Update: A Review of Women's Health Fellowships, Their Role in Interdisciplinary Health Care, and the Need for Accreditation

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Abstract

While Women's Health (WH) Fellowships have been in existence since 1990, knowledge of their existence seems limited. Specialized training in WH is crucial to educate leaders who can appropriately integrate this multidisciplinary field into academic centers, especially as the demand for providers confident in the areas of contraception, perimenopause/menopause, hormone therapy, osteoporosis, hypoactive sexual desire disorder, medical management of abnormal uterine bleeding, office based care of stress/urge incontinence, and gender-based medicine are increasing popular and highly sought after. WH fellowship programs would benefit from accreditation from the American Board of Medical Subspecialties and from the American College of Graduate Medical Education, as this may allow for greater recruitment, selection, and training of future leaders in WH. This article provides a current review of what WH trained physicians can offer patients, and also highlights the added value that accreditation would offer the field. Ultimately, accrediting WH fellowships will improve women's health medical education by creating specialists that can serve as academic leaders to help infuse gender specific education in primary residencies, as well as serve as consultants and leaders, and promote visibility and prestige of the field.

Introduction

IN THE LAST TWO DECADES, Women's Health (WH) as an interdisciplinary field has grown significantly as the demand for well-trained leaders and educators in the field has increased with the aging population.¹ The U.S. census estimates that by 2020 there will be 50 million postmenopausal women, and notably these women will spend approximately one-third of their life in menopause.² Due to the increase in numbers of peri- and postmenopausal women, there will be increased demand for interdisciplinary care. Historically, women's health equated with reproductive health, followed mostly through the lens of obstetrics and gynecology. As the complete care for women is now encompassing more than their reproductive tracts, women's health has appropriately shifting to other fields of medicine, such as internal medicine (IM) and family medicine.³ The need for special expertise that is both comprehensive and integrated for the care of the midlife female is growing in demand and popularity, and interdisciplinary care that meets clinical needs, and research

particularly in the unmet needs of untreated symptomatic midlife women that have marked economic and productivity issues will help push this paradigm shift.⁴

Development of the Women's Health Fellowship

In 1991, the Office on Women's Health (OWH) in the U.S. Department of Health and Human Services was established to improve the health of American women.⁵ The OWH contracted with 18 academic medical centers to develop National Centers of Excellence in Women's Health.⁵ The purpose of these centers was to provide comprehensive care to women, emphasize preventative medicine, research gender-based health care, promote women as academic leaders, and provide education through medical school curriculum.^{5,6,7} In 1994, the Office of Research on Women's Health at the National Institutes of Health along with the Association of American Medical Colleges conducted a study to determine the extent of Women's Health curriculum taught in the 125 U.S. medical schools. The response rate was high at 82%, but

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data showed that only 14% of schools had formal women's health curriculum and only 28% had a WH clinical rotation.⁵ In 1999, the Liaison Committee on Medical Education conducted the same study. While this time resulting in 100% response rate, only 28% of American Medical Colleges had a WH clinical rotation. Repeated for a final time in 2001, by the Society for Women's Health Research, there was ultimately an increase to 44% of medical schools offering WH curriculum.^{2,5} This evidence validates that many students are not getting exposure to women's health early in their medical careers⁸ and are lacking a significant experience unless ultimately choosing a residency in obstetrics and gynecology. Early exposure heightens curiosity, learning, and interest in the field and ultimately demonstrates to students and residents that a career in women's health can be achieved through both family medicine and internal medicine,³ and most comprehensively after the successful completion of a fellowship. Dedicated women's health tracts for trainees have been developed through some IM residency programs, with eight IM residencies offering specialized tracts for WH in 2014;⁹ however, residents enrolled in these tracts are only a small reflection compared with the number of IM graduates per year.

Encouragingly, through this initiative, women's health fellowships began to evolve. These fellowships were designed to help educate and train medical resident graduates on the complexities of women's health issues and to become leaders of multidisciplinary clinics or programs encompassing the broad scope of women's health. Currently, these fellowships are not accredited by either the American Board of Medical Subspecialties (ABMS) or by the American College of Graduate Medical Education (ACGME).

