

The ethical implications of the medical community's failure to differentiate sex- and gender-based medicine from women's health

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While rounding on patients one morning during my medicine clerkship, I agreed to see an individual who had recently been admitted to my team's census- a 60 something-year-old females for whom the sign-out list read "ACS r/o," or acute coronary syndrome rule out. Having just participated in the care of a 50 something-year-old male with a similar presentation, I confidently entered the room of my new patient and began to elicit her history. The patient described being the passenger in a friend's vehicle when she experienced the sudden onset of severe, crushing chest pain, which led her to present promptly to the emergency department. As I sat listening to the patient, I learned that within the past ten years she had had a quadruple bypass (CABG) and was followed by a cardiologist regularly. The patient went on to admit that she had not felt well for a week prior to her current admission to the hospital, explaining that she had experienced worsening indigestion over the course of the past week. She continued that this is exactly how she felt prior to her CABG some years ago. After gathering the rest of the patient's history and completing a physical exam I excused myself from her room so that I could present to my resident. After describing the patient's history in its entirety, including her worsening indigestion and its similarity to the patient's previous presentation, the resident asked if the patient was still having chest pain, to which I replied that no, she was not. "Okay," said the resident, "her EKG looks fine and her troponins have all been negative, so since she's not having chest pain we can send her home. Can you make sure she is discharged with a prescription for Prilosec for her indigestion?" Luckily for the patient, as we were preparing her discharge paperwork, her cardiologist stopped by to see her and recommended we not let her leave quite yet. Instead, the patient underwent further workup and returned to our floor later that afternoon with two coronary stents. When I saw my resident, she said, "Good thing we didn't end up sending your patient home, huh?"

I left the hospital that day relieved that the patient received the care that she needed, but extremely concerned that my resident had paid little attention to any of the patient's symptoms aside from chest pain. While the resident did not necessarily do anything wrong, and her care was in line with that suggested by any algorithm for ACS rule out, she failed to acknowledge that women with coronary artery disease often present with "atypical" symptoms, including those which are gastrointestinal in nature, which is well-documented in the literature [1-3]. The patient's presentation should have immediately alerted the resident that the patient might need further workup despite her otherwise negative studies and lack of chest pain. For the first time, and unfortunately not the last, I bore witness to the potential for serious consequences to result from the medical community's failure to

adequately address, research, and educate its members on the variation in disease presentation that exists based on one's sex and gender.

In 2001, the Institute of Medicine released a report titled Exploring the Biological Contributions to Human Health: Does Sex Matter? [4]. In the report, sex is defined as the classification of male and female based on one's reproductive organs and chromosomal complement and gender is defined as one's self-representation as male or female in accordance with sociocultural influences. This pivotal work identified the study of the influence of sex differences on health as a field which is "...evolving into a mature science" [4]. Today, the compilation of research, education, and legislation surrounding the influence of these variables on human health can be referred to as Sex- and Gender-Based Medicine (SGBM). While the field has grown over the course of the past two decades several limitations hinder the discipline from achieving complete integration into the medical armamentarium, thus preventing it from having greater clinical applicability. Such deficiencies bring to light various ethical implications, particularly surrounding the care rendered to patients. At present, the weaknesses associated with SGBM can be summarized as follows: 1) the inappropriate classification of SGBM as a women's health issue, alone, 2) the lack of inclusion of sex and gender as variables in biomedical research, and 3) the failure to adequately integrate SGBM into the medical school curriculum. For this discussion, I will focus on the first problem, outlining the issue historically and subsequently, I will then identify the associated ethical concerns pertaining to patient care.

Sex- and gender-based medicine as more than a women's health issue

Sex- and Gender-Based Medicine (SGBM) developed predominantly from the field of women's health, which itself emerged from the Women's Health Movement beginning in the 1960s [5,6]. Accordingly, an understanding of the evolution of the field of women's health allows one to better appreciate the position of SGBM within the medical community at large.

