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FROM THE EDITOR
Sex, Gender, and Why the Differences Matter

The Mars versus Venus distinction is commonly used to refer to the age-old dialog over the differences between men and women, differences that undoubtedly will be pondered, researched, and challenged for lifetimes to come. The subject of the sex and gender difference is now advancing with renewed vigor to the forefront of the study and practice of medicine. Just as it has long been known that children are not miniature adults, there is increasing focus on how the differences between the sexes affect how illnesses are diagnosed, run their course, and respond to treatment.

First though, it is necessary to point out that the terms sex and gender are not synonyms. Sex refers to the biological differences between males and females. Gender refers to the continuum of complex psychosocial self-perceptions, attitudes, and expectations people have about members of both sexes. Even the terms male and female, man and woman are not interchangeable. What it means to be male or female originates from physical characteristics derived from sex chromosomes and genes that lead to certain gonads, internal and external genitalia, and physiological hormones. Being a man or a woman holds broader meaning, with cultural concepts of masculinity and femininity coming into play. This issue of *Virtual Mentor* will not focus so much on why sex and gender should not be used interchangeably, but instead on how sex and gender together and to varying degrees influence today's practice of medicine [1].

Three obvious aspects of sex and gender in medicine are patient requests for a male or female physician, the choices men and women make about their medical career path, and how, if at all, sex discrimination factors into pain management. Muhammad Waseem and Aaron Miller frame their commentary on patient requests for a male or female physician around the results of a survey of children and their parents and their preferences for a doctor who is male, female, or has the most experience [2]. They then extend their train of thought and comment on some of the reasons behind such requests and the practical management of these situations.

In another clinical case, James Nuovo explores the role of gender in medical residency. To students preparing for residency interviews, he offers advice on what types of questions are "off limits" and how to respond to inappropriate inquiries. Allison Grady's journal discussion examines the reasons behind the apparent "gender gap" in authorship of medical journal publications, and in the health law section Kristin Pulatie studies employment laws that protect women who are pregnant and other caregivers.

On the topic of pain management, Andreea Seritan and Scott Fishman contribute a thoughtful joint perspective on unequal sex-related treatment for back pain. Approaching the pain problem from the clinical side, Robert McCarron provides a clinical pearl on strategies for managing somatoform disorders. Dr. McCarron recognizes that somatoform disorders are a frequent source of frustration for physicians and that the medicine-psychiatry interface is the key to handling troublesome, unexplained physical complaints.

In the policy forum article, Claire Pomeroy takes readers through the social determinants of HIV risk in women. She believes that better education, social and economic empowerment, and more sensitive care for women with HIV/AIDS are necessary to reduce the prevalence and stigma of the disease in this half of the patient population. Dr. Pomeroy also envisions a role for U.S. physicians in stemming the epidemic's effects on women. Roberta Loewy takes a philosophical view of the role of women in medicine, explaining what the growing number of women in medicine means for society. In a personal narrative, Amy Lehman shares a first-hand view of how she chose to enter the male-dominated field of surgery. Finally, Kay Nelsen argues on behalf of centers devoted to women's health, but says that the emphasis on women's health should not come at the price of excluding other populations.

Sex and gender differences affect not only the patients of medicine but the practitioners themselves, playing a role in the day-to-day functions of a doctor and extending into the legal, political, philosophical, and humanities realms as well. This issue of *Virtual Mentor* presents arguments for why it is important to focus on men and women separately rather than viewing and treating them as a unisex patient. I hope that, after reading about some of the key issues and component parts of the complex questions involving sex and gender in medicine, readers will consider for themselves whether the "differences" continue to be overemphasized or underemphasized in medicine in the present day.

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CLINICAL CASE

Patient Requests for a Male or Female Physician

Commentary by Muhammad Waseem, MD, and Aaron J. Miller, MD

Becky's leg wouldn't stop bleeding. She had been taking some empty bottles to the recycling bin for her mother when she dropped one and it broke into many pieces after hitting the stone steps. A shard of glass bounced up and cut Becky on her thigh. After investigating the cut and attempting to stop the bleeding for several minutes, Becky's parents took the 9-year-old girl to the ED for stitches. Becky's mother felt responsible—why had she let her daughter carry three bottles at once down the back steps to the recycling bin?

An emergency department staff member led them to an exam room, and a short time later Dr. Smith appeared. She started to check Becky's leg, chatting with Becky as she was doing so. She explained that she, too, had a 9-year-old daughter. Dr. Smith said, "We'll get you stitched up and that will stop the bleeding. Then we'll put a neat bandage on it and you'll have a great story to tell your friends."

Dr. Smith explained that the suturing would be like sewing, which Becky understood from watching her mom embroider. "Are you going to do it, Dr. Smith?" Becky asked. "I want you to do it. Will it hurt?"

"Well, I have some other patients to see," Dr. Smith replied. "And I don't want you to have to wait too long. Let me see."

When Dr. Smith stepped outside the exam room, Becky's dad followed her out. He went to the admitting clerk and asked whether the male resident they had seen could stitch Becky's cut.

"Why?" asked the clerk. "Dr. Smith and the other physician on duty are both residents and are both excellent. Plus, Dr. Smith will be available in just a few minutes, but Dr. Craig is in an exam room with another patient and he could be awhile. Don't you want to get this done as quickly as possible?"

Becky's dad knew that his wife was feeling really bad about the injury and had said that she would just be more comfortable if Dr. Craig could stitch Becky's leg. Becky's mom had whispered to her husband that she wasn't sure she liked all the chit-chat about sewing. This was medicine, after all. And an emergency at that.

Commentary

A study published in *Pediatric Emergency Care* in 2005 entitled "'Doctor' or 'Doctora': Do Patients Care?" highlighted several questions about patients' preferences for a man or woman physician [1]. The study consisted of a two-question survey for 200 children aged 8-13 and their parents who had come to the pediatric emergency department needing suture repair for a laceration. The two questions were:

1. If you had a choice, would you prefer to have a male doctor, a female doctor, or the doctor with the most experience?
2. If you picked one, would you be willing to wait longer to be seen by them or would you want the next available doctor?

Among the children, 80 percent of girls and 78 percent of boys preferred a woman doctor, and none chose the doctor with the most experience [2]. Among the parents, 60 percent preferred a man, 19 percent preferred a woman, and 21 percent preferred the doctor with the most experience [2]. Of parents who had a preference for one sex, only 28 percent said they would be willing to wait longer to see the doctor of that sex, whereas all of the parents who preferred the most experienced doctor stated they would be willing to wait longer.

This study was simple in its scope, and its limitations were rightly noted, but the strong preference among children for women doctors, which stood in stark contrast to their parents' preference for men, captures the questions from the case scenario: Why do such preferences exist? How should physicians decide whether to accommodate these preferences? How can physicians get all of their patients to be more comfortable with them?

Sex Preferences

Sex preferences have numerous foundations—e.g., culture, religion, past experiences with a man or woman—that can affect a person's comfort level when he or she must be naked in front of a doctor and can lead to judgments about a physician's caring or competence. Knowing that certain groups of patients are more likely to have strong sex preferences can make doctors aware that they may need to spend extra time discussing certain topics with those patients; however, research on the topic of human desires and fears will always have limitations. Every time a doctor walks into a room to meet a patient, he or she must do so with an open mind and avoid making too many assumptions.

When deciding whether to accommodate a patient's request for a male or female doctor, most physicians practice utilitarian ethics. In this philosophical model, an action is not inherently "right" or "wrong"; rather, the moral value of the action is determined by its contribution to achieving the greatest good. Physicians who use this technique may ask themselves, is this patient's preference strongly held, or might a few more minutes of building rapport change the patient's mind? Is another doctor readily available? How urgently does the patient need treatment? Will

acquiescing put a resident at risk of not learning a skill that will be valuable in a future emergency because he or she has always deferred to patients' requests to have a doctor of the opposite sex? All of these factors should be considered before a decision to accommodate the request is made.

Religion and Preferences for Physicians

When a patient makes a request based on religious beliefs, doctors often employ what is called "deontological" or duty-based ethics, feeling a sense of duty or obligation to accommodate the patient's wishes, regardless of the utilitarian balance of greatest good.

