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The future of health is female:
The impact of women+ health on our society



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Women as the bedrock of our society

Women are the bedrock of our economy and communities, but we must repair the cracks in the foundation to ensure their future prosperity. For more than two decades, the world has recognized that women's rights are human rights. It's a sentiment that also applies to health care because women+ health is community health. Leaders who prioritize women+ health can accelerate future economic growth and health equity progress:



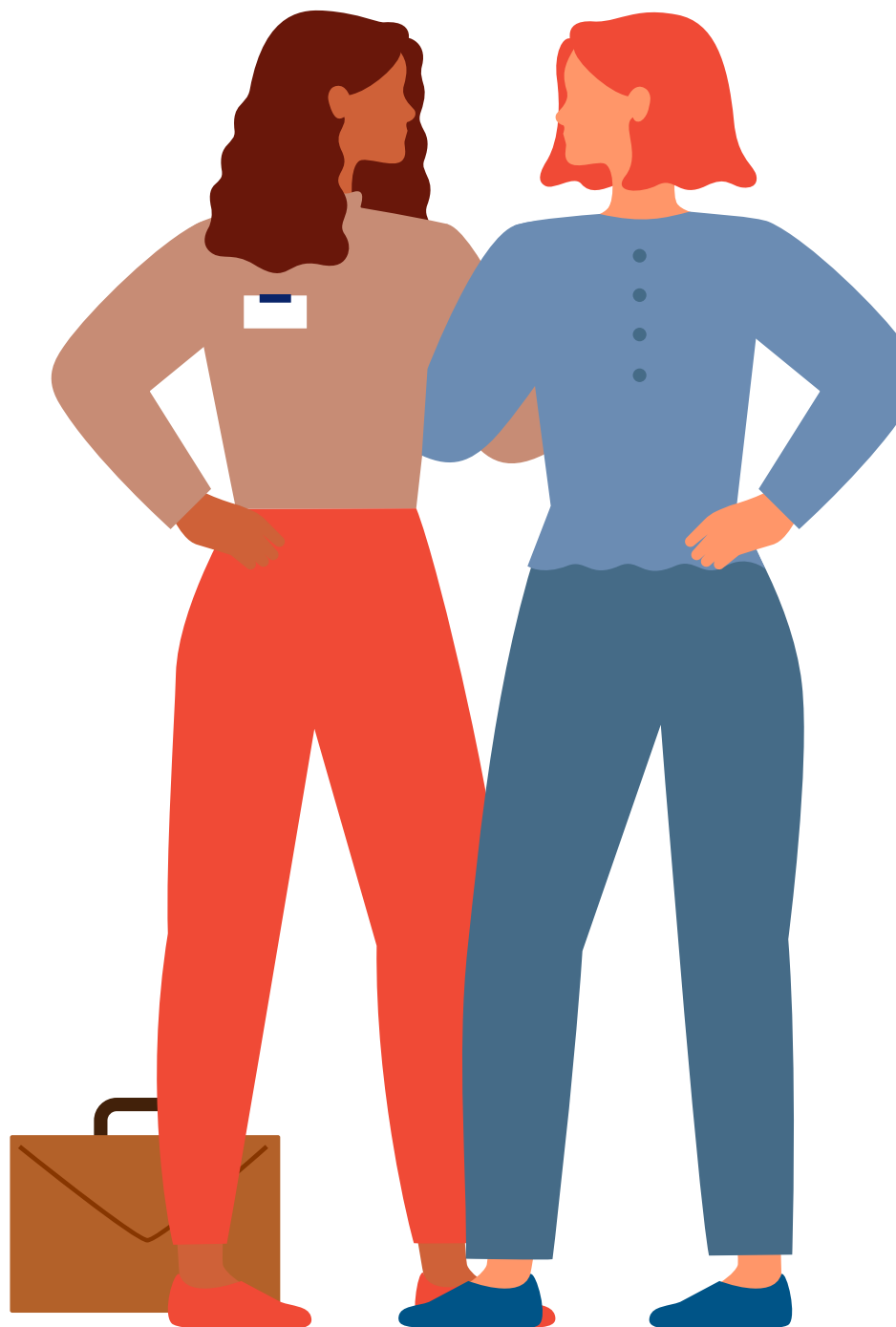
Women are America's most powerful consumers. Their rise in educational attainment, coupled with increased participation in the labor force, has propelled women to the forefront of the US economy. Today, they drive 70% to 80% of all consumer purchasing decisions across industries.⁹ And health care is no exception: women make 80% of household health care spending decisions in the United States.¹⁰



Women play an indispensable role in the workforce. Women make up nearly 60% of the paid US workforce and 65% of the unpaid workforce of caregivers for children and other family members.^{11,12} Keeping women healthy and able to work is paramount for promoting economic stability and prosperity.



