (ACOG) occasionally offered sessions at its annual meetings that addressed a broader range of women's health topics beyond reproduction. However, the majority of their topics dealt with more traditional aspects of obstetrics and gynecology.

CME may also be delivered by professional associations via journals or monographs. They may develop educational monographs for their members which include a test at the end that once submitted, provides physicians with CME credit. The Association of Professors of Gynecology and Obstetrics (APGO), a professional society for physician educators, first began addressing women's health in a more comprehensive manner, i.e., addressing issues beyond traditional obstetric and gynecologic topics, through the development of a series of educational monographs. These monographs were first available in 1996. By May 2005, monographs were available in 20 different women's health primary care and preventive medicine topics (APGO 2005). Other professional societies also sponsored the creation of women's health monographs. The American College of Obstetrics and Gynecology (ACOG), a professional group representing clinicians, branched out from its traditional focus and offered, *Clinical Updates in Women's Health Care* beginning in 2002 which offered

information about primary care and preventive health care for women. In 2004, ACOG published the monograph *Care of Aging Women*, It was an indication obstetrician-gynecologists had expanded the patient population whose health care needs they addressed beyond reproductive age women **(**ACOG 2004**)**.[11]

The American Academy of Family Physicians (AAFP) also has a history of developing educational monographs and has periodically focused on issues that are relevant to women such as osteoporosis (Broy, Natkin and Hofmann 1998). One of the women's health advocate respondents was involved in this project. Most of the AAFP monographs were not specifically directed toward women's health issues.

The American College of Physicians, a professional society for internists, offered CME in women's health over the years but did not appear to offer any in monograph form. Instead, they coordinated the development and publication of a series of books about women's health, with the first being about coronary artery disease in women (Charney 1999). One of the medical reformers was involved in this project.

One of the simplest ways to deliver CME is through grand rounds in which physicians from a specific academic department, medical facility, or other medical education institution gather together on a regular basis (often weekly) at

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[11] In addition to CME offerings, in 1993 ACOG's Task Force on Primary Care developed educational standards and practice guidelines for those physicians that provided primary care services to women (USDHHS 1997:65).

a set time for a one hour educational activity. Although it reaches a larger audience, the one hour format constrains the amount of material that can be addressed comprehensively. One of the women's health advocate respondents created grand rounds programs and a three-quarter day series of educational programs, both under the auspices of a medical school. A medical reformer respondent created a series of women's health CME one hour programs at her medical school which were broadcast to other physicians in the community. Both of these respondents noted that it was difficult to draw physicians to their programs.

> It's a new conference. Any time you have a new conference that never works well because people don't get it on their schedule.
>
> *Melanie, Internist*

Professional education can also be initiated by government entities, as was the case with the Heart Truth Campaign. This was a federally sponsored effort to educate health care providers about cardiovascular disease in women. It was a collaborative project with experts from across the country and had multiple components, including CME. One women's health advocate and two medical reformers were involved with this project.

Building Interdisciplinary Research Careers in Women's Health. The Building Interdisciplinary Research Careers in Women's Health (BIRCWH) program was created by the NIH Office of Research on Women's Health in 2000. It provided institutional grants to train junior faculty members to become

researchers and leaders in women's health. The BIRCWH program provided support and mentorship for interdisciplinary research initiatives. It legitimized interdisciplinary research in academic environments and supported the creation of evaluation and reward systems that reduced barriers to such work. Each BIRCWH grant designated site developed a curriculum to provide faculty with the additional knowledge and skills they needed to conduct research in women's health. The BIRCHW program enabled institutions to develop a cadre of women's health scholars that could provide collegial support for other women's health curricular activities at their respective institutions. At the time of the interviews, two of the medical schools represented among my respondents had received BIRCWH grants.

BIRCWH sites have conducted sex and gender based biological research on cellular, animal, and human levels in addition to integrating basic and clinical science research activities. Establishing a broad research program that could ultimately have a significant impact on women's health requires the commitment of many organizational resources over a very long period of time, and thus is unlikely to have an immediate impact on curricula, except in providing opportunities for students to participate in research activities. Innovation in women's health research activities from programs such as BIRCWH may eventually translate into broader changes in the content of medical education.

Evaluating Students

Once the curriculum and resource materials have been developed, the teaching method has been decided upon and the curriculum implemented, curriculum developers evaluate students. Information obtained from the evaluation is then used to revise the curriculum.

Evaluation commonly occurs throughout the medical education process when physicians senior to the student or the physician/learner observe the learner in clinical settings. More formal evaluation methods in undergraduate medical education include the use of objective structured clinical examinations (OSCE). This is a common method to observe and assess students' clinical skills. OSCEs rely on various clinical scenarios in which students rotate through stations and must demonstrate clinical skills. At each station, they may engage with a standardized patient or they may be presented with a written clinical scenario. Students demonstrate skills such as history taking, performing physical examinations, counseling the patient, writing reports, and interpreting laboratory findings. These examinations may be conducted throughout the educational process, and all students must pass this type of examination as part of their national board examinations prior to receiving their medical degrees.

Curriculum developers are especially concerned with how well their students score on national board exams after curricular innovations have been implemented, as this serves as one indicator of the effectiveness of an

educational innovation. Respondents reported that they were relieved and pleased when students' board scores did not decline after they implemented curricular changes. They were also pleased when students or residents attributed their board score performance to the faculty member's teaching of women's health.

> They [internal medicine residents] go to their boards and they come back and they say, "My god, there's so much women's health on that! I can't believe how great it was that I felt comfortable because I worked with you." *Melanie, Internist*

Concept mapping was a newer curriculum development and evaluation approach that was used to assess students' or physicians' level of understanding of the complexity of the subject matter.[12] With this method, learners identify related health issues and the relationships between different issues in the form of a diagram. This approach can demonstrate the complexity of learners' understanding. This approach may be especially useful if women's health is conceptualized in a holistic manner.

Programs that used lay educators to teach breast and pelvic exams also used lay educators to evaluate students. None of the respondents discussed having patients evaluate the learners, but this could have been one component of a learner's overall evaluation. Although patient satisfaction surveys were

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[12] For additional information about concept mapping, see the special Women's Health in Medical Education issue of *Academic Medicine.* November 2000.

commonly used in assessments at many health care facilities, they did not appear to be used for curricular evaluation.

At the residency level, residents are periodically assessed about their knowledge via exams created by oversight bodies in their specific discipline. Within obstetrics and gynecology, it is the Council on Graduate Residency Education in Obstetrics and Gynecology (CREOG). Within family medicine, it is the American Board of Family Medicine (ABFM). Within internal medicine, it is the American College of Physicians (ACP).

Williams (2007) found that in an assessment of the content of a sample of residency examination questions in family medicine between 1996 and 2005, 23.2% dealt with women's health. Of all exam questions, 18.6% dealt with reproductive health and only 4.6% dealt with other women's health issues. 8.5% of all exam questions dealt with maternity care which was the most common type of question related to women's health. Williams found that while health issues for reproductive age women were addressed on the exam, the primary causes of mortality in women were highly underrepresented. To the extent that the examinations reflected the content of residency education about women's health, then except for the residency programs directed by my respondents, family medicine training programs were not adequately addressing women's health needs. Similar analyses of resident-in-training exams within obstetrics and gynecology and internal medicine were not conducted at that time.

Advocating for Women's Health in Accreditation and Licensing

At every level of medical education, curriculum developers consider accreditation issues as they develop curricula. Medical schools must meet a wide range of criteria in order to be accredited by the Liaison Committee on Medical Education (LCME). The LCME is under the auspices of the Association of American Medical Colleges (AAMC). Curricula are developed for departments, program and courses, but practically speaking, implementation does not always follow the established curriculum. In order to become licensed, medical students must pass the National Board of Medical Examiners (NBME) licensing examinations. Some of my respondents indicated that they had been attempting unsuccessfully to persuade the NBME to include questions about women's health on their exams. They believed this would encourage medical schools to integrate women's health into their curricula.

Residency programs are accredited by a private professional organization, the Accreditation Council for Graduate Medical Education (ACGME). The overall ACGME residency program requirements were revised in 1999. Some of the requirements were consistent with aspects of the ideology associated with women's health such as professionalism and interpersonal and communication skills (ACGME 1999).[13] The ACGME has a number of Residency Review

[13] On September 28, 1999 the ACGME approved the following as expected competencies for residency education: patient care, medical knowledge, practice-based learning and improvement, interpersonal and communication skills, professionalism, and systems-based practice.

Committees (RRC) which oversee different aspects of medical education. Each specialty area has its own RRC which determines the knowledge and skills that physicians should possess within their respective areas in order to be able to practice medicine independently. The RRC conducts a peer review of individual programs to determine whether they meet the RRC and ACGME requirements. At the time of our interview, one of the medical reformers was a member of the residency review committee in obstetrics and gynecology.

Each specialty has its own examinations for board certification. The American Board of Medical Specialties is the umbrella organization for individual specialty boards. The boards that are relevant to women's primary care include the American Board of Obstetrics and Gynecology (ABOG), the American Board of Family Medicine (ABFM), and the American Board of Internal Medicine (ABIM). One of the medical reformers was a leader in developing questions about women's health for the ABIM recertification exam.

Even though obstetrics and gynecology is a surgical specialty, obstetricians and gynecologists have traditionally provided more primary health care services to women than either family physicians or internists (USDHHS 1997; Weisman 1998). They have considered themselves to be "the women's health physicians" because their patients are exclusively women (ACOG 2016). In 1995, the program requirements for residency training in obstetrics and gynecology were revised by the Residency Review Committee to include both

primary and preventive care. The RRC's recommendations were approved by the ACGME. Residency programs integrated these changes into their curricula. Residency exams in obstetrics and gynecology are administered by the Council on Residency Education in Obstetrics and Gynecology (CREOG). One of the medical reformers served on this committee and thus had some influence on the inclusion of primary care and prevention questions in certifying exams. Despite these various efforts to change residency education, some doubt whether the now dedicated six months of training is adequate for obstetricians and gynecologists to possess the knowledge and skills to be able to provide primary care to their patients (Cassel 1998).

The specialty of internal medicine undertook a project in the 1990s to more precisely define residency curricula, partly due to a shift within internal medicine to outpatient care, and partly due to new accreditation requirements established in the 1990's that required residency programs to have written curricular documents available to site visitors (Ende, Kelly and Sox 1997). This project was conducted under the auspices of the Federated Council for Internal Medicine (FCIM), an umbrella organization comprised of the American College of Physicians (ACP), the American Society of Internal Medicine (ASIM), Association of Professors of Medicine (APM), American Board of Internal Medicine (ABIM), Society of General Internal Medicine (SGIM), and the Association of Program Directors in Internal Medicine (APDIM). The women's health component of the

curriculum was coordinated by Dr. Glenda Donoghue and other women physician leaders within internal medicine. This project used the outline that was created for the *Textbook of Women's Health* (Wallis 1998) as a basis to develop the women's health competencies (Donoghue 1996; USDHHS 1997). The ABIM ultimately developed a set of competencies in women's health and included questions on their certifying exams for practicing physicians (ABIM 1998). One of the medical reformer respondents was a leader in this effort.

At the same time, SGIM's Section on Women's Health also sponsored a project to develop a women's health residency curriculum which was led by Dr. Janet Henrich (USDHHS 1997). SGIM is the professional society for internal medicine faculty. Despite efforts to create women's health curricula for residency education, at the 2004 meeting of the Society of General Internal Medicine, the presentation of a draft document of the new curriculum did not address women's health explicitly (SGIM 2004). Women's health was purportedly subsumed under the umbrella of diversity. Factors such as race, class, and ethnicity were made explicit in the document, but sex, gender and women's health were not. At least three of the women's health reformers were present at this meeting. One stated that she and her colleagues had been trying unsuccessfully to convince SGIM leadership to explicitly include women's health into residency education. Despite the inclusion of women's health into board certifying exams for physicians, the resistance to the explicit inclusion of women's health into residency curricula

suggests that the degree to which women's health content is likely to be present in most internal medicine residency programs is inadequate, with the exception of the programs directed by my respondents.

The American Academy of Family Physicians periodically updates and disseminates a Recommended Core Curriculum in Women's Health. This document was revised in 2004 and includes gynecology as well as other aspects of women's primary care. This curriculum includes thirteen knowledge components and covers women's health across the lifespan (AAFP 2004). None of my respondents reported advocacy efforts in relation to accreditation or licensing exams in family medicine.

Fellowship programs in women's health do not have the same level of oversight by individual medical specialties as residency programs. Women's health fellowship programs receive their accreditation from the Joint Committee on Graduate Medical Education through the sponsoring institution such as a university. The respondents who created fellowship programs did not express any concerns about accreditation issues for their programs.

In the case of CME, the Accreditation Council for Continuing Medical Education (ACCME) requires that each educational program specify learning objectives for each educational session. It is up to the curriculum developer to determine whether or not women's health will be a component of the curriculum. The American Academy of Family Physicians (AAFP) offers its own accreditation

for CME programs and the requirements are similar to those of the ACCME. The largest accrediting body for CME is the American Medical Association (AMA). The efforts of six of my respondents to create CME programs about women's health can be interpreted as one form of advocacy within the medical profession.

The Role of the National Centers of Excellence in Women's Health

In 1996, the Office on Women's Health (OWH) at the U.S. Department of Health and Human Services (DHHS) disseminated a request for grant proposals (RFP) in order to establish National Centers of Excellence in Women's Health (CoE) to serve as national models in all aspects of women's health. In 1996, six Centers were designated, and six more were designated each year for the next three years. Each of these Centers was identified as having some particular strength in women's health. A few Centers ceased to exist while others continued to be added so that in 2005, there were 21 CoEs in existence (USDHHS WomensHealth.Gov 2005). The initial RFP identified numerous objectives that potential CoEs should fulfill as part of their contracts. Eventually, the objectives of the CoEs were clarified and refocused, such that the CoEs were expected to address women's health in five main areas: research, clinical care, community outreach, professional education, and the advancement of women in medicine. By the year 2000, a total of $12 million had been disbursed by DHHS to support all of the CoEs (Collins 2002). Two medical reformers were in federal government positions and were leaders in designing and creating the CoE

program. Two women's health advocates were in the federal government and provided oversight to the CoE programs in their regions. Two women's health advocates, one appointee, and seven medical reformers were in leadership positions within their respective CoEs. Two additional medical reformers were also in leadership positions at their institutions which had been designated as CoEs, but they had no involvement with and little knowledge about their CoEs.

There was a great deal of variability among the CoEs in their women's health curricular activities. Some CoEs undertook comprehensive curricular evaluations to determine the content of their existing curricula so that they could use this information to facilitate change. CoEs created CME programs in women's health topics. They developed new methodologies for teaching physicians about women's health. Certain institutions were able to use their designation to help facilitate broader curricular changes such as the partial integration of women's health into undergraduate medical education. At one institution, the designation resulted in the creation of a women's health elective for medical students and residents (USDHHS 2002). The CoE designation increased student and faculty awareness of sex and gender differences, and enabled schools to begin to address diversity issues within medical education (USDHHS 2002). Increasing awareness about women's health translated into changes in clinical care, such that physicians at CoEs were in significantly greater compliance with professional recommendations regarding screening tests

and procedures for women in comparison to other institutions. Patients at CoEs also expressed greater satisfaction with their healthcare than at other institutions. In general, the CoE designation had a positive impact in facilitating curricular innovation and change. Resistance to curricular change, including at the CoEs, is discussed in the next chapter.

One of the primary effects of the CoEs has been that the designation has served to legitimize women's health as a field within medicine (USDHHS 2002). This facilitated collaborations within academic medical centers, as well as with local community groups and other parties interested in women's health. In a similar vein, in 1998 the Office on Women's Health (OWH) began to designate sites as National Centers of Leadership in Academic Medicine, and in 2000, it also began to designate National Community Centers of Excellence.

Publishing Textbooks and Educational Resources

Medical curricula require appropriate educational materials for teaching students and residents desired content, skills and attitudes. In many cases, there was very little scientific literature available about women's health. That body of knowledge began to grow, especially after the results of the Women's Health Initiative research program began to be published. Respondents indicated that the existing curricular materials were inadequate and they needed to create them.

> We were working with training programs, and a number of our faculty were [conducting] training, you know, either at the General or here or

> at Planned Parenthood or somewhere. And we're saying, "You know, there's nothing to give, we've nothing to give the residents. Like, we can give them a book, but we really need something, you know, that guides their training." *Wendy, Women's Health*, *1990s*

The lack of educational resources was an impetus for some of my respondents to develop curricular materials for medical education. They created workbooks, textbooks, handbooks, and monographs. Examples include the *Advancing New Standards in Reproductive Health* (Paul et al. 2003), a workbook which is an educational tool for teaching abortion procedures, and the *Breast and Pelvic Examinations* handbook (Wallis 1996) which is designed to teach medical students and interns how to perform these procedures. Women's health textbooks were developed such as the *Textbook of Women's Health* (Wallis 1998), which addressed both the biomedical and the psychosocial aspects of women's health. This text also included a section that provided a sociological overview of the field of women's health. It was edited in part by a sociologist and women's health advocate, ensuring that a patient-centered perspective was reflected in the text. After these early texts were created, additional women's health texts have been published for medical education. One of the women's health advocate respondents was involved in the reproductive health text. One medical reformer respondent was pivotal in the creation of the breast and pelvic exam text. One women's health advocate and one medical reformer respondent were central to the creation of the *Textbook of Women's Health*.

The above texts attempted to integrate the health care needs of women from women's perspectives with the needs of those in medical training. In contrast to using a women's health approach, there is another perspective that was emerging and was used to integrate women's health into medical education, i.e., a sex and gender approach. The textbook *Principles of Gender-Specific Medicine* (Legato 2004) was an early and influential textbook which used a sex and gender lens.[14] It was a comprehensive edited volume addressing differences and similarities between men and women in normal human biology and physiology. It also distinguished how diagnosis and treatment differs based on gender. The sex and gender approach to addressing women's health issues was just beginning to emerge at this time. The distinction between sex and gender and the need to address these issues was set forth as a future direction for medicine in an Institute of Medicine report (Wizemann and Pardue 2001).