Meta-ethicists might then be compelled to ask, "If doctors feel a sense of duty to comply with a patient's religion-related request, then why not also indulge a person's culture-based appeal, or mild preference?" In the given case scenario, we might ask, "Why should a child's wish for a woman physician be less important than her parents' desire?"

Answering these questions can be complex and personal, stirring strong emotions; but just by contemplating these questions each time he or she meets a new patient, a doctor demonstrates an awareness and sensitivity that can help guide a decision-making process with which all parties are comfortable.

The challenge in answering these questions further highlights the value of learning good bedside manner. Good bedside manner can help a patient feel more comfortable with the assessment and treatment, can dissuade some patients from asking for a different doctor, and can inspire some to rescind their request for a doctor of the opposite sex.

Several studies surveyed women about their preferences for obstetrician/gynecologists and found that most valued characteristics like interpersonal style and technical skills over the doctor's sex [3-6]. Still, a significant number of patients have a definite preference.

How can doctors improve their interpersonal and communication skills in situations like the case scenario where a parent is showing resistance? Acquiescing too quickly to a request for a different doctor can be interpreted as an acknowledgment that, indeed, doctors of a particular sex are not as well suited to provide good treatment and care. There are some approaches that can help Dr. Smith and other physicians who confront bias. First, acknowledge and show respect to the parents, the patient, and their concerns. Take the parties to the exam room—away from a common area where they might become defensive because they are in front of others—and acknowledge their frustrations; listen to and validate their concerns; and point out that everyone wants the patient to receive the best care from someone he or she feels comfortable with.

Next, empower the parents and the patient by giving them options whenever possible, for example, before drawing blood ask, "Which arm should I look at first?" This shows that you are not always trying to impose your preferences.

Lastly, if you are relaxed and do not get defensive when discussing difficult subjects like their desire for another doctor, parents and patients feel more relaxed with you.

Gaining people's trust can be difficult and sometimes impossible. When people are sick, they feel vulnerable and unsettled, and their ability to cope regresses. It is the moral imperative of the doctor to see beyond the tough circumstances, listen actively to the patient's concerns, weigh all the competing issues, and then frame the discussion in a manner that the patient can understand. When patients—sensing the doctor's sincere empathy—see that their doctor has taken that extra step to meet them where they are, they often realize they can trust the doctor and feel comfortable moving forward with care.

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CLINICAL CASE

Gender Stereotypes in Pain Diagnosis

Commentary by Andreea L. Seritan, MD, and Scott M. Fishman, MD

Mrs. Robertson was seeing her primary care physician of many years, Dr. Samuels, for back pain.

Mrs. Robertson had always led a busy life and was constantly on the go. She worked full-time as a financial analyst and was active in the Parent Teacher Association at her children's school; her husband was a regional sales manager for a large company.

During her previous visits, Mrs. Robertson described herself as "pretty healthy." Her family history included a father and cousin with high cholesterol and an aunt with arthritis of the hands. She had no hospitalizations other than for childbirth, and her only surgery was for a cesarean section at the birth of her second child.

Mrs. Robertson had seen Dr. Samuels earlier in the month because she had lower back pain that had started after she awkwardly bent down to lift a box. Though Dr. Samuels believed the back pain would resolve on its own, he ordered imaging and lab tests for evaluation at his patient's insistent request.

Mrs. Robertson returned to Dr. Samuels' office to find out the results. At this visit, Dr. Samuels started with his usual greetings and learned that Mrs. Robertson's back pain was unchanged. She indicated that she was eager to hear her test results, which, he revealed, were negative.

"This is great news, as the tests do not show an underlying disease or injury causing your back pain," Dr. Samuels said in an encouraging tone.

Mrs. Robertson sighed with relief. She replied, "That *is* good news. I was worried I might need surgery or something. But I'm still having this back pain and it's really affecting my life. What should I do now? I think I might need something stronger than ibuprofen for the pain."

Dr. Samuels considered Mrs. Robertson's comment for a moment. In his clinical judgment, based on the diagnostic test results and the nature of his patient's injury, Dr. Samuels decided to follow a conservative course for a while longer. Thus he responded, "I believe that continuing to take over-the-counter pain medications and doing the stretching exercises we talked about during your last visit is still the right

treatment plan. I understand that the pain is frustrating, but I think we need to give it more time before taking more aggressive action."

Mrs. Robertson immediately protested, "When my husband Larry strained his back, you gave him Vicodin for the pain, and all of his images and tests were negative."

Dr. Samuels paused in reflection. What Mrs. Robertson said was true; even with negative imaging results, he had prescribed opioid pain medications for her husband's back injury. Dr. Samuels found that his male patients were less likely to exaggerate pain. He also had the experience—and research statistics—that demonstrated that men tended to see the doctor only when absolutely necessary. Was he biased because Mrs. Robertson was a woman? Was it fair and within the standards of medical practice to treat these two people with the same symptoms differently?

Commentary

Sex and gender, age, ethnicity, cultural background, and personal history are some of the variables that can impact communication between a physician and a patient. For the purposes of this article, and in keeping with much of the recent literature, I use gender to refer to a social or cultural category and sex to refer to a biological classification. The patient-physician encounter, with its goal of restoring or maintaining health and well-being, can be a microcosm of the patient's interpersonal relationships. Personality traits, preferences, and values come into play on both sides of the dialogue, and, as much as health professionals take comfort in believing we are fully objective, we are all affected by our own biases or assumptions. It is how we manage these influences that determines how they affect the care we provide.

Appreciating and factoring in our own normal human responses in patient care is a key to avoiding misjudgments, mistakes, and injury to our patients and ourselves. This becomes even more important as escalating economic pressures reduce the amount of time we have to spend with our patients. It is understandable that patients report feeling rushed, not listened to, and misunderstood. If a patient is anxious, she might not be able to communicate her needs and concerns effectively and may be too easily dismissed because the physician does not have the time or economic motivation to explore her complaint in greater depth.

Such was the case with Mrs. Robertson, whose physician appeared to treat her back pain reflexively, with weaker, rather than stronger, analgesics. The exact factors influencing Dr. Samuels' decision are not clear and may have been guided by a complex interplay of biases and reactions. But in light of the stated disparity in care between the (apparently) similar symptoms of Mrs. Robertson and her husband, gender bias seems, at least in part, likely. As alluded to in the case, women are generally recognized as having higher utilization rates of medical care services [1]. In our scenario, we see that Mrs. Robertson is clearly familiar with Dr. Samuels and their greetings quickly progressed to a brief discussion of the unchanged pain, relief at the negative imaging findings, and a hasty recommendation of over-the-counter

analgesics, despite Mrs. Robertson's disclosing that her pain was impairing her function.

The available background information on Mrs. Robertson suggests that she is neither capricious nor untrustworthy. She is a full-time working mother who is active in her community through the Parent Teacher Association at her children's school. There is no indication that she plans to "slow down." On the contrary, she is bothered by the impact her back pain is having on her life. She describes herself as "pretty healthy," and there is no evidence of multiple hospitalizations or repeat office visits with Dr. Samuels. The case tells us that Mr. Robertson is a regional sales manager, a job that may involve travel and may make him less available at home. If hers is a traditional family, where childcare falls mostly to the mother, Mrs. Robertson is probably under a fair amount of stress, despite appearing to manage the pressures of her complex "on the go" role.

As a result of Dr. Samuels' response, the patient may feel like her complaint is not heard or is minimized, and she might be inclined to be more proactive than she would otherwise, pushing for diagnostic studies or additional medications. Under these circumstances, a patient might amplify symptoms or demand more complex testing to justify concerns that are being ignored. This, in turn, might lead the clinician to assume that the patient is histrionic, perhaps suffering from emotional rather than physical symptoms, and ultimately that the patient's report of her symptoms is unreliable. Such traits are often mistakenly attributed to all females and are an important part of the gender bias that may have influenced this case.

Gender differences can have significant influence on patient presentations and physician response. While women tend to report greater amounts of pain than males, physicians are more likely to recognize severe pain in women than in men [2]. A recent general population study investigated the course of medically unexplained pain symptoms over a 12-year interval [3]. Women had twice the likelihood of having persistent pain symptoms as men. The only other significant predictor of medically unexplained pain symptoms was depression, which raised the likelihood of pain complaints threefold [3].