Improving women+ health improves overall population health. Given women's central role in their families and communities, women+ health affects more than just them. Women+ health also has a great impact on broader society. Studies show that healthier women and their children contribute to more productive and better-educated communities.¹³ Conversely, when a mother dies, her family and her community experience a significant decline in health, nutrition, education, and economic outcomes.¹⁴ Because of these ripple effects, women+ health is a critical public health issue and should be treated as a priority by leaders across industries.



Persisting gaps and disparities in women+ health

Since women+ health is clearly critical to the well-being and prosperity of our society, why do significant gaps and disparities persist today? Despite comprising more than half of the US population, women represent only 7.8% of CEO positions in S&P 500 companies, 27% of members of Congress, and 36% of physicians in the United States as of 2019.^{15,16,17,18} One bright spot: the percentage of doctors who are female is increasing, as women represent an increasing proportion of future physicians; in 2019, they comprised 50.5% of all medical school students.¹⁹

These trends persist across industries, companies, and communities. But because there are fewer women in positions of power, many decisions are made in a vacuum, where neither women's unique needs nor potential implications for the broader population are considered.

Perhaps what is less well known is how women have been underdiagnosed, undertreated, and underserved in health care. Still prevalent today, gender bias negatively affects women's experiences interacting with the health care system and receiving effective care. A 2019 study found that one in five women felt that a health care provider had ignored or dismissed their symptoms.²⁰ Another study found that women with abdominal pain in the ER waited longer than men on average to receive pain medication (65 minutes, as compared with 49 minutes for men).²¹

Symptoms specific to women are often already more difficult for providers to recognize, given the historical gender-agnostic approach to medicine.

The presence of gender bias further exacerbates these challenges, resulting in women being less likely to receive the right treatment at the right time and ultimately leading to poorer health outcomes.


Similarly, the historic underrepresentation of women in clinical trials has led to a male-centric understanding of medicine, and the implications continue to





persist today, despite progress. In 1977, the U.S. Food and Drug Administration banned women of childbearing age from participating in drug trials, citing concerns about experimental drugs causing birth defects and monthly fluctuating hormone levels introducing complicating factors in studies. It was not until 1994 that the U.S. National Institutes of Health reversed the policy and mandated that women be included in clinical trials.²² But by that time, much of the damage had already been done. Almost two decades of medical research and pharmaceutical products developed without appropriate testing on women were in the marketplace.


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Even today, women continue to comprise fewer than half of clinical trial participants, and health care and life sciences research continues to be overwhelmingly tailored to the male body. Systemic underrepresentation has had dangerous implications for women+ health, ranging from unanticipated side effects of drugs and incorrect dosing recommendations to underdiagnosis of diseases and more. These severe consequences have been evident across several specific incidents in recent history, including:

 **Incorrect Ambien dosing recommendations:** When the sleeping pill zolpidem (brand name Ambien®) was approved in 1993, female users experienced higher, more dangerous blood levels that put them at greater risk for impaired “sleep” driving the next day.²³ After a series of tragic accidents, the FDA required that manufacturers halve the recommended dose for women, one of the first examples of different, sex-based dosing recommendations for a pharmaceutical drug.²⁴

 **Underdiagnosis of heart disease:** Women still only represent 30% of participants in heart disease clinical trials, limiting our understanding of how new therapies may affect them, particularly given known differences in how heart disease presents in women (resulting in a 50% greater chance of misdiagnosis).^{25,26}

 **Late development of the gender-specific knee:** Even though the first knee replacement was performed in 1968, it was another 40 years before medical device companies began creating a gender-specific knee tailored to the female anatomy.²⁷ The gender-specific knee reflects the femur’s different contour in women versus men. However, limited research since the product was introduced has demonstrated mixed results in terms of significant impact on clinical efficacy and outcomes.²⁸

 **Lower adoption and value from digital health offerings:** While women have increased adoption of digital health tools over time, men continue to report greater usage and value from these tools. Based on Rock Health’s 2020 Consumer Adoption Survey, 35% of women respondents reported previous use of a live video telemedicine call compared with 51% of men respondents, and 36% of women respondents owned a wearable versus 49% of men respondents. Lastly, 66% of women respondents who owned a wearable reported that it helped them achieve their goals compared with 76% of men respondents.²⁹

The health care industry continues to increase female participation in clinical trials and their efforts to better understand women+ health care needs. As part of that process, we can all collectively continue to overturn misconceptions about women+ health and advocate for care rooted in robust, sex-specific research and evidence.

