



The Business Case for Integrating Menopause Education into the Medical School Curriculum: a Central Issue, Not a Peripheral One.

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Thank you

To all contributors to this white paper, the work gathered here reflects months of rigorous research and thoughtful collaboration, driven by a shared recognition that menopause education belongs at the heart of medical training, not at its margins. Your contributions are helping to shape a more informed and equitable standard of care for women.

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Executive Summary

The fact that men and women are treated differently by healthcare systems and practitioners is a well-recognized phenomenon. It stems from a number of factors, such as systemic bias, a dearth of women included as participants in scientific research, and a lack of training in medical schools related to women's health issues. This systemic omission has economic implications both for the individual patient and the broader healthcare system.

Perhaps nowhere is this treatment gap more apparent than when it comes to menopause—a fact of life for all women as they age that also drives billions in direct healthcare costs and lost productivity annually. Most physicians receive little to no training in the physiology and management of perimenopause and menopause, especially early in their medical education, prior to choosing a specialty.

In addition to gynecological care, physicians in primary care, internal medicine, cardiology, orthopedics, neurology, urology, and psychiatry regularly encounter patients experiencing perimenopause- and menopause-related health effects. Early foundational training can better prepare physicians across disciplines to recognize and manage these conditions as part of routine clinical care.

This oversight has costly implications both for women's health and the overall economy.

This paper examines the potential for early, universal menopause education for medical students in reducing healthcare costs, strengthening economic output, and encouraging innovation that will close the gender treatment gap.

It is beyond time for medical schools to make a change. Stakeholders in the healthcare system, from patients and physicians to policymakers and payors, must push them toward reform.

Before we begin, a few defining notes:

- We recognize that some individuals experiencing menopause may not identify as women; however, for the purposes of this paper, the terms “woman” and “female” refer to individuals born biologically female who experience perimenopause and menopause.
- In this paper, “menopause education” refers to foundational knowledge of perimenopause and menopause physiology, symptoms, associated health risks, and long-term clinical implications. While the authors recognize that effective menopause care also requires training in communication, interdisciplinary management, and patient-centered care, these topics are beyond the scope of this analysis.

1.0 Introduction: Why Economics Matter

1.1 Context: The menopause revival

Perimenopause and menopause are not niche clinical concerns. They represent a major stage of life for over half the population, one that affects multiple organ systems and chronic disease management across all medical specialties. Several trends underscore the growing urgency of improving menopause-related education and preparedness:

- In the U.S., an estimated **1.3 million women** enter menopause annually.
- By 2060, **90 million women** in the U.S. will be postmenopausal.
- Between 80 and 96% of women report experiencing menopause or perimenopause symptoms, many of which persist for years.
- A Mayo Clinic study estimates menopause symptoms lead to **\$1.8 billion in lost work time** every year in the U.S.

The bottom line: At some point in their careers, nearly all clinicians will provide care for a woman experiencing menopause, regardless of specialty. Many will do so on a daily basis.

By 2060

an estimated 90 million women in the U.S. will be postmenopausal making menopause care a core competency across healthcare.

Women are demanding better care and clinicians with menopause training will be better able to meet this demand. In 2024, the global menopause market size, inclusive of direct healthcare costs as well as over-the-counter medications and dietary supplements, was estimated at **\$17.79 billion** and is projected to reach \$24.35 billion by 2030. The menopause industry in the U.S. held the largest share of the market, 83.51% in 2024.

To help address unmet needs in menopause care, **investment in menopause-related start-ups has accelerated** with a growing number of clinicians participating in the design of new products or services. Equipping physicians with a greater understanding of menopause positions them better for the development of these products and services and ensures clinicians can guide their patients towards clinically sound, innovative solutions.

Despite this growing clinical and business relevance, menopause education remains limited or absent in many **medical school and residency curricula**. This **educational gap** leads to:

- Lower patient satisfaction;
- Higher healthcare system costs;
- Suboptimal care, including missed diagnoses;
- Missed innovation; and
- Reduced economic output.

While a woman cannot die from menopause, it can **lead to a variety of conditions** that cause suffering, disability, or ill health, including osteoporosis and cardiovascular disease, that, in addition to increasing healthcare costs, can hasten morbidity and mortality. Ensuring that physicians are adequately trained to recognize and manage these conditions in menopausal women therefore represents both an economic priority and a moral imperative.