While the impetus for creating the aforementioned texts came from individual women, medical specialty organizations were also involved in creating educational texts. The American College of Physicians (ACP) determined that there was a need for a book series about women's health. The first volume in this series was about *Coronary Artery Disease in Women* (Charney 1999). One of the medical reformers was a central figure in developing this book series and was asked to do so by a representative of ACP.

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[14] For an introduction to sex and gender based medicine, see Legato (2003).

Comprehensive educational resources were developed to guide faculty as they attempted to integrate women's health into medical education. The primary organizations involved in these efforts were the National Academy on Women's Health Medical Education (NAWHME), the Association of Professors of Obstetrics and Gynecology (APGO) and the American Medical Women's Association (AMWA). NAWHME created *Women's Health in the Curriculum: A Resource Guide for Faculty* (Donoghue 1996). This book defined women's health, identified necessary women's health competencies, provided strategies for integration, and provided many other resources that faculty might need to develop curricula for medical students, residents, or for continuing medical education. One women's health advocate and six medical reformers were involved in the NAWME project.

APGO developed the *Competencies for Medical Students* (2004) which is an online tool for curriculum developers for undergraduate medical education. It identified competencies, learning objectives, content, references, and evaluation methods. Although this project was sponsored by APGO, it was an interdisciplinary effort. Three medical reformers were involved in APGO's project.

AMWA developed a comprehensive *Reproductive Health Initiative* curriculum for medical students (AMWA 1997). Many medical schools have used this curriculum. None of my respondents stated that they were directly involved in this AMWA project, but some of their colleagues were.

> Many of our faculty are either part of that curriculum project or reviewers for that curriculum project. *Wendy, Women's Health*

Establishing or Reorganizing Clinical Services

Significant curricular innovation may coincide with clinical innovation because clinical sites are the location for hands-on clinical training. When a clinical site changes, it changes what can be learned because the patient population differs or because the associated practices result in new types of knowledge being introduced. An appointee discussed how physicians needed to consider whether there was any evidence that was applicable to any specific population was being cared for.

> Until people started looking at women as a separate population, they didn't find anything. They wouldn't know that women needed to be treated differently because they never looked. And then you might look at black women and find that that population needs to be treated totally differently than white women, and that's fine. So you have to do the research to actually find out if there is a meaningful difference in how we deal with folks. *Frank, Family Physician*

Different clinical settings would be composed of different types of populations and would create learning opportunities that were specific to the patient population at each site. For example, a veterans' hospital and a woman's health hospital would have different types of patients.

Clinical innovation may involve creating new clinical sites and services or it may be the result of reorganizing existing services. The impetus for clinical innovation varies. Organizational leaders may determine that clinical reorganization or innovation will result in increased efficiency, improved cost

effectiveness, enhanced marketing opportunities, or provide better educational opportunities for students and physicians. The impetus for clinical innovation may also be the result of the needs of patients, learners, researchers, or clinicians. It may come from women's health activism such as demands for gender specific HIV services. All of these were contributing factors in clinical innovation to varying degrees within respondents' organizations.

Responding to Patient Needs

In the initial stages of clinical innovation, physician medical reformers changed how they practiced medicine. Internists began to incorporate gynecological services into their practices. Some internists also integrated other areas of medical specialization such as endocrinology. This was a dramatic shift within the field of internal medicine because it integrated primary care practice with the skills and knowledge of a surgical specialty. Obstetrician-gynecology respondents integrated aspects of primary care into their practices. For one physician, this meant expanding her practice to include hospice patients. Although family physicians traditionally provide more comprehensive care to their patients, my respondents integrated sex and gender specific knowledge into their practices with sensitivity to the context of their patients' lives. The psychiatrists determined that reproductive health issues were central issues in their patients' lives and learned how to provide patient-centered care to them. At that time, their

colleagues were dismissive of women psychiatric patients' reproductive health issues and merely recommended that they avoid pregnancy.

Once the needs of women patients are recognized in a clinical setting, it can lead to the discovery of other women's health needs that should be addressed. In the case Carol, an internist, she initially began providing gynecological care to her patients as part of their primary care. One of her patients asked her to manage her gestational diabetes, which my respondent learned to do. She then began to manage "the diabetics who were pregnant within the HMO for their diabetes, and diabetic women who were interested in becoming pregnant."

Broader societal changes can lead to a change in patients' needs and thus in the types of clinical services which are offered. Following the deinstitutionalization of mental health facilities in the 1980s, at one physician's hospital, they "started to get a number of pregnant, psychotic women that we had to take care of" which placed additional demands on clinicians. This physician was aware of the mental health needs of this patient population, but there was no guidance in the literature about how to care for these patients. After developing expertise in caring for these patients, she then developed a "women's issue consultation team" composed of nurses, social workers and staff, which evolved into a clinical program area. Eventually, this team began providing consulting services to other departments. At another medical school, a different mental

health program was developed by another physician as a “stepwise gradual process” by first creating an inpatient treatment service for women, followed by the creation of an outpatient clinic, then a consultation team for other departments, and finally other specialized services. Each of these clinical service areas also provided teaching services geared primarily toward postgraduate training.

As greater numbers of women entered the military, this increased the need for women’s healthcare services within Veterans Administration facilities, and especially for primary care services. One internist responded to this need.

> First thing we did was we developed what we called a women’s preventive health clinic which… was designed to be a pap [test] clinic.
>
> *Melanie, Internist, 1990s*

This physician went on to later establish a gender specific primary care clinic which she staffed along with a psychiatrist and a social worker.

As one component of their federal contract, the National Centers of Excellence in Women’s Health were to develop a one-stop shopping clinical model. In this model, clinical services were to be centralized in one location, both primary care and sub-specialty care. This was intended to decrease the fragmentation of women’s healthcare services and to make it easier for women to receive care. It also improved communication between clinicians, which contributed to improvements in patient care.

> Things work better if you can run into people in the halls and talk about it. Things work better if you have a shared chart. Things work

> better if my nurse can say to me, “This patient was seen by Dr. [X] in Gyne clinic on Wednesday, and she has a question now, can you answer it?” *Melanie, Internist, 1990s*

The centralization of clinical services created an environment in which there was continuity with support staff which was viewed as benefiting patients because of familiarity and creating a “healthcare home.” Others modified the clinical setting to be more comfortable for their patients so that patients “can come back to a place that’s comfortable and convenient and familiar.”

Labeling and Reorganizing Services

In some cases, there may be a set of patient problems which are recognized, but for which it is infeasible, undesirable, or impractical to establish a full women’s health clinic oriented around a specific disease or condition. In those cases, organizations may dedicate a certain number of rooms within an existing clinic to address women’s health issues. An organization may allocate staff such that women’s health physicians participate in rounds on certain clinical services and have input into how patient care may proceed. An alternative approach which has been adopted by some medical advocates is to carve out specific time within an existing clinic and identify that as women’s health time. One medical reformer explained, “I didn’t go off and say, I want a separate clinic, I want separate space.”

Comprehensive clinical innovations can be difficult to undertake, but it is possible to engage effectively in clinical innovation on a much smaller scale.

Rather than creating a new clinic that requires additional staffing and new clinical space, it is possible to reorganize existing services so that specific times are set aside to address women's health issues.

> We just 'labeled' some clinic time as 'women's health time' and started to provide services. Then we added administrative pieces to the clinic. We added an MA [medical assistant] to do paps [pap tests], and we got a med student. *Melanie, Internist, 1990s*

Once the clinic is labeled and services are reorganized without the need for new resources, women's health issues can then receive more focused attention from clinicians, and they provide new educational opportunities for students and physicians. Using this approach, my respondent adapted to the existing system at her institution.

> I've been very careful to build it within existing structure, and capitalize, just reorganize what we already had.
> *Melanie, Internist, 1990s*

As I have shown, focused attention on the specific needs of patients creates an environment in which clinical needs can be recognized, they can evolve over time, and they can then be built upon. Over time, administrative components may be added to the clinic as additional resources become available.

Several organizations reorganized their clinical services so that patients were seen by both an internist and an obstetrician-gynecologist. A medical reformer discussed how this process worked.

> Each patient was presented to the attendings which included a gynecologist and an internist sitting together hearing about all the patients. And I would go in and help evaluate asthma and cardiac

> symptoms, and look at rashes and talk about headaches, and teach the gynecologists. *Carol, Internist, 1990s*

Developing Community Sites

Clinical innovation may occur as a result of learners' needs and may involve the development of new clinical sites within the community for training purposes. In order to develop community sites, one physician built a relationship "with a private Ob/Gyn office, which is very challenging to get residents into" so that their primary care residents could acquire skills in obstetrics and gynecology. At the undergraduate level, community sites may be developed for student rotations in order to provide them with clinical training and exposure to the needs of diverse patient populations about various healthcare issues and within multiple healthcare contexts. Community sites provide a balance to and can fill out the limitations in educational offerings within academic medical centers. They can provide focused training in addressing the needs of special populations such as adolescents or geriatric populations. They can provide exposure to different philosophies of care, such as hospice care. They can provide training in areas of medicine that are considered too controversial to be provided within the traditional medical education environment or for which faculty are unavailable, such as abortion training, LGBT health services, or complementary and alternative medicine. One medical reformer was a co-founder of a clinic that provided care to low-income and lesbian women in her community. One medical

reformer was involved in coordinating a community based clinical rotation for medical students.

New Standards and Processes

Clinical innovation may involve the development of new standards or procedures for clinical practice. For example, at one site, a respondent ensured that pelvic trays were available on every floor of the hospital so that all physicians were able to perform pelvic exams. At another site, a medical reformer established standards for psychiatric patient intake.

> We developed… standards for the inpatient units, where now every woman that is admitted, first of all, there is an inquiry about how many children does she have, what is her reproductive history, is she sexually active and with whom, and so forth -- and then a pregnancy test is done immediately. And that has been the standard for quite a while. And then if the woman is in her reproductive years or hasn't had a hysterectomy or something like that, she also, during the inpatient stay, is informed of some of the options should she become pregnant… because one of the problems is that there is a lot of information and misinformation available about the harmful effects of medication on the fetus of pregnant women, while there is very little information available or in people's awareness of the harmful effects of women who need psychotropic medication, because they are severely mentally ill, suddenly stopping them.
>
> *Stephanie, Psychiatrist, 1990s*

Changes in organizational processes can be implemented to provide more comprehensive care. One way that health care providers could begin to view the patient in a more comprehensive manner is when patient intake forms change so that the initial encounter encompasses a broader range of women’s health concerns.

> Even intake materials for patients are developed across all these different specialties. Which is pretty rare, to have all the internal medicine things, and all the Ob/Gyn things and all the psychiatry things and everything all on one intake form. And that alone, I think, starts to change how people think about care for women.
>
> *Corinne, Ob/Gyn, 2000s*

Meeting Learners' Training Needs

As the length of patient hospital stays declined over time, it had an impact on medical education in that opportunities for hospital based training declined, while the need for community based care increased. Patients were increasingly receiving outpatient care in continuity clinics. Continuity clinics are a common feature of residency and fellowship programs in which physicians have an opportunity to develop a relationship with their patients over time on a recurring basis. Some organizations integrated women's health into this aspect of training. One appointee commented "We can build [women's health] into that easily, and it's already in place as a longitudinal experience."

Creating Interdisciplinary Medical Education

In their various efforts to meet women's health needs, my respondents were creating a new form of knowledge within medical education that went beyond women's health, i.e., interdisciplinary knowledge. This occurred through all phases of curricular innovation. In the initial phase of learning about women's health, they began to acquire knowledge and skills that went beyond their disciplinary boundaries. As they defined women's health, not only did they recognize that women's health went beyond breast and reproductive health

issues, but they acknowledged that the context of women's lives mattered. There were multiple ways in which the context of women's lives was acknowledged. The most common included considerations of race, ethnicity, socioeconomic status, mental health, and the stage of a woman's life or her life cycle. As they created women's health curricular programs, in the majority of cases, their efforts involved participation from physicians in other disciplines. Those that were the most successful at integrating women's health knowledge throughout the undergraduate medical school curriculum used an interdisciplinary team teaching approach and they modified the departmental economic reward system to foster interdepartmental collaboration. Some medical schools began to encourage and develop interdisciplinary research initiatives. The most prominent women's health and sex and gender medicine textbooks that were initially published were edited volumes that were interdisciplinary endeavors, an important step in creating a new form of knowledge. The new clinical services that were created to meet women's health needs relied on interdisciplinary teams. The curricular efforts of individuals such as the women's health advocates, appointees, and medical reformers led to the creation of a new form of medical knowledge, i.e., interdisciplinary medical knowledge.

The interdisciplinary knowledge that was being created was of a specific form. At the most basic level, it integrated knowledge from the primary care specialties with knowledge from obstetrics and gynecology, or that of a surgical

and non-surgical specialty. In some settings, it also integrated the knowledge of psychiatrists, social workers, and other staff. Knowledge produced by others such as sociologists and gender and women's studies scholars was also integrated in some texts, programs and institutions. To the extent that women's voices and non-medical perspectives were at least partly integrated into women's health curricula, the evolution of the field of women's health was moving beyond the traditional medical model. It was a movement toward patient-centered care.

Curricular Innovation in Practice and Knowledge Exposes the Gendered Hidden Curriculum

Medical reformer respondents encountered a great deal of uncertainty as they began to provide care to women. There was very little information available in the medical literature because women had been excluded from research studies and respondents' training had not prepared them to provide the care that their patients needed. The way that they responded to this uncertainty was to work with their patients and listen to them. Rather than adopting a position of certitude and infallibility which was the traditional masculine approach toward uncertainty in medicine (Katz 1984), they acknowledged their uncertainty and worked with their patients and colleagues in other specialty areas to determine what they should do. They also self-trained to acquire the skills that they needed.

Listening to their patients changed the doctor-patient relationship because they were no longer the expert dictating from a position of authority. They were

working in a world filled with uncertainty, and their patients helped them to learn how to be good physicians. The relationship became more of a partnership. They also shared information with their patients. The idea of sharing information with patients emerged from the women's health movement when women insisted on being provided with information by their physicians. One of the medical reformers spoke about the roots of this idea and that one of her guiding themes was to share information to empower her patients. Sharing information with patients was also a necessity for my respondents because they were working in a new territory and they needed to listen closely to their patients so that they could develop expertise in caring for them. By listening to their patients, they were practicing patient-centered care. In their daily lives of caring for patients, they were combining lay knowledge with expert knowledge and practices. They were developing a model of patient-centered care which was a new model for clinical care. They were able to practice patient centered care because they approached their patients differently and they viewed them differently. The historical approach had been to pathologize women, medicalize their health issues, or view them as "hysterical," as one respondent put it. The traditional approach toward woman patients made it difficult for physicians to truly listen to their patients. My respondents took their patients' concerns seriously.

My respondents recontextualized patients in terms of the lived context of women's lives. For example, one physician instructed residents to consider

whether a patient was able to comply with treatment regimens because of caregiver burden or other factors. Another physician spoke about redesigning patient intake forms to included information that encompassed the domains of multiple specialties. This information was used to identify women's health status and needs and to guide daily medical practices. As they provided more comprehensive care to their patients, my respondents established new routines for clinical care. For example, routine obstetrics and gynecology services were being integrated into primary care. This meant that daily practices were being transformed. By developing new routines for daily practices, my respondents illuminated how gender bias was hidden and integrated into the daily practices of clinical education.

My respondents also began to change the clinical reasoning process in students and among their colleagues when they began to regularly incorporate issues of sex, race, age, sexual orientation, and gender identity into their teaching and practices. As one physician stated:

> It became normative that people who presented at grand rounds included what was different about sex and race and age as they would give their talk. *Melanie, Internist, 1990s*

This meant that the former reliance on gender based aphorisms in clinical reasoning such as Type A for men or "it's all in her head" for women could begin to shift toward a different and more holistic approach. By modifying how clinical

reasoning worked, they were illuminating how gender bias had been hidden and integrated into clinical reasoning in education and practice.

In their curricular efforts, my respondents explicitly addressed the issue of gendered medical knowledge. They produced knowledge about women's health that was gender specific and which challenged existing medical knowledge and the approach to the clinical care of women. They identified women's health competencies, learning objectives, and specific content that needed to be integrated into physician training. They created texts that focused on women's health needs and women's similarities and differences from men. They modified existing teaching methods to include women, for example making sure that women from diverse groups were represented in teaching cases. They also developed new teaching methods, e.g. lay pelvic educators. Respondents who were researchers began to conduct research on women's health topics. Some respondents were also able to engage in faculty development. They began to educate other faculty members about women's health issues during journal clubs, grand rounds, and through 'stealth' strategies of offering information, suggestions and resources. By creating a new form of gendered medical knowledge, they were illuminating the ways that gender bias existed as part of the hidden curriculum in medical education.

My respondents' curricular efforts included identifying knowledge and curricular gaps in women's health. They created learning objectives and

competencies based on what they knew from their patients in combination with the medical knowledge they'd acquired during their training and practice. The creation of learning objectives and competencies were aspects of formal curriculum development that were directed at curriculum developers, but they also served as models for medical education in general. In developing competencies and learning objectives that were specific to women, my respondents illuminated the ways that gender bias was integrated into existing competencies and learning objectives, and thus was part of the hidden curriculum.

The 1993 NIH Revitalization Act mandated the inclusion of women and minorities in research studies, while the Women's Health Initiative funded research into the specific health issues of heart disease, breast and colorectal cancer, and osteoporosis. As the results of these studies were published in the late 1990s and early 2000s, it provided a scientific basis to change clinical care for women. It created a legitimate foundation of knowledge about women's health and validated my respondents' efforts to educate students and residents, to develop curricula, and to create educational programs. My respondents began to incorporate this new knowledge into their practices and their teaching. The new women's health knowledge that was emerging began to show how gender bias was integrated into existing medical knowledge in medical education and was a component of the hidden curriculum.