The sphere of women's health has expanded tremendously over the past two decades, in part due to its incorporation into medical education,

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as well as the establishment of legislation related to the discipline. While innumerable persons, committees, and policy changes have contributed to the evolution of women's health, for this discussion, only the most key moments in the history of the field will be addressed. In 1990, the Office of Research on Women's Health (ORWH) was established by the National Institute of Health (NIH) following the failed enactment of the Women's Health Equity Act by the Congressional Caucus on Women's Issues, which had sought to improve the delivery of health services to women [7,8]. With its formation, ORWH became the first Public Health Service office specifically dedicated to promoting women's health research [9]. Another pivotal point in the history of the field was the foundation of the Office of Women's Health (OWH) in 1991 as a component of the U.S. Department of Health and Human Services. This office was established to improve women's health through policy, education, and model programs as well as to work closely with other government agencies and organizations [10]. In 1992, the *Journal of Women's Health* published its first issue, becoming the predominant source of scientific information regarding care provided to women [11]. Particularly important to the discipline's growth was the publication of the Council on Graduate Medical Education's (COGME) Fifth Report, titled *Women and Medicine*. The report commented on the new paradigm of women's health in detail and called for expanded research and educational efforts [12]. Between the years of 1996 and 1998, the OWH established 18 National Centers of Excellence to create model academic programs [13]. In 2000, the *Journal of Academic Medicine*, the medical community's premier resource regarding medical education, published a special theme on women's health in its November issue. The issue focused on the role of women's health in medical education throughout the 1990s and the way in which the topic may serve as a catalyst for further reform. An article within the special theme pointed out that, "Women make up more than half of the population, and women's health-the science that elucidates sex and gender differences in health and disease-needs increased integration into the medical curriculum" [14].

By 2001, the focus began to shift from specifically addressing women's health issues to elucidating the role of sex and gender on well-being. This change stemmed largely from the publication of the Institute of Medicine's groundbreaking report, *Exploring the Biological Contributions to Human Health: Does Sex Matter?* In the publication, committee chair Dr. Mary-Lou Pardue remarks, "Sex does matter. It matters in ways that we did not expect. Undoubtedly, it also matters in ways that we have not begun to imagine." [4]. The medical community continued to address the topic of sex and gender as variables which influence disease throughout the early 2000s, as evidenced by the publication of Dr. Marianne Legato's landmark book titled, *Principles of Gender-Specific Medicine* [15]. In a way, this work revealed the emergence of SGBM as a field of study.

The evolution of SGBM from the field of women's health makes sense from a historical perspective. The Women's Health Movement of the latter half of the 20th century recognized deficiencies in the care women received; accordingly, a woman-centered perspective was adopted by various committees, government agencies, and policies to overcome these deficiencies. Donoghue, Hoffman, and Magrane comment: Such a woman-centered perspective is offered as a remedy to the inaccuracies of the "sameness as the norm" in science and medicine. In fact, "sameness" has propagated a norm based on the white male, as if this prototype were sex- and gender-neutral...A woman-centered perspective in medicine brings equity to health care, research, and education [16].

COGME's Fifth Report *Women and Medicine*, also remarks on this perspective, explaining, "The rationale for focusing on women's health is that women have been the ones most poorly served by the current system." However, the report goes on to explain that, "This new paradigm is not unique to women's health; applied broadly, these principles could benefit men as well as women" [12]. It becomes clear then, that at the onset of the Women's Health Movement, a woman-centered perspective was desperately needed to diminish the deficiencies surrounding the care rendered to women. With time, however, shifting the focus toward women, and away from the male model as the norm, led to the realization that sex and gender undoubtedly contribute to and influence human health.

The problem is not that the emergence of SGBM is rooted in women's health, but rather, that the lines between the two fields are often blurred and subsequently, the scope of each discipline is not considered in its entirety. On the one hand, in the past, women's health has focused predominantly on the topics of reproduction and childbearing [6,14,17,18]. This stems largely from the fact that the male model has been considered the 'norm' throughout much of the history of medicine and accordingly, deviations from this predetermined norm, such as variation in disease presentation in women, are simply considered "atypical." Thus, it becomes easy to categorize such variations as "atypical," rather than identifying pathophysiologic explanations for recognized differences. In turn, the focus of women's health has historically been on that which is clearly dissimilar between men and women, that being, the fact that women can have children. This limited view, however, fails to address the complexity of women's health and frankly, does not adequately identify variations between men and women [12]. Raymond, Greenberg, and Leeder identify a tangible problem with the narrowed definition of women's health by assessing the causes of mortality in developing countries. Their research demonstrated that in seven of nine countries assessed, chronic disease accounted for about twice the number of deaths in women aged 15-34 than reproductive causes and HIV together and in women aged 35-44, chronic disease caused four times the number of deaths in eight of the nine countries [18]. These results exemplify the true importance of considering all aspects of women's health, as opposed to focusing solely on reproductive issues.