1.2 Menopause erodes worker productivity

The economic cost associated with menopause is significant. In the U.S. alone, annual costs related to lost productivity, absenteeism, and early departure from the workforce are **estimated to be \$1.8 billion**. Comparable estimates include approximately \$2 billion in the United Kingdom, \$3.3 billion in Canada, and \$9.9 billion in Germany. Importantly, these estimates do not include direct medical costs, which we will consider in Section 3, below, and we expand on workforce implications in Section 6, below.

Costs in the U.S. are lower not because menopause care here is better. Rather it is more difficult to estimate true costs since the country has no publicly funded universal health care system, which would facilitate tracking costs. In an environment where more than half of women aged 19-64 are dependent on employer sponsored health insurance, women are less likely to seek care—or care may not be accessible to them. Adding another barrier to care, women in the U.S. may feel that taking days off work due to menopausal symptoms may not be feasible due to **fears of losing their job and their health coverage**.



The Hidden Economic Cost of Menopause

Annual productivity losses attributed to menopause symptoms

Country	Estimated Annual Cost
 United States	\$1.8B
 United Kingdom	\$2.0B
 Canada	\$3.3B
 Germany	\$9.9B

1.3 Limiting menopause education to specialties is misguided

Currently, education about menopause is limited to certain specialties and often only starts once a student enters internship and residency.

However, as noted above, most clinicians will care for patients who will experience menopause. Physicians in other specialties need exposure to the health challenges that often arise in perimenopause and menopause. Take urinary sepsis, for example, which provides just one illustration of why menopause training and education should be integrated into early medical training:

*Approximately 75% of hip fractures occur in women, mostly postmenopausal women who are at risk for genitourinary syndrome of menopause (GSM) and recurrent urinary tract infections (UTIs). The most common complication of hip fracture surgery is a UTI, with many patients presenting preoperatively with an infection or developing one within 30 days of surgery. Additionally, **urinary sepsis is a significant cause of mortality** following hip fracture repair. While vaginal estrogen can prevent about 40% of UTIs in menopausal women, it won't be rapidly effective postoperatively as it functions by altering the vaginal microbiome over an approximately 6-week period. However, proper education would play a role in the increased use of vaginal estrogen, decreased risk of UTI and fracture and **save the healthcare system billions of dollars** every year.*

Thus, the orthopedic surgeon should know:

- One of the strongest predictors of another fracture is a prior fracture.
- UTIs can cause confusion and trips to the bathroom during the night, leading to an increased risk of fracture.
- GSM **is a significant risk factor** for a urinary tract infection and the subsequent development of urinary sepsis.
- Vaginal estrogen post-surgically is an effective and safe treatment for GSM.
- Initiating vaginal estrogen in this vulnerable population can mitigate the risk of UTIs.

Yet, because many orthopedic surgeons did not receive training or education about menopause, many have no idea about the risk, let alone the treatment. We will revisit this example in Section 3.



Physicians outside of obstetrics and gynecology should also know:

- Menopause can **worsen insulin resistance**.
- For women who already have Type 2 diabetes, worsening glycemic control increases vascular complications.
- Menopause is associated with a higher incidence of various **autoimmune diseases**.
- Premature menopause, before the age of 40, may **increase the probability** of developing Alzheimer's disease.

2.0

Current State of Affairs

2.1 Medical schools do not educate students about menopause

Recent surveys have found there is [a global lack of appropriate education](#) in perimenopause and menopause throughout medical school curricula. Even if students independently look for this information, many will not find it in their study materials. Indeed, one study found that [58% of medical textbooks](#) available worldwide never even mention menopause.

The U. S. is not immune from this deficit. In a 2022 study of obstetrics and gynecology (OBGYN) program directors, [only 31.3% reported having a menopause curriculum in their program](#). That gap was present even though 92.9% of the participants agreed residents nationwide should have access to a standardized menopause curriculum.

A separate study of 20 U.S. residency programs found [only 6.8% of physicians](#) in family medicine, internal medicine, and OBGYN reported feeling prepared to treat menopause after residency.

Shockingly, 20.3% of respondents stated they had received no lectures on menopause at all during their residency training.

This marginalization sends the implicit message that menopause is irrelevant even within OBGYN practice and even though menopause affects every organ system and intersects with every discipline in medicine from cardiology and dermatology to urology, orthopedics, and others. Some countries are doing something about this deficit. The European Menopause and Andropause Society (EMAS) released [a position statement](#) in 2022 recommending a menopause curriculum for all healthcare professionals worldwide, as one example.