As my respondents transgressed traditional disciplinary boundaries in their own clinical practices, in establishing new forms of clinical services, and in their collaborative efforts to create women's health curricula, they were creating interdisciplinary knowledge. They were exposing how traditional disciplinary boundaries supported the division of women's healthcare into reproductive and non-reproductive health, and how it supported the fragmentations of women's health. They were showing that disciplinary boundaries are themselves a component of the hidden curriculum.

CHAPTER 5

CURRICULAR INNOVATION – STRATEGIES AND RESISTANCE

My respondents employed a number of strategies in order to implement curricular innovations in women's health. They first had to establish their own credibility and the legitimacy of their efforts. They created collaborative working groups and mobilized support and resources. They seized opportunities to insert women's health into broader curricular change efforts within their organizations. They also worked to advance women in medicine. Along the way, they encountered various forms of resistance, much of it gendered in nature.

Establishing Credibility and Legitimacy

One of the first challenges respondents encountered was the need to establish their own credibility as competent physicians and/or curriculum developers, as well as the legitimacy of their efforts. They did so by establishing their own credibility within their organizations and among their colleagues. They established legitimacy for their efforts and for the field of women's health. They began to establish standards for women's healthcare. They built constituencies. They created a visible presence within their organizations. These strategies were used to persuade potential collaborators, colleagues and their organization's leadership about the wisdom of curricular innovation in women's health.

Individual Credibility and Legitimacy

Individual credibility may be demonstrated through professional competence and problem solving abilities. For physicians who began to consult for other clinical services about women's health issues, the initial attitude toward them was one of skepticism, but once they demonstrated their ability to assist other services with their patients' women's health problems, they were accepted as providing a legitimate and valuable service. Some respondents were eventually recognized by their colleagues and others as having expertise in women's health and were then asked to undertake other curricular initiatives.

> She had seen me teaching women's health and had heard that I was running this innovative track [and requested that I develop this other women's health project]. *Carol, Internist, 1990s*

In order for physicians who were providing primary care women's health services to be considered credible, they had to demonstrate high skill levels in all traditional aspects of primary care medicine as well as in women's health.

> First and foremost, everyone who's in my section is a good internist so that all of the people are perceived as wonderful physicians … so they can all talk about diabetes and sodium as well as they can [about] hormones. So they're not looked at as those fringe doctors who only deal with those women's issues, who are very credible as physicians. *Melanie, Internist*

Women's health faculty members also needed to demonstrate to their respective professional specialty societies that they had the knowledge and skills to be women's health faculty. Initially in obstetrics and gynecology, faculty members were not trained in primary care medicine and had to collaborate with

other specialties such as internal medicine to cross-train their residents. Over time, faculty members in Ob/Gyn gained expertise in primary care for women and were able to serve as faculty for their own residents.

> The change the RRC is working towards is recognition of the fact that we now have faculty in these residency programs who were trained in primary care during their Ob/Gyn residency… so the RRC is transitioning to allowing individuals who have received training in primary care being acceptable faculty for that.
>
> *Corinne, Ob/Gyn, 2000s*

Professional leaders, either within the same organization as the women's health curriculum innovators or those external to their organizations could also lend credibility to those who were working to change the curriculum. For example, after a dean met the head of the U.S. Department of Health and Human Services' Office on Women's Health during a CoE site, he became aware of his institution's CoE and put additional effort into preparing for subsequent site visits.

Organizational Legitimacy

Organizations that were involved in women's health curricular efforts needed to demonstrate to their constituents that they were engaged in legitimate activities. This was achieved by establishing a curriculum evaluation and change process that all faculty and senior administrators agree upon. For example, they could begin by reaching agreement on the goals and objectives for their curriculum change and the means to attain those goals and objectives. A medical reformer stated, "We agreed on the process first."

Several respondents noted that the faculty in their institutions would have faith in a curriculum that was created within their own institution, but would not be open to using a curriculum that had been developed elsewhere. An additional problem was that curricula that were created elsewhere might not fit into the existing organizational structure.

> I received a number of guidelines of what has to be in a women's health curriculum, and they are so extensive and impractical that we just basically developed our own. … We haven't used any of these publications to guide our curriculum development.
>
> *Rebecca, Ob/Gyn*, 1990s

The challenges associated with applying externally created curricula were due to their comprehensive nature, difficulty with extracting useful information from those curricula, and adapting that information to the specific constraints of individual educational sites. It was often much easier to begin from "scratch." Internally generated curricula were more likely to result in a product that met the needs and utilized the resources of the specific organization.

Although externally created curricula were often viewed as suspect, external experts could be brought in to provide information and to facilitate the curricular change process. One medical reformer sought out experts in curriculum development and women's health to assist with the process and to advise participants about how to proceed. Any experts that were brought in to assist with the process had to be credible, legitimate and useful.

One strategy that was believed to confer legitimacy within the women's health reformer community was for curricular projects to be developed in a multidisciplinary manner, as was the case with the NAWHME project. While not all of my respondents were familiar with this project, those that were familiar with it viewed it favorably. These respondents were represented among all primary care specialties. The APGO curriculum project was also deliberately created interdisciplinarily.

> We were very much aware of being inclusive, and for the ultimate product to be accepted by a wide variety of people. Not just the disciplines, but the government, other women's health organization.
>
> *Rhonda, Professional, 1990s*

While not all respondents were familiar with the APGO project, there were respondents across various disciplines who viewed it favorably. Others, however, viewed it as a product by obstetrician-gynecologists, i.e., external to their own specialty, and thus were suspicious and dismissive of it. Some respondents had some familiarity with the APGO project, but were unaware that is was developed interdisciplinarily.

After curricular innovations were implemented, the primary way that was used to determine their legitimacy was in the impact on learners. When students stated that they performed better on their board exams because of the new curriculum, it conferred legitimacy to the faculty member who implemented the curriculum. Women's health reformers expressed relief and felt validated either

when students' board scores did not change as a result of curricular changes or when students' clinical skills improved.

> The board scores didn't change at the first set of students who did the new curriculum who took their boards, so that was reassuring to all of us. *Rebecca, Ob/Gyn, 1990s*

When preceptors noticed an improvement in students' or residents' performance, it also had a positive impact.

> We've had feedback from preceptors who are outside of the [university], well even our own preceptors inside the university, and those outside, who've said that it's made a significant difference. They were much readier, much better prepared to go on rotations. *Sarah, Pharmacy, 1990s*

At an organizational level, medical schools were concerned with their students' performance on board exams. If board scores either stayed the same or improved, it conferred legitimacy on the curricular change. Educators were able to use this to justify the innovations to their colleagues.

> Our board scores are up. ... So that's been good, because we cut about 40% of the time out of the curriculum when we did this. We basically said we just need to slash the time and give students more independent learning time and let them experience medicine, not just memorize it, and that's been highly effective. *Frank, Family Physician, 2000s*

Although the improvements in patient care at the CoEs due to higher levels of compliance with screening recommendations affirmed the legitimacy of their efforts to those within the CoEs and the government, none of the respondents indicated that it increased the CoE's legitimacy or of any corresponding curricular changes within their medical schools.

External financial support for women's health projects also served an important legitimating function, at least to the individuals who were being recognized. The establishment of endowed appointments such as the Lila Wallis Visiting Professorship at Cornell University provided recognition for Dr. Wallis' lifelong commitment to women's health issues and to her patients. This particular appointment was established by one of Dr. Wallis' former patients. External funding for curricular development projects also served a legitimating function. Although there were few possibilities for external funding, five respondents indicated that they had obtained grant funds for women's health curricular projects. The majority had some pharmaceutical support. Respondents had mixed views about receiving pharmaceutical support. Many did not have any problems with it and thought it was acceptable, while some were concerned that it would create a perception of implicitly supporting pharmaceutical products. One women's health advocate was conflicted about seeking our pharmaceutical support for women's health CME programs due to concerns about the history of the pharmaceuticalization of women's health (Bell and Figert 2012), i.e., the inappropriate attempts to solve women's health problems and problems in women's lives through pharmaceuticals.

Legitimacy for comprehensive women's health was attained when organizations create specific offices of women's health to administer curricular efforts, as occurred within one medical school and one specialty society. Within

specialties, the legitimacy of women's health began to be established when accreditation requirements included comprehensive women's health competencies, as well as when medical specialties included women's health questions on board certifying and recertifying exams.

Establishing Standards

National standards for medical schools and programs are set by accrediting bodies. For medical schools, they are set by the Liaison Committee on Medical Education (LCME) which is located within the Association of American Medical Colleges (AAMC). For graduate medical education, accreditation standards are set by the Accreditation Council for Graduate Medical Education (ACGME). Each specialty then determines how their specialty will meet these standards and identifies specific competencies to meet those standards. The American Board of Internal Medicine (ABIM) created a set of competencies in women's health which indicated the knowledge and skills that internists should possess in women's health (ABIM 1998). Medical reformers within the field indicated that at the time of our interviews, these competencies were more of a suggestion than a requirement. The American Academy of Family Physicians (AAFP) revised their curriculum guidelines in 2004 to expand the primary care issues that family physicians should be able to address and which included additional women's health related competences (AAFP 2004). The Council on Resident Education in Obstetrics and Gynecology (CREOG)

began to require residency programs to include primary care education. One medical reformer was involved with the CREOG project, but no other respondents had attained positions of comparable stature within their specialties to be able to influence their specialty's training requirements. To a great extent, this was because there were few women in positions at that level of authority within medicine at the time.

National standards were also created with respect to various diseases and conditions, and there was a progression in how women's health was incorporated into these standards.

> So if you look at the national cholesterol guidelines, the first sets of guidelines really didn't pay attention to sex issues at all, then finally there was attention to HDL versus LDL in women and men, and now when the risk paradigms come out, they come out with attention to what we know about sex and what we may or may not know about racial issues in prescribing. So there's really been an enormous improvement, even in national guidelines paying attention to patient specific characteristics. *Carol, Internist*

None of my respondents indicated that they were involved in establishing national guidelines with respect to diseases and conditions, with the exception of one psychiatrist who was instrumental in defining how pregnant mentally ill women should be cared for. However, I did not ask this specific question in my interviews because I was focusing on curriculum and not on national standards.

Building a Constituency

Building constituencies was a strategy that was used to provide support for women's health initiatives, including curricular reform. Several respondents

recognized that their students were an effective constituency that could be mobilized to support curricular change. Students were viewed as effective in persuading individual faculty members and medical school leadership to support curricular change in women's health. One medical reformer actively encouraged students to voice their support.

> Medical students, both men and women [who] were writing the most enthusiastic letters to the Dean. They asked me, "How can we make sure that this is the program that will stay with us?" I said, write, write, with a cc: to Dr. [Y], to the Department of Medicine, to the Dean. Tell them what you have learned, why is this a good program. And they did. *Wanda, Internist, 1980s*

A longer term strategy that was adopted was to educate the public through public education efforts and outreach campaigns to support women's health issues in general. As public awareness increased, a few women's health advocates believed it would create pressure for increasing attention to women's health in medical education. Among the majority of respondents, when public education programs were created or when community outreach occurred, it was seen as empowering community members to be more informed about their health care. They approached it as a form of service rather than a way to build a constituency for women's health.

When the National Centers of Excellence in Women's Health were established, one component of the program was to engage in community outreach. The CoEs were all active in public education via implementation of predesigned initiatives such as bone health or healthy body campaigns,

community based health screenings, lectures, and conferences. The CoEs also developed projects that were relevant to their own local communities. Conferences were one way to get health "information out to the general public." This approach was a public health approach. When respondents spoke about their community work, it was usually as experts providing information to those who needed the information. It was a form of community service. In only one organization did a women's health advocate speak about empowering young women to be more informed about their health so that they could be better health care consumers, potential future providers of feminist health care and change agents.

> [We were] wanting them to be informed consumers, definitely wanting the push from the patients to change the system because - and not just our system, but any healthcare system that they might engage with. The hope would be that they would, you know, challenge that system. *Wendy, Women's Health, 2000s*

Most respondents discussed their public education efforts as a potential method for building a public constituency for women's health. However, most of my interviews did not include discussions about these activities, so my conclusions here are tentative.

Some organizations developed community outreach committees that were composed of faculty and staff internal to their organizations and which were part of their CoEs. Others had had a community advisory board that assisted with project development. When representatives from community groups were

included, it provided a counterbalance to the traditional medical lens by presenting patients' perspectives, by highlighting problems with health care services, and by indicating which women's health issues should receive more attention. Professionally, it allowed women's health physicians to acquire greater expertise about the health needs of specific populations or related to specific issues such as trauma. One medical reformer found that working with an individual who had many community linkages provided support for establishing clinical service programs within her health facility because it enabled them to create services that were identified as women's health needs within the community.

> [My colleague] has resources within the community and we've build lots of programs [because] of that. *Melanie, Internist*

Community networks were also used to create new educational opportunities for students. They facilitated establishing sites for community based training for medical students and residents. Two respondents relied on their networks to establish external rotations for their students. Collaborating with community organizations also provided an entrée for researchers and their students.

Respondents suggested two additional strategies to increase visibility and awareness for women's health and to build public support. One approach was to mobilize the support of representatives from a wide range of either women's health related groups or groups that represented large constituencies of women

such as unions in order to encourage public officials to support women's health policies. One politically astute women's health reformer in a professional society noted that it was especially important to have a "bipartisan authoritative group that will come out with a definitive statement [about the issue at hand]."

Creating Visibility in their Organizations

Respondents also attempted to increase the legitimacy of their efforts by joining with others to create a visible presence in their organizations so that initiatives appeared to be collective efforts and represented collective interests rather than just their own. For one medical reformer, her objective was to increase other's consciousness and awareness about women's health issues in her department. She and her women's health track residents made a point of raising issues about the relevance and applicability of various research studies to women at departmental grand rounds and journal clubs. When it was their turn to present, they always chose an article that focused on women. For her, this was a deliberate and effective strategy.

> We've raised consciousness and awareness, but we have a real visible presence. *Melanie, Internis*t

Consequently, she was recognized as a women's health person among her colleagues in her department, as were her students.

When making requests of the leadership, one medical reformer discovered that it was more effective to do it as a group. Some of the faculty members in her department had objected to her use of lay pelvic educators

because they believed only physicians should be the ones to educate students. In response, she and other supportive parties petitioned the leadership as a group by writing letters to the deans and department heads. Their strategy was to "sign it as a group" which created the impression that there was a broad constituency for women's health. She was permitted to continue using this educational method.

Respondents used curricular assessments as a way to increase colleagues' awareness about curricular deficiencies in women's health. The results of curricular assessments were brought to department heads, curriculum committees and deans. This strategy produced varied results. Faculty members and leadership were more receptive to curricular assessments that were implemented by students. At one medical school, they were very unreceptive to an assessment that was conducted by a faculty member who was in their own medical education program.

Increasing visibility also occurred by creating a physically identified space or office that was dedicated to women's health. Among the organizations represented by my respondents, a women's health education office was established at one medical school.

> The other important thing… which we sort of learned in the process was there literally had to be a physical space and it had to be named.
>
> *Nancy, Internist*

Respondents in one professional society reported that they created a similar office. In order to coordinate their women's health curriculum project, the Association of Professors of Gynecology and Obstetrics (APGO) created a Women's Health Education Office (WHEO). They devoted considerable resources over the years to this office and to women's health curricular development. Their efforts produced the *Women's Health Care Competencies for Medical Students* (APGO 2000).

Creating Collaborative Working Groups

Substantive curricular reform in medical education cannot be accomplished alone. My respondents searched for other individuals with whom they could collaborate on curricular initiatives. They created special interest groups. Some of my respondents served as liaisons, conduits and connectors between individuals and groups to facilitate curricular development. These various efforts enabled respondents to collaborate on interdisciplinary projects.

Finding Potential Collaborators

Throughout the curricular innovation process, it was essential to foster relationships with collaborators and build networks of individuals with similar interests and goals. Within an individual organization, it involved gathering together what one medical reformer referred to as the "usual suspects", i.e., those one knows to have an interest in women's health and in curricular development issues. In other cases, the appropriate individuals had to be

identified and persuaded to participate and relevant departments had to be encouraged to be involved.

> I had the opportunity to create a [internal medicine] women's health track with senior support, which meant finding some of the junior faculty who wanted to work with me on it, meeting with senior faculty in medicine and in gynecology to work out further collaborative relationships. *Carol, Internist*

Although collaborative relationships were generally established by building on existing positive relationships between individuals or organizations, in some cases, collaborative relationships had to be established among individuals who were often at odds with each other. In many locations, conflicts existed between complementary organizations, disciplines or departments. As two medical reformers noted, "They basically hate one another," and "We made a conscious effort to invite people that some … considered to literally be the enemy." In cases of conflict between specialties, organizations or departments, respondents acted as "bridge builders" to facilitate relationships and collaborations. Despite having a history of conflict, individuals and groups were able to come together when they had similar goals.

While many collaborative relationships were among individuals who were members of the same organization, especially at CoEs, for larger curricular projects and those that were national in scope, establishing collaborations between members of diverse organizations was a deliberate strategy to gain legitimacy for the project. According to the leaders of APGO's curricular project,

> [We] wanted to make sure that we included not just the disciplines, but national organizations like the American Medical Women's Association, National Academy on Women's Health Medical Education. *Rhonda, Professional, 1990s*

They received "contributions from all of the clinical clerkships" of possible learning objectives for their women's health competency project. These collaborations were facilitated by the Alliance for Clinical Education (ACE), which was an umbrella organization that represented seven professional medical clerkship organizations whose primary activities were directed at the core clinical experiences of medical students. Rhonda continued by saying "ACE was *pivotal* because we already had those alliances with other disciplines at the clerkship level." The APGO initiative was international in scope in that the Society of Obstetricians and Gynaecologists of Canada (SOGC) also contributed to the project. Colleagues and community partners at both local and national levels became collaborators when they had compatible or complementary interests.