For postgraduate physicians, in 1993 the Executive Leadership in Academic Medicine (ELAM) Program for Women was created in order to help promote women as academic leaders and has had tremendous success, again demonstrating the need to enhance the status of women in medicine and is a tribute to women's achievements in medicine.¹⁰ Long-term follow-up showed that ELAM participants had achieved greater scores on 12 of 15 established leadership indicators, compared with physicians who had not sought any formal leadership training.^{10,11}

Meanwhile, while medical school and residency exposure to WH outside the lens of obstetrics and gynecology is lacking,⁸ the demand for WH providers is increasing,¹ and thus the need to raise awareness of WH fellowships is of optimal importance in order to train experts and educational leaders.¹² Unfortunately, the knowledge of these specialty interdisciplinary WH fellowships is lacking.¹³ To evaluate the current national awareness of WHF programs, a study was conducted by sending surveys to family practice (FP) and IM residents across the United States. Of the responses, only 35% stated that their medical school had dedicated WH curriculum. Twenty-seven percent of respondents stated they might be interested in such a fellowship, but 40% found it concerning that WH fellowship programs are not ACGME or medical subspecialty accredited.¹³ To further demonstrate this, Tilstra et al. evaluated the Veterans Affairs (VA) WH Fellowships and in their findings reported that 83% of WH program directors resorted to word of mouth for fellow recruitment, and 67% used active recruitment from resident programs.¹⁴ This highlights just how insufficient this fellowship is currently represented, as there is no formal orga-

nizational body to facilitate recruitment and acceptance into fellowship. The number of unfilled positions goes underreported, as the fellowship is not accredited, and programs begin to shut down as an unintended consequence. Choosing a fellowship is heavily influenced by environment, mentors/leaders, and experience,¹⁵ and this will surely be heightened and reflected both in medical school and residency training if the fellowship has an accredited status.

Core Components of Obtaining Accreditation

The importance of WH fellowships is growing as the need to provide comprehensive interdisciplinary care to complicated midlife women is beginning to exceed demand.¹ Obstetrics and gynecology (OB/GYN)-trained physicians are needed in obstetrical care, labor, delivery, and surgery, where their unique skills are a necessity. Meanwhile, growing bodies of both FP and IM fellowship-trained physicians have been overseeing the medical complexities involved in prescribing contraception, hormone therapy, and osteoporosis medications and are overseeing the medical management of abnormal bleeding, managing hypoactive sexual desire disorder, managing urinary incontinence, following breast cancer survivors, and other uniquely female lifecycle medical concerns. This requires specialized training beyond residency, as it requires a direct focus that is not realistic to achieve during undergraduate study.¹⁶ While there have been some advances in the field of WH, there is still significant room for improvement. According to the 2014 *Journal of Women's Health* directory, there were 25 WH fellowship programs in the United States, and 8 (previously 10 in 2012) internal medicine residency programs with women's health tracts.⁹ Even with these tracts, there is still a notable lack of awareness of the fellowship, and some may be deterred from the fact that this fellowship is not ABMS or ACGME accredited.¹³ At the same time, the demand for physicians competent in these areas is increasing at a rate at which the supply simply cannot meet the demand, and having an accredited fellowship may attract more candidates, as in order to promote continued academic medicine, trainees' interest must be retained through medical school and residency to influence fellowship and ultimately career choice.¹⁵

Currently, the ABMS recognizes 24 approved specialties and 117 approved medical subspecialties, with internal medicine currently listing twenty, pediatrics listing twenty, and family medicine listing five.¹⁷ The process to achieve accreditation is extensive but achievable. Briefly, to achieve certification for a medical subspecialty, the specialty society must first submit a proposal to the ABMS. The ABMS would then complete a needs assessment to gauge how many programs would apply for this accreditation. If the number is significant, the ABMS would submit a proposal to the ACGME, and if the ACGME is in agreement, they would begin to create program requirements for the new subspecialty. Since IM graduates are already leaning towards subspecializing,¹⁸ it is valid to promote an accredited fellowship to attract qualified candidates that would then go on to benefit a population of women who need their special training as well as most importantly serve as educators and leaders to help infuse gender-specific education into existing residencies in several fields, such as internal medicine, family practice, OB/GYN, emergency medicine, and pediatrics.

