 An audio interview with Cecile Richards is available at NEJM.org

But there is still much to do to ensure that all women have equal access to the full scope of contraceptive methods, and political barriers pose an alarming obstacle. I believe it is imperative that we challenge those seeking to restrict women's health care and develop new ways to continue to expand women's access to all methods of contraception.

Disclosure forms provided by the author are available with the full text of this article at NEJM.org.

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## Menopause Management — Getting Clinical Care Back on Track

JoAnn E. Manson, M.D., Dr.P.H., and Andrew M. Kaunitz, M.D.

By 2020, more than 50 million U.S. women will be older than 51 years of age, the mean age when menopause occurs. During the late stages of the perimenopausal transition, almost three quarters of women report symptoms such as hot flashes or night sweats, and women with moderate-to-severe symptoms often experience them for a decade or longer.<sup>1</sup> Hot flashes often disrupt sleep and may cause mood changes, difficulty concentrating, and impairment of short-term memory.<sup>1,2</sup> Untreated menopausal symptoms are also associated with higher health care costs and loss of work productivity.

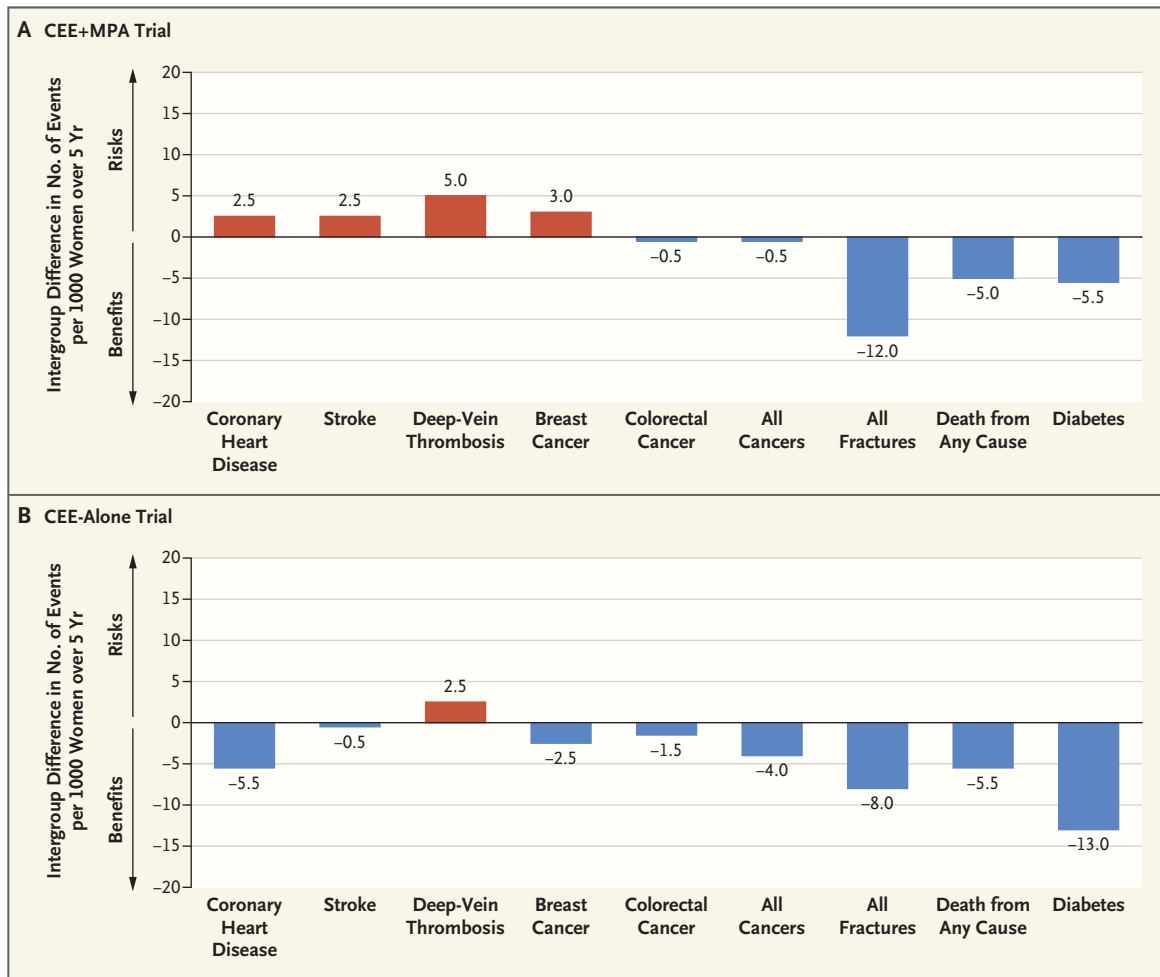
Despite the availability of effective hormonal and nonhormonal treatments for menopausal symptoms, few women with these symptoms are evaluated or treated.<sup>1,2</sup> Leading medical societies devoted to the care of menopausal women agree that systemic hormone therapy is the most effective treatment currently avail-

able for these symptoms and should be recommended for women with moderate-to-severe vasomotor symptoms, in the absence of contraindications.<sup>1,2</sup> Such criteria apply to approximately 20% of women in early menopause, most of whom remain untreated despite having symptoms that adversely affect their daily activities, sleep, and quality of life. For women with contraindications to hormone therapy or a preference for nonhormonal approaches, several effective options are available, including low-dose paroxetine.<sup>1</sup>