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Top Misconceptions about Women+ Health

Misconception

Reality

1

Women+ health = sexual and reproductive health

Women+ health is inclusive of a woman's complete anatomy—women have a broad set of health care needs (including sexual and reproductive health) which require tailored care offerings

- Despite women+ digital health startups raising \$1.3B in 2021 (as of August), 65% of these investments have focused on fertility, pregnancy, and/or motherhood solutions^{30,31}
- Women present different symptoms for many conditions; for example, women are more likely to present atypical heart attack symptoms that are harder to detect (including nausea or vomiting, dizziness, or no symptoms at all)³²
- Women have different risk factors for many conditions; for example, women are at a higher risk for thyroid disorders because they are often triggered by autoimmune responses (which are more common in women)³³

2

Women tend to live longer, which means they are healthier than men

Despite living longer than men (on average in the U.S.), women suffer higher morbidity rates across several conditions

- Women are twice as likely as men to be diagnosed with depression and anxiety³⁴
- Women's lifetime risk of Alzheimer's disease is twice as high as compared with men (20% versus 10%)³⁵
- At age 65, women are estimated to spend 30% of their remaining years with a disability, compared with 19% for men³⁶

3

Women+ health only affects women

Given women's central role in their families, communities, and the broader economy, women+ health affects broader population health and economic prosperity

- Women play a critical role in our national economy, making up nearly 60% of US workers and 65% of the unpaid workforce of caregivers³⁷
- Studies show that when a mother dies, her family and her community experience a significant decline in health, nutrition, education, and economic outcomes³⁸
- Studies also show that healthier women and their children contribute to more productive and better-educated societies³⁹

4

Race and ethnicity are root causes for health care disparities

Racism and bias, drivers of health (social, economic, environmental factors), and structural flaws in care delivery and financing systems are root causes for health care disparities

- Race is a social and cultural construct that does not predetermine biological differences and outcomes⁴⁰
- Despite having only a slightly lower incidence rate of breast cancer, Black women have a 42% higher mortality rate than white women⁴¹
- Black women have a higher risk of pregnancy-related death (2.5 to 3 times higher than white women), regardless of income or education levels⁴²
- Latinx women are more than twice as likely to die from stomach cancer than non-Hispanic white women⁴³

5

Gender equity has been achieved in the workplace

Women continue to encounter significant challenges in the workplace and comprise a disproportionately small percentage of leadership positions across industries as a result

- Women represent only 7.8% of CEO positions in S&P 500 companies⁴⁴
- Only 27% of members of Congress are women, and fewer than 5% of Supreme Court justices have been women^{45,46}
- Female physicians represent a minority in several medical specialties, including urology (9.5%), pulmonology (12.3%), and orthopedic surgery (5.8%)⁴⁷

Understanding holistic women+ health

To promote future economic prosperity and equity by improving women+ health, leaders must first educate themselves and their organizations about women's unique health needs. Women are not the opposite of men, despite outdated health care research and clinical protocols that suggest otherwise. Instead, they are uniquely different, both anatomically and physiologically.

While some diseases, particularly those related to reproductive organs, are unique to women, many other diseases are different in women than in men, whether they present a difference in risk factors, symptoms, or treatment efficacy. For example, women experience different heart attack symptoms than men.⁴⁸ Often, women will experience nausea and/or shortness of breath that can go unnoticed, given broader health education rooted in typical male symptoms, which frequently involve pain in the chest or left arm.

In contrast, osteoporosis is an example of a condition more prevalent among women because of women's different (and more significant) risk factors, including declining estrogen levels which impact women's bone size and density.⁴⁹

Traditionally, women+ health has been synonymous with obstetrics and gynecology, but the definition must be broadened.