Provider Skills

The prospect for the field of WH to continue growing is imminent. The postmenopausal population in the United States is dramatically increasing, necessitating a need for specialized, focused, and knowledgeable WH experts. By the year 2025, the number of postmenopausal women is expected to rise to 1.1 billion worldwide,¹⁹ and these numbers will only increase as the baby boomer generation continues to age. Midlife should be a time for women to enjoy and improve their health, and WH providers are crucial in achieving and maintaining this lifestyle, as they have focused training that is not affordable by residency training or continuing medical education (CME) classes alone.²⁰ Multiple studies have shown that gaps in WH training remain,^{8,20} and WH specialty providers poses a unique skill set that includes some or all of the following: knowledge of current literature on hormone therapy (HT) and the risk/benefit classifications of prescribing HT; following Pap results; performing office-based minor procedures such as colposcopy, cervical polyp removal, or IUD insertion; medically managing abnormal uterine bleeding; reading bone density scans and prescribing osteoporosis treatment; managing low libido; managing urinary incontinence; and contraception management and a unique understanding of how gender-based medicine plays a role in the management of chronic conditions such as diabetes, heart disease, and depression.²¹ Moreover, WH specialty providers

have a broad understanding of diseases that are more common in women, such as autoimmune conditions, thyroid disorders, rheumatologic conditions, and chronic pain syndromes; breast cancer survivors as well as those that carry genetic mutations; and cardiovascular conditions.²²

Women's Health physicians may also be needed by young women, who do not necessarily need a referral to a gynecologist, whereas WH fellowship-trained physicians specifically help to fill the gap where primary care providers may not have this unique familiarity and can also help fill the gap between primary care medicine and routine OB-GYN practice.²² The fellowship allows trainees to gain an understanding of the entire reproductive life cycle in terms of pregnancy and diagnoses associated with pregnancy that increase lifetime risk for chronic conditions such as gestational diabetes, preeclampsia, and gestational hypertension, and have knowledge on how these medical risks should be followed and managed long term. Based on their training, WH providers are often comfortable with contraception counseling in healthy and, more importantly, in some high risk patients, such as those with systemic lupus erythematosus (SLE) clotting disorders, thyroid disorders, or those with a complex medical history prior to attempting pregnancy. They are also uniquely trained in following postpartum conditions such as depression, cardiomyopathies, and consequences of vaginal lacerations resulting in weak vaginal and/or anal musculature or neuropathy. WH providers can help couples

TABLE 1. OVERVIEW OF WOMEN'S HEALTH FELLOWSHIP-TRAINED SKILLS

<i>Population</i>	<i>Clinical skills</i>	<i>Procedural skills</i>
Young adult	<ul style="list-style-type: none"> • Management of contraception for complex patients • Following pap results and ASCCP guidelines • Preconception counseling for high-risk patients • Management of postpartum complications • Following postpartum consequences of vaginal lacerations • Basic infertility workup • Managing patients with chronic pelvic pain • Diagnosis, management, and treatment of PCOS during lifespan • Workup and treatment for mastodynia and fibrocystic breast changes 	Office based procedures such as <ul style="list-style-type: none"> • Colposcopy • IUD insertion/removal • Trigger point injections for pelvic pain
Midlife	<ul style="list-style-type: none"> • Knowledge on high-risk peripartum medical conditions and long-term risk • Medical management of perimenopause • Knowledge of current literature on HT, understanding of R/B, comfort in prescribing • Following pap results and ASCCP guidelines • Medical management of abnormal uterine bleeding • Reading and interpreting bone density scans • Prescribing osteoporosis treatment (both hormonal and non-hormonal) • Managing low libido and HSDD • Medical management of urinary incontinence • Work up of new breast masses, BRCA carriers, or caring for breast cancer survivors • Knowledge on conditions more common in women (autoimmune conditions, thyroid disorders, rheumatologic conditions, chronic pain syndromes, cardiovascular conditions) • Gender-based care 	Office-based procedures such as <ul style="list-style-type: none"> • Colposcopy • Cervical polyp removal • IUD insertion/removal • Pessary fitting and placement • Fitting of pelvic stimulation devices

ASCCP, American Society for Colposcopy and Cervical Pathology; BRCA, breast cancer gene; HSDD, hypoactive sexual desire disorder; HT, hormone therapy; IUD, intrauterine device; PCOS, polycystic ovarian syndrome; R/B, risks/benefits.

with infertility by initiating a basic workup. They also have familiarity in the diagnosis and long term management of polycystic ovarian syndrome. WH providers are comfortable counseling on and prescribing all forms of birth control methods especially in women with various contraindications or complex medical co-morbidities and thus decrease the rates of referrals to gynecologists for contraception counseling while also directly managing the patient's comprehensive care. WH providers can also care for and follow patients with benign breast conditions as well as those with documented breast cancer gene (BRCA) mutations.^{21,22} This information is summarized in Table 1.