Communication among representatives from the designated National Centers of Excellence in Women's Health occurred frequently. Progress meetings were scheduled regularly which facilitated collaboration among these organizations. When collaborations occurred between them, it was often related to public health education projects as well as sharing how they could achieve the goals of the CoE program. There was no comparable mechanism for ongoing communication between the CoEs and other women's health groups. One medical reformer noted that there were limited opportunities for interaction

between the “American College of Women’s Health Physicians (ACWHP) … the Women’s Health Centers of Excellence, the Community Centers of Excellence … the Boston Women’s Health Book Collective, National Women’s Health Project.”

Establishing collaborative relationships and using those relationships to mobilize support for women’s health initiatives was an ongoing and deliberate strategy. One women’s health reformer who was especially successful in promoting women’s health within her organization noted that it was necessary to continually encourage collaborators and potential collaborators to adopt leadership roles and to become advocates for women’s health. She noted that “we had to get our people out to lobby… talk to them [politicians] about why it’s [women’s health] so important, and make them feel embarrassed not to [support] it.” In medical schools, respondents searched for potential collaborators in other departments, what one medical reformer referred to as a ‘curricular ambassador,’ and regularly encouraged that individual to be persistent in their efforts to advance the cause of women’s health. These curricular ambassadors’ effectiveness was affected by multiple factors.

> [It} was affected by the kind of “relationship [and] connection they had with [others]… whether they have support from above and from below in terms of what their role was, and… whether there was personal support [for] … the individual… to succeed. *Nancy, Internist*

Collectively, the search for potential collaborators and the establishment of working relationships between individuals, departments, and organizations comprised an effort to create a women’s health medical education community.

Serving as Liaisons, Conduits and Connectors

In developing collaborative and collegial relationships, it was important to identify individuals who had common interests, compatible interests, or who had access to curricular resources that could be useful to others. Appropriate individuals were not easy to identify, especially in an emerging area as was the case with women's health medical education. Respondents discussed the difficulty they had in establishing relationships with and meeting others who had similar interests in women's health within their organizations. One of the younger medical advocates asked if I could collaborate with her on a project, while a younger appointee respondent asked me for information about other curricular resources that might be available to help her develop a women's health residency track.

Among my respondents, there were individuals who had a role in fostering these professional relationships. These individuals self-identified as "liaisons," "conduits" and "connectors." For these individuals, this role was more important than their other efforts in curricular development. There were two categories of individuals who served this function. There were three respondents who were in physician support leadership positions in medical societies who used this term to self-identify, and there were two respondents in government positions who served a similar function but did not use these terms.

The respondents in medical professional associations who used the terms "liaisons," "conduits" and "connectors" meant that their position within the medical professional network was such that although they believed that they themselves had a minimal role in women's health curricular development (their role was primarily to represent their professional organization or to serve as consultants), these women knew about others who had curricular or other women's health expertise. In the case of one of these respondents, many women's health physicians identified her as the expert that I had to interview for my project. These liaisons, connectors, and conduits facilitated collaborative activities among other individuals. Interestingly, many of these women often dismissed their role in curricular efforts and in moving the field of women's health forward. A medical reformer claimed "We didn't do anything in the area of women's health at all, except I've facilitated communication between the women's health community and the … curriculum developers." Although she was internationally recognized and respected, she minimized her role by saying that her efforts as a connector were all done "in a very informal way… just a connector." Even though she minimized the importance of her role, she recognized that it was a useful role.

> Whenever I'm able to connect anybody with anything that's been done before, it prevents a waste of energy, prevents people having to do their own little survey, having to call 20 [different people].
>
> *Belinda, Professiona*l

It is possible that because these types of activities have traditionally been associated with the relational work that women do, respondents had a difficult time in appreciating the significance of their role in curricular change.[1]

The two respondents who worked in the government and did not use these terms explicitly viewed connecting people with each other as part of their jobs. Because they were in a position that gave them access to many individuals and other resources, they were able to facilitate connections between individuals and organizations. They could move the women's health agenda forward even when they did not have funds to allocate to a specific project themselves.

Organizations can also play a connector role in curricular change. In women's health, the most obvious such organizations were the National Centers of Excellence in Women's Health. A women's health advocate who worked in government viewed the CoEs' role as "catalyzing and building some partnerships [and] getting a new coalition together." The various state and federal offices of women's health had a connector role in that they brought various individuals and organizations together to work on specific initiatives such as the professional women's health education Heart Truth project. APGO also had a connector role in curricular development efforts when their interdisciplinary efforts brought together representatives from many different organizations and medical

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[1] The liaison, conduit, or connector role and its significance may be better appreciated when one considers the literature on interlocking corporate directorates, and the strength of weak (social) ties in facilitating organizational action (Granovetter 1973).

professional specialty groups to develop women's health competencies. Women's health education special interest groups within medical societies also functioned as connectors. According to a medical reformer, they "help to spread the word [about women's health education]" and they help to bring people together who have similar interests in curricular development.

Connectors served a "bridge builder" function. They linked individuals, organizations, and resources. Resources included human resources, curricular or informational resources, and monetary resources. Connectors disseminated information. Their presence was critical to moving the curricular change process forward.

Creating Opportunities for Collaboration

Respondents created various ways to collaborate between individuals, across different organizations and departments, and within organizations. This included creating retreats, special interest groups, referral relationships and interdepartmental teaching relationships.

Retreats were organized by APGO to plan the development of women's health competencies and learning objectives. AMWA also organized a retreat to plan the Advanced Curriculum in Women's Health. One medical reformer used a retreat for all of the faculty members at her medical school to work on a complete curriculum review and to develop plans to integrate sex and gender into their

curriculum. Faculty retreats were discussed by respondents from four organizations.

Within medical professional societies, individuals with common interests formed special interest groups (SIG) to centralize women's health curricular efforts. Several medical reformers either participated in these groups or were instrumental in creating these groups. One of the first such groups began in 1998 under the auspices of the Association of American Medical Colleges (AAMC) and was knows as the Interdisciplinary Women's Health Care Education Special Interest Group (IWHC SIG). This was a collaborative effort between the Alliance for Clinical Education (ACE), AMWA, APGO, and NAWHME. Men were members of this group (APGO 2005b). A special interest group was established in 2000 by women professors of internal medicine and was called the Women's Health Education SIG within the Society of General Internal Medicine (APGO 2005c). Once these special interest groups were created, "they [the specialty society] keep approving you" and they attain a semi-permanent status. Committees and task forces that addressed women's health were also established at AMWA and APGO.

Clinical and educational needs served as an impetus for collaboration across departments. In some cases, internal medicine and obstetrics-gynecology faculty had a referral relationship and also assisted each other in educating students. As one medical reformer stated, "They refer to us. We work

collaboratively. I teach at all of their seminars." Such collaborations facilitated communication between groups and departments and helped to further establish women's health as a legitimate field of work. These types of relationship have the potential to serve as an impetus to address women's heath at a broader organizational level. This occurred at one physician's academic medical center.

> The [hospital] folks actually have taken this initiative and they have met with many of the division chiefs and department chairs and asked them to identify women's health issues, and so there is a gender specific task force at the University-wide level.
>
> *Melanie, Internist, 2000s*

Mobilizing Support and Resources

In order to implement curricular changes, my respondents needed to mobilize support and resources. This had four primary components: obtaining leadership support, mobilizing constituents, obtaining funding, and persuading colleagues.

Obtaining Leadership Support

In order for curricular change to be successful, respondents noted that it was essential to gain the support of their organization's leaders. While there were some cases where the leadership was willingly supportive, in the majority of cases they were not and they required persuading.

In several cases, leadership support was readily forthcoming, as discussed by one respondent:

> We had a chair that was very willing to donate space, willing to donate support, willing to do the matching. That gave us dean support.
>
> *Wendy, Women's Health, 1990s*

When asked to support women's health initiatives, in two cases the dean or department chair self-identified as a feminist and provided resources for women's health projects. One physician's department chair responded to a request for support by saying "I am a card carrying member of NOW! [National Organization for Women]"

In three cases, senior male leaders initiated curricular changes and were effective in diminishing colleagues' resistance to innovation. In a professional specialty organization, one physician noted that it was useful to have an esteemed senior member who was a man with a well-recognized name be supportive of the society's embarking on a national curricular initiative. In one case, a new residency program director had a spouse who was a women's health physician and so he was aware of women's health issues. He requested that my respondent create a women's health track in internal medicine.

> [He is an] internist whose wife, whose wife is a high risk OB. And he had already gone to the chairs of medicine and OB and shopped this idea, both of whom were supportive and knew me well.
>
> *Carol, Internist, 1990s*

At another medical school, the university had recruited a prominent women's health researcher, which my respondent believed contributed to her residency program director's interest in establishing a women's health track. Two respondents stated that if a leader had a daughter that was interested in a

medical career, it would help to advance women's health in medicine. One physician explained:

> The other thing that helps, interestingly enough, is having men in power who have young daughters who aspire to great things, because suddenly they can become the ambassadors, because then they see women's health as sort of a personal issue for their daughters in terms of opportunities. *Nancy, Internist*

Leader initiated women's health programs did not guarantee that adequate resources would continue to be devoted to a project. While one dean might support a women's health initiative, subsequent deans may not. In several cases, my respondents credited the organization's leadership with creating curricular change, even when the leadership appeared to have a relatively minor role in the process. For example, one respondent credited her chair for his leadership in allowing her to reorganize clinical services to meet women veterans' health needs at no economic cost to the institution, and which subsequently became an opportunity to receive grant funds.

In the majority of cases, respondents had to persuade their organization's leadership of the need for curricular change or for developing and implementing women's health programs. They adopted a number of direct strategies to persuade their leaders. One strategy was to use professional authority to persuade. Some used authoritative professional findings of inequity such as those published by the Institute of Medicine to persuade chancellors, deans, and department chairs (Mastroianni, Faden, and Federman 1994; Wizemann and

Pardue 2001). One medical reformer suggested using the authority of a collective effort undertaken by physicians across the U.S. such as the APGO project to persuade one's organizational leadership. Some respondents believed that their organization's leaders were competitive with their peers at other organizations and that pointing out that one's competition engaged in curricular innovation would encourage support for women's health programs. Several respondents used this strategy. One physician explained:

> I said [to the dean] we need to change our curriculum. Everybody is changing their curriculum. Even Cornell is changing their curriculum.
>
> *Mary, Ob/Gyn*

When the dean was not supportive at one institution, the women's health leaders obtained the support of a chancellor who was ultimately able to persuade his colleague to support women's health initiatives. Several respondents indicated that over time, they eventually had success in persuading reluctant leadership to support women's health projects.

In some cases, leadership support was obtained primarily because the respondent requested it. One physician requested funding for a small percentage of her salary to work on curricular issues, and it was granted her. Another physician requested a change in her clinical assignment so that she might be challenged more professionally for purposes of career development and also to enable her to develop new women's health projects, and this was approved. When medical reformers pointed out systemic licensing and professional

inequities to the leadership of the American Board of Internal Medicine, over time, the ABIM was persuaded to reconsider the lack of women's health questions on board exams. After persistent efforts by women faculty, a medical school dean was eventually persuaded to examine issues of inequities in the advancement of women faculty. Respondents noted that appeals which elicited an emotional response such as caring about the professional lives of women faculty or their own daughters could be successful in garnering support for change. One physician suggested that what was important was either "finding the men of good heart," or men with daughters in the medical profession.

Organizational leaders could sometimes be persuaded to support change efforts when a benefit might accrue at very little cost. One physician informed her department chair that she could accomplish similar programmatic innovations as a women's health leader at another institution by merely reallocating existing resources. A few respondents believed that appropriate leaders needed to be sought out, either within their own department or in other departments to support curricular innovations.

Even when leaders provided some degree of support, many still needed ongoing encouragement and a rationale to continue their support. This was a difficult process. One women's health advocate reported that at "the last site visit, the [dean] came, he had practiced his script. Until they started asking him ad hoc questions, he did great." A medical reformer noted:

> We had to educate each dean and get them on our side, and give each of them a different perspective, their own perspective so they could talk about it [the curricular innovation] … It was quite challenging. *Mary, Ob/Gyn, 1990s*

Respondents who worked on women's health projects at the federal level noted that they mobilized the support staff of those in leadership positions to assist with women's health initiatives. Support staff were able to provide organizational leaders with the necessary women's health information in a timely fashion. Support staff also offered advice to respondents about how to proceed with their initiatives. A women's health advocate recalled:

> I remember a conversation about, you know, how [U.S.] Senator [Y's] staffer was a woman who, um, you know, we should approach, and this is how we should address some of the issues, and that way she could get to her Boss, as they called him. *Katherine, Sociology*

Given that most support staff are women and are likely to be interested in women's health issues, this was a useful but underutilized strategy.

Mobilizing Constituents

An indirect strategy for obtaining leadership support was to mobilize constituents to request support for women's health initiatives. Constituents included patients, lay educators, and students. A few respondents garnered student support for curricular changes. At one medical school, "medical students, both men and women, were writing the most enthusiastic letters to the dean [in support of the curricular innovation]." Copies of the letter were sent to relevant department heads and curriculum leaders. At another medical school, students

participated in curricular assessment and consequently made many faculty members aware of women's health issues. Students also indicated their enthusiasm for curricular innovation during their course evaluations which encouraged leaders to support curricular changes.

On a societal level, the most important strategy used to mobilize public support was thought to be obtaining media attention for women's health issues about inequities in women's health. This was discussed by three respondents. Although this is not directly related to curricular innovation, I include it here because it reflects a long term strategy to garner support for women's health which in the long run, my respondents believed would influence medical curricula. My respondents identified this approach as being used by organizations such as the Society for Women's Health Research as well as by women Congressional leaders. According to a women's health advocate,

> [It was the] women in Congress… [who] were able to show blatant discrimination… that the GAO was supposed to be including women [in research] and they weren't doing it… And it became a huge media thing. *Kim, Professional*

These efforts were seen as influencing federal legislation and contributing to the passage of the 1993 NIH Revitalization Act which mandated that women and minorities had to be included in federally funded research. This was viewed as an important step in advancing future women's health initiatives, including curricular initiatives.

In addition to drawing public attention to women's health issues, another strategy used was grassroots activism. One women's health advocate noted that her efforts involved drawing "together as large as possible a coalition of women and other kinds of civic groups to support the fight." She also lobbied Congress which was possible because "the Congressional Caucus on Women's Issues provided exactly that kind of access [to Congress for] us."

Obtaining Funding

I did not spend much time discussing funding issues with my respondents, but obtaining funding for women's health curricular initiatives was critical to respondents' ability to develop curricula. Funding was obtained from individual departments, the medical school, pharmaceutical companies, foundations, state grants, specialty societies, and the federal government. Federal grants included the Fund for the Improvement of Postsecondary Education (FIPSE), the Veterans' Administration, the Health Resources and Services Administration (HRSA), the U.S. Department of Health and Human Services for the Centers of Excellence in Women's Health, and the NIH Office of Research on Women's Health's BIRCWH grants. While most funding support was for a broader initiative or was an institutional grant such as for the CoEs and BIRCWH programs, there was one instance where the support was obtained for a specific individual. One medical reformer received support from her medical school to develop women's

health curricula. Despite these many sources of funds, funding was difficult to obtain for curricular initiatives in women's health.

Persuading Colleagues

Curricular change within an organization cannot be accomplished alone. It requires participation and support from other faculty members because they will be the ones who teach students. Faculty members must be persuaded to be involved and participate in the process. My respondents adopted various strategies to build faculty support, including building trust, establishing common goals, being useful, creating resources, appealing to science and evidence based medicine, and in some cases, faculty development. Faculty development refers to training one's faculty to be better educators and to support of their professional development.

Building trust is a process in which trust grows over time. A medical reformer stated that within her department, the women's health faculty members had to "earn their trust," meaning the trust of her colleagues. Another medical reformer worked to build trust among faculty by creating smaller collaborative tasks and projects "so that we got experience working together." Building trusting relationships was easier when it was project based, that is, when a group of individuals came together to work on some specific project, irrespective of whether it was a women's health project or not. Mary, an obstetrician-gynecologist reformer stated, "Rather than getting a whole body of faculty to

agree to a curriculum change … we started with private projects." Belinda, a professional and medical reformer noted that APGO had been very successful at building relationships with others because "[the program director] has been very continuously active in building relationships with [other professional organizations]" while within other specialty groups "there hasn't been anybody … who's done that."

A second strategy was to establish common goals in a way that was understandable to faculty members and to work collectively toward those goals. This was the approach used by Mary, an obstetrician-gynecologist, as her medical school was undergoing a curricular revision. This required laying the "groundwork for people working together." Laying the groundwork meant communicating in ways that were "devoid of jargon," including both curricular jargon and women's health jargon. A useful strategy was to focus on the expected outcome of curricular change for students, i.e., at the competency level. She defined the central question that she asked of faculty as, "Tell me what you think a student should be able to do at a certain period. They [faculty] can answer that question." This approach shifted the focus onto what students needed to learn and away from her faculty members' limitations in teaching the desired content. Tasks were subsequently assigned to faculty members in working groups which were "accountable for creating something … what they're going to

have to show at the end." In this way, even the smaller working groups had a common goal. In one physician's experience:

> The message from the faculty was "We're building this curriculum."… The faculty were so engaged in the process and had already created so much, that the curriculum went forward. *Mary, Ob/Gyn, 1990s*

This process enabled faculty to take ownership of the curricular changes. Smaller scale curricular revisions focused on the common goals of improved student education, students' clinical skills, research, and patient care. Common goals were also established in relation to clinical services by another respondent.

> We're just going to work together [house staff from different departments] and our goal is going to be to provide the best prenatal care and work together. *Stephanie, Psychiatrist, 1990s*

Several medical reformers became useful to their colleagues either in relation to clinical care for their patients, for cross-disciplinary teaching, or for their research. The point was to make women's health relevant to them.

