UNDERREPRESENTED

Women and people of color are consistently underrepresented in and are not always included in clinical study populations, contributing to concerns about the safety and effectiveness of treatments as they are applied to the general population. In addition, very few studies specify *both* a participant's sex and gender, ***as well as*** their race and/or ethnicity, making it difficult to look at data for women of a specific population unless the study specifically focuses on women of these populations.

Although just over 50% of the U.S. population is female, in an analysis of clinical trials for cancer drug approvals between 2008 and 2018, women represented only

40% **of clinical trial participants.[8]**

Although people who are African American or Black (AA/B) and people who are Hispanic or Latino (H/L) represent 13.4% and 18.5% of the U.S. population, respectively, an analysis of therapeutic clinical cancer trials in the U.S. from 2003 to 2016 found that across several different cancer types, only 5.9% of participants were African American or Black, and only 2.6% were Hispanic.[9]

General Population

13.4% *African American or Black* | **18.5%** *Hispanic or Latino*

Cancer Trial Populations

5.9% *AA/B* — **2.6%** *Hispanic*

36%
of the clinical trial participants for novel cardiometabolic drug approvals between 2008 and 2017 were women.[10]

19%
of samples in genome-wide association studies were of non-European ancestry, according to a 2016 analysis of 2,511 studies.[11]

UNDERREPORTED

Even when studies include women and participants from many racial and ethnic groups, researchers rarely report their results with separate analysis based on sex and race or ethnicity. Without these analyses and data, advances in scientific knowledge of these populations are limited, and crucial insights may be overlooked.[12]

26%
of studies reported results by sex separately.

74%
of studies did not report outcomes by sex, and even fewer did so by race.

A 2018 analysis of NIH-funded clinical trials in 2015 found that only 26% reported at least one outcome by sex or clearly considered sex during analysis; even fewer reported outcomes by race or ethnicity.[12]

ORWH U3 Research Supplement

ORWH's U3 Administrative Supplement Program provides support for scientists from across different disciplines who are conducting preclinical, clinical, behavioral, or translational research addressing health disparities among women from one or more NIH-designated health disparity populations.

U3 Populations (NIH-designated health disparity populations)

- Black or African American
- Hispanic or Latina
- American Indian or Alaska Native
- Asian
- Native Hawaiian/other Pacific Islander
- Socioeconomically disadvantaged
- Underserved rural
- Sexual and gender minority

1. Hero et al., 2017. PMID: 28583961; Woolf & Aron (Eds.), 2013. https://www.ncbi.nlm.nih.gov/books/NBK154469
2. Lathrop, 2020. PMID: 31911097.
3. Geller et al., 2018. PMID: 29053489.
4. Lee et al., 2019. PMID: 31186154; Hoffman et al., 2016. PMID: 27044069; Aggarwal et al., 2018. PMID: 29449443; Zhang et al., 2021. PMID: 33684539.
5. Petersen et al., 2019. PMID: 31073074.
6. DeSantis et al., 2019. PMID: 30762872.
7. James et al., 2017. PMID: 29145359.
8. Mendis et al., 2020. PMID: 32960478; https://www.census.gov/quickfacts/fact/table/US/PST045219
9. Duma et al., 2018. PMID: 29099678.
10. Khan et al., 2020. PMID: 32427023.
11. Popejoy & Fullerton, 2016. PMID: 27734877.
12. Geller et al., 2018. PMID: 29053489.

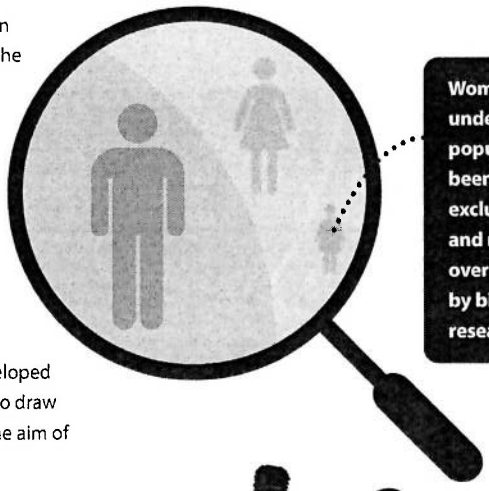
NIH National Institutes of Health
Office of Research on Women's Health