On the other hand, because SGBM evolved largely from the field of women's health, it is often incorrectly assumed that SGBM comments solely on issues related to women. This is especially true given that many specialties within the medical system have adopted a woman-centered perspective to account for the deficiencies pertaining to the care of women. SGBM serves to better the health of all persons by recognizing sex and gender as variables which undoubtedly influence health and well-being including, but certainly not limited to, disease presentation, response to therapy, and mortality. Thus: gender-sensitive medicine is not the same as considering the specific needs of women in health care...and might even be contradictory. Gender medicine must consider the needs of both sexes. This might require giving greater attention to women where specific data on women are lacking, and greater attention to men where specific data on men are lacking [19].

An example of the ways in which SGBM can and must also be applied to men comes from a recent study, which demonstrates that men are more likely to die following a hip fracture than women. The study specifically claims that the rate of mortality is as high as 37 percent for men in the first year following the fracture [20,21]. Thus, this pathology, which is often thought of as affecting women

predominantly, is more fatal in men. Accordingly, if the variables of sex and gender had not been analyzed, the medical community may have remained oblivious to this fact, which in turn, could have caused undue harm to men. Ultimately then, to view the scope of disease solely within the framework of men's or women's health is to limit one's awareness of the ways in which sex and gender influence all aspects of health.

Recently, a committee of the Institute of Medicine was charged by Congress to report on the status of women's health today. In doing so, a definition of women's health was established as follows: the scientific study of health conditions that are specific to women, are more common or more serious in women, have distinct causes of manifestations in women, or have different outcomes or treatments in women; and it includes the study of factors that are determinants of health (biologic, physiologic, environmental, and sociocultural factors), especially factors that might affect women disproportionately or uniquely [22].

Thus, this differs from SGBM, which adopts a much broader framework by considering the influence of sex and gender on all aspects of health for both men and women. Ultimately, a problem exists about the medical community's inability to adequately differentiate between women's health and SGBM, ultimately failing to consider the scope of either field in its entirety.

Ethical concerns and implications: feminist bioethics on sex- and gender-based medicine versus women's health

The emergence of Sex- and Gender-Based Medicine (SGBM) from the field of women's health makes sense from a historical perspective, as previously outlined. However, the enmeshment of the disciplines encourages one to consider the ethical implications surrounding the medical community's inability to adequately delineate the subject matter associated with each, and address the scope of both fields in their entirety.

It is not coincidental that the 1960s bore witness to the emergence of the Women's Health Movement as well as second-wave feminism, for this period revealed immense social change across the nation. In large part, the feminist movement encouraged and provided momentum to the area of women's health [23]. Feminism is rooted in the acknowledgment of the oppression faced by women in all positions in society due to the prevalence of sexism. Barriers to women's achievement are evidence of this oppression [24]. The subordination of women pervades all facets of society and unfortunately, medicine is not exempt. By the 1990s, feminist bioethics emerged as a field, which found fault in the foundations of mainstream bioethics and distinguished itself from other taxonomies of feminism [23,24]. As such, feminist bioethics provides a basis upon which the ethical concerns associated with SGBM and women's health can be analyzed.

At the most fundamental level, feminist bioethics serves to establish a "...theoretical grounding to provide a framework for practical strategies to curtail oppressive practices in medicine and healthcare" [23]. This, in turn, ultimately provides a platform for reform. In *Feminist Bioethics: At the Center, on the Margins*, Fitzpatrick and Scully further outline the tenets of the theory of feminist bioethics. First, they describe bioethics as a field, which despite an increasingly interdisciplinary approach, focuses largely on "...foundational concepts derived from moral philosophy and ethics" [25]. Fitzpatrick and Scully go on to discuss the practical nature of bioethics and its focus on establishing tangible change. While multiple taxonomies of feminism exist, in general, feminists have criticized mainstream

bioethics for its reliance on the male experience in relation to morality, largely ignoring the female gender [25].