> We really try to come to the relevance of the faculty person, whether it's in research or whether it's in something that they're already doing to enable some more creativity, and then pull in some issues in terms of women's health. *Nancy, Internist*

As my respondents came to be identified as women's health physicians, they became a resource to their colleagues. Over time, one physician noted "people know to come to me for women's health." The women's health physicians became consultants to others in their own departments as well as to those in other departments. They enabled their colleagues to provide better care to their patients.

> Over time, as actually they heard us speak to their concerns… as we increasingly helped them with their [clinical] problems, [they became receptive to us and to women's health]. *Stephanie, Psychiatrist, 1990s*

Respondents also were useful to their colleagues by helping them to be better educators. They provided resources or examples of curricular content that their colleagues could incorporate into lectures. They provided them with case materials. They offered suggestions about how to make specific women's health issues more relevant to students.

> [We] help them, give them information, give them new resources, and they run with it. *Nancy, Internist*

When faculty received positive student feedback after implementing suggested changes, they felt better about their own abilities as educators. One respondent noted that basic science faculty members at her institution were more receptive to suggestions about women's health than clinical faculty members, but she did not explain why. At the residency level, internal medicine and Ob/Gyn faculty taught each other's residents.

> Our Ob/Gyns will go into your primary care lectures, and in exchange, your primary care students can go to our Ob/Gyn lectures.
> *Corinne, Ob/Gyn, 2000s*

Collegial relationships were facilitated when women's health leaders developed expertise in an area of women's health that was ultimately useful for their colleagues. Other respondents noted that when they provided assistance or resources for other faculty members' research, it was also well received.

A less commonly used strategy among my respondents was to provide resources about women's health for other faculty members. This included having senior faculty members with women's health expertise be available to junior faculty. Another resource was improved access to the scientific literature. In one organization, a medical reformer was able to make a librarian available to the faculty in her department. It is likely that few respondents were able to use this strategy because they did not have adequate resources themselves to use for developing resources for others.

Several respondents noted that faculty development was important to curricular change, but few did it in a consistent and substantial manner. As one medical reformer stated, "I think that nationally we're sort of starved for faculty development." One appointee who was responsible for broad based changes intended to expand the role of faculty development in the future.

> It's [faculty development] gonna have to play a bigger part period, just to continue to have our curriculum improve and survive to some extent, and women's health or women's issues will certainly play a role in that. *Frank, Family Physician, 2000s*

One respondent suggested that it would be helpful for an organization to have a person dedicated to working on faculty development. At one CoE, a women's health advocate created a series of research roundtables so that researchers throughout the university could come together to share ideas and potentially establish collaborative relationships around women's health issues. She viewed this as advancing both the faculty members' interests and the research

conducted about women's health issues. In its own way, it was a form of faculty development.

Respondents also relied on science and evidence based medicine to persuade their colleagues. They presented women's health research during journal clubs and grand rounds. When others presented research, they asked about its relevance and applicability to women. Initially, the women's health faculty members were the ones who raised these issues, but eventually, it began to change the culture of the educational program.

> We knew that the track had really started to change the entire residency when it was the second year in the track, that the track was in existence, and about five different people stopped me in the hall that morning and said, "Did you hear about journal club this morning? Did you hear about journal club?" And it ended up one of our residents was on the in-patient service, and it was her turn to do journal club. And she brought in an early article that was from the Mayo clinics comparing angioplasty results in women and men. And so she just chose that as her article. And there was such a buzz from faculty, from residents, and an excitement about it. And we thought what we had tried to do with the track was create a critical mass, and in fact we were changing the whole program just in terms of what people were thinking. And it became normative that people who presented at grand rounds included what was different about sex and race and age as they would give their talk. But we were changing the culture. *Carol, Internist, 1990s*

One physician noted that colleagues were more likely to support curricular innovation when the women's health leader adopted a perspective of complementarity between groups rather than a competitive or antagonistic approach. As one physician explained:

> Many women's health programs in internal medicine have set themselves up as competitors to Ob/Gyne… and what I've always said is we're complementary. *Melanie, Internist*

In her approach, the work and value of both disciplines was recognized even when there was some overlap in knowledge and skills and when they provided care to the same patients.

The possibilities for developing collaborative and collegial relationships were very much institution specific and they depended on the individual organizational environment, the expertise of those in the organization, and the specific barriers to change within each organization.

Seizing Opportunities for Curricular Change

Medical school curricula are very resistant to change (Bloom 1988). In some cases, curricular changes may be prompted by an LCME accreditation review, but at one school, it had been a long time since a curriculum change occurred.

> I am looking at a curriculum that had its last change in 1967, and a faculty that's *proud* of that change, and doesn't realize that they really haven't changed since then. *Mary, Ob/Gyn, 1990s*

At one medical school, the curriculum was under review because faculty members were frustrated that their students were learning content but were unable to apply it.

Respondents seized the opportunity of an overall curriculum review to work towards integrating women's health into the curriculum. Four medical

schools and one residency program represented among my respondents undertook such a review. As a women's health advocate recounted:

> [We were] also undergoing a major curriculum reform at this time, and they were able to get gender put on that, in that mix.
>
> *Wendy, Women's Health, 1990s*

In some medical schools or residency programs, when they underwent a curriculum review, it meant that the curricular content was being reconsidered.

> What we have is an opportunity, is to identify the content areas that should be included in the curriculum across the continuum, look and see what we're actually doing, and then mature our curriculum in those areas in an effective manner, and evaluate the effectiveness of that. *Frank, Family Physician, 2000s*

Curriculum reviews could also involve re-conceptualizing the approach toward the curriculum, such as changing from a content based to a competency based curriculum. One medical reformer stated that her medical school changed to a symptom complex based curriculum, .e.g. chest pain. This provided an opportunity to include women's health issues in the curriculum

> So we were sort of at the table for that in terms of giving objectives that would be appropriate in terms for the different symptom based complexes. *Nancy, Internist, 1990s*

Multiple medical reformers noted that when a curriculum review was in process, it was essential that women's health faculty be "at the table," i.e., be part of the process.

> [He was] hired here as the vice dean for education, and the educational curriculum was undergoing a significant restructuring. And that allowed us -- because everything was sort of being thrown up. Institutionally, things were being looked at again … [it] allowed us to

> participate in a number of different committees in that process, and so we got involved in that work. *Michelle, Ob/Gyn 1990s*

Curricular changes often occurred in stages and it was important for women's health faculty to have input at each stage of the process. One medical reformer ensured that women's health faculty were involved in discussions about the curriculum for their residency program.

> And we were involved in the meetings where new curricular, every time the curriculum was reassessed, we had faculty at the table advocating for the next thing we wanted to get into the curriculum. And we essentially chose things that we thought were inadequately currently covered within our broad curriculum. *Carol, Internist, 1990s*

Another medical reformer pointed out that once women's health faculty members were involved in the initial process of curricular reform at her medical school, it established a precedent for their continued involvement.

> So we, they took advantage of one curricular change opportunity and money in order to sort of be at the table, and then sort of had established precedence so that when they moved into the second piece, … so that ensured that in the second part of the track, that women's health was included there. *Nancy, Internist, 1990s*

At this school, a woman vice dean was also a vocal supporter of maintaining a strong presence for women's health in the curriculum.

Curriculum reviews, both large and small in scope, provided opportunities for the integration of women's health into curricula. However, this does not mean that such efforts will be sustained. At one of the medical schools discussed above, gender started to be integrated into the curriculum, but once the education director changed, there was no longer support for this effort.

Subsequent curricular changes about women's health were undertaken by individual faculty on a smaller scale.

Advancing Women in Medicine

One of the primary reasons the field of women's health developed and curricular innovation occurred was because there were more women in leadership positions in the medical profession. Women's health advocates and medical reformer respondents believed it was critically important for women to advance into leadership positions so that women's healthcare could be improved. One physician in government explained,

> We know there's a dearth of women in senior positions, and we hope that as women rise into senior positions within medicine, there will also be a change in the way that medicine is practiced.
>
> *Lisa, Internist*

Advancing women in medicine was one of the components of the CoE grant program.

There were a number of efforts to promote women's leadership in academic medicine. There were organizations established to support women in leadership. Some respondents had previously participated in the Harvard Macy Institute's leadership program, while others had participated in Drexel University's Executive Leadership in Academic Medicine (ELAM) program for women. Both were highly selective programs.

> [ELAM is] responsible for like 80% of women at associate or dean's level, or CEO's or chancellor level positions out there in the world. And so ELAM has sort of populated the upper echelon. *Nancy, Internist*

The Association of American Medical Colleges had a *Women in Medicine* program that supported women's career advancement. The American Medical Women's Association has, since its inception in 1915, promoted the interests of woman physicians. The University of Illinois at Chicago's National Center of Excellence in Women's Health, with the support of the USDHHS Region V Office of Women's Health, coordinated a national workshop in 2002 to discuss and address the barriers experienced by women in academic medicine. This workshop resulted in the development of a workbook, *Beyond Parity* (Morrissey and Hoersch 2004), which was to be used by individuals to promote the advancement of women in medicine. At the federal level, in September 1998, a National Centers of Leadership in Academic Medicine program was created to "promote gender equity in medicine and leadership advancement of junior faculty" (USDHHS 2005b). As of June, 2005, four centers were designated. As a result of these efforts, medical schools began to examine salary equity issues and institute faculty advancement committees to review barriers associated with the advancement of women in academic medicine.

Encountering Resistance

As my respondents attempted to develop and implement women's health curricula, they encountered resistance in various forms. It came from other faculty members, students, and staff. This resistance was based on gendered views of patients and the gendered nature of the medical profession and medical

education. It was rooted in the medical profession's reliance on a normative male model.[2]

The Consequences of Relying on a Normative Male Model

> Medical knowledge is based on males being the normative patients.
>
> There are generations of us that grew up on the 70 kg white male as the norm. *Corinne, Ob/Gyn*

Even in pediatrics, the normative infant was a white male, even though more girl infants were born in the U.S. annually than boy infants.

> We sort of had this bet that pediatrics would be less biased. And it turns out that the default in cases, you know, baby is born, the default is always assumed to be male. And so if it's not mentioned, it's assumed to be male. If it's not mentioned, it's assumed to be white. And so the normative, I mean I actually had one case author for a [women's health] series that I did, who said this is how it is with babies. But then if they're women, if they're female children then they're this way. … But he wrote, here's normative, and then if you happen to be non-normative and female. *Nancy, Internist, 1990s*

The reliance on a normative male model meant that issues related to women didn't enter most physicians' consciousness.

> It never occurred to most physicians that there are sex or gender differences in health and illness. … If women had different reactions to drugs, it was dismissed, not recognized, and not recorded, unless it was a significant reaction or a significant percentage of the population experienced it. *Nancy, Internist*

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[2] Note: Unless otherwise specified, all respondents' quotes in this section are from medical reformers.

This translated into a lack of awareness among faculty that women's health was missing from the curriculum until it was pointed out to them, as happened during a curricular review.

> And through that process, we got sort of an assessment of where the strengths were, where the weaknesses were in the curriculum… I know, from comments that I got from faculty. Some of them very much had their eyes opened in terms of well, maybe I do need to be thinking about women's health when it comes to this or maybe it's not really represented in the curriculum. *Michelle, Ob/Gyn, 1990s*

Both women's health advocates and medical reformers believed that when faculty members thought about women's health, they often thought of it in terms of reproductive health. According to Wendy, a women's health advocate, "There's still a bias that women's health is Ob/Gyn." Conceptualizing women's health as reproductive health allowed faculty members to be dismissive of curricular reform efforts, which a medical reformer encountered at the premiere annual national academic medicine conference.

> We'd done this survey about - if you say you have women's health, what is it that you need to have other than saying we do Ob/Gyn. … And so this guy comes up to me and says, "Well I think the answer is, you just, it's real simple with all this. You just let the gynecologist do this." And I said, well sir, if my mother wanted to come to you as a renowned cardiologist, I would certainly hope he'd understand hormone replacement therapy. And he goes, "Well, I uh uh uh, well I see your point." ... And he just moved on. *Nancy, Internist*

Equating women's health with reproductive health meant that many if not most faculty members had limited knowledge about women's health. When

women's health was successfully integrated into the curriculum, the curricular content was based on the knowledge of specific faculty members.

> What we would do is, the first day of the month long class, I would put up on the board and say these are the 4 faculty this time. These are the general areas they're comfortable in. *Carol, Internist, 1990s*

Even when there was departmental support for developing women's health curricula, it was not possible to implement it if faculty members did not know the material.

> One of the course directors here said that he was very anxious to facilitate this and could see the need for it, but he recognized that his faculty who were actually teaching the segments of the course didn't necessarily have the knowledge or material that they would need to put it in the curriculum. *Michelle, Ob/Gyn, 1990s*

One respondent learned that residency programs hoped that students who had been trained in women's health at her medical school would teach it to their faculty members.

> I had one woman who was interviewing for residencies in Ob/Gyn and she was told by a number of places, "Oh, you have to come here because our faculty needs to learn women's health. So you need to come to our residency to do that." *Nancy, Internist, 2000s*

The lack of knowledge about women's health was to a great extent attributable to the lack of research that had been conducted on women. This meant that when providing care to women, physicians would have to explicitly acknowledge their lack of certainty.

> The modification that has to be made is an understanding of the lack of research that we have in a lot of areas, and what, then, do you do when you have to decide on the applicability of a study that didn't

> have enough women in it? So that what we find ourselves talking about is – "Okay, we have studies that show that aspirin works in men. The results are coming on whether or not aspirin works on women. They've at least recognized they need to do the study. In the meantime, what can we take from the studies on men? Why might it work? Why might it not work? And what should you be telling your women patients? *Patricia, Family Physician, 2000s*

The lack of research about women's health meant that physicians could continue to practice as they always had and remain unaware of the consequences of their actions. The publication of an IOM report about the harm that physicians were causing patients, in addition to the publication of research findings about hormone therapy, challenged some physicians' views about the impact of their actions.

> The [IOM] *Quality Chasm* [report] …. The association of physician related harm to patients is critical. It's overwhelming in its scope. So that challenge, when you couple that with the Hippocratic oath to try to do no harm. And then have so much data indicating that we are doing harm, I think that's part of why physicians have been so challenged by the hormone related issue. *Frank, Family Physician, 2000s*

On a fundamental level, it was challenging to some physicians sense of competence. A medical reformer noted a similar impact when she discussed her work on cultural competence with others.

> [The response I received] was "You do what?" It's like, "We don't do that here." You know, if you're culturally competent, and I'm an expert clinician and I don't know anything about this, that means I might be incompetent. So squish! *Nancy, Internist, 2000s*

Limiting Discourse

The medical profession has a history of attempting to limit the sharing of health information among women patients and between physicians and patients. Physicians are also limited in their ability to critique their colleagues. These limits on discourse reduce the ability of individuals to challenge the medical profession. A women's health advocate recounted attempts to prevent women who had breast cancer from sharing their experiences with other women.

> I knew the whole scandal of the woman who started, Terese Lasser who started Reach to Recovery, and the struggles she had had with the surgeons about their willingness to allow her to even speak to another woman who'd undergone mastectomy and all of that stuff.
>
> *Sylvia, Women's Health, 1970s*

This respondent also recounted barriers that physicians experienced in objecting to their colleagues medical practices, particularly when they relied on their colleagues for referrals.

> To this day, I remember this pediatrician taking me aside and explaining to me that they were horrified at the condition of the babies that were coming out in this era of the scopolamine and the Demerol. And you know, they were horrified. And the barbiturates especially. That's another whole scandal. … They were drugged (the babies). … They were horrified but they couldn't do anything about it, because they depended on OB referrals for their bread and butter. And he had the guts to say that to me. And he trusted that I would not print it in the *Boston Globe* the next day. But it's been with me ever since, because it was my first lesson in how there would be structural constraints that silence people even when they know better. And yet his conscience primed him to tell me this. *Sylvia, Women's Health, 1970s and 1980s*

Historically, physicians have also attempted to control the medical information that was available to their patients.

> Those initial hearings in Congress about the labeling of the birth control pill when the preeminent gynecologist of the day was arguing against having a patient information flyer and said, "Well, if you tell a woman she may have a headache, she'll have a headache. So we shouldn't give her any information at all.'" *Michelle, Ob/Gyn, 1970s*

Students were also silenced during their medical training. However, they were willing to share their experiences and concerns with a women's health advocate.

> And there were about eight of them who wanted to talk with me alone, who started pouring out everything they know about what it's like to be an OB-GYNE and how impossible it is to tell how you feel to anybody. You dare not tell your colleagues; you dare not tell the faculty; you dare not tell anybody. And, of course, I've had this experience all over the world. *Sylvia, Women's Health*

When one women's health advocate attempted to draw attention to the problem of sexual harassment, her concerns were dismissed by a faculty member.

> A male on faculty, uh, at one institution commented to me that, "Oh, that's, you know, that's just part of the process. We all have to go through that. You know, they just need to buck up."
> *Hannah, Women's Health*

Physicians' efforts to control discourse meant that alternative voices and perspectives were silenced. They could not learn from their patients. Medical perspectives about women's health supplanted women's own experiences of their bodies. A women's health advocate believed that physicians were misinformed about women's bodies.

> They didn't know what they were talking about. They had never lived through it [menopause], and yet they were writing about us and telling us how we felt and should feel and what to do and all that.
> *Sylvia, Women's Health*

When women's voices were silenced, it meant that those in the medical profession could not hear women's concerns and address their needs. This was the case encountered by a medical reformer when she was a medical student and her Latina patient had not been informed for days that the baby she'd given birth to was alive but was merely separated from her to provide care for the infant's infection.

The lack of openness to hearing other voices and other perspectives was reflected in a preference for curricula created within one's own organization and unwillingness to consider the various model women's health curricula that had been created nationally.

> The other [reason] is a sense of pride that if it's not created here, it's not good enough for us or we're the best and we can create our own curriculum. So, I think that hinders the dissemination and the usefulness of information across, you know, various academic centers. *Michelle, Ob/Gyn, 2000s*

Faculty Resistance to Curricular Change

Although my respondents were able to implement curricular changes, some of their colleagues objected to their efforts. Respondents noted that a typical response from male faculty members was "Well, what about men's health?" In one case, this objection was raised in relation to breast cancer.