U3 Interdisciplinary Research

Bringing Women of Understudied, Underrepresented, and Underreported Populations into Focus

The United States ranks lower than other high-income countries in terms of health and health care equity.[1] Health care inequities in the U.S. are particularly evident in the disproportionate burden of disease and adverse health outcomes experienced by women of underrepresented racial and ethnic communities, women in economically disadvantaged groups, women who live in rural areas, and women of sexual and gender minority groups. Despite the need for research to understand and reduce these inequities, women of these and other populations remain largely **U**nderstudied, **U**nderrepresented, and **U**nderreported in biomedical research.

The U3 framework and administrative supplement program, developed by the NIH Office of Research on Women's Health (ORWH), seeks to draw attention to and support research that addresses this gap, with the aim of advancing health equity.



Women of underrepresented populations have been historically excluded from and remain often overlooked by biomedical research.

UNDERSTUDIED

Although a growing body of research has demonstrated that women of underserved populations are at greater risk for and experience worse outcomes with certain diseases, few research studies specifically focus on these populations. As a result, much is unknown about the complex drivers and mechanisms that give rise to and sustain these disparities.[2,3]

Women and people of color are undertreated for pain and cardiovascular symptoms.[4]

From 2011 to 2015, rates of maternal deaths were threefold higher for NH Black women compared with NH White women and more than twofold higher for American Indian/ Alaska Native women.[5]

Despite lower incidence rates, death rates for uterine corpus and breast cancers are 98% and 41% higher, respectively, for non-Hispanic (NH) Black women compared with NH White women.[6]

Across many health and care access indicators, rural women face greater health-related quality-of-life challenges.[7]

State CME Licensure Requirements

Below is a list of state medical/osteopathic board regulations on continuing medical education (CME) for licensure re-registration. States that contain no information do not have regulations concerning CME.

CECentral members should verify this information with their state board of medical licensure. See Notes

State	Required CME Per Year(s)		Avg. Hours Per Year	AMA/AOA/ AAFP/ACOG Cat. 1 Hours	Certificates Accepted as Equivalent	State-mandated CME Content/Additional Notes
Alabama	12	1 yr	12	12	ABMS	
Alaska	50	2 yrs	25	50	AMA PRA, ABMS, GME	
Arizona	40	2 yrs	20		AMA PRA, AMA PRA app, ABMS, GME	
Arizona DO	20	1 yr	20	12/yr (AOA 1-A)	AOA, ABMS, GME	12 AOA 1-A credits per year
Arkansas	20	1 yr	20	Not specified	AMA PRA, AOA, GME	
California*	100	4 yrs	25	100	AMA PRA app, ABMS, SMS,	Pain management, geriatric medicine, end-of-life care
California DO*	150	3 yrs	50	60 (AOA 1-A or B)	AOA, AAFP, CMA, CAFP	Pain management, geriatric medicine, end-of-life care; AOA cert. accepted when accompanied by AOA activity registration
Colorado						
Connecticut	50	2yrs	25			Infectious disease, risk management, sexual assault, domestic violence
Delaware	40	2 yrs	20	40	AMA PRA app	
D.C.	50	2yrs	25	50	AMA PRA app, AOA, GME	
Florida*	40	2 yrs	20	40	AMA PRA, GME	HIV/AIDS, domestic violence, TB, end of life palliative care, med error
Florida DO	40	2 yrs	20	20 (AOA Category 1-A)	AMA PRA app, GME	HIV/AIDS, domestic violence, risk management, FL rules/laws, use of controlled substances, 2 hrs prevention of med errors
Georgia	40	2 yrs	20	40	AMA PRA app, GME	
Guam	100	2 yrs	50	25	AMA PRA app, AOA, NSS, ACEP	Ethics (2 credits every 2 years)
Hawaii	40	2 yrs	20	40	AMA PRA, SMS, NSS, GME	
Hawaii DO					AMA PRA, SMS, NSS, GME	
Idaho	40	2 yrs	20	40	AMA PRA, AMA PRA app, AOA, ABMS, GME	
Illinois	150	3 yrs	50	60	AMA PRA, SMS, NSS, GME	SMS, NSS if ACCME-accredited
Indiana						
Iowa*	40	2 yrs	20	40	AMA PRA, ABMS (cert and recert), GME	
Kansas	50	1 yr	50	20	AMA PRA, AMA PRA app, ABMS, SMS, GME	
Kentucky	60	3 yrs	20	30	AMA PRA, AOA, NSS, GME	HB 1 (passed in 2012) requires a minimum of 4.5 hours every licensing cycle for physicians who are authorized