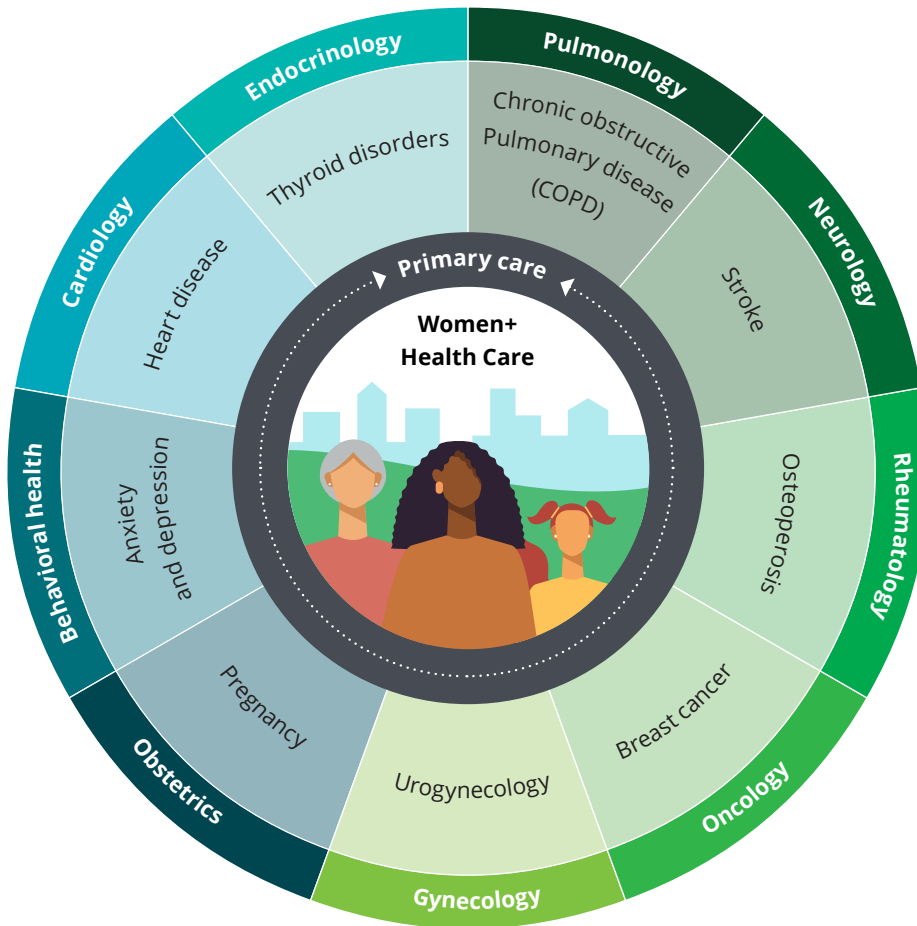
A focus on sexual and reproductive health is necessary but not sufficient—we must broaden our understanding of women+ health to be inclusive of the whole woman, including all of her body parts. Women's complex health needs span across medical disciplines and life stages, and health care offerings should be tailored accordingly to meet these needs.

While it's true that an OB/GYN is an important member of a woman's care team, additional physicians and specialists (including primary care providers) are also critical to provide holistic health care services. Sex-specific research, knowledge, and approaches to treatment are essential to providing effective care for women. To improve women+ health outcomes, leaders should first understand the breadth and complexity of women+ health as a clinical discipline.

A focus on reproductive health is necessary but not sufficient—we must broaden our understanding of women+ health to be inclusive of the whole woman.

Women+ Health Wheel[†]

The Women+ Health Wheel depicts the spectrum of specialties that should be tailored to women and included as a part of a holistic women+ health care offering. Note effective holistic care may be different between women based on their stage of life and their specific social determinants of health.



Outer layer

The outer layer of the wheel depicts medical specialties that can and should be tailored to the unique needs of women.



Middle layer

The middle layer provides examples of conditions that are different in women than in men, including differences in:

- Risk factors
- Symptoms
- Treatment efficacy



Inner layer

The inner layer shows primary care as core to holistic women+ health care. Primary care physicians play a critical role in women's everyday preventative health and chronic disease management, in addition to serving as the "quarterback" for their overall health and directing women to specialists when needed.

[†] Select specialties, conditions, and diseases highlighted are specific to individuals with biological female traits (e.g., female sex organs).