The use of systemic hormone therapy has decreased by as much as 80% among U.S. women since the initial findings of the Women's Health Initiative (WHI) were published in 2002.<sup>1,2</sup> Women's decisions regarding such therapy are now surrounded by anxiety and confusion. The WHI trial was designed to address the risks and benefits of long-term use of hormone therapy for the preven-

tion of chronic disease in postmenopausal women who were on average 63 years of age at initiation of therapy (both of us serve as investigators and one of us [J.E.M.] as a Steering Committee member). But its results are now being used inappropriately in making decisions about treatment for women in their 40s and 50s who have distressing vasomotor symptoms. Not only has hormone-therapy prescribing by obstetrician-gynecologists and internists or family physicians decreased substantially, but the new generation of medical graduates and primary care providers often lacks training and core competencies in management of menopausal symptoms and prescribing of hormonal (or nonhormonal) treatments.<sup>2,3</sup>

The gap in provision of appropriate treatment has left an opening for a burgeoning market for untested and unregulated alternative treatments, including custom-compounded hormone products



#### Benefits and Risks of the Two Hormone-Therapy Formulations Evaluated in the Women's Health Initiative.

Results are shown for the two formulations, conjugated equine estrogens (CEE) alone or in combination with medroxyprogesterone acetate (MPA), for women 50 to 59 years of age. Risks and benefits are expressed as the difference in number of events (number in the hormone-therapy group minus the number in the placebo group) per 1000 women over 5 years. Data are from Manson et al.<sup>5</sup>

that are not regulated by the Food and Drug Administration (FDA), which have raised concerns about dose consistency, product contamination, and unsubstantiated safety and efficacy claims.<sup>1,4</sup> Alarming, a recent survey of 3725 postmenopausal women conducted by the North American Menopause Society estimated that 35% of current hormone-therapy users are taking a compounded hormone product.<sup>4</sup> This constellation of circumstances could be harmful to the health of peri- and

post-menopausal women, and these trends may accelerate in the future.

Paradoxically, FDA-approved hormonal treatments for menopausal symptoms are being used so infrequently even though our understanding of their benefits and risks has never been clearer. Few medications are as well studied as hormone therapy, and the balance of its benefits and risks has been well documented in the WHI trials — even for women in their 50s (see graph).<sup>1,5</sup>

We know that the absolute risk of adverse outcomes is much lower in younger women than in older women; the net effect on all-cause mortality in younger women is neutral or even favorable.<sup>1,2,5</sup> In addition, new hormone formulations — including those with lower doses and transdermal routes of delivery, as well as FDA-approved bioidentical hormone regimens — are now available for treatment of menopausal symptoms, as are nonhormonal options including selective sero-

tonin-reuptake inhibitors, norepinephrine-reuptake inhibitors, and gabapentinoids.<sup>1</sup> Nonhormonal options, however, tend to be less effective than hormone therapy.<sup>1</sup>

Professional societies including the North American Menopause Society (for which we served on an advisory board regarding hormone therapy), the American College of Obstetricians and Gynecologists, the Endocrine Society, and others support the use of systemic hormone therapy in symptomatic, recently menopausal women who don't have contraindications, such as an excess risk of breast cancer or cardiovascular disease, and who have a personal preference for such therapy.<sup>1,2</sup> For women in this category who have moderate-to-severe vasomotor symptoms, a consensus has emerged that the benefits of hormone therapy are likely to outweigh the risks.<sup>1,2</sup> Moreover, vulvovaginal atrophy, also known as genitourinary syndrome of menopause, occurs in up to 45% of women in midlife or later, adversely affects physical and sexual health and quality of life, and progresses over the course of menopause.<sup>1</sup> Despite compelling evidence that low-dose vaginal estrogen is an effective and safe treatment, this condition is substantially undertreated.<sup>1</sup>