						to prescribe or dispense controlled substances in Kentucky. HB 157 (passed on 2014) requires pediatricians, radiologists, family practitioners, and emergency medicine and urgent care physicians to complete 1 hour of training on abusive head trauma that is approved by the KBML prior to December 31, 2017. Primary care physicians granted licensure after July 1, 1996, are required to complete a 3 hour domestic violence training course within 3 years of the date of initial licensure.
Louisiana	20	1 yr	20	20	AMA PRA	One-time board orientation course
Maine	100	2 yrs	50	40	AMA PRA, AMA PRA app, ABMS, SMS, GME	
Maine DO	100	2 yrs	50	40 (AOA 1-A or B)		
Maryland*	50	2 yrs	25	50	AMA PRA app, ABMS+	+Partial credit for ABMS
Massachusetts	100	2 yrs	50	40 (40 AOA 1-A for DOs)	AMA PRA, AMA PRA app, ABMS, SMS	Study board reqs; risk mgmt.
Michigan	150	3 yrs	50	75	AMA PRA app	75 Category 1 AMA PRA
Michigan DO	150	3 yrs	50	60 (AOA 1-A or B)	ABMS, GME	60 hours Category 1-A or 1-B
Minnesota	75	3 yrs	25	75	AMA PRA, ABMS, MOCOMP	ABMS cert/recert accepted
Mississippi*	40	2 yrs	20	40 (DOs: AOA 1-A)	AMA PRA app, ABMS*, GME	
Missouri*	50	2 yrs	25	50	ABMS, GME	
Montana						
Nebraska	50	2 yrs	25	50	AMA PRA, AOA	
Nevada*	40	2 yrs	20	40	AMA PRA app, GME	Ethics (2 credits), 20 credits in specialty; other 18 hrs can be any in Category 1; 4 credits in WMD/bioterrorism (new applicants only)
Nevada DO*	35	1 yr	35	10 (AOA 1-A)	AMA PRA app, AOA, ABMS	
New Hampshire	150	3 yrs	50	60	AMA PRA, ABMS, GME	Credits reported to NH Med Society; CME reporting cycle changing to 2 years
New Jersey*	100	2 yrs	50	40	GME	Cultural Competence
New Mexico	75	3 yrs	25	75	AMA PRA, ABMS, GME	
New Mexico DO	75	3 yrs	25	75	AMA PRA, ABMS, USMLE	Active membership in AOA may replace 75 hours of CME
New York						
North Carolina	150	3 yrs	50	60		
North Dakota	60	3 yrs	20	60	AMA PRA, AMA PRA app, ABMS, MOCOMP	
Ohio	100	2 yrs	50	40 (DOs: AMA 1-A or B)	AMA PRA app, AOA	All CME must be certified by the OSMA or OOA
Oklahoma	60	3 yrs	20	60	AMA PRA, ABMS, GME+	+50 hours for each year of GME
Oklahoma DO	16	1 yr	16	16 (AOA 1-A or B)		1 credit on prescribing controlled substances (every 2 yrs)