It is time for the U.S. medical educational institutions to do the same.



2.2 What we risk by not teaching students about menopause

Understanding the physiology and management of perimenopause and menopause is crucial for young physicians. Without proper training, clinicians may mis-evaluate menopause symptoms, under-appreciate the long-term risks (e.g., cardiovascular disease, osteoporosis) linked to menopause, and fail to provide appropriate interventions. Polypharmacy, increased healthcare utilization, and unnecessary diagnostics or specialist referral also could occur. There is another danger when physicians are not adequately trained: the perpetuation of medical myths.

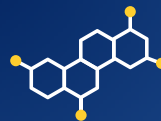
In 2002, the Women's Health Initiative (WHI) hormone therapy trial is a prime example. The study was terminated early because preliminary results suggested that combined hormone therapy (estrogen plus progestin) significantly increased breast cancer risk. These findings were later found to be flawed, but the damage was already done:

- The media response was swift and dramatic, prompting many physicians to abandon hormone therapy. Over the next two decades, hormone therapy was stigmatized, and menopause management fell off the radar in clinical education.
- Black box warnings appeared on products including vaginal estrogen even though this treatment was known to be safe for nearly all women.
- Physicians who were better equipped to recognize that these findings were grossly misinterpreted struggled to convince patients of the benefits of hormone therapy and the actual risks such treatment would pose. The rest could not counter the myth.
- **Use dropped dramatically**, from approximately 27% to less than 5% of menopausal women.

As a result, healthcare spending increased. In one study of the 6- and 12-month changes in healthcare costs, a **three-fold reduction in overall costs** was seen in women treated with conjugated estrogens. Finally, the persistent misunderstanding also created **a generation of clinicians** hesitant to prescribe—and patients hesitant to ask—about individualized hormone therapy despite current guidelines supporting it.

This mistake may have led to thousands, if not tens of thousands, of **premature deaths** in menopausal women.

The fallout from this single, large yet misinterpreted study underscores why we must prioritize robust, evidence-based menopause education. When physicians are not trained accurately, when the media circulates outdated or fear-based narratives, then women themselves begin to misunderstand what is happening to them during menopause. Without trustworthy, evidence-based guidance from their providers, many women enter this life stage confused and isolated. In many cases turning toward unproven alternative treatments that at best may not help. At worst, that may do harm.



**Hormone therapy use
dropped by more than
80% following the
misinterpretation of
the 2002 WHI study.**

3.0 Summary of the Effect of Menopause by System and the Direct Financial Implications

3.1 How menopause affects women

The symptoms of menopause generally begin between the ages of 45 and 55, with **80–96% of women** reporting mild to severe physical and physiological symptoms. The most common symptoms are vasomotor including palpitations, migraines, and what are commonly known as “hot flashes,” which **affect an estimated 80% of women**. Sleep disturbance is also reported in **as many as half of women** aged 45–64. Additional nonspecific symptoms include impairments in cognitive performance, “brain fog,” headaches, sexual dysfunction, mood swings, irritability, depression, and anxiety. Greater than 70% of women will also experience the **musculoskeletal syndrome of menopause**, a term recently coined to capture the joint pain, loss of muscle mass and progressive osteoarthritis associated with menopause.

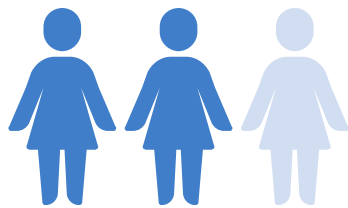
When physicians lack an understanding of the constellation of issues women experience during menopause, women **may not seek care**, or may turn to over-the-counter supplements and alternative treatments that have both economic and opportunity costs. Out of pocket spending on self-treatment of menopause related symptoms **can reach \$100 per month** or more. Importantly, delaying care allows manageable health adjustments to transition into irreversible, chronic medical conditions.

The onset of perimenopause and menopause overlaps with increased risk for other serious medical conditions, including:

Heart health and stroke. Cardiovascular disease (CVD), including coronary heart disease and stroke, **account for 35% of deaths** in women. Contributing to this significant mortality is a delay in recognition of symptoms and a misperception that “women don’t have heart attacks.” In fact, women are **seven times more likely** to be misdiagnosed or discharged home during a serious cardiac event and **50% more likely to die in the following year**. The decline in estrogen during the menopause transition is considered an **independent risk factor for CVD**, as it accelerates vascular aging and this same process increases the risk of stroke.