In the absence of adequate physical findings on repeated examinations, a competent physician will consider somatoform disorders as part of the differential diagnosis. Somatoform pain disorder—diagnosed as pain disorder in the *Diagnostic and Statistical Manual of Mental Disorders* [4]—has a lifetime prevalence of 12 percent and a 6-month prevalence of 5 percent in the general population and occurs twice as frequently in women as in men [5]. The key in diagnosing somatoform disorders is the absence of explanatory findings on physical examination or ancillary tests. When psychological factors are believed to have an important role in the onset, severity, exacerbation, or maintenance of pain, a diagnosis of pain disorder becomes more likely [4]. Taking sex into consideration, Mrs. Robertson has a greater chance of developing a somatoform disorder than her husband, although there is no indication

of recent negative events in her life. Onset of somatoform disorders is usually closely correlated with a severe stressor.

When a thorough medical workup has proven unremarkable and the presence of psychosocial stressors is thought to be a key to understanding unexplained physical symptoms, the physician should initiate open-ended conversation with the patient about any such possible events; he or she should not represcribe an over-the-counter analgesic and be done with it. The concern in our case is that Dr. Samuels, aware of these prevailing patterns, may not be giving Mrs. Robertson's pain experience the attention it deserves. Had he taken several additional minutes to listen, he might have been able to assess and address recent stressors in his patient's life.

Recognizing the differences between men and women in reports of pain and in psychiatric disorders can, in isolation, lead the otherwise genuinely concerned and well-intentioned clinician toward a gender bias and a self-serving position of relinquishing responsibility for diagnosing and treating symptoms effectively.

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CLINICAL CASE

Sex Discrimination in Selection for Residency

Commentary by James Nuovo, MD

It was midway through the school year, and the third-year medical students had been excused from their clerkship duties and classes to attend a residency fair at the medical school. Representatives from each of the teaching hospital's major medical departments were present to answer questions. Many of the spokespeople were faculty members who were excited to see medical students interested in their respective fields.

Amanda, who was interested in cardiothoracic or orthopedic surgery, stopped in front of the surgery table and introduced herself to the program director.

"Hi, Dr. Harrison. My name is Amanda Carter. My sister, Karen, did research with you when she was a medical student."

Dr. Harrison remembered her sister well and asked how Karen was faring in her first year of surgery residency. After a couple of minutes updating him about Karen and expressing her own interest in surgery, Amanda went on to another table.

After the conversation, Dr. Harrison turned to a colleague and confided, "I remember during the selection process, I was debating between Amanda's sister, Karen, and a male applicant. They were equally qualified, but I ranked Karen lower. Based on my experience and the numbers, women just don't stay in practice as long."

Seeing his colleague frown over that statement, Dr. Harrison was quick to add, "Hey, it's not prejudice, it's a fact."

Commentary

The opinions expressed by Dr. Harrison in this case are offensive. They show a bias against a candidate for a residency position because of her sex, implying that it should play a role in how candidates are assessed. As with every other job, one of the guiding principles for hiring should be nondiscrimination. Specifically, all institutions should support equal opportunity and not judge candidates on the basis of race, color, national origin, religion, sex, gender identity, pregnancy, physical or mental disability, medical condition, ancestry, marital status, age, or sexual orientation.

Dr. Harrison received some immediate feedback from his colleague in the form of a frown. He attempted to justify his indefensible position by suggesting that his opinion was not prejudice but based "on the facts." It seems unlikely that this is really an argument about facts. It is more likely that Dr. Harrison is angry about something, although what that might be is not made clear in the vignette.

This being said, what *are* the facts concerning women in medicine? Over the last 30 years there has been a substantial change in the demographics of medical students, residents, physicians in practice, and physicians on faculty. The Association of American Medical Colleges (AAMC) web site has links to resources that document this shift [1]. In 2006-2007 women represented 49 percent of applicants to medical school, 49 percent of medical students, and 44 percent of residents [2]. In the academic world, 17 percent of full professors, 21 percent of division chiefs, 11 percent of department chairs, 33 percent of associate deans, and 12 percent of medical school deans were women [2].

AAMC also provides an extensive listing of the distribution of residents by specialty and information on the trends over the previous 10 years. Overall, women increased from 34 percent of all residents in 1996 to 44 percent in 2006 [3]. There clearly are sex differences in the distribution of residents across specialties, but changes in that distribution have been occurring over the last decade. For example, anesthesiology in 1996 was a field that was 26 percent female and is now 33 percent. Women make up 30 percent of the surgery population, up 11 percent from 1996; and women currently represent 76 percent of ob/gyn physicians—a 15 percent increase from 1996 [3].

Researchers have been assessing the factors that play into choice of specialty for some time and, in particular, the influence of lifestyle on specialty selection. Dorsey and associates examined changes in medical students' specialty choices, by gender, from 1996 to 2003 [4]. They found that the preference by men and women for what the investigators termed "controllable lifestyles" accounted for a large part of the pattern of specialty selection that had occurred over the 7-year study period. They found striking similarities in specialty choice trends between women and men. A 2007 study by McCord and colleagues looked specifically at factors that led surgery residents to seek training in particular subspecialties. Seventy-four respondents completed the survey—16 women and 58 men. All respondents indicated that the intellectual appeal and clinical opportunities in the field were important considerations in their future careers, as was having had an influential mentor during residency [5]. In the McCord study, significantly more women than men (69 percent versus 43 percent) listed lifestyle as an important factor in future career decision.

A question more closely related to our case is whether sex discrimination affects career selection. In 1997, Stratton and associates surveyed fourth-year medical students from 14 different schools [6]. Based on more than 300 responses, the investigators found that women were more likely to indicate that sex discrimination and sexual harassment influenced their specialty choice. What sorts of discrimination do women medical students and physicians experience? Shrier et al. looked at the

experiences of a unique population—136 pairs of physician-mothers and their physician-daughters [7]. The daughters reported higher rates of harassment during medical school and by patients; the mothers experienced harassment by their colleagues [8]. Sex discrimination was lower for daughters than for their mothers, but still substantial.

Witte and colleagues asked graduating medical students from 12 schools to write personal accounts [9] of their experiences with sex discrimination and sexual harassment. One-hundred and sixty-six students (106 women and 60 men) responded with narratives of events that they perceived as either discriminatory or harassing. Men were more likely to report educational inequalities, that is, perceived differences in the training environment for men and women. Women were more likely to report incidents of sexual overtures, inappropriate touching, and sexist remarks [10].

What should be done to eliminate, or at least reduce, the influence of sex discrimination on the residency selection process? Cheever and associates suggest methods to improve medical students' comfort with and skill in handling sex- and gender-related inquiries during residency interviews [11]. They developed an educational intervention focusing on sex-, gender-, and family-related questions that may arise during the selection process. The goal was to help students recognize inappropriate questions and situations and handle them effectively. Cheever et al. suggested that, first, candidates recognize that it is inappropriate for an interviewer to ask about race, religion, creed, national origin, birth place, citizenship, gender, marital status, sexual orientation, children, age, and birth date. One way to practice responding to an inappropriate question is to do a mock interview with a faculty advisor.

The authors also recommend that applicants look at the track record for women at the institution of interest. Are there women in leadership positions? Are they well-represented on the faculty? You can get a sense from the residents during your interview day as to whether the program is supportive of all its residents.

Finally, I would add that it is a good idea to look for opportunities to discuss professional development for women at your school and at the national level. There might be a student interest group at the school. Nationally, the AAMC has Professional Development Seminars, and The American Medical Women's Association's (AMWA) activities include "providing and developing leadership, education, expertise, mentoring, and strategic alliances" [12].

In summary, there have been substantial changes in the past 30 years for women in medicine. Despite this progress, the profession is not immune to the effects of sex and gender discrimination. There are federal and state employment laws that apply to the residency selection process. How we respond to the sex bias that we see and experience is important. If the total measure of response is, as in this scenario, a frown, we all fall short in finding effective ways to address this problem.

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Related in VM

Closing the Gender Gap in Medical Journal Publishing, July 2008

The Influence of Controllable Lifestyle on Medical Student Specialty Choice, August 2006

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JOURNAL DISCUSSION

Closing the Gender Gap in Medical Journal Publishing

Allison Grady

Jagsi R, Guancial EA, Worobey CC, et al. The 'gender gap' in authorship of academic medical literature—a 35-year perspective. *N Engl J Med*. 2006;355(3):281-287.