Oregon	7 by 2009					Pain management and end-of-life care, completed by 1/2/09
Pennsylvania	100	2 yrs	50	20	SMS, GME	12 hrs patient safety/risk mgmt
Pennsylvania DO	100	2 yrs	50	20 (AOA 1-A)		12 hrs patient safety/risk mgmt
Puerto Rico	60	3 yrs	20	40	AMA PRA	
Rhode Island	40	2 yrs	20	40	AMA PRA, AMA PRA app, AOA, ABMS, SMS, NSS, GME	2 credits: universal precautions, bioterrorism, end of life, OHSA, ethics, or pain management
South Carolina	40	2 yrs	20	40	ABMS, GME	75% specialty education (30 credits every 2 years)
South Dakota						
Tennessee	40	2 yrs	20	40	AMA PRA	Appropriate prescribing (1 credit every 2 years)
Tennessee DO	40	2 yrs	20	40 (AOA 1-A or 2-A)		Appropriate prescribing (1 credit every 2 years)
Texas	24	1 yr	24	12 (12 AOA 1-A for DOs)	AMA PRA, ABMS, GME	Of 12 Category 1 credits, at least 1 in ethics and/or professional responsibility
Utah MDs and DOs	40	2 yrs	20	40	GME	
Vermont						
Vermont DO	30	2 yrs	15		AMA PRA	At least 12 of 30 hours must be in osteopathic medical education
Virgin Islands	25	1 yr	25	25		
Virginia	60	2 yrs	30	30	AMA PRA app, GME	
Washington	200	4 yrs	50	Not specified	AMA PRA, ABMS, SMS, NSS	
Washington DO*	150	3 yrs	50	60 (AOA 1-A or B)	AMA PRA, AMA PRA app, ABMS, SMS, GME	Also accepted as equivalent: current certification of CME from medical practice academies and original certification or recertification within 6 years by specialty board
West Virginia	50	2 yrs	25	50	AMA PRA	One-time requirement for two credits in end-of-life care, including pain management, and 30 credits related to physician's designated specialty
West Virginia DO	32	2 yrs	16	16 (AOA 1-A or B)		One-time requirement for two credits in end-of-life care, including pain management, and 30 credits related to physician's designated specialty
Wisconsin	30	2 yrs	15	30	AMA PRA	
Wyoming	60 hrs	3 yrs	20	60	AMA PRA, ABMS	

Return to Top

Abbreviations

ABMS—certification or recertification by a member board of the American Board of Medical Specialties
AMA PRA—American Medical Association Physician's Recognition Award
AOA—American Osteopathic Association
AAFP—American Academy of Family Practice
ACOG—American College of Obstetricians and Gynecologists
APA—American Pediatric Association
CMA—California Medical Association
CAFP—California Academy of Family Physicians
CME—Continuing Medical Education
FLEX—Federation Licensing Examination

GME—graduate medical education
MOCOMP—Royal College of Physicians and Surgeons of Canada
OSMA—Ohio State Medical Association
USMLE—United States Medical Licensing Association
Return to Top

State CME Licensure Notes

California MD and DO - All general internists and family physicians who have a patient population of which more than 25% are 65 years of age or older shall complete at least 20 hours of all mandatory continuing education in geriatric medicine or the care of older patients. All physicians and surgeons (except pathologists and radiologists) must complete mandatory continuing education in the subjects of pain management and the treatment of terminally ill and dying patients (one-time requirement of 12 credits). Physicians must complete this requirement by their second license renewal date or within 4 years, whichever comes first.

Florida MD - *First time license renewal:* One hour HIV/AIDS, 2 hours in prevention of medical errors. *Second and subsequent renewals:* Two hours in prevention of medical errors. *Every third renewal:* Forty hours, including 2 hours in prevention of medical errors and 2 hours in domestic violence CME. *Note:* End-of-life care and palliative care can no longer be completed in lieu of HIV/AIDS or domestic violence courses.