It takes a village: Our call to action

Women+ health is multifaceted and requires a cross-industry, collaborative approach to deliver holistic care. Improving women+ health outcomes begins with increased awareness around a broader definition of women+ health (including common misconceptions that must be addressed) and improving equitable access to care, and then continues with action across industries and functions.

Everyone has a role to play: providers, health plans, clinical leaders, policymakers, employers, entrepreneurs, investors, and community members.

Progress begins with leaders taking action across three key critical areas:

1. The people you hire and promote

Sample activities:

- Dedicate resources to recruit, retain, and empower female professionals across all levels, including professional development and mentorship programs tailored to women.
- Commit to having a diverse executive leadership team and board of directors, including measurable goals around the percentage of female representation on both.
- Require diverse leadership and management teams at the companies with which your organization affiliates, including firm investments and affiliated vendors.

2. The types of offerings you create

Sample activities:

- Create a more expansive portfolio of products and service offerings to address the complexity of women+ health care across all specialties and life stages.
- Build health solutions centered around women's specific needs and preferences, care priorities, and daily behaviors, leveraging human-centered design principles and data analytics.
- Leverage digital health innovations to expand women's access to care across races and ethnicities, ages, and socioeconomic status.

3. The investments you make

Sample activities:

- Advocate for policies aiming to address social determinants of women+ health (including childcare support).
- Allocate funding and resources dedicated to studying women+ health and sex differences in disease progression and treatment, including clinical trial diversity.
- Invest in women+ health companies that offer gender-specific, clinically validated solutions.

Over the past several decades, we have made strides in increasing the number of women in the U.S. workforce and in leadership roles. Now, it is time to change our approach to women+ health with similar fervor. Leaders have a unique opportunity to capitalize on current momentum from the COVID-19 pandemic and change how we define and approach women+ health. These efforts are critical not only to improve the health of women, but also, ultimately, to create healthier and more productive communities.



Endnotes

1. Jasmine DeSilva, Adriana Krasniansky, et al., "[Building comprehensive women+ digital health: Eight sectors serving women+ needs](#)," Rock Health, September 27, 2021.
2. Asif Dhar and Kulleni Gebreyes, "[Racism is a public health crisis](#)," Deloitte, September 8, 2020.
3. Brittnei Fredriksen, Usha Ranji, Alina Salganicoff, and Michelle Long, "[Women's Experiences with Health Care During the COVID-19 Pandemic: Findings from the KFF Women's Health Survey](#)," Kaiser Family Foundation Women's Health, March 22, 2021.
4. Jonathan Rothwell and Lydia Saad, "[How Have U.S. Working Women Fared during the Pandemic?](#)" Gallup, March 8, 2021.
5. American Psychological Association, "[One year on: Unhealthy weight gains, increased drinking reported by Americans coping with pandemic stress](#)," March 11, 2021.
6. Janet Foutty, "[The Myths that Undermine Racial Equity at Work](#)," *Harvard Business Review*, June 24, 2021.
7. Sabrina Tavernise, "[The U.S. Birthrate Has Dropped Again. The Pandemic May Be Accelerating the Decline](#)," *New York Times*, May 5, 2021.
8. Kulleni Gebreyes, David Rabinowitz, Nigel Ferguson, and Wendy Gerhardt, "[Mobilizing toward health equity: Action steps for health care organizations](#)," Deloitte Insights, May 26, 2021.
9. Krystle M. Davis, "[20 Facts And Figures To Know When Marketing To Women](#)," *Forbes*, May 13, 2019.
10. US Department of Labor, "[General Facts on Women and Job Based Health](#)."
11. US Census Bureau, "[QuickFacts](#)," 2019.
12. Sean Coffey, "[27 Things You May not Know about Women and Caregiving](#)," Family Caregiver Alliance, 2012.
13. Kristine Husøy Onarheim, Johanne Helene Iversen, and David E. Bloom, "[Economic Benefits of Investing in Women's Health: A Systematic Review](#)," *PLoS ONE* 11, no. 3 (2016).
14. Patricia M. Davidson et al., *The Health of Women and Girls Determines the Health and Well-Being of Our Modern World: A White Paper From the International Council on Women's Health Issues*, *Health Care Women Int.* 32, no. 10 (2011): pp. 870–886.
15. US Census Bureau, "[QuickFacts](#)."
16. Anne Stych, "[Percentage of women CEOs rises during challenging business year](#)," *Bizwomen*, January 4, 2021.
17. Carrie Blazina and Drew Desilver, "[A record number of women are serving in the 117th Congress](#)," Pew Research Center, January 15, 2021.
18. Patrick Boyle, "[Nation's physician workforce evolves: more women, a bit older, and toward different specialties](#)," Association of American Medical Colleges, February 2, 2021.
19. Association of American Medical Colleges, "[The Majority of U.S. Medical Students Are Women, New Data Show](#)," December 9, 2019.
20. Emily Paulsen, "[Recognizing, Addressing Unintended Gender Bias in Patient Care](#)," Duke Health, January 14, 2020.
21. A. Pawlowski, "[The invisible woman? The challenge at the doctor's office every woman needs to know about](#)," *Today*, May 13, 2019.
22. NIH Office of Research on Women's Health, "[History of Women's Participation in Clinical Research](#)."
23. Kai Falkenberg, "[FDA Takes Action on Ambien; Concedes Women at Greater Risk](#)," *Forbes*, January 10, 2013.
24. Katherine A. Liu and Natalie A. Dipietro Mager, "[Women's involvement in clinical trials: historical perspective and future implications](#)," *Pharmacy Practice* 14, no. 1 (2016): pp. 708.