> We went to [another medical school], and we're here in the middle of this curricular discussion about something or other, and this man who's involved in curriculum who I didn't even know ends up in this really sort of rude way, coming late to the meeting, making all this noise, derailing the meeting, and in the middle saying, "Well what about the men with breast cancer? Why don't we talk about them?"

> Which was absolutely off topic by intention. And I'm thinking, for those hundred guys, perhaps. Maybe it's better if we address the thousands, and hundreds of thousands [of] women. *Nancy, Internist, 1990s*

The objection that those who were advocating for women's health were ignoring men's health resulted in one medical reformer's reconsidering the terminology of 'women's health'. In order to be more equitable and less polarizing, her group began to frame the issue in terms of sex and gender medicine.

> It required us to think again about whether labeling this as women's health was the best way to accomplish the goal, because if you really talk about -- and we tend to talk about it now more -- making sure that sex and gender differences are in the curriculum, because then it applies a more equal benefit. But it definitely made us realize that that needed to be done. *Michelle, Ob/Gyn, 2000s*

When another medical reformer went to do a site visit to review a medical school's implementation of a women's health curriculum, the faculty refused to use the terminology of women's health and insisted on renaming it.

> What was fascinating, literally every time we said 'women's health' at [another medical school], they said Sex and Gender Medicine. Like we'd say it and they'd correct us immediately. Like you didn't get the words out, 'women's health', they said "Sex and Gender Medicine." Right. Boom! Stomp it down! … And it's like they literally could not handle saying women's health. It was so misogynistic.
> *Nancy, Internist, 1990s*

In one instance, a challenge to the established approach of addressing women's health in medical education was met with overt hostility. When a medical reformer's colleague published an article about gender bias in anatomy textbooks, her colleague received hate mail that was verbally abusive.

In some cases, resistance to including women's health in curricula took a narrower form. Faculty members objected to including specific topics such as "reproductive options and abortion, lesbian health, and rape and sexual assault" (USDHHS 1997:148). Among my respondents, faculty members noted particular resistance to teaching about domestic violence.

> We didn't in the beginning have violence. That took us several years to get violence in the curriculum. And then eventually, and it took so long because it took, it was easier to get the other stuff in. It was easier to get in osteoporosis. *Carol, Internist, 1990s*

> There was some pushback from sub-specialists. You know, why do I have to do that? That's stinky. And one of the things in terms of a primary care curriculum was issues in terms of violence. *Nancy, Internist, 1990s*

Another medical reformer was able to include issues of domestic violence into her residency track, but whereas she was comfortable with integrating many women's health issues into the general residency program, she was careful about not raising the issue of domestic violence too often for fear of causing dissent in her department.

> Emergency contraception and domestic violence, you know, it's not that we don't, [but] those are not core issues for us. But we've been very careful deliberately and because of who we are not to polarize the group. *Melanie, Internist, 2000s*

This particular respondent was located at a large academic medical center on a very large state campus where many of their patients were likely to need emergency contraception and services for abuse. While my respondents did not discuss their views about the roots of the resistance toward including domestic

violence in the curriculum, it may be related to the sexually abusive nature of medical education. Studies have shown that woman students and residents commonly experience sexual harassment and abuse in their training (Komaromy et al. 1993; Charney and Russell 1994; Conley 1998; Nora et al. 2002; Hinze 2004; Stratton et al. 2005; Wear, Aultman and Borges 2007). Identifying that the abuse of women was a problem would amount to acknowledging that some of their colleagues' behavior was unacceptable.

One of the commonly cited reasons for not incorporating women's health into the curriculum was the lack of time. On one level, faculty members did not have the time to change their course materials to include women's health.

> So, it was some of the, sort of the time and attention for the faculty time pressures in order to incorporate this new material.
>
> *Michelle, Ob/Gyn, 2000s*

On another level, the medical school curriculum was already so full that faculty members claimed there was no room in the curriculum to teach additional material.

> When you look at some of the years that weren't covered, or weren't covered as fully, people, some of the people said, "But we can't. We don't have time to do it. We can't cover everything." I think it was time that was the most [objectionable]. I don't think people really said "It's not important." But it's "How much can we put into a curriculum? How much can we cover? Gee if we needed to put more in, what would we take out?" So it was just time, and knowing that you only can put so much into a particular area. *Sarah, Pharmacy, 2000s*

Another common excuse was that the curriculum did not need to change because faculty members had patients who were women and thus were already

providing care to those patients. In educational settings, they claimed that students would learn about providing care to women because that was part of the patient population.

> And then other people would say, well they saw patients, they saw women, and therefore some of the things that they might not have picked up in the classroom, or have in the classroom, they'll learn on their rotations. And then that was where [our women's health curriculum person] would say, "But some people take family practice or internal medicine or whatever at the VA. They don't see a huge number of [female] patients there." So sometimes she would have students who would come through and who may not get the instruction in the classroom, and then they go out, and they don't get it anywhere on their rotations, and then we send them out into the world without really covering some of the, just fundamentals.
>
> *Sarah, Pharmacy, 2000s*

At one medical school, a course director had informed my respondent about why they would not be able to integrate women's health into the curriculum:

> One of the course directors here said that he was very anxious to facilitate this and could see the need for it, but he recognized that his faculty who were actually teaching the segments of the course didn't necessarily have the knowledge or material that they would need to put it in the curriculum. *Michelle, Ob/Gyn, 2000s*

In this case, the primary barrier was faculty members' lack of knowledge about women's health. This was undoubtedly also true at many other medical schools.

Due to faculty members' resistance to integrating women's health into their teaching, some of my respondents adopted what one referred to as a "stealth strategy" of personally communicating with individual faculty members about women's health and offering suggestions about how they might integrate it

into their teaching. Another dimension of the stealth strategy was finding others who would advocate on behalf of curricular integration of women's health within their individual departments.

> [The] stealth strategy of, you know, finding within the various silos of people who are interested in championing this as an issue and facilitating their ability to do that. *Michelle, Ob/Gyn, 2000s*

The lack of institutional support for women's health left respondents with few options or alternative strategies.

> If you don't have the ability to sort of mandate and make it that kind of a priority, then I think you're left with a stealth strategy. *Michelle, Ob/Gyn, 2000s*

Students' Resistance

Some students, especially the men, objected when there was a focus on women's health in the curriculum. A medical reformer noted that there was a "fair amount of pushback on them." Another medical reformer described the "eye rolling" phenomenon among students when women's health issues were addressed. Women's health faculty members responded to student resistance by informing them of the history of women's health and how it had not been addressed by the medical profession.

> We used it as an opportunity to really give people the historical understanding about how women had been disadvantaged and why there needed to be this emphasis on this, which was a very educational session (chuckling) for people. *Michelle, Ob/Gyn, 2000s*

After students were informed about the history of women's health, they were more accepting of the new curricular content.

> The response was "I never knew. I didn't realize that." I mean, the students were basing it on their perspective in their life span, when they had been cognizant of the issues of men and women and the drawback on some of the comments 25 years ago, 30 years ago when women and the GYN textbooks, how they're described, or those initial hearings in Congress about the labeling of the birth control pill.
>
> *Michelle, Ob/Gyn, 2000s*

> People are appalled when they hear that [history of women's health], but they don't understand where things are coming from and how it applies to today and what the funding differential is. They can't appreciate the need. *Michelle, Ob/Gyn, 2000s*

According to a women's health advocate, an additional challenge with associated with attempting to introduce women's health into the curriculum was that there has been a conflation of women's health with abortion. Students resist discussing what they view as a political issue.

> Nowadays when I… talk a little women's health, what I get is abortion. … And younger students that I meet and younger women don't want anything to do with that [political] issue.
>
> *Sylvia, Women's Health, 2000s*

Resistance in Clinical Sites

Respondents also encountered resistance to addressing women's health needs in clinical settings. A psychiatrist indicated that both nursing staff and the obstetrics-gynecology departments objected to providing the care that pregnant mental patients needed.

> It was very difficult for a unit to embrace the idea that we will treat pregnant, psychotic women. Nursing staff, who predominantly in the past, treated violent men, said it would be impossible to have a unit where the pregnant women are together with the usual people that we get, which are very acute, often violent substance abusers and so forth. And so, there was a lot of resistance of establishing a focus. You

> know, many nursing staff felt, "Oh, I'm going to lose my job, because I don't really want to learn how to take care of prenatal care, and what's the ins and outs of pregnant women, right? And if I have to do that, what's going to happen?" So, clearly it was a stretch for them how to think about that indeed this was a population that needed care, and we were going to have that focus. *Stephanie, Psychiatrist, 1990s*

While the nursing staff were concerned about their ability to provide care to pregnant mentally ill women, those in the obstetrics-gynecology department did not recognize that these patients had health needs that could be addressed by a psychiatrists.

> It took, of course, quite a few years, and their initial response is, "We don't have time for that. We don't have rooms for you. We don't have time to meet. We have our social workers, so why do we need psychiatrists?" So it wasn't particularly welcoming.
> *Stephanie, Psychiatrist, 1990s*

This psychiatrist received support from social workers as she attempted to serve as a consultant to the obstetrics-gynecology department which facilitated her acceptance by that department.

> Our strongest advocates were religious social workers who said that all social workers have been working in the clinic for many years and they, in essence, said, "We need the psychiatric backup. You know, we can do so much, but we need that." *Stephanie, Psychiatrist, 1990s*

She believed that she was ultimately accepted because she was able to assist the obstetricians-gynecologists in doing their work.

> But over time as actually they heard us really speak to their concerns. "You know, what are we going to do with this woman on L&D (labor and delivery) that's driving everybody nuts and lies in her bed in fetal position, and the Utilization Review tells us we should discharge her, but we don't know how and what's going on with her?" As we increasingly, you know, in some ways, helped them with their

> problems … The thing that really, I think, motivated them is that it's a real challenge of taking care of such a population that has such multiple of problems. And they do appreciate having a coordination of that and making sense and who is going to do different paths and so forth. *Stephanie, Psychiatrist, 1990s*

The Concerns of Faculty and Students (Men)

Respondents noted that the introduction of women's health into the curriculum resulted in men students feeling as though they were being personally attacked.

> I had people in my seminar who come up and say, "I just want to thank you cause I've taken courses in terms of diversity stuff, and I've suffered through months of being the bashed white male, and this is the first time I had an experience where I felt included, and I now understand in a different way." *Nancy, Internist, 2000s*

Another respondent indicated that the physicians in continuing medical education programs would also feel that attention to women's health was a personal attack.

The introduction of women's health into medical education had potential broader implications for some men physicians. Because the primary interest in women's health was among women students, it meant that these young women were learning to provide appropriate care to their women patients. In the future, this could draw women patients to women's health physicians. Men physicians would be excluded from having this population as their patients.

> I've had men who say, [using exasperated tone] "Well that just means that women should just take care of women!" *Nancy, Internist*

Their fears were not entirely unfounded. As more women entered the specialty of obstetrics-gynecology, women patients often preferred to have a woman

physician. In obstetric-gynecological residency training, men residents had fewer opportunities to oversee the care of patients due to women's preferences for a woman physician.

An additional concern among men faculty members was the potential loss of power and prestige that they received from having control of an area of the curriculum, as was noted by multiple respondents.

> I think when it comes to the educational world, that people tend to count the number of hours that they have in the curriculum, and hours relate to power, prestige, or whatever. And so, people get very, you know, "They reduced my clerkship from eight weeks to six weeks. It means that Ob/Gyn is less important than it used to be." Or "If I own such and such in the didactic aspect of the course and then somebody else is doing it" that becomes a turf war or competitive.
>
> *Michelle, Ob/Gyn, 2000s*

The amount of time that a faculty member teaches becomes an indicator not just of their own status, but it contributes to the status of the department relative to other departments in the medical school.

Resistance Due to Medical Silos

Several respondents stated that one of the primary barriers to integrating women's health into medical curricula was due to 'medical silos'. This refers to the rigid disciplinary structure within medicine. Medical silos are resistant to curricular change efforts.

> Medicine's in silos. ... Each department had its own courses. ... In medicine, each department teaches its own section of the curriculum. So you have Ob/Gyn teaching a section, and you have medicine, which is divided down into divisions, each of them teaching their own thing. And they just teach, and they don't' necessarily interact with

> each other to see what the other one is teaching, or where the gaps are. ... But it's then up to that curriculum committee to put the pieces together, which is difficult when you have each of the silos giving you their view of the world. *Sarah, Pharmacy, 2000s*

The disciplinary structure of medical silos meant that individuals identified primarily with their specialty area rather than with the medical profession in a general way.

> In medicine we need to have our silos. You're an internist, you're a pediatrician, you're a psychiatrist, you're a surgeon. *Nancy, Internist*

This shaped physicians' and medical educators' view the world. It shaped how they viewed patient problems because they interpreted them within their own disciplinary framework. One physician related a story about being asked to review medical case materials by a doctoral candidate in information science. When my respondent asked her what she had found thus far, the woman was perplexed because physicians in different disciplines had different interpretations of the case materials.

> And I say, well what have you found in terms of this? And she says "It's really fascinating, cause I created these 10 cases with a general internist friend of mine. And I decided, well are these cases are OK? So I wanted to pilot them. So I went to a neurology friend, and I said "Tell me what you think of them." And he said "They're great, why did you choose neurology?" And she's like, "I'm not." And she thought that was weird. So she went to a cardiology friend, and this sounds like it's a joke, but it's a true story. She went to a cardiology friend and said "Read these 10 cases, and say, how do they sound?" And he said "They're great. How come you only chose cardiology topics?" Because each sub-specialist could see whether it's the 35th or 150th most likely disease that attended to that particular case.
>
> *Nancy, Internist, 2000s*

Members of each discipline filtered information through their own lenses and had blinders to seeing other perspectives. These blinders contribute to physicians developing the perspective that their discipline is the best at teaching specific subject matter.

> And there's some sense that “We can teach it better.” You know, “We can teach it better because of X.” And so, I think it's quite hard to get crosscutting themes, you know, to go across those typical ownership. Education is still owned by departments, and so if you're talking about doing crosscutting themes, it's interpreted as an interference unless there are champions within that department. *Michelle, Ob/Gyn 2000s*

Narrow disciplinary thinking inhibits communication across disciplines about educational issues. Interdisciplinary initiatives such as women’s health curricula become threatening if they are perceived to be interference.

Physicians may look disparagingly on those in other disciplines whose beliefs and approaches differ from their own, as noted by an appointee respondent.

> I think internists are very much shying away now from using hormones and would use maybe SSRI or something, an alternative treatment before going to hormones; whereas, the gynecologists are still using that first line and with less reservations. … I was just at a lecture with one of our gynecologists … And one of our gynecologists who's talked on menopausal disorders, and her approach, I think, was fairly different than some of the internists could be [laughter].
>
> *Debra, Internist, 2000s*

Given the interdisciplinary nature of women’s health, few medical schools or residency programs were able to change their curricula and teach in an interdisciplinary manner. Given the interdisciplinary nature of women’s health, it

may be integrated more easily into schools that had a curriculum that went across the college rather than those which maintained a rigid disciplinary structure. The interdisciplinary structure of medical education is further reinforced by the reward structure where faculty members are rewarded based on publications in their own disciplines. The disciplinary structure of medicine created silos that are resistant to attempts at interdisciplinary change.

Gendered Perspectives on Women in Medicine

Almost all of my respondents were women and they were all advocating for change in the medical profession. One of the challenges in their ability to effect change was related to their marginalization within the medical profession. Marginalization can occur when women physicians are viewed differently than men physicians. One medical reformer indicated that her department chair had not perceived or treated her in the same way as her male colleagues.

> As an internist who was an associate residency director, I met with my chair every 2 weeks. He liked me. We had a good relationship. He was a good guy. I'd been working with him for years. A new allergist gets recruited. The guy's not even warm in the seat. And he tells me, cause we see patients the same day, that he's getting called into the chair's office to make sure his career is on track. I'm like, that happens? Huh? I'd been there for years. This guy was here a millisecond and he's getting called in, told what committees to be on, not to be on, you know productivity, dadadada, all this stuff. I'm like, huh? So, this is when I found out about [a] fellowship. So I went to my chair, and I said, I want to do this. And he goes, "Ooh, ok, I never really saw you that way." Saw me in what way? Academic. Huh? Why would I be in an academic institution? … Then he was absolutely supportive [later]. *Nancy, Internist*

The marginalization of women in medicine applies to views about the status of different medical specialties and who should work in each specialty. Psychiatry was a lower status specialty that was viewed as more appropriate for women. Men who were interested in entering the specialty were discouraged. Other specialty areas such as surgery were considered more appropriate for men.

> I think there always was a selection of the men that went and took psychiatry . . . because, by definition, they took on and went against what, in some ways, "men" are supposed to do. I mean, men even more than women, traditionally will get a lot of grief for getting into psychiatry. … I mean, you know, "You could be a surgeon. You know, why are you throwing your training away? You know, anybody can deal with those crazy people! You don't have to do that!"
>
> *Stephanie, Psychiatry, 1990s*

The bias against women in the medical profession translated into bias against those who wanted to become women's health physicians. One medical reformer was discouraged by a woman physician who had once been a national leader in women's health from pursuing her interest in women's health education.

> There are lots of people, including [Dr. X], who are telling women at junior level faculty level, "Don't do women's health because you won't have a career in it. You can't get promoted to full professor, you can't be successful. Get out of it." That it's a dead end type of thing. It's a hobbyish thing. *Nancy, Internist, 2000s*

The multiple forms of resistance encountered by those advocating on behalf of women's health curricula made them cautious as they proceeded so as not to disrupt the status quo too much and so as not to offend their male peers.

> I've worked very hard to not make us Feminazis … and we're all very strongly feminist. *Melanie, Internist, 2000s*

In her efforts at curricular reform, she needed to find ways to accommodate to the existing system.