Florida DO - *First time license renewal:* One hour HIV/AIDS, risk management, Florida laws and rules, controlled substances; 2 hours domestic violence and prevention of medical errors. Of the remaining required hours, at least 20 must be AOA Category 1-A. *Second and subsequent renewals:* One hour each in risk management, Florida laws and rules, and controlled substances; 2 hours each in domestic violence and prevention of medical errors. *Every third renewal:* 2 hours of domestic violence. *For each license renewal,* of the remaining required hours at least 20 must be AOA Category 1-A; all other hours (including those in the required content categories) can be either *AMA PRA Category 1 Credit*™ or AOA Category 1-A credit.

Continuing medical education with regard to risk management, Florida laws and rules, controlled substances, and the prevention of medical errors must be obtained by completing live, participatory attendance courses.

Iowa - Training for identifying and reporting abuse required every 5 years for EM, FM, IM, FP, OB/GYN, and Psych, and others who regularly provide primary care to children and adults.

Maryland - Partial CME credit is offered for ABMS certification, select peer review, serving as an intervenor or monitor on a physician rehabilitation committee or professional committee, and serving as a preceptor for resident physicians or medical students. For first license renewal, the CME requirement is waived, but the licensee must have completed an approved orientation program.

Mississippi - Initial certification only (not renewal); for DOs, all credit must be AOA 1-A.

Missouri - The CME license renewal requirement can be met by a) completing 50 hours *AMA PRA Category 1 Credits*™, AOA Category 1-A or 2-A credits, or AAFP Prescribed credits; b) completing 40 hours of *AMA PRA Category 1 Credit*™ or AOA Category 1-A credit if each course, seminar, or activity includes a post-test of the material covered in the 40 CME credits; c) specialty board certification or recertification; or d) participating in an ACGME- or AOA-approved internship or residency program during the reporting period if at least 60 days of the reporting period were spent in the internship or residency.

Nevada - Ethics (2 credits), 20 credits in specialty; other 18 credits can be any in Category 1; 4 credits in WMD/Bioterrorism (new applicants only)

New Jersey - The six credits for cultural competence are in addition to the 100-hour requirement for physicians licensed prior to 3/24/05; these credits may be included if licensed after this date.

For newly licensed physicians, the Board requires attendance at an orientation program; no CME is given for this.

Washington MD - The board classifies CME into five different categories. A candidate for relicensure may earn all 200 required hours every 4 years in Category 1; a maximum of 80 hours may be earned in any of the other four categories.

Return to Top

From heart disease to IUDs: How doctors dismiss women's pain

Several studies support the claim that gender bias in medicine routinely leads to a denial of pain relief for female patients for a range of health conditions

By Lindsey Bever (The Washington Post) Dec. 13, 2022

One woman was told she was being "dramatic" when she pleaded for a brain scan after suffering months of headaches and pounding in her ears. It turned out she had a brain tumor.

Another was ignored as she cried out in pain during a 33-hour labor. She was supposed to be getting pain medication through her epidural, but it had fallen out.

Dozens of women complained of torturous pain as their vaginal walls were punctured during an egg retrieval process. They were told their pain was normal, but, in actuality, they were getting saline instead of anesthesia.

These are just some of the stories of women who say their pain and suffering has been dismissed or misdiagnosed by doctors. Although these are anecdotal reports, a number of studies support the claim that women in pain often are not taken as seriously as men. This year, the Journal of the American Heart Association reported that women who visited emergency departments with chest pain waited 29 percent longer than men to be evaluated for possible heart attacks.

An analysis of 981 emergency room visits showed that women with acute abdominal pain were up to 25 percent less likely than their male counterparts to be treated with powerful opioid painkillers.

Another study showed that middle-aged women with chest pain and other symptoms of heart disease were twice as likely to be diagnosed with a mental illness compared with men who had the same symptoms.

"I was told I knew too much, that I was working too hard, that I was stressed out, that I was anxious," said Ilene Ruhoy, a 53-year-old neurologist from Seattle, who had head pain and pounding in her ears.

Despite having a medical degree, Ruhoy said she struggled to get doctors to order a brain scan. By the time she got it in 2015, a tennis ball-sized tumor was pushing her brain to one side. She needed surgery, but first, she rushed home, hugged her 11-year-old daughter and wrote her a letter to tell her goodbye.