Medicine, like other professions, has traditionally been dominated by men. Although women now make up 49 percent of incoming medical students [1], it is still unusual to find them in the highest positions of academic leadership. In a 2006 article entitled "The 'Gender Gap' in Authorship of Academic Medical Literature—A 35-Year Perspective," published in the *New England Journal of Medicine*, Reshma Jagsi and colleagues reported on their collected information about the sex of the first and last authors published in six peer-reviewed professional journals. This data served as the benchmark to measure success for women in academic medicine [2].

Jagsi et al. began by identifying the first and last authors of all original articles published at 10-year intervals from 1970-2000 and 2004 in *New England Journal of Medicine*, *Journal of the American Medical Association, Annals of Internal Medicine, the Annals of Surgery, Obstetrics & Gynecology,* and *Journal of Pediatrics* [3]. They determined the sex of the contributor by inspection and, when necessary, by locating biographical information on the Internet [3]. The investigators also made note of the graduate degrees and institutional affiliations of each author [3]. Ultimately only MD-trained, American-based authors who wrote original articles or published on original research in one of the six journals, or served as a guest editorialist for the *New England Journal of Medicine* or *Journal of the American Medical Association* were included.

The researchers found that, of the 7,249 articles published, 15.9 percent of the first authors and 10.3 percent of the senior authors were women [4]. When the data were broken down by year, Jagsi et al. found that the percentage of female principal investigators rose annually over the 34-year span from 5.9 percent to 29.3 percent [4]. The percentage of women who served as senior authors rose over the same time span from 3.7 to 19.3 percent [4]. When the data were arranged by specialty, the proportions of first and senior female authors increased most dramatically in obstetrics and gynecology and pediatrics [4]. The specialty that showed the least growth in female publication was surgery.

Understanding the Gender Gap

The authors offer several possible explanations for the "gender gap" in medical publication. One reason they postulate is the scarcity of women in the highest leadership positions in medical schools. It is fair to infer, then, that the number of women who are qualified to publish at this level is low and that those who are able to, do. But it is also possible that the women who have reached this level are busy with other demands of the job and might focus their energies on non-research aspects of their teaching and personal lives.

The authors point out that women are not represented equally across the medical fields they studied. According to the Association of American Medical Colleges, women held 14 percent of full professorships in internal medicine, 24 percent of pediatric full professorships,18 percent of ob/gyn, and a mere 7 percent of the surgery full professorships [5]. For all ranks of professorships, women comprise 30 percent of internal medicine, 45 percent of ob/gyn, 45 percent of pediatrics, and 14 percent of surgery [5]. These percentages bear out the authors' observations that the specialties in which female physicians are better represented overall are those that have higher rates of women writers. These statistics also hint that female physicians "hit a ceiling"; they are competitive in lower level positions but do not advance to the more prestigious positions.

Next Steps

It would be interesting if a future study compared first and senior authors in dermatological, social science, and family practice journals, given that at least 38 percent of all physician-faculty in these categories are women [5]. Jagsi et al. note that the publishing gains for women may be reaching a plateau based on numbers between 2000 and 2004. I would caution that we not place too much emphasis on this trend. In 2006, of more than 2,200 promotions to associate professor, 33 percent were women and, of the over 1,400 new full professors, 25 percent were women [1]. These gains signal that women are still making significant strides in the profession and that in coming years we can expect to see more women authors and experts.

Overall, Jagsi and colleagues' study is an interesting, albeit limited, one. Given the simple study design, it would be valuable to see this study repeated roughly every 10 years to monitor progress and bring awareness to journal editors and medical school leaders of what ought to be the growing influence of female physicians.

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CLINICAL PEARL

Managing Somatization Disorder

Robert McCarron, DO

Patients and primary care physicians (PCPs) both become frustrated when troublesome physical complaints cannot be explained after repeated assessments and persist after multiple treatment attempts. PCPs encounter these perplexing somatic complaints in up to 40 percent of their patients [1,2]. Medical explanations for common physical complaints like malaise, fatigue, abdominal discomfort, and dizziness are found 15-20 percent of the time [3]. The remaining somatic complaints—up to 20 percent in primary care settings—are called unexplained physical symptoms (UPS). It is difficult to determine the prevalence of unexplained physical complaints reliably, due to wide-ranging definitions [4]. Although somatization may ultimately have general medical and psychiatric etiologies, the goal of this article is to help psychiatrists provide practical information and advice to PCPs who treat patients with unexplained physical symptoms that are due to psychiatric pathology.

Diagnosis

The *Diagnostic and Statistical Manual of Mental Disorders* includes seven diagnoses under the category of somatoform disorders: somatization disorder, undifferentiated somatoform disorder, conversion disorder, pain disorder, hypochondriasis, body dysmorphic disorder, and somatoform disorder not otherwise specified. In order to meet the criteria for any of the somatoform disorders, one must have significant social or occupational dysfunction that is directly related to psychopathology and not due to an occult general medical condition or substance abuse [5]. Patients with somatoform disorders somatize unconsciously as a dysfunctional and maladaptive coping mechanism; they do not produce their symptoms intentionally as do those with malingering or factitious disorder.

Table 1. Somatoform disorders—diagnostic criteria [5]

Disorder	Diagnostic Criteria
Somatization Disorder	Many unexplained physical complaints before age 30 Four pain, two gastrointestinal, one sexual and one pseudo-neurological symptom(s)

Undifferentiated Somatoform Disorder	One or more unexplained physical complaints Duration of at least 6 months
Conversion Disorder	One or more unexplainable, voluntary motor or sensory neurological deficits Onset directly preceded by a psychological stress
Pain Disorder	Pain in one or more sites that is largely due to psychological factors
Hypochondriasis	Preoccupation with a nonexistent disease despite a thorough medical workup Does not meet criteria for a delusion
Body Dysmorphic Disorder	Preoccupation with an imagined defect in physical appearance
Somatoform Disorder Not otherwise specified (NOS)	Somatoform symptoms that do not meet criteria for any specific somatoform disorder

All above disorders must: (1) cause significant social/occupational dysfunction (2) not be due to other general medical or psychiatric conditions and (3) not be produced intentionally or related to secondary gain [5].

The CARE MD Approach

Somatoform disorders occur on a wide-ranging diagnostic continuum, have elusive etiologies and can be difficult to treat or manage. The CARE MD treatment approach encourages patients to be active participants in their care and serves as a guide to help PCPs work effectively with people who have somatoform disorders [6].

Table 2. CARE MD—treatment guidelines for somatoform disorders [6]

<u>C</u>ognitive Behavioral Therapy/Consultation	Follow the cognitive behavioral therapy treatment plan developed by the therapist and patient
<u>A</u>ssess	Rule out potential general medical causes for the somatic complaints Treat co-morbid psychiatric disorders

*R*egular visits	Short frequent visits with focused exams Discuss recent stressors and healthy coping strategies Patient should agree to stop overutilization of medical care (e.g. frequent emergency room visits or excessive calls and pages to the primary care provider, etc.)
*E*mpathy	"Become the patient" for a brief time During visits, spend more time listening to the patient rather jumping to a diagnostic test Acknowledge patient's reported discomfort
*M*ed-psych interface	Help the patient self-discover the connection between physical complaints and emotional stressors ("the mind-body" connection) Avoid comments like, "your symptoms are all psychological" or "there is nothing wrong with you medically"
*D*o no harm	Avoid unnecessary diagnostic procedures Minimize consults to medical specialties Once a reasonable diagnostic workup is negative, feel comfortable with a somatoform-type diagnosis and initiate treatment

Cognitive behavioral therapy/Consultation. Consultation with mental health professionals and the use of cognitive behavioral therapy have been shown to decrease the severity and frequency of somatic preoccupations [7, 8]. Psychiatric consultants should encourage patients to learn and actively engage in this type of therapy style [9]. Patients should also be instructed to use a daily dysfunctional thought record (DTR) to monitor their depressive or anxious emotions and associated negative thoughts. In collaboration with the therapist, PCPs can learn to use basic cognitive behavioral techniques and quickly review the DTR during office visits (much like they would review daily blood glucose records).