The majority of strokes in women occur at **a later age and with a worse prognosis** than in men. Menopause-related elevations in arterial blood pressure are due to **the loss of estrogen** and its vasodilatory effects. This increase means that the **risk of stroke doubles** in the 10 years following the onset of menopause. A lack of education about sex-related differences in preventative measures create a missed opportunity. Even more critical, **women are more likely to be misdiagnosed and mismanaged** because of differences in their presentation and associated symptoms.

Brain and central nervous system health. Women are at higher risk for dementia than men. As the neuroprotective effects of estrogen are lost, vascular-related cognitive disorders such as Alzheimer's disease present with greater frequency than in men. In fact, **two thirds of Alzheimer's patients are women** and surgically induced menopause (through ovary removal) is associated with an increased risk of dementia. Better awareness of this risk means earlier diagnosis and the potential for treatment or clinical trial enrollment.



2 out of 3
Alzheimer's
patients are
women.

Osteopenia/osteoporosis. Despite its prevalence, osteoporosis is one of the most routinely ignored, and highly preventable, consequences of menopause. Estrogen plays a pivotal role in maintaining bone density and its decline during menopause accelerates bone loss. Of those in the U.S. with a diagnosis of osteoporosis, **80% are women**. Of the estimated 300,000 hip-fracture related hospitalizations each year in the U.S., **70% occur in women**. Hip fractures **are particularly impactful**, with 80% of patients unable to perform routine activities and over half requiring nursing home care. Importantly, hip fracture in older women **increases the risk of death**, particularly within the first year following injury.

Many physicians are unlikely aware that a fracture in a woman over the age of 50 that occurs from a low energy injury, such as a minor trip or fall, are, **by definition**, indicative of osteoporosis and require further evaluation. As many as half of all women over the age of 50 will sustain a non-traumatic fracture due to low bone density. Estrogen is the only well-established pharmaceutical intervention to be used as a prophylaxis against osteoporosis and reduce fracture risk.

Many patients and providers are unaware that estrogen is approved by the FDA for the prevention of bone loss. As of 2020, **less than 5% of women** between the ages of 45–64 were prescribed hormone therapy. Therefore, doctors who manage hip fractures should also be aware of interventions to prevent serious, potentially fatal, complications.

Arthritis. Estrogen has anti-inflammatory effects and its decline contributes to the development of menopausal arthritis. **Over 70% of women** will experience musculoskeletal symptoms during the menopausal transition, with nearly a quarter experiencing disabling symptoms. The musculoskeletal syndrome of menopause describes the consequence of estrogen loss in every tissue of the musculoskeletal system. However, this constellation of symptoms **is often unrecognized** and therefore appropriate assessment and management is not provided.

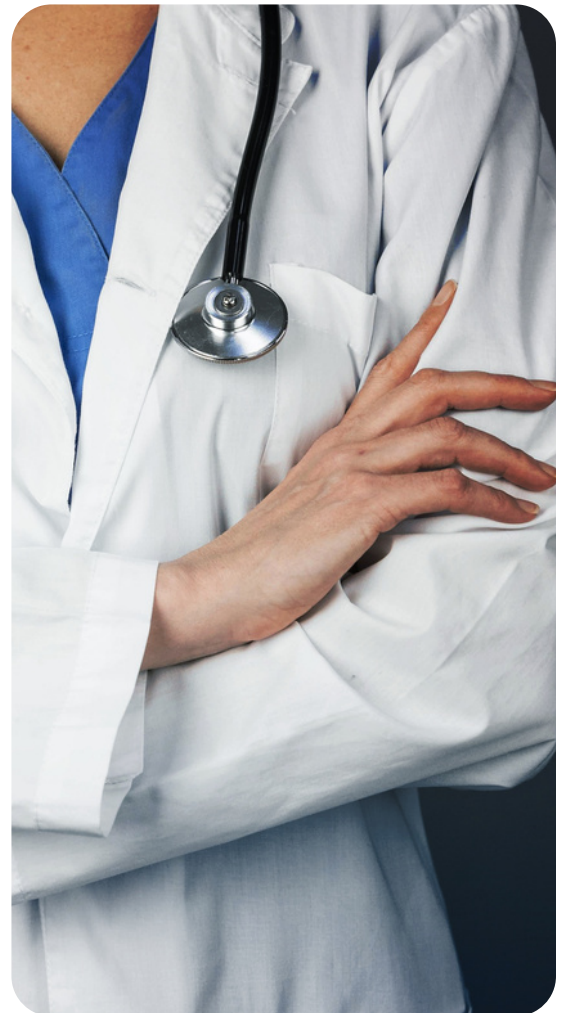
Frailty and sarcopenia. The loss of estrogen contributes to a loss of muscle mass (sarcopenia), worsening mitochondrial function and insulin sensitivity of muscle, meaning **women not only lose muscle** but struggle to build it. The loss of muscle mass, worsening muscle quality, and loss of strength contribute to age-related frailty and the associated burden on the patient, caregivers, and society. Without knowledge of the underlying mechanism of frailty and sex-specific methods of prevention and management, doctors miss an opportunity to increase a woman's years in good health.