25. American College of Cardiology, "[Cardiovascular Care of Women: Understanding the Disparities](#)," *Cardiology Magazine*, August 14, 2020.
26. Elizabeth Gehrman, "[A Place in the Room](#)," *Harvard Medicine*, 2021.
27. Allison Aubrey, "[Knee Replacements, Designed for Women](#)," *NPR*, August 30, 2007.
28. American Academy of Orthopaedic Surgeons, "[Gender bender: Do gender knee implants provide better outcomes?](#)" *ScienceDaily*, August 19, 2010.
29. Jasmine DeSilva, Adriana Krasniansky, et al., "[Building comprehensive women+ digital health: Eight sectors serving women+ needs](#)," *Rock Health*, September 27, 2021.
30. DeSilva, Krasniansky, et al., "Building comprehensive women+ digital health."
31. Elena Gambon, Chipper Stotz, and Nimerta Sandhu, "[Femtech is expansive—it's time to start treating it as such](#)," *Rock Health*, August 3, 2020.
32. Dr. Lili Barouch, "[Heart Disease: Differences in Men and Women](#)," Johns Hopkins Medicine.
33. Mayo Clinic, "[Hypothyroidism \(underactive thyroid\)](#)," November 19, 2020.
34. Caroline Praderio, "[16 health problems you may need to worry about more if you're a woman](#)," *Insider*, September 19, 2019.
35. Alzheimer's Association, "[Race, Ethnicity and Alzheimer's in America](#)," 2021.
36. Carina Storrs, "[Women live longer, but not as well as men, in their golden years, study finds](#)," *CNN Health*, March 17, 2016.
37. The Commonwealth Fund, "[Transforming Primary Health Care for Women — Part 1: A Framework for Addressing Gaps and Barriers](#)," July 16, 2020.
38. Davidson et al., *The Health of Women and Girls Determines the Health and Well-Being of our Modern World*.
39. Onarheim, Iversen, and Bloom, "Economic Benefits of Investing in Women's Health."
40. American Medical Association, "[New AMA policies recognize race as a social, not biological, construct](#)," November 16, 2020.
41. Gebreyes et al., "Mobilizing toward health equity."
42. Ibid.
43. US Department of Health and Human Services Office of Minority Health, "[Cancer and Hispanic Americans](#)," 2021.
44. Stych, "Percentage of women CEOs rises during challenging business year."
45. Blazina and Desilver, "A record number of women are serving in the 117th Congress."
46. Jessica Campisi and Brandon Griggs, "[Of the 114 Supreme Court justices in US history, all but 6 have been White men](#)," *CNN Politics*, September 26, 2020.
47. Boyle, "Nation's physician workforce evolves."
48. Hanna Gaggin and Andrew Oseran, "[Gender differences in cardiovascular disease: Women are less likely to be prescribed certain heart medications](#)," *Harvard Health Publishing*, October 15, 2020.
49. Praderio, "16 health problems you may need to worry about more if you're a woman."

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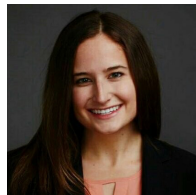
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