Assess medical and psychiatric comorbidities. On each visit PCPs should assess patients thoroughly for medical problems that might explain troublesome physical complaints. This is particularly important for those who have histories of psychiatric illness and present with a new complaint or a worsening of existing symptoms. Up to 25-50 percent of patients with conversion disorder (one of the seven types of

somatization disorder) are diagnosed eventually with a nonpsychiatric disease that explains the symptoms [10]. Physicians should also screen for other common psychiatric diagnoses. Twenty-five to 50 percent of patients with somatoform disorders have comorbid anxiety or depressive disorders [11, 12]. PCPs can assess and better address frequently co-occurring depression and suicidal ideation by using the Physician Health Questionnaire (PHQ-9), a patient self-report tool that reliably screens for depression in the primary care setting. All patients with a score greater than five should be assessed for a possible major depressive disorder.

Regular visits. Psychiatrists who are working with patients diagnosed with somatoform disorder should stress the importance of regular visits with one primary care physician. Short, frequent appointments or telephone calls have been shown to decrease outpatient medical costs while maintaining patient satisfaction [13]. These clinical encounters should include a brief but focused history and physical exam followed by open-ended questions like, "How are things at home?" or "What is your biggest problem?" If the patient is undergoing cognitive behavioral therapy, say "Tell me about your most frequent negative or inaccurate thoughts since your last visit." Over time, patients can use these scheduled, supportive, caring interactions in place of excessive phone calls and visits to the emergency room or clinic.

Empathy. Empathy or briefly "becoming the patient" is a key component to developing a strong therapeutic relationship with the patient. The use of empathy can also minimize physicians' negative feelings or countertransference. Truly empathic remarks such as "Having so much pain and discomfort must be difficult for you," or "The discomfort you have would probably be a challenge for anyone" are often helpful. Although there are clear benefits associated with the use of empathy, it can also be emotionally taxing to the physician [14].

Medical-psychiatric interface. General medicine and psychiatry frequently overlap in the treatment of patients with somatoform disorders. Patients with this diagnosis should be educated about the direct effects that emotions and stressors have on their pain or discomfort. Understandably, many patients do not accept purely psychiatric explanations for their symptoms. Physician statements such as "Your physical problems are really caused by psychological or emotional problems," or "There is nothing medically wrong with you," or "A psychiatrist will have to treat this problem" tend to be poorly received by patients. Instead, primary care practitioners should provide a diagnosis and remain the primary medical caregiver.

During the short, regularly scheduled office visits, patients should be asked if their symptoms worsen as the identified stressor intensifies or if the symptoms improve as the primary stressor lessens. Patients who answer in the affirmative to both questions should be allowed time and opportunity to make the connection. Physicians can promote this by asking an open-ended question like, "Any idea why this might be?" Essentially, it is best to help the patient discover the connection between the unresolved stressor and the symptoms for himself.

Do no harm. Doing no harm when treating patients with chronic somatization disorder means, first and foremost, avoiding unnecessary procedures or consultations. Psychiatric consultants should encourage treating physicians not to deviate from normal practice style simply to appease a patient or to minimize the patient's or the physician's frustration. While unnecessary invasive procedures should be avoided, routine health care maintenance tests and workup should be offered and their importance emphasized.

Bottom Line

While psychiatrists are not normally on the "front lines" when dealing with patients with somatization disorders, they frequently are called upon to advise primary caregivers. Unexplained physical symptoms due to a somatoform disorder usually cause great frustration and anxiety to both the treating physician and the patient. As consultants, psychiatrists can help treating physicians recognize and properly use their countertransference and encourage the use of the CARE MD management plan.

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HEALTH LAW

Bias against Pregnant Medical Residents

Kristin Pulatie, JD

As the number of female medical students in the health care community increases, so does the number of pregnant women in residency training. The growing number of residents who are pregnant creates concerns for all female students, who do not want to be seen as less capable or committed when they apply for post-graduate training, and for hospital programs that search for innovative ways to ensure the healthy and sustainable growth of the number of women in medicine. Do female medical students encounter discriminatory selection for residency positions? Do female residents and practicing physicians encounter barriers to obtaining promotion to leadership roles or higher rates of dismissal due to their pregnancies or potential for pregnancy? If so, how can hospitals ameliorate these conditions and establish more favorable and equitable employment environments?

The Pregnancy Discrimination Act was passed in 1978 as an amendment to the Civil Rights Act of 1964. Under Title VII of the legislation,

> discrimination on the basis of pregnancy, childbirth or related medical conditions constitutes unlawful sex discrimination. Women affected by pregnancy or related conditions must be treated in the same manner as other applicants or employees with similar abilities or limitations [1].

Specifically,

> an employer cannot refuse to hire a woman because of her pregnancy related condition as long as she is able to perform the major functions of her job. An employer cannot refuse to hire her because of its prejudices against pregnant workers or the prejudices of co-workers, clients or customers [1].

Even with these regulations in place, however, many women still report blatant pregnancy-related discrimination in the workplace. In fact, pregnancy-related charges reported to the Equal Employment Opportunity Commission (EEOC) have risen 45 percent since 1992 to a total number of 4,901 complaints in 2006 [2]. Many companies claim that they do not make sex-based personnel decisions, but will consider actual pregnancy as a factor for hiring, promotion, or leave—a practice that is unlawful and discriminatory.

The EEOC has also promulgated regulations that apply to caregivers, recognizing that motherhood does not end with pregnancy and that fathers often need medical

leave for family obligations, too [3]. These regulations cover promotion procedures that prohibit employers from bypassing qualified individuals due to their status as parents or caregivers. The law states that "employers can also violate Title VII by making assumptions about pregnancy, such as assumptions about the commitment of pregnant workers or their ability to perform certain physical tasks" [3]. Thus hospitals violate the law if they refuse to promote a woman on the belief that she needs to spend more time at home, or that she would not be interested in taking on more responsibility.

Such generalizations constitute discrimination under the Family and Medical Leave Act. The act and subsequent regulations prohibit termination based on pregnancy or parenthood status. Legislators and courts have recognized that women generally perform most child-rearing and caregiving duties and that to discriminate against people who perform these duties is to discriminate against women. For the smaller group of men who take leave to care for their children or families, these regulations also protect their employment while they assume a role not always supported by society.

Residency training for many women coincides with primary childbearing years. According to the American Medical Women's Association (AMWA), 50 percent of female physicians have their first baby during residency training [4]. The sheer number who become pregnant and give birth during this time is reason enough for hospitals to create policies and employment guidelines regarding pregnancy during residency. Further, many male residents need family leave consideration because their spouses are pregnant. The immediate problem seems greater for women, inasmuch as their condition may be readily visible during interviews and training. The Supreme Court noted, "women as capable of doing their jobs as their male counterparts may not be forced to choose between having a child and having a job" [5]. Selection and promotion committees may not consider pregnancy during their evaluations, regardless of whether the employer is acting out of hostility or out of intent to serve the employee's best interest.

Making Accommodations

What does it mean for a hospital to provide "reasonable accommodation" for a pregnant resident? According to EEOC regulations, if an employee is temporarily unable to perform her job due to pregnancy, the employer must treat her in the same manner it treats any other temporarily disabled employee; for example, by providing modified tasks, alternative assignments, disability leave, or leave without pay [6]. For residents, this may mean eliminating tasks that require heavy lifting and exposure to radiation or hazardous chemicals and adjusting work hours to allow for rest and proper nutrition. To the degree possible, residency programs should try to implement these solutions without unduly burdening others. Programs should also make an effort to allow the pregnant woman to complete her residency in a timely fashion, without having to take a year off or repeat training.

A reasonable solution, regardless of how it is reached, must not discriminate against female residents and physicians based on pregnancy or the potential to become pregnant. In Chicago, the district office of the EEOC is currently litigating *EEOC v. Midwest Emergency Associates*, charging Midwest with sex discrimination against a female physician who was demoted from her position as assistant director of a hospital emergency room and denied owner/partner status in her practice after she took pregnancy leave [2]. Few pregnancy discrimination cases are so blatant; employers can simply claim that they refused to hire or promote a woman for some other, unrelated reason, and that can be difficult to disprove.

Many legal theories are cited in discrimination cases, making it difficult for the average employer to know which laws to follow or how to create a workable policy regarding employees with families. Family law experts have suggested making lists of the ways that "unacceptable behaviors" are manifested towards pregnant women and parents in the workforce. Beyond simply delineating which behaviors to avoid, hospitals would serve their interests well by taking the lead in implementing proactive policies that encourage early disclosure of pregnancy or related medical conditions, and assist women with long-term planning so that they can complete their training in a timely fashion and receive support during pregnancy. Establishing such programs fosters a more sensitive and productive workplace.