Genitourinary syndrome of menopause (GSM). **GSM** refers to a number of symptoms that relate to declining estrogen levels in perimenopausal and menopausal women, including vaginal dryness, irritation, burning, painful intercourse, recurrent urinary tract infections, and urinary incontinence. This condition affects more than half of all menopausal women and can be well managed through a variety of both hormonal and nonhormonal treatments. Yet, without awareness, there is no management.

3.2 Estimated cost burden

A comprehensive analysis of the economic benefit of incorporating menopause-related information into medical school curricula will ultimately require post-implementation data. However, existing evidence on the cost burden of menopause-associated conditions provides a compelling baseline. Menopausal symptoms alone account for an estimated **\$25 billion annually** in direct medical expenses among U.S. women aged 45 to 60, including clinical visits, medications and treatments to manage their side-effects, and diagnostic testing. Beyond symptom management, the downstream health consequences of menopause contribute substantially to national healthcare spending. Cardiovascular disease in post-menopausal women, for example, is projected to exceed **\$200 billion per year**, with lifestyle-related risk factors continuing to drive increases. Additional domains including stroke, central nervous system disorders, arthritis, frailty, and sarcopenia, and GSM further compound this burden, reflecting a broad and interconnected spectrum of risk that emerges or accelerates during this life stage. To illustrate two well-known examples of this economic impact, we revisit our example from section 1.2, emphasizing where missed prevention in osteoporosis and skeletal health leads to significant clinical and financial strain:

A large analysis of non-traumatic fractures in post-menopausal women attributed an **estimated \$5.1 billion** in 2011 alone to hospitalization costs. Despite the high correlation between osteoporosis and non-traumatic fractures, fewer than 12% of patients had a pre-fracture diagnosis of the condition, revealing a missed opportunity for preventative measures. Costs remain elevated for years following injury, encompassing both direct medical expenditures and indirect costs such as absenteeism and disability. Similarly, GSM is a significant risk factor for recurrent UTIs. An analysis of the cost-savings from the prevention of UTIs suggests that effective management, such as topical estrogen therapy, could lead to a **potential savings in the billions** in Medicare spending by reducing infection rates. Further, older women with UTIs are **at increased risk for falls**, compounding risk for long-term disability. Taken together, these data highlight a substantial and, in many cases, preventable economic burden, underscoring the potential value of earlier recognition, education, and intervention in menopause-related care.



4.0 Economic Implications for Academic Institutions

4.1 Cost of inaction

Institutes that do not respond to the call for better menopause care risk their reputation. To be more specific: Are medical schools willing to be known as institutions that ignore women, but jump at the chance to help men? Consider this anecdote. In 2012, the American Urological Association published [a medical school curriculum](#) on erectile dysfunction, which affects approximately half of U.S. men. In 2022, a review of [menopause medical education](#) suggests that implementation of menopause education in medical schools remains subpar despite the fact that menopause is an inevitable biological transition for all women as they age.

With demand for perimenopause and menopause care growing, it is time to ask: Why have medical schools not yet developed curricula for a condition that affects 100% of women who live long enough to reach it?

4.2 Cost of action

Curriculum development necessitates investment. Faculty time, resource allocation, development of educational materials, and assessment design are essential for any robust educational program. However, by weaving the specific needs of older women across the entire medical school curriculum, costs can be mitigated.

Cooperation between institutions, as well as leveraging internal experts and existing frameworks for curricula, such as the [one produced by EMAS](#), offer schools an opportunity to adopt the necessary resources for little additional expense.