Ruhoy did not die on the operating table, but her tumor had grown so large it could not be entirely removed. Now, she has several smaller tumors that require radiation treatment.

She said many of her female patients have had experiences similar to hers. "They're not validated with regards to their concerns; they're gaslit; they're not understood," she said. "They feel like no one is listening to them."

Doubts about women's pain can affect treatment for a wide range of health issues, including heart problems, stroke, reproductive health, chronic illnesses, adolescent pain and physical pain, among other things, studies show.

Research also suggests that women are more sensitive to pain than men and are more likely to express it, so their pain is often seen as an overreaction rather than a reality, said Roger Fillingim, director of the Pain Research and Intervention Center of Excellence at the University of Florida.

Fillingim, who co-wrote a review article on sex differences in pain, said there are many possible explanations, including hormones, genetics and even social factors such as gender roles.

Regardless, he said, "you treat the pain that the patient has, not the pain that you think the patient should have."

Women say reproductive health complaints are commonly ignored

Women often cite pain bias around areas of reproductive health, including endometriosis, labor pain and insertion of an intrauterine device, or IUD.

When Molly Hill made an appointment at a Connecticut clinic in 2017 to get an IUD, she said she was warned it would be uncomfortable, but she was not prepared for "horrific" pain. Hill, now 27 and living in San Francisco, recalled that during the procedure, she began crying in pain and shouted at the doctor to stop.

"We're almost done," she said the doctor told her and continued the procedure.
"It was full-body, electrifying, knife-stabbing pain," she said. After it was done, she said she lay sobbing on the table in physical and emotional pain. "It felt violating, too, to have that pain that deep in your core where you feel the most vulnerable."

Studies consistently show that women who have not experienced vaginal birth have much higher pain during IUD insertion compared with women who have given birth. A Swedish study found that among 224 women who had not given birth, 89 percent reported moderate or severe pain. One in six of the women said the pain was severe.
Although numbing agents and local anesthetics are available, they are rarely used.
In some cases, women have sued physicians for ignoring their pain. Dozens of women sued Yale University claiming that during an egg harvesting procedure at its infertility clinic, they were supposed to be receiving the powerful painkiller fentanyl. But some women were getting only diluted pain medication or none at all, according to lawsuits filed in the state Superior Court in Connecticut.

Later, the clinic discovered a nurse had been stealing vials of fentanyl and replacing the painkiller with saline solution. The nurse pleaded guilty last year and was sentenced for tampering with the drugs.

One of the plaintiffs, Laura Czar, wrote about her experience for Elle magazine, describing it as "a horrible, gut-wrenching pain," and told a doctor at the time, "I can feel everything you're doing." Despite her protests, the doctor continued.

Yale said in a statement that it "deeply regrets" the women's distress and has "reviewed its procedures and made changes to further oversight of pain control and controlled substances."

Racial disparities in pain management

For Sharee Turpin, the pain of sickle-cell disease sometimes feels like tiny knives slicing her open. Sickle cell disease is an inherited blood disorder that can cause suffering so severe, its attacks are called "pain crises."

But when Turpin, who is Black, experiences a pain crisis, the 34-year-old does not rush to the ER in Rochester, N.Y. Instead, she combs her hair, mists some perfume and slips on her "Sunday best" in hopes that the doctors and nurses won't peg her as a drug seeker, she said.

Sometimes, Turpin gets a care team that understands her pain. Other times, she is treated as a bother. "I've even been told 'shut up' by a nurse because I was screaming too loud while I was in pain," she said.

Abundant research shows racial bias in pain treatment. A 2016 study found half of white medical students and residents held at least one false belief about biological differences between Blacks and Whites, and were more likely to underestimate Black patients' pain. "The management of pain is one of the largest disparities that we see between Black people and White people in the American health-care system," said Tina Sacks, an associate professor at the University of California at Berkeley and author of "Invisible Visits: Black Middle-Class Women in the American Healthcare System."

Labeling women "hysterical" or blaming psychological causes

Research shows men in chronic pain tend to be regarded as "stoic" while women are more likely to be considered "emotional" and "hysterical" and accused of "fabricating the pain."