A hospital that successfully develops and offers clear and accommodating programs for employees who are pregnant and for caregivers will be a more attractive option for many prospective residency candidates. Such hospitals increase their ability to recruit and retain the most qualified candidates in this competitive environment marked by extreme talent shortages. Taking the lead in providing workplace accommodation also promotes the reputations of these hospitals as progressive institutions. Another significant and favorable byproduct of such policies is a reduction in the risk of expensive and ultimately negative litigation brought by resident claimants. Embracing forward-thinking policies about pregnant residents and caregivers is beneficial to hospitals, their employees, and to public health.

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POLICY FORUM

Social Determinants of HIV Risk in Women

Claire Pomeroy, MD, MBA

Twenty years ago, it was said that the AIDS epidemic "moves along the fault lines of our society and becomes a metaphor for understanding that society" [1]. The feminization of this disease is a compelling example of how the AIDS epidemic has grown along the "fault line" created by the unequal status of women. As pointed out by the World Health Organization's Commission on Social Determinants of Health, "the catastrophic AIDS epidemic in southern Africa is a clear demonstration of the lack of power of women to enjoy fundamental social freedoms" [2]. What was once known in the U.S. as a gay man's disease, AIDS now claims the lives of an increasing number of women, both in the United States and around the globe.

In the U.S., the percentage of HIV patients who are women has risen from 8 in 1985 to 27 in 2005 [3]. Hispanic and African American women are at disproportionately high risk [4], as are women with low incomes [5]. On a global scale, the statistics are even more striking, with women now representing more than half of the 33 million HIV/AIDS patients in developing countries [6]. In sub-Saharan Africa, women comprise 60 percent of adults living with HIV, and 3 of 4 people aged 15-24 years who live in that region and have HIV are women [7].

With heterosexual transmission the chief cause of continued spread of global HIV, those without the power to select sexual partners, choose the timing of sexual encounters, or insist on safer sex practices (such as the use of condoms) are unable to protect themselves from infection. Given the gender-based inequities that characterize society [8], it was tragically predictable that women would face higher risk.

Social determinants of HIV risk for women include:

- Societal values, such as restriction of sex education in the U.S. and the belief that education is not necessary or appropriate for girls and women in other countries.
- Cultural norms, which dictate lower status roles for women and result in subordination to their partners and lack of control over life decisions.
- Poverty, which has propelled the global epidemic in developing countries—Africa, Asia, and parts of South America—and in the U.S. among people of color and those residing in parts of the rural South.

These social determinants, often interrelated and overlapping, can be mitigated through educational, cultural, and medical interventions to decrease the risk of HIV acquisition among women and provide appropriate care for those who are living with it.

Empowerment through Education

Both general and sexual health education are central to the economic, social, and personal empowerment of women, and can play important roles in reducing transmission of HIV.

In the U.S., only 35 states require education about sexually transmitted diseases and HIV, and many of these programs impose limits on course content [9]. Public health advocacy groups have called for national, comprehensive approaches to sexual health education [10], which have been shown to correlate with reduced HIV infection in adolescents of both sexes [11, 12]. As part of this approach, abstinence-only programs are being increasingly scrutinized, with calls by many experts to abandon these approaches due to their ineffectiveness in curbing both sexual activity and transmission of STDs [13]. Expansion of access to sex education that emphasizes prevention of risky behaviors will be critical to protecting the youth of our country from HIV.

Globally, the problem is broader, with girls and young women in many cultures having no—or very restricted—access to primary or secondary education. In sub-Saharan Africa, for example, only 17 percent of girls are enrolled in secondary school [7]. Overall, only 59 countries have achieved parity between boys and girls in primary and secondary education [14].

Without general education, young women lack the skills to gain employment and compete economically, which leaves them dependent upon their fathers, and, later, their husbands. Economic dependency, in turn, creates social dependency, and, when husbands die or choose not to support them, these women are left with few options and often find themselves in poverty. To survive, many women have no choice but to become sex workers or to trade sex for necessities such as food and housing for themselves or their children. It is not surprising, then, that HIV/AIDS infection rates are estimated to be about twice as high among young people who do not finish primary school than among those who do [7].

Without sex education, which is even less available in developing countries, girls lack basic information about sexual health and HIV transmission. A recent multinational study of adolescents in Africa reported that at least half had not had any sex education and that existing education efforts were often too late, not comprehensive, and sometimes inaccurate. As a result, less than 40 percent of 15- to 19-year-olds could correctly identify preventive methods and myths about HIV [15].

Global health policy leaders and advocacy organizations propose eliminating school fees in developing countries and accelerating mobilization of global aid for

childhood education worldwide as fundamental first steps in empowering women to reduce their risk of HIV [16]. International aid and local commitments to sex education in communities around the world are critically important.

Redefinition of Traditional Gender Roles and Social and Economic Empowerment

Traditional gender paradigms lead to inequities in economic, social, and personal power. As a result of these male-dominated power imbalances, women are at higher risk of HIV. For example, a recent study of African American females in the U.S. showed that power imbalances with a male partner and fear of negotiating about condom use were significant in determining whether young women engaged in unprotected vaginal sex [17].

Globally, gender-based role definition often leads to an acceptance that men are "driven" or thought to "naturally need" multiple sexual partners—a practice that is condoned and even celebrated in some cultures. In some developing nations, the AIDS epidemic among women has been fueled by promiscuous behavior of married men who return home and infect their wives. In some countries, such as Nigeria, being married is a risk factor for HIV acquisition in women [18].

Traditional gender roles dictate values such as virginity and motherhood that paradoxically contribute to the epidemic in many cultures. The emphasis on virginity, for instance, discourages access to sexual health information while reinforcing the role of the woman as the passive partner [19]. This status precludes her denying or setting conditions for sex, even if she suspects that her partner has been engaged in high-risk activities. In some cultures, men presume that younger women are less likely to be HIV-seropositive. This results in acquisition of HIV at younger ages in girls and young women than in men [20]. Similarly, emphasis on the importance of motherhood in some cultures dissuades women from engaging in safer sex negotiations that involve birth control (i.e., condoms) [19]. Finally, entrenched gender roles are associated with high levels of violence and sexual abuse toward women, which is correlated with HIV risk [21]. Women may be discouraged from independently accessing health information, services, and safer sex tools by their own acceptance of these values or due to fear of reprisal or abandonment by their partners.

Innovative approaches are urgently needed for the difficult task of redefining these traditional roles. Approaches must be culturally appropriate and sensitive, with careful attention to local history and expectations. Nevertheless, cultural relativity should not be used as an excuse to condone behaviors that place women at risk for dying of AIDS. Providing girls and women with the education and support they need to acquire economic power and social skills will enable them to take a more active role in defining sexual relationships and gender roles. At the same time, boys and men should be enrolled in efforts to break with traditional masculine norms and promote sexual health. While this approach has been underexplored, some male-centered programs show promise, such as those involving organized group activities,

role modeling, and more [19]. Men (and women) should be encouraged to replace risk-taking with responsibility.

Overall, more research is needed into culturally sensitive ways to empower women and to shift traditional views of masculinity. Only then will we be able to accomplish a deep social transformation of relationships between women and men, so that women will be able to take greater control of their lives—physically, economically, and socially.

Women-Controlled Prevention Tools

Advancements in sex-specific HIV prevention tools provide a way for women to protect themselves from HIV. The female condom, approved by the FDA in 2003, substantially reduces the risk of HIV transmission. Notably, research has shown that the resulting feeling of empowerment for women who use these condoms has helped them initiate more effective dialogue with their partners regarding risk and protection [22]. A recent study in Zimbabwe showed that female condoms could be a viable option if paired with outreach and education [23]. Unfortunately, use of the female condom is limited, partly because it is more expensive, less widely available, and more difficult to use than the male condom. Similarly, a recent study shows that the diaphragm is not a desirable option unless it evolves both in product design and disease prevention capability [24].