Faculty expertise may be, initially, a limiting resource but tapping into available didactic resources, such as the growing availability of menopause-related educational materials, is a short-term investment with long-term benefit.

Schools also can incorporate curricula without burdening medical students. Integrating material specific to menopause is just that: integration. There is no need to add to class loads if materials can be interlaced into existing classwork.

4.3 Returns on investment

There are obvious returns, both tangible and intangible, for medical schools that choose to incorporate specific considerations for menopausal patients into their program, including improved student competency scores, better patient outcomes, and a school's overall rise in academic rankings. (*Reputation is an important factor for institutions looking to attract the best and brightest of the next generation of physicians.*)

Medical schools that integrate menopause training also may generate funding opportunities from public and private sources. The [recent award of \\$5M](#) to The Menopause Society for advancement of digital training tools for physicians is a prime example.

Finally, medical schools that integrate menopause training will be helping their communities, patients, and the overall economy.

5.0 Economic Implications for the Broader Healthcare System

5.1 Preventative and early management effects

Closing the medical school training gap triggers a cascade of financial and systemic relief: Education directly enables earlier recognition, ensuring that women receive appropriate, timely management that reduces long-term downstream morbidity and eliminates billions in avoidable healthcare spending.

When comparing healthcare costs between postmenopausal women over 45 who were prescribed estrogen therapy versus those who were not, despite having vasomotor symptoms, substantial cost savings were seen for both total costs (three-fold) and inpatient costs (fifty-fold) for those treated with estrogen.

When physicians are equipped to better recognize the health effects of menopause, patients will see lower costs and fewer subsequent complications, including:

- **Increased uptake of cost-effective therapies (e.g., hormone replacement therapy when appropriate); and**
- **Improved adherence to clinical practice guidelines that lead to lower hospitalization rates and chronic disease burden.**

5.2 Reducing diagnostic spending waste and inappropriate prescribing

An actuarial review of insurance costs found that a lack of appropriate menopausal care results in significant waste of healthcare dollars as women seek out specialty visits and tests across multiple providers. In actual numbers, their report identified over \$4600 in wasteful spending per patient per year.

Physicians who better understand the signs and symptoms of menopause are less likely to order unnecessary tests and inappropriate medications, reducing direct costs and improving patient safety.

5.3 Enhancing efficiency across specialties

Improved menopause training will improve care across specialties:

- ✓ In primary care, we expect to see better triage, fewer unnecessary referrals.
- ✓ In OBGYN, we expect to see streamlined care protocols.
- ✓ In endocrinology and geriatrics, we expect reduced fragmentation of care.
- ✓ In orthopedics, we expect fewer osteoporotic fractures and fewer complications of repair.

6.0 Macroeconomics and Workforce Implication

6.1 Workforce implications

Women in the workforce are fundamentally critical to economic prosperity. Women experiencing the transition to a menopausal state are estimated to **comprise 30% of women in the U.S. labor force**. These women, aged 45–60, often sit at the height of their careers, providing essential leadership, mentoring, and expertise. Yet, the transition from a pre-menopausal to a menopausal state causes symptoms that may interfere with a job. Indeed, it has been estimated that **roughly one in three women**, many of them in senior positions, consider leaving or have left the workforce due to symptoms of menopause.

For women who remain in the workplace, the estimated cost in lost productivity solely due to missed work days was **\$1.8 billion**. However, when accounting for career opportunity costs associated with early retirement, such as missed promotions, and movement into less lucrative positions, **the estimate exceeds \$5.4 billion**.

There are also considerable intangible costs to women leaving the workforce early.

The loss of experienced, talented workforce members is a cost of capital to business. This is not simply just a loss of institutional knowledge and experience, however; women at senior executive levels **improve corporate efficiency**. These are fiduciary consequences to business not in the best interests of their shareholders.