Fitting in and Changing Things

Efforts to integrate women's health into medical curricula represented a challenge to the status quo. My respondents' efforts showed the ways that medical education and the medical profession were failing women by pointing to the lack of knowledge about women in research and among practitioners and medical educators.

As my respondents' entered the medical profession and wanted to care for their patients in a different way, they first had to prove themselves on an individual level. One medical reformer who was an internist wanted to manage her patient's gestational diabetes. When she approached the gynecologists at her community health center, her colleague stated:

> Anyone else I'd laugh them right out of the room, but tell me what you mean by managing the diabetes. *Carol, Internist, 1990s*

She had proved herself to be an excellent clinician and because of that, was permitted to expand the domain of care she provided. Initially, acceptance of women's health physicians occurred on an individual level after they proved that they were exceptional. Once they established their credibility, then their colleagues were willing to let them proceed. Respondents such as Carol first had

to prove that they fit into the system as it existed. They had to prove their value and worth.

The initial forays into practicing medicine in a different way, in a way that met their women patients' needs, led to curriculum reform efforts on an individual and a collective level. Although many educational programs were developed and implemented, it all occurred in a very fragmented way across the U.S. These programs began to create cadres of women's health physicians and who then had a visible presence in their organizations. As one medical reformer stated, "We're sort of Internal Medicine Plus," meaning that not only could they provide care to their patients as well as the men faculty members in her department, but they could also provide gender specific care to their women patients. The residents from her residency track often became chief residents. They were repeatedly proving that among their peers, they were exceptional. At the same time, my respondents were beginning to examine the reward structure within medicine and learning how it was not accommodating to women.

My respondents encountered resistance to their curricular change efforts. Although there was some resistance from students and clinical staff members, the majority of the resistance came from their colleagues. There were three primary components to their colleagues' resistance. First, many of their colleagues did not understand why women's health was an issue. Based on their years of experience in caring for women patients, they had not had experienced

challenges to their beliefs that would make them question their approach toward the clinical care of women. Reliance on the normative male model meant that it was not questioned, which would make the curricular efforts of women's health physicians incomprehensible. Women received medical care from all medical specialties and they also had an entire medical specialty devoted to their needs, i.e., obstetrics-gynecology. It is understandable that asking for more could be interpreted as asking for more than their fair share.

On the other hand, just as students had difficulty identifying that women's health was integrated into the curriculum when it was no longer named "women's health," it is likely that physicians also had a hard time recognizing when they integrated women's health information into their teaching and practice. In the case of Steven, the appointee respondent who did not think women's health was a factor in physiatry, after he spoke with his physiatry colleague, he learned that there were gender differences in this area. Women's health may already be in the curriculum in many as yet unidentified ways. It would require a curricular assessment to determine the extent to which that was the case.

The second source of resistance was faculty members' lack of knowledge about women's health. They could not teach what they did not know. They were unaware that they did not know because the hierarchical relationship between patients and physicians discouraged patients from sharing their concerns, making it difficult for physicians to hear information that was external to what was

required to perform their clinical work. It is not surprising that patient-centered care emerged as a new approach toward patient care at the same time that women physicians began to listen to their patients. As a medical reformer stated:

> From my perspective … the mantra was, if you're smart enough, and listen hard enough, your patients will tell you what is going on.
>
> *Nancy, Internist*

To the extent that women physicians had developed good listening skills as a result of gender socialization and men had not, it provided them with a competitive advantage in providing patient-centered care. The way that medicine was practiced was beginning to change because of women's presence in the medical profession.

The third primary source of resistance was due to concerns about a potential loss of power and prestige for men physicians. This would happen if they admitted that there was much they did not know about women's health, if they lost patients because women preferred women's health physicians as healthcare providers, and if their teaching time was reduced.

Because women's health is interdisciplinary, it does not readily fit into the existing system of medical silos. It presents a challenge to not only the disciplinary hierarchy, but to the place of individuals within those silos. In particular, it calls into question whether obstetrics-gynecology really is "the" women's health specialty. Interdisciplinary women's health was permitted to be established, but only to the extent that it did not challenge the existing gendered

system too much. It was an accommodation made by those in power in the medical profession to the increasing numbers of women in medicine.

The entry of women into the medical profession and their efforts to change curricula were producing interdisciplinary knowledge, changing medical practice and shifting it toward patient-centered care. It was possible for men to think interdisciplinarily and listen to their patients, but it was challenging because it was new and made many comfortable. As one medical reformer stated, men were quite capable of changing too if they wanted to. She believed that those who thought men were not up to the task were wrong.

> You underestimate men, because I think men have the capacity and the skill set, if trained and interested, that they can be excellent caring and sensitive. It's just you have to want to, and you have to do it. Because it seems to me, a patient should have the ability to see a man or a woman who's a clinician, and get excellent care.
>
> *Nancy, Internist*

While there were men in medical education who understood the problems that the new field of women's health was trying to address, such as the men in my study, there were many others who were threatened by the changes in the profession. For those who were open to learning a new way to be clinicians, women's health and patient-centered care provided an opportunity for professional growth.

Strategies, Stalled Progress and Unmasking the Gendered Power Structure

Beginning in the 1980s through the early 2000s, many women's health curricular initiatives and programs were developed. The National Centers of

Excellence in Women's Health were established in 1996, but in 2005 due to a changed political climate, they began to be defunded. The Centers were permitted to keep their titles and apply for a new federal designation, the Ambassadors for Change (Federal Grants 2014a, b). Eighteen expected Ambassador designees were to share $625,000 in grant funds. The defunding of the Centers was a blow to the various women's health initiatives across the U.S. By 2004, progress with curricular innovation had stalled (Henrich 2004). This corresponds with the year I concluded my data collection. I believe my work provides an insight into why progress stalled.

My respondents were all exceptional individuals. They were leaders in their fields. They had established their credibility among their colleagues and had not only excelled, but they had worked to establish the new medical field of women's health. They were also building a women's health community, primarily through interdisciplinary collaborations. Unfortunately, there were not enough women's health physicians in their own organizations with whom they could collaborate. Due to the relatively few women in leadership in the medical profession, the level of change that they could implement was limited. There were also few funds available for curricular innovation in women's health. Although they were able to establish a degree of legitimacy for their curricular initiatives within their organizations, that legitimacy was not widespread across the medical profession. According to my respondents, both the American Medical

Association and the American College of Obstetrics and Gynecology opposed the establishment of a new medical specialty in women's health.

While trying to implement women's health curricula within their organizations, my respondents encountered resistance. The majority of the resistance came from other faculty, although some students and staff were also resistant to changes. The definition of women's health was still being defined within the women's health community, and to many outside of the community, it was still associated with obstetrics and gynecology. One respondent's colleague had asked her if being a women's health physician meant that she "did pap tests." In addition, it would have been difficult for other physicians to recognize that there were deficiencies related to women's health in medical education if they had never experienced a significant clinical problem that they attributed to their own lack of knowledge. In their experience, the normative male model worked for them. The structure of the clinical encounter would have made it difficult for them to hear their women patients' concerns, in addition to the silencing of women's voices that was part of the broader culture. Some men physicians would also lose status if they admitted fallibility, if they lost women patients, or if their teaching time was reduced to allow time for someone else to teach women's health. For some physicians, efforts to establish the field of women's health were personally threatening. Rigid disciplinary silos also made it difficult to integrate women's health curricula. Although the American Board of

Internal Medicine included some questions about women's health in their certification examinations, the National Board of Medical Examiners was resistant to changing their licensing examinations for medical students. Therefore, there was little incentive for medical education to change systematically.

All of these factors contributed to stalled progress for women's health curricular initiatives. These factors also showed how the medical education system is gendered. There are few women in positions of power. Knowledge is based on a normative male which makes it difficult to see things from the perspective of a non-normative male, i.e., a woman. Women's health posed a threat to individual men, and the rigid disciplinary structure of medical education made it difficult to implement interdisciplinary knowledge and practices.

The respondents in this study were unmasking the gendered hidden curriculum in medical education. The requirement that they establish their own credibility and the legitimacy of women's health curricula indicated the gender bias toward women in the medical profession. The women physicians needed to prove that they were as good if not better clinicians as the men in their departments. They experienced challenges in finding a supportive network for their efforts. Many had to persuade the leadership in their medical schools about the merits of women's health curricular projects on an ongoing basis. They also had to explain what the field of women's health was to their colleagues. Although

they experienced resistance to their efforts from staff and students, primarily those who were men, the greatest resistance came from their colleagues who were men. Both the responses to the presence of women physicians and to their curricular efforts were unmasking the gendered power structure within medical education. This power structure is also an element of the gendered hidden curriculum in medical education.

CHAPTER 6

DISCUSSION AND CONCLUSIONS

I view medical education as a system which means that although the majority of my respondents are physicians and medical educators, there are other actors who also influence medical education. I selected individuals for my study who were all involved in curricular innovation in women's health and whose efforts had national significance. Their inclusion in this study enabled me to understand the medical education system and the process of curricular change in a more holistic manner. Including a broader range of respondents allowed me to better see how the medical education system worked and to unmask the gendered hidden curriculum.

Seeing the Unseen: Gender and the Hidden Curriculum

Most studies of the hidden curriculum are of learners to determine what students are actually learning and how the curriculum can be improved so that students will learn what educators have deemed important (Hafferty and O'Donnell 2015). Much of the work about the hidden curriculum in medical education initially focused on issues of professionalism which was being learned via the hidden curriculum. Formal standards and competencies for professionalism were created by accrediting bodies and professionalism became a formal component of medical curricula. Despite these efforts, students

observed unprofessional behavior not only among their colleagues, but among faculty. Although professionalism was being taught to students formally, it was not as effective as curriculum developers hoped. I believe that what was missing in these studies was a systematic study of faculty members' professional behaviors and targeted efforts to address instances of unprofessionalism.

In general, there has been little study of faculty members in relation to the hidden curriculum. Given that students learn from faculty members, it is essential to include them as the subject of studies. In my work, I study the women's health community which included women's health physicians who are medical educators. My work begins to address this gap in the literature.

Studying faculty members is difficult because there are challenges in studying this population. This type of examination is difficult to implement because medical schools or programs may not want to create a disruption or dissent among faculty that could ensue by taking a closer look within their institutions.

Hafferty and Castellani (2009) indicate the need to study the hidden curriculum in the context of the system of medical education, while Haidet and Teal (2015) indicate that the institutional context must be considered. Haidet and Teal (2015) refer to the institutional context of individual organizations. Collectively, these authors indicate the need for a broader approach to studying the hidden curriculum. My work takes this broader approach. My respondents

were positioned within all levels of medical education and across multiple specialties. My work examines the system of medical education nationally. Although the focus of my discussions with faculty was on their individual organizations, they also spoke about their experiences of site visits at other medical schools and at national medical conferences such as those sponsored by the Association of American Medical Colleges (AAMC) or the Society of General Internal Medicine (SGIM). One respondent described how a faculty member equated women's health with obstetrics and gynecology at an AAMC meeting, while others discussed the challenge of having SGIM identify women's health as a priority area for education. The society had identified race, ethnicity and cultural competency as areas for additional attention, but thus far, had rejected the inclusion of women's health. Given how integrated gender is at all levels of medical education and the resistance to women's health curricular change at all levels, it indicates the breadth and depth of the challenge in changing medical curricula.

Gender is present in the detached concern and clinical empathy that characterizes the doctor/patient relationship. It is present in daily gendered practices that fragment women's health into reproductive and non-reproductive health. It is present in clinical reasoning, research and medical knowledge. It is present in teaching practices, methods, texts, and curricular materials. Gender is embodied in the division of labor in medical environments as reflected in the work

that men and women do, either as physicians or as other healthcare providers. Gender is a central characteristic of medical knowledge, practice, and culture. This means that creating and implementing women's health curricula in the formal curriculum will not adequately address problems related to women's health education in the informal and hidden curriculum.

In contrast to earlier approaches to studying the hidden curriculum, Cruess and Cruess (2015) note that learners enter the system with an identity that has multiple components, including gender, race, religion, culture, socioeconomic status, sexual orientation, among other identities. In their view, this means that the socialization process of medical education may have a different impact across learners. My work suggests one possible impact on learners, which is that women and others who are not white heterosexual white men are better able to see the cracks in the medical education system. Once they discovered the cracks, my respondents embarked on a path of changing how they practiced medicine and on changing medical curricula. While their efforts focused on women's health curricula, they also created curricula relevant to other populations. A lesbian respondent also created an LGBT curriculum, while an ethnic minority respondent created a cultural diversity curriculum. Both of these were for undergraduate medical education.

Cruess and Cruess (2015) indicate that when studying the hidden curriculum, it should be considered in relation to the formal and informal

curriculum. My work does not address issues of the informal curriculum. It is a study about formal curriculum development. If we consider the place of women's health in the formal curriculum, it is located in the specialty area of obstetrics and gynecology. That is where it is most visible. Women's health is not the null curriculum, i.e., not present, but it is present in a specific way, and that is within a specific discipline. The location of women's health in a specific discipline in combination with the existence of gender specific clinical sites reinforces the idea about what constitutes women's health, which is primarily in traditionally gendered ways. This makes it difficult for others to understand what women's health is. This is why one respondent's colleague asked her if it meant that as a women's health physician, she did paps, meaning the pap tests that are a component of women's routine gynecological care.

Taylor and Wendland (2015) believe that studies of the hidden curriculum can help illuminate the "habits of unseeing" in which there are things that go unnoticed about the curriculum and which can be uncovered. My respondents saw early on that a hidden aspect of the curriculum was its gendered nature. They were able to see this because of their life experiences, but it was difficult for their colleagues who were predominantly men to see the same things. Not only did their colleagues have different life experiences, but the normative male model used in medicine, practices associated with controlling discourse, daily gendered

practices that were based on gendered knowledge, and assumptions about men, women, and patients made it difficult for them to see the unseen.

One way to address this is to unmask that which is unseen. My respondents showed that there was a path to seeing the unseen which was by listening to their patients. What they were practicing was patient centeredness as they provided clinical care. Patient centeredness is difficult to teach. The primary way that this has been addressed in medical education is to improve teaching about patient communication and interviewing skills. Ridgway (2001) indicates that we must also examine daily practices that reinforce specific types of knowledge. While communicating well with a patient is one aspect of patient centeredness and decreases the distance between the physician/student and the patient, there are other daily practices in medical education which increase distance. When students present a case to their superiors, they use SOAP notes. They present information that is subjective, objective, an assessment, and a plan. The subjective component is reduced to what is viewed as the most essential information. It becomes a problem that must be solved. It decontextualizes the patient such that the patient's suffering or the patient's life context can be dismissed more readily. Similarly, when students are taught using case materials, they are presented with the patient's chief complaint and the case proceeds in a structured format. This also decontextualizes patients and minimizes what they have to say. It teaches students a specific form of clinical

reasoning that distances the physician/student from the patient. The addition of women's health into curricula adds one component to the patient's life context that becomes integrated into clinical reasoning, i.e., the patient's sex, and possibly some information about what her life is like. While this is a critically important addition if women's healthcare is to be improved, it does not ensure that students are learning patient-centered care when other teaching methods increase the distance between student and patient.

Although teaching methods are viewed as gender neutral and thus far, efforts have focused on integrating women's health content into educational materials and formal curriculum documents, teaching methods also have an impact on the way that students come to understand the doctor-patient relationship. Current approaches are more effective at establishing a hierarchical power relationship between physicians and patients rather than a partnership between them. The teaching and reproduction of this power relationship makes it more difficult for students to truly listen to their patients. It also mitigates the extent to which information from patients can be used to reduce uncertainty in the clinical encounter. In terms of integrating women's health into curricula, it means that teaching methods and other aspects of daily practice must be reexamined to determine whether they are gender neutral or whether they are reinforcing gendered practices that minimize women's experiences of their lives. Daily practices must be reexamined more critically to understand how they are a

part of the hidden curriculum. This is one step in helping faculty members and students to see the unseen.

The field of women's health is characterized by interdisciplinarity. My respondents indicated how the hidden curriculum had previously worked to inhibit interdisciplinarity in medical education. They stated that team taught courses were a better way to integrate women's health rather than their previous approach of discipline based teaching. Some schools changed their method of providing funding across departments to facilitate team teaching. One respondent believed that it was more difficult to integrate women's health into a content based curriculum compared to a competency based or symptom based curriculum.

Clinical sites that focused on women's health in a narrow way also inhibited interdisciplinary learning. One component of the National Centers of Excellence in Women's Health was to develop a one-stop shopping clinical model in which patient services were all provided in one location. In some cases, the range of primary care services were integrated into one clinic, while at other sites, multiple clinics were in one location. In both models, such changes facilitated interdisciplinary communication among faculty members. The use of a broad based intake form that reflected a wide range of women's health clinical needs also encouraged interdisciplinary thinking about women's health problems. To further encourage interdisciplinary thinking among students and faculty,

teaching methods and teaching tools should also be examined to consider whether they encourage or inhibit interdisciplinary thinking. The barriers to interdisciplinary thinking perpetuate thinking of women's bodies in fragmented ways. They make it difficult to see women's bodies as an integrated whole. This perpetuates seeing women primarily in terms of their reproductive health needs.

Gender in medical education, as it is in all institutions, is reproduced through inequality regimes (Acker 2006). Inequality regimes refer to the interlocked practices and processes that reproduce inequalities in the system. My respondents referred to multiple dimensions of this in relation to gender. There were assertions of power and authority via sexual harassment and discrimination. Woman faculty members were sometimes viewed as clinical faculty members rather than as teaching faculty who might be interested in career advancement. Few reported being mentored. Some respondents who focused on women's health curricula were harassed, verbally abused, and some of their colleagues experienced negative career repercussions. Harassment and discriminatory behaviors are aspects of medical education, especially in the specialties of surgery and obstetrics-gynecology.