Given that SGBM developed largely from the field of women's health, it becomes important to first recognize the opinion of feminist bioethicists regarding the emergence of a discipline devoted entirely to the health and well-being of women. One might question how a gendered perspective could possibly help to overcome the oppression of women within the medical community. The answer to such a question has been discussed readily in feminist literature and is even commented on by feminist bioethicists, like Susan Sherwin, who states:

Under feminism, women are unjustly oppressed, so they must be allowed the means to free themselves from their subordinated position. Because gender is the basis of women's subordination, feminists believe that their oppression cannot be ended without attending to matters of gender. They realize that if women are oppressed because of their sex, to disregard the significance of gender and treat everyone simply as "an individual" is to perpetuate women's oppression; the forces of oppression are complex and systematic, and they will continue to operate until they are dismantled. Therefore, feminists argue, we cannot act in accordance with the ideal of sexual equality until that equality is itself a reality. Attending to the needs and perspectives of women is essential to achieving that end [24].

She further explains, "We cannot uncover and dismantle sexist... prejudices by proceeding with a gender-neutral...account, because within a sexist...society, such an account is more likely to mask bias than remove it" [24]. According to feminist bioethics, then, the development of women's health was a necessary step to overcome the oppression of women within the medical field, given that the male model has been considered the 'norm' throughout much of the history of medicine.

As stated previously, feminist bioethicists recognize the gender bias, which exists in the medical field, and seek out strategies to overcome such injustices. Therefore, the emergence of the field of women's health was in every way necessary to garner information regarding women that had previously been ignored. The ethical issue, however, arises when women's health and SGBM are not clearly delineated among medical professionals and instead, are used somewhat interchangeably. In this sense, the situation creates a metonymy in which SGBM is referred to in the context of women's health. From the feminist bioethics perspective, this raises concern surrounding the issuance of appropriate care for women. While women's health can address any topic pertaining to the well-being of women, by and large the focus of the discipline over the years has been on that of reproduction and issues surrounding child bearing. Accordingly, failing to delineate SGBM from women's health encourages the perpetuation of the male model as the norm. For, if the medical community does not address the effects of sex and gender on all aspects of health and well-being, which is the goal of SGBM, women remain unable to escape the subordination placed upon them by nature of lack of information and knowledge pertaining to this subject area. In most cases, it is women who suffer, however, in some cases men do as well, as diseases, which have been deemed "feminine," like osteoporosis, are less likely to be studied in men. Therefore, it is crucial to distinguish women's health from SGBM and to work toward overcoming the metonymy that has been established in the medical community at large. Women, and feminist bioethicists would ardently agree, are not simply small men and must not be treated as such.

Rojek and Jenkins, advocates of SGBM, argue for a movement from women's health to that of "sex and gender specific women's

health,” stating: We propose the adoption of a broader framework that will enable us to integrate existing women's health knowledge with existing knowledge about men's health. From a scientific perspective, this will enhance our understanding of disease processes. Using a sex and gender lens will enable researchers to conduct valid research and enable educators to integrate knowledge about both men and women into medical education. As learners begin to think more critically using a sex and gender lens, they will be able to consider how and the extent to which scientific knowledge applies to the specific patient before them. This is a critical aspect of patient-centered care. A sex and gender lens is the path for changing medical practice and improving the health of all patients [6].

This framework, which would be applauded by feminist bioethicists, acknowledges that attention must be paid to women to overcome oppression. However, this expanded lens also speaks to the importance of analyzing the influence of sex and gender on all aspects of health in all persons. Only when this is established will the medical community be able to provide women with the same healthcare as men, and only then will providers be able to treat all persons with the knowledge of the effects of sex and gender on one's health and well-being.

Conclusion

As I recall the day on my medicine clerkship when my team nearly discharged a woman in need of care because her “atypical” presentation did not demand the need for further workup, I am reminded of the potential for patients to suffer undue harm because of the medical community's failure to acknowledge the influence of sex and gender on disease presentation. The evolution of Sex- and Gender-Based Medicine (SGBM) from the field of women's health makes sense from a historical perspective. However, despite the continued development of SGBM over the course of the past two decades, the medical community has failed to adequately delineate the discipline from women's health and as a result, has not considered the scope of either field in its entirety. This raises ethical concerns and implications surrounding patient care. Assessing the dilemma through the lens of feminist bioethics suggests that attention needs to be paid specifically to women, to overcome the male model as the ‘norm;’ however, the influence of sex and gender must also be considered. Only then will the best care be provided to all patients.

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