6.2 Broader GDP impact

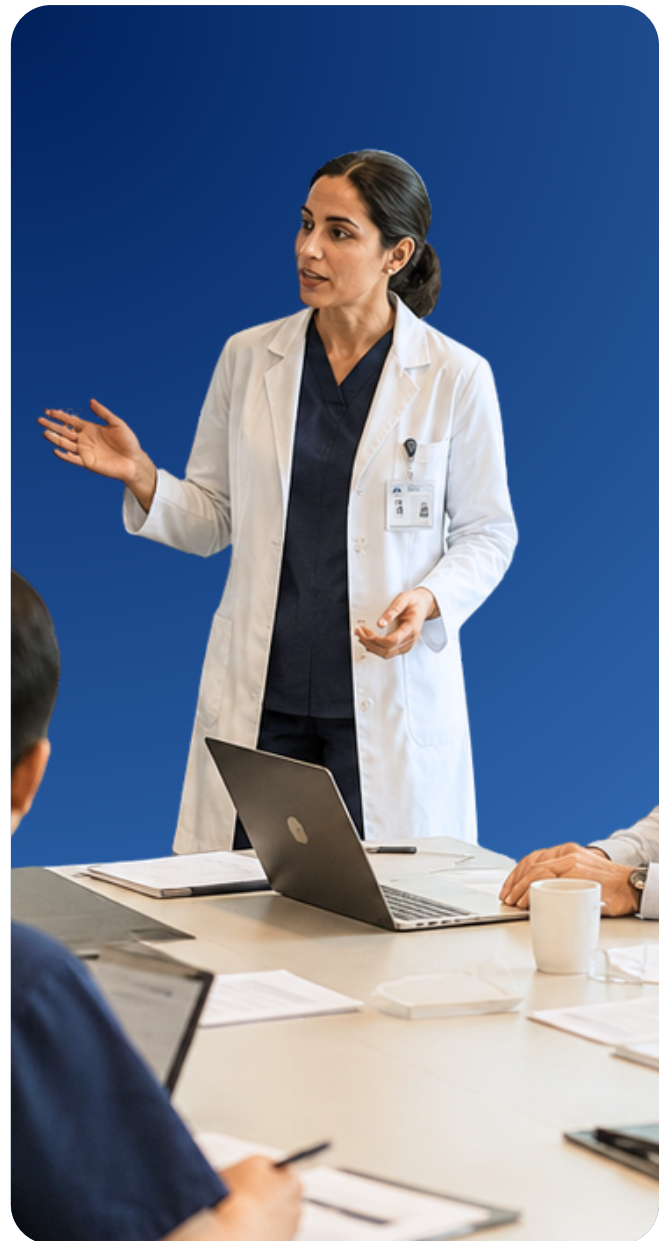
Some estimates place the menopause-related market potential on global GDP at **approximately \$120 billion**, making it one of the top two women's health conditions (next to endometriosis) with respect to economic impact. The impact of menopause on a woman's ability to remain in the workplace and contribute economically is significant. Steps to mitigate the effect of menopause-related disease has a global economic impact.

7.0 Case Studies and Exemplars

While not specifically targeted at medical students, there are an increasing number of academic medical institutions that are creating broad, multi-disciplinary centers focused on women and menopausal health. Notable names such as the Mayo Clinic, New York University Langone Health, UCLA, and Johns Hopkins are among such systems that have recognized the importance of appropriate menopause treatment for women. Increasingly, educational material aimed at providers is being made available; however, these resources require both clinician interest and awareness of a gap in their own learning.

As referenced previously, EMAS released a position statement in 2022 calling for a menopause education curriculum for healthcare providers. It provides an example of a broad curriculum to educate all healthcare providers on the effects of perimenopause and menopause on patients. The impact of the paper is difficult to measure since there remains no standardized curriculum mandated for undergraduate medical training but it does mark recognition of the need for education at the earliest entry point.

Encouragingly, a growing number of companies are providing menopause support to employees. Companies such as Midi, Maven, and Carrot Fertility provide workplace packages for women. Adoption reflects a growing business case for supporting employees through menopause. More than 500 companies, including Amazon, Microsoft, and Morgan Stanley, currently offer Maven menopause-related benefits which include personalized treatment plans and mental health support.



Case Study

A Medical Student's Perspective

As a medical student, limited menopause education has become evident in both the classroom and clinical settings, and I worry these gaps will shape how we approach care later in practice. This issue is not unique to any one institution, but rather reflects a broader pattern in medical education across the country and globally.

The available statistics highlight this trend. A content analysis of Canadian medical schools found that **only 8.6%** of publicly available curriculum documents mentioned women's health alone. It was also reported that there was even less emphasis during clinical clerkships compared to pre-clinical courses. In other studies, resident physicians reported feeling unprepared, with **just 6.8% feeling adequately equipped** to manage women experiencing menopause across internal medicine, family medicine, and obstetrics and gynecology, suggesting that these educational gaps extend beyond medical school.