Physicians become familiar with treatment options for menopausal symptoms through appropriate clinical training. However, most primary care residency programs in the United States don't provide adequate education in women's health in general or in menopause management in particular. For instance, a 2009 survey of 100 U.S. internal medicine residents showed a clear mismatch between trainees' needs

and the clinical curriculum.<sup>3</sup> Although more than three quarters of respondents considered care of menopausal women to be a "very important" area that should be addressed as a core component of their training in internal medicine, half reported a low comfort level managing menopausal symptoms, more than three quarters indicated that training opportunities in this area were limited, and more than one third indicated that they had no clinical experience managing menopausal symptoms in the previous 6 months.<sup>3</sup> Comfort with menopause management and other

line risk of cardiovascular disease and breast cancer, risk stratification and personalized risk assessment and personalized risk assessment may be helpful in decision making. The North American Menopause Society provides a free mobile app called *MenoPro* to facilitate the individualized risk assessment required for counseling menopausal women regarding hormone therapy.<sup>1</sup> This decision-support tool — which has a mode for clinicians and one for patients — also includes nonhormonal options for managing menopausal symptoms and genitourinary syndrome of menopause.<sup>1</sup>

***Most primary care residency programs in the United States don't provide adequate education in women's health in general or in menopause management in particular.***

women's health issues was not found to increase as trainees advanced from junior to senior residents.<sup>3</sup> Our own experience similarly suggests that training in menopause management is often inadequate for primary care and obstetrics–gynecology residents and that many physicians do not feel comfortable providing such care after completing their residency.

Physicians, particularly those who only occasionally discuss treatment of menopausal symptoms with patients, may find it challenging to help symptomatic menopausal women make appropriate decisions regarding treatment. Given the greater safety of hormone therapy and its more favorable benefit–risk ratio among younger menopausal women and among women with a lower base-

Reluctance to treat menopausal symptoms has derailed and fragmented the clinical care of midlife women, creating a large and unnecessary burden of suffering. Clinicians who stay current regarding hormonal and nonhormonal treatments can put menopause management back on track by helping women make informed treatment choices. In addition, we must train and equip the next generation of health care providers with the skills to address the current and future needs of this patient population.

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## Uber's Message for Health Care

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Unreliable service, inconvenience, uncomfortable surroundings, and high prices make customers unhappy, and given the opportunity, they will go elsewhere. Uber, Silicon Valley's response to the shortcomings of urban taxi and limousine services, has managed to upend an established industry by offering an appealing alternative. Uber's technology-enabled incursion into a highly regulated market suggests that if consumers gain enough from a new solution, it can overcome powerfully entrenched economic and political interests. Is U.S. health care ripe for disruption by a medical Uber?

Taxi service was vulnerable to disruption because poor (some would say archaic) service had been established as the norm, in part because it was difficult for higher-quality alternatives to fill the gap. The taxi industry would seem to exhibit the key characteristics of a highly competitive market. It has many sellers, each of which is too small relative to the overall market to affect prices by withholding or expanding its own supply of rides. But in most cities, taxis and limousine services have operated as regulated monopolies for decades. Most jurisdictions, claiming to be shielding suppliers from ruinous

competition that would drive prices below the costs of doing business and protecting consumers from unsafe equipment and untrained drivers, have restricted licenses to specific vehicle owners. Such regulation has limited the supply of cabs (thereby increasing the price above true costs of providing rides, leading to excess profits that economists call "monopoly rents") while requiring the industry to meet prescribed standards.

Since 2009, when it was founded to develop technology to help would-be riders find transportation, Uber has become a rider-driver matching service. Crucially, the drivers did not have to be established, full-time limo or taxi drivers. The company has grown rapidly, spreading to more than 150 U.S. cities and 58 countries, with an estimated valuation of \$62.5 billion.<sup>1-3</sup> This growth came at the expense of Uber's traditional competitors, eroding the earnings of many people who drove taxis and limousines in the regulated part of the sector and driving down the monetary value of their licenses. In Toronto, the average selling price of a "cab plate" fell from \$360,000 in September 2012 to \$153,867 a year later and \$118,235 in 2014.<sup>4</sup> The concurrent increase

in Uber's valuation is a measure of the transfer of monopoly rents to Uber from license holders all over the world.

With so much at stake, license owners and their drivers have fought back, putting enormous political pressure on government officials who had previously protected their monopoly rents. Although Uber has lost some battles, it has won many others and has shown that it will aggressively defend its ability to operate in cities worldwide.

Health care delivery may seem far less vulnerable to disruptive change than taxi services. Any would-be health care disrupter confronts a web of regulations, contractual obligations, interlocking financial interests, and providers' political influence — hospitals are often a congressional district's largest employers. Market power and outright monopoly, often reinforced by insurer and hospital consolidation, licensing, and other regulations, characterize health care provision in many parts of the country and can discourage the entry of new competitors. Furthermore, an alternative service would face a relative price disadvantage if it didn't qualify for health insurance coverage. Strategies for delivering lower-cost alternatives by using non-