Carol Klay, a 68-year-old from Tampa, had endured years of chronic pain from arthritis, degenerative disk disease and spinal stenosis. During a hospital stay last year, her doctor noted in her medical record that she was crying "hysterically."

Klay said she was crying because she was unable to sit, stand or walk without agony, and the doctor had removed morphine from her cocktail of pain medications. She wonders whether the doctor "would have called me hysterical if I was a man," she said. Tampa General Hospital said it could not discuss specific patients, but stated: "Patient treatment plans, including medication orders to reduce pain, are prescribed by multi-disciplinary clinical teams."

Research shows women's physical pain is also often attributed to psychological causes. Jan Maderios, a 72-year-old Air Force veteran from Chipley, Fla., said the trauma of having pain dismissed by doctors has stayed with her for years. She saw about a dozen doctors in the early 1970s for pelvic pain. When clinicians could not identify the cause of her pain, she was referred to a psychiatrist.

"You start to doubt yourself after so many medical experts tell you there's nothing wrong with you," she said.

After a hysterectomy in 1976, Maderios learned that fibroid tumors in her uterus had been the source of her pain. She said learning her pain was real — and physical — "made all the difference in the world."

Why women's pain complaints often aren't taken seriously

During a 33-hour labor with her first child in 2011, Anushay Hossain, 42, of D.C., opted for epidural pain relief but said she still felt it all — every contraction, every cramp and every dismissal of her pain by her medical team. The doctor reassured her that she was getting the maximum dosage of pain medication.

In fact, she wasn't getting any at all. She said her epidural had slipped out. By the time the error was caught, she was shaking uncontrollably and in need of an emergency Caesarean section, she said.

"There's a pain gap, but there's also a credibility gap," said Hossain, author of "The Pain Gap: How Sexism and Racism in Healthcare Kill Women." "Women are not believed about their bodies — period."

This pain gap may stem, in part, from the fact that women have historically been excluded from medical research. It wasn't until 2016 that the National Institutes of Health (NIH) required sex to be considered as a biological variable in most studies it funded.

"We're making progress," said David Thomas, special adviser to the director of NIH's Office of Research on Women's Health. "But we do have a long way to go because there's this whole institutional approach to doing research — pain and beyond — where it tends to be male-focused."

Nearly 95 percent of U.S. medical school students said instruction on sex and gender differences in medicine should be included in curriculums, according to a 2015 survey. But only 43 percent said their curriculum had helped them understand those differences and only 34.5 percent said they felt prepared to manage them in a health-care setting.
"It is changing, but it's changing very slowly," said Janice Werbinski, immediate past president of the American Medical Women's Association and chair of the mentorship committee of the association's Sex and Gender Health Collaborative.

How women can advocate for better pain care

It took decades to solve the mystery of Maureen Woods's chronic pain. Woods, 64, of Myersville, Md., started having joint pain in her teens and, over the years, told dozens of doctors her pain was "debilitating," she said. Some told her it was all in her head. In 2017, she was diagnosed with hypermobile Ehlers-Danlos syndrome, a connective tissue disorder often causing loose joints, dislocations and chronic pain.
She said women who are not being heard should keep advocating for themselves. "You have to go with your gut — something is wrong and I need to find a doctor who can figure it out," she said.

Marjorie Jenkins, dean of the University of South Carolina School of Medicine Greenville, urged women against feeling pressured to accept an "everything is normal" non-diagnosis.

"If your provider does not appear to be listening to you or believing what you're saying, then you need a new provider," Jenkins said. "You are the client, you are the customer and you are the owner of your health."

Women can also take a family member, friend or other support person who can corroborate their stories, said Alyson McGregor, an emergency medicine professor at the University of South Carolina School of Medicine Greenville and author of the book "Sex Matters: How Male-Centric Medicine Endangers Women's Health and What We Can Do About It."

Particularly in emergency departments, she said, there can be an inherent bias. "There's this assumption that women are emotional and they're anxious and that that's the main issue," she said.