Vaginal microbicide gels were a highly anticipated woman-controlled prevention tool, but their use has been fraught with disappointment. Currently available gels have not been shown to be consistently effective in clinical trials, and some have even increased risk of HIV transmission [25]. Recently published research also shows that men's cooperation must continue to be investigated as a strategy in future microbicide trials [26]. Efforts and policies aimed at supporting further research of and better access to prevention tools that neutralize gender-based power imbalances should be a top priority.

Women-Centered and Culturally Competent HIV/AIDS Care

Besides reducing the numbers of women who are contracting HIV, we have a pressing ethical mandate to redirect the emphasis of HIV/AIDS clinics, treatments, and programs so that they accommodate the needs of women. In the U.S., disparities between the sexes in quality of care at HIV clinics continue to exist [27]. Antiretroviral therapy was diffused more slowly to women in the late 1990s, and women with HIV continue to be less likely to have access to care and to receive antiretroviral therapies [28, 29]. We have a duty to create and design clinical environments where all women with HIV feel comfortable and welcome—both in the U.S. and abroad.

In particular, U.S. physicians must reach out to minority women who are already affected by gaping disparities in health care. Poor African American women in the South are particularly at risk [30]. We must also make a special effort to care for immigrant women, including Latinas, who are at a greater risk for HIV infection and

who, upon infection, exhibit higher levels of stress, depression, and substance abuse [31].

Our Responsibilities as Medical Professionals in Addressing this Crisis
First and foremost, we must educate ourselves. Our professional duty to improve the health of our patients requires that we understand the complex social determinants that currently fuel HIV/AIDS risks among women.

Second, we must move beyond a traditional "medical" approach to embrace a broader "social" model for HIV prevention and care [2, 32]. As stewards for local and global health, we have an ethical responsibility to lead a call for attacking the social determinants that place women at greater risk for HIV. Physicians should work to improve educational opportunities for girls, expand sex education programs, and advocate for and support programs that reduce economic and social gender-based inequities around the world.

Third, we must ensure that HIV/AIDS care in our clinics is sensitive to the differences—physical, psychological, and social, between men and women. Not only must we provide more options for and access to women-controlled protection against HIV transmission, but women with HIV/AIDS should be able to find friendly and culturally sensitive health care environments in our offices, clinics, and hospitals.

Finally, physicians should both call for and participate in research to better define the social determinants of HIV risk among women and to delineate innovative interventions that can address the social inequities which sustain the AIDS epidemic.

In sum, physicians should understand that social inequalities have led to a sex- and gender-based "fault line" in power and social status, resulting in disparities in HIV/AIDS infection and treatment among women. As HIV/AIDS continues to affect increasing numbers of women, gender-specific strategies aimed at redefining social norms have the potential to empower women, leading to better health for them and their families. As world-renowned AIDS advocate Dr. Jonathan Mann once said, we must place ourselves "squarely on the side of those who intervene in the present, [so that] the future can be different" [33].

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MEDICINE AND SOCIETY

Women in Medicine: Recognition and Responsibility

Roberta Springer Loewy, PhD

In the mid-1960s, only 6 percent of the students enrolled in U.S. medical schools were women [1]. By the mid-1970s, the number of women graduating from U.S. medical schools had risen to only 16 percent [2]. By the 2004-2005 academic year, women represented 50 percent of applicants, 49 percent of matriculating medical students, 47 percent of graduates of U.S. medical schools, and 42 percent of residents and fellows [3]. While obvious disparities remain for women in medicine—especially as one looks higher up the institutional ladder—the gains, so far, have been solid and enduring.

Prior to 1968, approximately 2.5 percent of American physicians were African American (and virtually all were trained at Howard or Meharry) and less than 0.2 percent of medical students were Mexican American, Puerto Rican, or American Indian/Native Alaskan—this at a time when minorities represented, depending on which resource one cites [4, 5], between 12 and 12.8 percent of the general population. Underrepresented minorities finally reached 12.1 percent of the 1999-2000 first-year medical school class, but, by then, according to U.S. Census Bureau 2000 estimates, African Americans, American Indians and Alaska Natives, and Hispanics represented 25 percent of the U.S. population [6]. Even more troubling, however, is the fact that, as of 2005, racial and ethnic minorities (black, Hispanic, Native American/Alaska Native, and Native Hawaiian/Other Pacific Islander) still accounted for less than 10 percent of all U.S. physicians and surgeons [7].

Fortunately, as the number of women applicants to medical schools has grown, the numbers of racial and ethnic minority women applicants have also steadily increased. Among minority women applicants, black women have made the greatest gains. In 2004, black women accounted for nearly 70 percent of all black applicants to medical school [8]. This statistic defines a trend across many racial and ethnic minorities; men have not fared as well as women. Between 1995 and 2000, minority matriculation for men at medical schools dropped by 15 percent [9]. Thus, despite efforts to reach more equitable minority representation in medicine, most minority groups remain underrepresented, whether as graduates of medical schools or as practicing physicians.

What does this latter, disturbing set of statistics about underrepresented minorities have to do with the question of sex and gender in medicine? More than one might

initially appreciate. As the victims of entrenched prejudice in business and academia (foreshortened ladders, glass ceilings, closed doors—the usual suspects) women, despite accounting for 50.7 percent of the population, know only too well—and first hand—the effects of prejudicial thinking and behavior. Members of racial or ethnic minority groups who are women have more experience in applying strategies for obtaining what they want from the majority culture—hence the gains by racial and ethnic minority women mentioned above. Sure, women still have an uphill battle despite being the majority sex, but, pragmatically speaking, wouldn't the struggle be a bit easier if *the rest* of our underrepresented minorities—that is, not only the remaining underrepresented female minorities, but the *males* too—were included? And, pure pragmatics aside, isn't it simply "the right thing to do"?

Medicine—like any other social institution—is always, in large part, a reflection of the culture in which it exists and, historically, racism and sexism have, unfortunately, been endemic to U.S. culture. I submit that this is an artifact based largely on an erroneous assumption; namely that, for the most part, culture is—and rightfully ought to be—perceived and understood through some dominant, monolithic viewpoint. But cultures are pluralistic; there are nearly as many conflicting and competing values, interests, and goals as there are persons within a culture. Moreover, it does precious little good to replace one dominant, monolithic viewpoint (i.e., white male) with another, whatever its stripe. The way out of such zero-sum game thinking is to recognize and celebrate differences as strengths, not weaknesses.

Differences are strengths because they force us to develop more rigorous and inclusive intellectual habits that serve as means to the shared twin goals of justice and respect for individuals. Just as binocular vision is a vast improvement over monocular, hearing about a problematic situation from multiple perspectives will nearly always enlighten our own understanding of it and reveal the existence of a much broader, richer range of "live options" available to us for crafting an equitable solution with more sensitivity and respect for all relevantly affected.

Long before the relatively recent interest and scholarship in what has come to be called "feminist ethics," John Dewey, in his 1919 essay, "Philosophy and Democracy," declared:

> Women have as yet made little contribution to philosophy. But when women who are not mere students of other persons' philosophy set out to write it, we cannot conceive that it will be the same in viewpoint or tenor as that composed from the standpoint of the different masculine experience of things [10].

For Dewey, women's philosophical writing would be a *good* thing, a breath of fresh air. What makes democracy vibrant and rich with promise is the recognition and celebration of such differences. A single philosophy or perspective must never be permitted to "overcome" or "replace" another; rather, it should be welcomed as one more intellectual tool for crafting respectful, equitable solutions.

So, this underrepresented minority philosopher takes your leave by way of the three questions (often explicit, but always there—even if hidden from view) Plato raised in his famous dialogues via his protagonist, Socrates:

- Where have you/we come from?
- Where are you/we going?
- How will you/we get there?

The answer to the first question is as diverse as the numbers of persons asking and answering—and that's a *good* thing. The answer to the second question stems from the commonalities that unite us—our human nature and our basic drive to develop our interests and talents to the greatest extent possible.

The answer to the third question is not "out there somewhere," waiting to be found; it is not imposed "by nature" or from within. Rather, it is hammered out in the course of engaged and respectful dialog by those with different points of view. And, even in the singular, where this question is posed as an internal "dialog" with oneself, what we are really doing is posing, in our mind's eye, a hypothetical "other" with whom we can critically rehearse a defense for a favored point of view.