My respondents experienced resistance in a multitude of ways. When my respondents formed special interest groups within their specialty societies, their concerns went unheeded by the larger organization. In their efforts to develop curricula, there were topics that were difficult for them to persuade colleagues to

include, such as domestic violence. My respondents had to act strategically to be permitted to review teaching materials such as case materials to ensure that women were included as representative cases. When their organizations underwent curricular reviews, they had to persuade their colleagues that women's health needed to be included as part of the curriculum. Even when a curriculum review showed that there was a gap, their organizations were in many cases unwilling to change the curriculum. They experienced resistance from students, staff, colleagues, and leadership. When they were able to obtain support from leadership, in some cases, they were not able to maintain that support after a new leader arrived. Faculty objected to the introduction of new teaching methods such as lay pelvic educators. Teaching materials and methods continued to reflect a gender bias. All of these factors combined to keep the gendered nature of medical education hidden, and it prevented others from being able to see what was unseen. While these are all aspects of the hidden curriculum, the concept of inequality regimes helps us to see that it is a system of practices and assertions of power and authority that hinder the advancement of women's health.

In combination, looking at both the daily practices and the practices associated with inequality regimes provides us with a richer understanding of barriers to curricular change. As currently conceptualized, the concept of the hidden curriculum directs us to examine policies, evaluation procedures,

resource allocation decisions, and institutional vocabulary and slang (Hafferty 1998). While this approach points us in the right direction, and while it allows us to examine the practices associated with each of these dimensions, medical curricula continue to be resistant to change. My study indicates that a broader conceptualization of hidden curricula is needed and that a focus on actual practices, both individual and systemic, may help us to better understand not only hidden curricula, but may point toward the broader barriers to change. The focus on students without also studying faculty members has directed attention away from one of the primary barriers to change.

Studying Resistance

In the sociology of education literature, resistance has been conceptualized primarily in oppositional terms. This is rooted in the Marxist perspective of many education scholars. My respondents were also resistant. They resisted the dominant approach toward medical education about women. In creating and implementing women's health curricula and changing medical practices, they were changing the acceptability of the longstanding reliance on the normative male and were able to include considerations of race, sex and gender. Although men continued to be the normative patient, as a result of my respondents' efforts, other voices and experiences were being included in medical education. My respondents accomplished resistance by being exceptional as physicians, by gaining credibility, by excelling within the existing

system, and then by expanding the system's boundaries. It was change from within. My respondents found contradictions in spaces that enabled them to begin to enact reforms, i.e., in their own clinical settings, which then expanded and migrated into their teaching and their departments, programs and schools. They complied with all that was expected of them and they did more. Internists began to provide routine gynecological and obstetric care in their practices. Obstetrician-gynecologists began to include primary care in their practices. Family physicians began to explicitly consider a broader set of women's primary healthcare needs. Those in psychiatry identified and addressed the needs of their pregnant or potentially pregnant mentally ill patients. My respondents began to establish a new standard of care for women. This suggests that other forms of resistance should be considered among education scholars. While Marxist scholars would like to see a change in the educational system so that it no longer reproduces inequality, my respondents provide an example of a step-wise change from within.

The field of women's health is often thought of as specifically related to women. However, it is also a way of thinking about patients, teaching, and providing healthcare services. Women's health knowledge and practices, as developed by my respondents, was interdisciplinary. An interdisciplinary approach that attends to gender also has the potential to improve men's health

because men are also gendered and they live gendered lives which have an impact on their health.

Moving Forward in Women's Health

One of the greatest barriers to changing medical curricula to include women's health is enabling those within the institution to see what they have not seen and to recognize the extent to which the normative male model is integrated into their knowledge, beliefs, attitudes, practices, and the medical education system as a whole. They need to see that gender is not just in the content of the curriculum, but that it is implicit in the educational process and that gendered values and traditional ideas about what a physician is create a barrier to change. Leaders in medical education must also be proactive in addressing issues of harassment, discriminatory behaviors and practices against women students and faculty, and career advancement for women. The explicit inclusion of women's health in medical licensing examinations and accreditation requirements is necessary and would serve as in impetus for change. Funding is also necessary, for curricular assessment, curricular change and faculty development. Curricular assessments will enable organization to better identify the gaps in medical curricula and then to implement necessary changes. Faculty development is critical if curricular change is to be effective because faculty members are a barrier to change. Faculty development needs to address knowledge deficits about women's health as well as an appreciation of the history of gendered

medical knowledge, the gendered aspects of medical education, and tools for changing medical curricula.

At the time that I was conducting my interviews, the new field of sex and gender based medicine was emerging. This field has grown and there are now efforts to integrate sex and gender knowledge into medical education. This has been made possible because of the increasing number of studies that have shown differences between men and women in all organs and disease processes. While there is still much that is not known, the implied equity in the sex and gender model has the potential to reduce faculty resistance to integrating knowledge about women's bodies into medical curricula. Whether it is successful and whether it is effective at leading to truly patient-centered medicine remains to be seen. If there is an overreliance on the biological differences between women and men and inadequate attention to issues of gender, then this will preserve the distance between physicians and patients and will inhibit truly patient-centered care.

There are a number of policy implications from my study. Continued efforts to advance women in medicine are necessary. Funding must be made available for curricular innovation and faculty development. Women's health leaders need to work to build women's health communities. At this time, many of these communities are disease based advocacy efforts. In order for change to occur, we may need to encourage the leadership and constituencies of the

different disease based groups to collaborate on more foundational issue of women's health in those cases where the groups have complementary interests. Sex and gender based research must continue to be supported. This is already occurring at the federal level at both the NIH and FDA regarding mandates and expectations for future research to not only include women in studies, but to also include female cells and female lab animals in research. As team based approaches to clinical care are becoming increasingly becoming common, it provides opportunities for interdisciplinary knowledge to be created. However, that does not mean that learners will be equipped to interpret or apply interdisciplinary knowledge. Medical schools which have changed their funding streams and implemented team based teaching approaches serve as a model and need to be examined regarding whether they enable their graduates to work more effectively in interdisciplinary settings. Such analyses will require funding. The system of medical education must be reexamined and changed to provide medical students with a more humane educational experience so that it is possible for them to view their patients in a more humane manner. Leaders within the medical profession can set a more humane educational experience as a goal. The current approach of adding humanities course is a start, but it is not enough. There needs to be a national discussion about what it means to be a patient-centered physician in an increasingly technoscientific world. Lastly, given the huge deficit in our understanding of women and their healthcare needs,

women's health must be a priority at the federal and state levels, and also within medical education. Women's health must be made visible.

Directions for Future Research

My work clearly shows the importance of including faculty and an examination of power structures in studies of the hidden curriculum. Any studies of the hidden curriculum must at a minimum consider the role that these factors play in advancing or inhibiting curricular change.

The future direction for this specific project is to take a narrower approach and examine curricular change in women's health or sex and gender based medicine within a specific medical school. Subsequent studies would examine the hidden curriculum within specific component of each stage of the curriculum development process ranging from a needs assessment, implementation plans, teaching methods, infrastructure, specification of competencies and learning objectives, curricular implementation, evaluation plans, educational resources, and faculty development.

A Personal Reflection

This project has been a long journey for me. When I first began working in the field of women's health and developing women's health curricula, it was because I recognized that medical education and medical knowledge were based on a normative male model and that our knowledge about women's bodies and health were woefully inadequate. It was not until I completed this project that I

began to understand the extent of the barriers that were present to true curricular reform about women's health.

I have since learned about the many dimensions in which gender is present within medical education and which serve as a barrier to change. The reliance on a normative male model in a profession with a masculine culture makes it difficult to recognize that medical practice and education do not reflect the reality of women's bodies or their lives. It was not until women entered the medical profession that they began to see how what they had learned in medical school did not apply to them and did not prepare them to care for their women patients. Their lived experiences enabled them to critique the system and find solutions. They were the ones to expose the cracks in the system. Doing so required bravery. They were often alone in their efforts and had little support, especially in the early stages of this process.

I was surprised to learn of the extent to which the normative male model and a masculine culture are integral components of medical culture. It goes beyond just medical knowledge, research, and the fragmentation of women's health. Although there is literature that illuminates specific ways that medical education is gendered, it was only through a close examination of my respondents' stories that I was able to see how gender is a component of detached concern between physicians and patients rather than connectivity. I was able to see how gender is a component of disciplinary structures that inhibit

the creation of interdisciplinary knowledge. I was able to see how gender is integrated into daily practices, routines, clinical reasoning, foundational knowledge, teaching methods, and how this is transmitted daily from faculty members and others to students. It is the pervasiveness of gender throughout medical education that enables traditional educational approaches to endure and makes it difficult to implement comprehensive curricular reform in women's health.

I was surprised at the extent to which inequality regimes worked to maintain the status quo and inhibit curricular reform. Inequality regimes operate at many different levels. On a national level, there is a lack of allocation of funds to women's health curricular reform. Comprehensive curricular reform is a large and costly endeavor, but it is difficult to obtain funds for curricular projects that are not associated with a pharmaceutical product. Within organizations, it is not surprising that some leaders and faculty would object to change and would feel threatened by the prospect of change. However, it was surprising to learn that many medical educators did not have a basic understanding of what was meant by women's health and that they resisted challenges to their existing knowledge framework. I had not imagined the extent to which those outside of the women's health community that I studied would have difficulty understanding the extent and significance of the problems related to women's health, and that they would reject changes either overtly, covertly, or passively. In retrospect, given that my

respondents had to educate themselves about women's health so that they could incorporate it into their clinical practices and teaching, it is unreasonable to think that other faculty members would be ready to change without experiencing a comparable educational process themselves.

My understanding of how the hidden curriculum works has changed substantially as a result of this study. The life experiences that individuals bring with them into the medical education setting need to be considered because they affect what and how they learn. This includes the experiences of both students and faculty. These experiences make a difference in how individuals interpret and use information in clinical and educational settings. For substantial curriculum change projects, the level of learning that is necessary for faculty cannot be underestimated. In the case of women's health, not only is there content that must be learned, but faculty must also learn to think interdisciplinarily, and they must learn to teach with attention to the values inherent in their teaching methods. Curricular change cannot be effective without attention to issues of power within organizations and an examination of how that power is asserted. We must include faculty in examinations of the hidden curriculum, in addition to our traditional examinations of structure and culture because they all have a role in the hidden curriculum.

Despite many challenges, I am optimistic that as new generations of physicians become medical educators, as women enter into more leadership

positions in medicine and in other sectors, and as additional research emerges about the specific health needs of women and members of other populations, medical education will eventually adapt and prepare physicians to be better practitioners for all of their patients. I am also optimistic that future generations of physicians will embrace patient-centered care, not just because it will enable them to be better clinicians, but because they will find the relationships with their patients to be personally more rewarding.

APPENDIX A

ORGANIZATIONS REPRESENTED IN THIS STUDY

- Women's Health Activist Groups
    - Our Bodies Ourselves
    - National Women's Health Network
- Government Agencies
- Academic Medical Organizations
    - Centers of Excellence (CoE) in Women's Health
    - Academic Non-CoE's
    - Community Health Centers
    - Medical Schools
- Medical Professional Organizations
    - American Academy of Family Physicians
    - American College of Obstetrics and Gynecology
    - American College of Physicians/American Society of Internal Medicine
    - American College of Women's Health Physicians
    - American Medical Association
    - American Medical Women's Association
    - American Psychological Association
    - Association of American Medical Colleges
    - Association of Professors of Obstetrics and Gynecology
    - National Academy of Women's Health Medical Education
    - Society of General Internal Medicine
    - Society of Teachers of Family Medicine

APPENDIX B

INTERVIEW GUIDE

1. Background – how the subject came to women's health (WH), the subject's background in WH, any personal experiences that influenced the subject's efforts in WH
2. Personal and organizational perceptions of the biggest problems in WH and possible solutions
3. Personal and organizational perceptions about the factors that have facilitated progress in the field of WH
4. What has hindered progress/barriers in WH
5. What they/their organization are trying to accomplish in relation to WH
6. The role of the subject's organization in the field of WH
7. Organizational mission
8. Major organizational accomplishments in WH
9. How they achieved these accomplishments
10. The organization's policies in WH, priorities in WH, plans and goals for the future in WH
11. The organization's published reports in WH, curricular evaluations in WH, curricular guidelines for WH - actual and desired
12. The role of other types of groups in WH (lay activist, government, medical, research, legal). Relationship to their organization.
13. Collaborations with other organizations on WH issues
14. The subject's views on health, illness, and healing - as related to expanding views of WH

APPENDIX C

TABLE OF RESPONDENTS

Table 1

Pseudonym	Field	Respondent Type	Primary Organization
Hannah	WH	WH Advocate	Government
Jane	Nursing	WH Advocate	CoE
Katherine	Sociology	WH Advocate	WH Lay Group
Robin	WH	WH Advocate	Government
Sylvia	WH	WH Advocate	WH Lay Group
Wendy	WH, ObGyn	WH Advocate	CoE
Debra	IM	Appointee	Academic Medicine
Frank	FM	Appointee	CoE
Steven	FM	Appointee	Academic Medicine
Barbara	IM	Med Ref	Community Health
Belinda	WH	Med Ref	Professional
Blanche	Psychiatry	Med Ref	Government
Carol	IM	Med Ref	Community Health
Corinne	ObGyn	Med Ref	CoE
Helen	FM	Med Ref	Community Health
Kim	WH	Med Ref	Professional
Lisa	IM	Med Ref	Government
Marcia	Psychiatry	Med Ref	CoE
Mary	ObGyn	Med Ref	Professional
Melanie	IM	Med Ref	CoE
Michelle	ObGyn	Med Ref	CoE
Nancy	IM	Med Ref	CoE
Nora	IM, Public Health	Med Ref	CoE
Patricia	FM	Med Ref	Community Health
Rebecca	OBGyn	Med Ref	CoE
Rhonda	ObGyn	Med Ref	Professional
Sarah	Pharmacy	Med Ref	CoE
Stephanie	Psychiatry	Med Ref	CoE
Wanda	IM	Med Ref	Academic Medicine

Key: IM = Internal Medicine, FM = Family Medicine, ObGyn = Obstetrics/Gynecology, WH = Women's Health, Med Ref = Medical Reformer

APPENDIX D

DEFINITIONS OF AND APPROACHES TO HEALTH AND WOMEN'S HEALTH

American College of Women's Health Physicians

Seven Guiding Principles for Women's Health (ACWHP 2005)

1. Diversity
2. The Respectful and Therapeutic Use of Power
3. Complexity
4. Activism
5. Eclectic Healing Practices
6. Women-Centered
7. Individual and Organizational Well-Being

AMWA's Advanced Curriculum on Women's Health

October 29 – November 1, 1993 and October 14-17, 1994
(USDHHS 1997:173-187)

Life Phases:
Early Years (Birth to 18)
Young Adult (19-39)
Midlife (40-64)
Mature Years (65-79)
Advanced Years (80+)

The Goals and Objectives of This Curriculum are to Train Physicians for the Following:

- More efficient and accurate recognition and management of conditions unique to women, more common in women and whose manifestations are different in women.
- To eliminate fragmentation of women's health care.
- To improve skills of physicians in evaluation procedures unique to women (e.g. pelvic, Pap, breast examination, instruction of patient in breast-self examination, office gynecology, history-taking, contraception, cardiac examination).
- To recognize and manage appropriately psychosocial and economic issues which influence the patient's health and well being, assessment and compliance.
- To develop a treatment plan that takes into consideration a women's hormonal and metabolic characteristics.
- To enhance the development of the woman patient/physician partnership in clinical decision making and patient education.

- To critically evaluate new research data and its impact on women's health care.

NAWHME's Definition of Women's Health (Donoghue 1996:10)

Women's Health is devoted to facilitating the
- preservation of wellness and
- prevention of illness in women,

and includes
- screening, diagnosis and management of conditions which
- are unique to women
- are more common in women
- are more serious in women
- have manifestations, risk factors or interventions which are different in women.

It also
- recognizes the importance of the study of gender differences
- recognizes multidisciplinary team approaches
- includes the values and knowledge of women and their own experience of heath and illness
- recognizes the diversity of women's health needs over the life cycle, and how these needs reflect differences in race, class, ethnicity, culture, sexual preference and levels of education and access to medical care
- includes the empowerment of women, as for all patients, to be informed participants in their own health care.

Adopted by NAWHME
September 26, 1994

NIH Definition of Women's Health

September 4-6, 1991 Hunt Valley, MD meeting. (NIH 1992:1)

Women's health research should address:

Diseases, disorders, and conditions that are unique to women, more prevalent among, or far more serious in women, or for which there are different risk factors or interventions for women than for men.

Dr. Vivian Pinn, Director, NIH OWH (Pinn 1999)

> Sex refers to biologically-based differences (being male and female).
>
> Gender denotes those qualities that are culturally-shaped variations between men and women, or that result from social processes or expectations of being male or female.

World Health Organization Definition of Health (WHO 1948)

> Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.

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VITA

Mary Rojek received her Bachelor of Arts degree in Economics from the University of Chicago and her Master of Arts degree in Sociology from the University of Pittsburgh. While at the University of Pittsburgh, she taught courses in the sociology of gender and in medical sociology. As a result of her teaching experiences, she developed an interest in the field of women's health.

Mary first began working in the field of women's health medical education in 1998 at the University of Illinois at Chicago's (UIC) Center for Research in Women and Gender. While there, she developed many women's health projects and curricula for physician education at both an organizational and national level. At UIC, she was also in the departments of medical education and obstetrics-gynecology. Mary was the curriculum co-chair for UIC's National Center of Excellence in Women's Health. In this role, she chaired the committee that developed the Interdepartmental Graduate Concentration in Women's Health. This was a collaboration between the College of Nursing, the School of Public Health, and the Gender and Women's Studies program. She was also instrumental in UIC's receipt of the NIH's Building Interdisciplinary Research Careers in Women's Health grant.

In 2008, Mary joined the women's health medical education working group of the American Medical Women's Association. Eventually, that group became

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While completing her doctoral work at Loyola University Chicago, Mary was a graduate research fellow at Loyola's Center for Urban Research and Learning (CURL). At CURL, Mary was a lead researcher for a dental curriculum evaluation project and for an evaluation of a managerial leadership initiative at community health organizations.