For many years hormone replacement therapy has been approached with caution shaped in part by evolving evidence and safety concerns. These uncertainties are not abstract. They influence clinical decision making that future physicians will need to navigate. In the aforementioned survey of residents, **34.4% reported they would not offer hormone therapy** to a symptomatic, newly menopausal woman without contraindications – a finding that is perhaps unsurprising given the black box warning that accompanied all estrogen-containing menopause therapies until 2025.

The medical school curriculum includes discussion of menopause's effects on quality of life, bone health, the cardiovascular system, and vasomotor symptoms such as hot flashes. However, medical students are often graduating without the clinical competencies to address these issues effectively.

Medical curricula continue to represent menopause in the context of associated health risks with less emphasis on management and patient centered care.

Meaningful change can happen with dialogue across all levels of the profession. For example, **92.9% of program directors** strongly agree that residents nationwide should be exposed to standardized menopause curriculum and 89.7% would likely use a self-paced curriculum if available. These findings are encouraging, suggesting increased interest and greater recognition of the need for improved menopause training.

Organizations such as The Menopause Society offer certification programs and evidence-based education resources. Through incorporating these options into core medical training menopause education could be accessible to all trainees. Furthermore, the recent removal of the FDA black box warning on estrogen products provides an important opportunity to enhance education on hormone replacement therapy, highlighting the evidence supporting both its efficacy and safety.

I am hopeful that by increasing awareness and building on the foundational knowledge already included in medical school curricula through including an emphasis on evidence-based education on hormone therapy and patient-centered management future physicians can be better prepared to provide comprehensive and confident menopause care.



Mariam Ranginwala

The Ohio State University College of Medicine (2028)

Case Study

A Medical Educator's Perspective

As a pediatrician, a lack of education about menopause and its effect on a woman's overall health and longevity wasn't of tremendous concern. However, as a woman, this gaping hole in my own learning screams loudly. As a medical educator, it seems incredulous that a condition that affects over half the population was often referred to as a "before" and an "after," when the reality is that it is a universal transition that has continuous effects from onset to the end of life.

Menopause education must go beyond the walls of a gynecologist's office. A cardiologist needs to understand the impact of declining estrogen on the risk of cardiovascular disease. A neurologist should be taught about mood changes, cognitive symptoms and sleep disorders associated with menopause. Emergency medicine doctors should be prepared for patients presenting with palpitations, joint pain and worsening anxiety and meet them with both a diagnosis and potential interventions.

Medical education is a unique form of adult education whereby learners need not only new knowledge and skills, but also learn via role modeling and within communities of healthcare providers.

The lack of inclusion of a topic in medical school sends a clear signal to students: it doesn't matter.

That is the wrong message when it comes to a condition that affects half the population and the entirety of that population's well-being.

The beginning of a young physician's training is the foundation upon which specialists are born. From the classroom to the clinic, from textbooks to the bedside, these few years are the only time when future doctors across the entire breadth of medical specialties are learning together. Menopause education is foundational to the knowledge we should expect all our doctors to have, no matter what their specialty. Even in pediatrics, where caring for a newborn baby means also caring for the exhausted, anxious "older mother" who is experiencing a postpartum period complicated by perimenopause.

It's all of our patients in some form or fashion. Which means we must teach it to all of our doctors.



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Conclusion: A High Value, No Risk Investment

Incorporating menopause-specific education across the entirety of the medical school undergraduate curriculum is a low-cost, high-impact intervention that prepares physicians to care for patients. It is not only a moral imperative; it is an economic one.

The negative effects of menopause on our global economy are well documented. Changing how we train doctors and other healthcare professionals is now of paramount importance.

It is possible to mitigate the costs of implementing menopause training into medical school education, and the tangible economic benefits are widespread. They include reduced healthcare expenditures, more efficient patient care, and a stronger, more resilient workforce.

This paper is the combined effort of a variety of stakeholders interested in better healthcare for women. Physicians, future physicians, business leaders, investors, researchers, and educators. This is a call to action for medical education institutions across the nation to embrace these recommendations and work together to create a curriculum that can be developed quickly, with evidence of best practice and standardized learning, assessment and outcome measurements. It is an opportunity for institutions to position themselves as thought leaders in the education and management of mid-life conditions that have broad systemic implications.