If women answer this all-important third question by trying to impose a "new" perspective for the field of medicine—not an unusual outcome when groups finally acquire power—then one form of domination will merely have been replaced by another. But if the women of medicine can wield their relatively new and increasingly powerful influence to transcend difference by bringing everyone to the table, by listening with charity to everyone's points of view, and by discussing the strengths and weaknesses of various viewpoints, they will truly transform both medicine and its individual practitioners.

As an underrepresented cousin in the field of philosophy, I eagerly wait to see how women in medicine go about answering that all-important third question.

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MEDICAL NARRATIVE

The Worlds of Motherhood and Cardiothoracic Surgery

Amy G. Lehman, MD, MBA

I have recently spent some time reviewing my experiences as a female general surgery resident and as a medical student who was pretty sure that she'd be heading into a career in surgery. I was specifically looking for those examples of gross sexism or cultural insensitivity that are supposed to prevail in this still-male-dominated, knuckle-dragging field, so that I could write a powerful essay about the trials and tribulations of being a woman in surgery.

The trouble is, those examples were nowhere to be found among my experiences.

What insinuates itself into my mind, instead, is the perpetual lack of understanding and sometimes harsh judgment from my women family members and friends—a stark juxtaposition to the never-ending support and encouragement of my male mentors in surgery. This tells me the problem that women in surgery face is actually a deeper sociocultural phenomenon about the general vision of women that is held by many members of *both* sexes.

Let me backtrack.

Unlike many surgery residents (female and male), I started my training program with a 10-year-old son. I had been a single mother in college and had worked, then gone to medical and business school after becoming a parent. There was no time when I just stayed at home with my kid. My lifestyle represents a major departure from that of the other women in my family, who, by and large, are all well-educated and primarily raise their children without carrying on an active career outside the home. No one had kids young or without a husband as I had done. Instead, there was a clear path for girls in the family: go to college and then to professional school or get an advanced degree. Then work. One could even get married and keep working. But once a child came into the picture, her duty as a woman was clear—stay at home. If she didn't, she could never be a "true" woman and would probably end up with a maladjusted child to boot. That was decidedly not how my life unfolded and decidedly not who I was or who I am now.

Before I even applied to medical school, I was put into contact with a thoracic surgeon by a mutual friend, and he quickly became my mentor. After I started medical school, I would cut class to scrub and participate in esophagectomies and lung resections. I learned to suture and tie and studied the anatomy of the chest and

its diseases. In doing so, I found the focused intensity of the operating room the most exciting and exhilarating tonic to the daily routine I had been juggling for some years. What characterized that OR? Total concentration, physical power, power-tools, and high stakes—typically male-oriented actions and interests—and escape from the world I was supposed to occupy and from which I was supposed to derive my deepest satisfaction as a woman.

Are surgeons really different from other physicians? I am not sure, but I remember distinctly when, as a third-year clerk on the burn service, the resident with whom I was working, debriding devitalized tissues, turned to me and said "You're going to be a good surgeon because you know how to hurt people." After my brief double-take, I realized that it was true. As a surgeon, you have to be capable of doing painful and violent things to a patient who has entrusted you with his or her physical body to cure, to mend. It takes a particular sensibility to pick up a knife and, in a single stroke, open the chest, uncover a heart and pump it with your hands in order to save the just-unconscious young man who was stabbed in the chest, and who will certainly die without your doing that.

It's a biological fact that, on average, men and women have different brains and, consequently, on average, different skills. The evolutionary division of labor that has occurred and propagated the species is real and hardwired. But that says little about the individual person and his or her abilities and interests. Men and women bring different skills to surgery and to the operating room, and that is good for the field and good for patients. What both sexes bring in equal portion, however, is total commitment.

Surgery training is long and arduous. Of all the medical residency fields, surgery has had the hardest time adapting to the 80-hour work week for both cultural and practical reasons. Does this make a career in surgery more difficult for women? I would say, for the average woman, absolutely. As a single mother, I have experienced the difficulty of balancing work and parental responsibilities. Doing so took an almost unbelievable amount of organization, an exhaustive search for caregivers I trusted, money, time, and energy that I rarely see male surgery residents expending because their wives undertake, or at the least, share, these responsibilities. I have straddled two worlds—the essential world of women, biological motherhood, and one of the traditional worlds of men, cardiothoracic surgery (still fewer than 5 percent women). It can be tough. But I must be honest and say that I am not sure I want it to be less tough. Some of the most rigorous testing is completely self-imposed. Am I a good mother? A good surgeon? Is there milk in the refrigerator? Did my son get his homework done? Is he happy? How is my patient doing? How do I fix this—the stapler misfired. And engendering a general state of toughness, but not meanness or insensitivity, is a vital part of becoming an operating surgeon.

Having said that, I paradoxically think that becoming a mother—and a single parent, at that—forced me to develop a personality suited to the field of surgery. Parenthood, perhaps more than any other human act, teaches relegation of the self in service of

someone else. I never slept through a page as my fellow interns occasionally did because that pager was like my son's cry at night: get up, it's only you here, you need to care for someone, get up. I had already dealt with long stretches of sleeplessness, fear that I wouldn't know what to do, anxiety about what would happen if I couldn't be there to care for him, and the idea that physical work and service are the most valuable aids one can offer to another. My son is the most important person on earth—but my patients are a close second, and so I'll get up at 4, I'll stay late to talk with families, I'll stay up all night to participate in a lung transplant. It is what I am called to do.

If this job really isn't for everyone, that's fine. The world needs many kinds of people and many different kinds of physicians. Maybe, on average, fewer women than men are interested in surgery. But it is possible and appropriate to be a surgeon, a woman, and a mother, if one's personality and interests drive her there. And now, with a teenaged son who is actively developing his own interests and goals towering over me, I am reassured that my unconventional child rearing has worked out well, although he doesn't want to be a surgeon. He's a little squeamish about blood.

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OP-ED

Why "Women's Health"?

Kay Nelsen, MD

My grandmother was diagnosed with breast cancer at the age of 68. She had been seeing her physician every 3 to 6 months for more than 20 years for her many medical problems, which included diabetes and hypertension. Only after her physician retired and passed his practice on was she asked by her new doctor when she had last had a mammogram. As it turned out she had not had a pap smear, clinical breast exam, or mammogram in more than 20 years. Her primary care physician assumed that she was seeing a gynecologist. My grandmother assumed that her physician was providing comprehensive medical care. Poor communication between the patient and physician and a fragmented approach to her health that isolated her reproductive organs from the rest of her body directly resulted in her cancer not being detected earlier.

Formulating women's health as a discrete body of medical knowledge is necessary to balance the bias in favor of male anatomy and physiology that has long existed in medicine and to ensure that women have access to quality, comprehensive care. Medicine has been taught and learned using a standard male body, with the "typical" patient being a 70-kilogram male. Until recently medications were developed and approved based on clinical trials that enrolled mostly men. Women have historically been the "forgotten" sex. For example, the natural role of women's hormones on disease states has been properly studied only recently. The labeling of menopause as a disease that is pharmacologically treated—rather than a natural phase of life—may have contributed to further health problems.

Women's health comprises more than just the health of our reproductive organs. How diseases present in women and how they are diagnosed and treated can vary widely from their presentation and diagnosis in our male counterparts. Some—cardiac disease, for example—have different symptoms in men and women and typically show up at different stages of our lives. Others—such as many rheumatologic diseases—predominantly affect women and have vague symptoms. And then there are the diseases—such as migraines—whose pathophysiology is directly affected by our hormone cycles.

Last but not least are the overlapping concerns of health and disease that occur during pregnancy. Obstetricians are often reluctant to treat certain chronic conditions that can impact the health of both the woman and fetus. Conversely, primary care physicians are often out of their comfort zone when caring for common illnesses that

arise in pregnancy because they do not know how medications will affect the fetus. Pregnant women can easily fall into a medical “grey zone,” a gap in quality medical care.

As a field of study, women’s health does not ask for exclusivity. Rather it strives to integrate into the general field of medical knowledge an understanding of health and pathology that applies to half the population. It is an attempt to break away from defining illness by body parts and systems and to get a more global perspective on disease and its treatment. Acknowledging the unique health needs of women should be seen as an opportunity to foster collaboration among a variety of specialties that will improve health care for all. Addressing the special needs of women’s health should not, however, detract from the special needs of other populations.

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JULY 2008 CONTRIBUTORS

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