Value of Accreditation

There would be significant value that accreditation would give to the field of WH. Most importantly, it would provide comprehensive, up-to-date, individualized, and focused care for the peri- or postmenopausal female and young adult that no longer needs to follow with a gynecologist or surgical OB/GYN, specifically if she has completed childbearing and/or does not require GYN surgery. Many midlife women complete annual exams with their gynecologists who are often unfamiliar with menopause treatment,² chronic disease management, risk assessment, and polypharmacy, which highlights the need for a WH provider to function in the area between gynecology and medicine.²¹ Furthermore, since the release of the Women's Health Initiative study in 2002, many providers stopped prescribing HT, and as a result, a decade later most internists lack the core competencies and experience necessary to address menopausal issues and fail to meet the needs of midlife women.^{23,24} Santen et al. states, "We believe that this situation is detrimental to women's health, leads to fragmented care, and should change."²³ Even program directors of internal medicine residencies are reporting that despite national guidelines endorsing women's health education, they still find a negative discrepancy between what they feel residents should master and what the residents estimate they have mastered.⁸ Not only is residency knowledge on HT lacking; studies also show even IM residents lacking in overall contraception knowledge.²⁵ Even among IM facility there have been reports that knowledge and procedural skills needed to teach necessary WH skills are lacking,¹² again pointing toward the functionality for WH fellowship-trained physicians to function in the gray zone between OB/GYN and IM.²² Experiential learning on HT and other WH issues through training with fellowship-trained accredited leaders may be one way in which patient care is enhanced and practice patterns are changed for the better.²⁶

Fellowship-trained physicians can consult and manage complicated patients, and give focused gender-specific recommendations, which is a separate entity from a primary care provider who follows primarily women and men. Accreditation would also enhance research during fellowship²⁷ and stimulate more education, speaking opportunities, writing, and dedicated clinics, therefore serving to spark more interest in the field, attract more candidates, and ultimately lead to greater career opportunities in the future and may ultimately enhance the status of women in medicine.¹⁵ Experiential learning, through following leaders and experts in the field, will be the distinction between trained fellowship physicians and primary care physicians,²⁶ and accreditation heightens

TABLE 2. VALUE OF ACCREDITATION

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- Create national academic leaders qualified to run interdisciplinary women's health centers across the nation
 - Improvement in clinical care
 - Increased visibility and prestige
 - Greater recruitment of future trainees and leaders
 - Enhanced awareness leading to more education and research
 - Creates research dollars and revenue
 - Greater organization of the field
 - Establishment of standards for women's health specialty trained providers
 - Promotes solid mentorship
 - Funding for trainees
 - Builds career opportunities
 - Validation to consumers
 - Enhancement of women in medicine
 - Connect and unify women's health fellowship graduates into formal organizational body
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curiosity and interest in physicians-in-training.¹⁸ Accreditation therefore serves to recognize those that are specialty trained from those that are more focused on primary care.

Accreditation also has added value and importance to physicians. It serves to organize the field and sets standards and priorities during training and throughout one's practice. It serves to separate untrained physicians from trained physicians. It also adds research dollars, revenue, and validates to consumers that their physician is specially qualified to take care of them. Lastly, it promotes solid mentorship. Mentorship is crucial for women to maintain and hold academic positions.²⁸ Research on the VA WH graduates have shown that since graduation, nearly half have gone on to hold major leadership positions and that 79% of that population has remained in academics since graduation, compared with 35% of women in academic medicine that do not pursue fellowships,¹⁴ a value that the OWH initially cited as one of the core reasons to develop the National Centers of Excellence in Women's Health. Moreover, many WH fellowships also offer other advanced degrees, such as a dual MBA or MPH that is achievable during fellowship,⁹ providing women even more potential as valuable resources for patients, colleagues, future fellows, and society. If WH fellowships were accredited, it is likely that a greater number of physician-graduates (both female and male) would undergo specialized training²⁹ and therefore better serve the greater than 50 million patients that would benefit greatly from their care.^{1,2,19} This information is summarized in Table 2.

Conclusions

This paper highlights the gap in medical care provided for women and demonstrates the need for more trained and highly specialized WH physicians to matriculate and become academic leaders as the population continues to grow and their needs become more complex. Accreditation would serve to organize the field, establish revenue, and set standards along with providing invaluable mentorship. Women's health fellowship programs would benefit from more robust recruitment and presence, and accreditation would make this a more attractive, comprehensive, and funded fellowship to both medical students and residents in training. By

accrediting a fellowship, it will immediately lead to increased visibility and prestige, and the effect of training and credentialing women's health experts will continue to improve medical education and clinical care.

Author Disclosure Statement

No competing financial interests exist.

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