

A life-course approach to women's health



We are launching a new Series as a starting point for discussions on how to improve the health of women and girls as part of a route to achieving global health equity.

There are 3.95 billion women in the world – half of humanity – yet women are often treated as a niche or atypical population by the medical community.

When women's health is studied, research all too often focuses exclusively on sexual and reproductive health, despite the fact that the main causes of death for women worldwide are cardiovascular disease and cancer. Sex differences and the key role of sociocultural factors, such as discrimination and unequal power relationships with men, are rarely studied by health researchers, despite their impact on women's health.

The medical research community must re-focus its energies on the health and wellbeing of women (including transgender women and non-binary people), as part of achieving health equity for all. Women make up **two thirds of the global health and social care workforce**, so when women are healthy, the benefits are felt throughout communities, especially by children and young people. This is why we are now launching a new Series on women's health throughout the life course, with a focus on the causes of ill health in women and the barriers to their health and wellbeing in the twenty-first century.

Women experience disease differently than men do, in part because of biology but also because of sociocultural factors, as outlined by Cheryl Carcel and colleagues in the inaugural **Perspective** of the Series. Sex differences in disease are numerous, but they are understudied and poorly characterized. Animal model experiments often use only male mice, and women (especially pregnant women) are regularly under-represented in clinical trials¹. If female biology continues to be ignored by medical research, understanding of sex differences will remain elusive and healthcare will continue to be inequitable.

Diseases that disproportionately affect women, such as anxiety disorders, headaches and migraine, **receive low funding** relative to the burden they exert. Menopause is a complex condition that affects health and wellbeing, but few treatment options exist beyond hormone-replacement therapy. Endometriosis affects more than one in ten women and people assigned female at birth (over 190 million people worldwide), but it is woefully underfunded, having received just \$16 million from the US National Institutes of Health budget in 2022 (ref. 2) – 0.038% of the total. Despite this paucity of funding, some recent advances have helped to improve understanding of the biology of endometriosis³, while new drugs for treating symptoms of menopause⁴ are in clinical trials. This research is welcome, and successes should spur yet more discoveries. A **White House Initiative on Women's Health Research** launched in November 2023 is another step in the right direction.

When women present with symptoms of disease, delays in diagnosis are common⁵. The average time to diagnosis for endometriosis is 7.5 years, and diseases as varied as stroke and tuberculosis are diagnosed more slowly in women than in men. Diagnostic delays are often caused by sociocultural factors. Many women rely on male permission to access healthcare, while others act as carers (usually without pay) for family members, which can lead to women's deprioritizing their own health needs. Women often rely on self-care for their own health needs, most notably for menstrual health⁶ and contraception; such self-care can be effective, but it comes with a cost that is especially problematic for low-income women. A lack of education for millions of girls worldwide, a greater risk of poverty and social isolation than that of men, and the potential or actual experience of physical, sexual or emotional violence present yet more barriers to health-seeking behavior for many women and girls.

Intimate partner violence is strongly gendered and affects the life course of women's health, including an increased lifelong risk

of depression⁷. The risk of violence is especially high for transgender and gender-nonconforming women and women of color, indicative of the importance of an intersectional approach to women's health that examines the impact of race and ethnicity, income, education, sexual orientation and gender identity.

As with all of medicine, research should reflect the priorities and needs of the population. Women are chronically under-represented as health leaders and in the senior scientific workforce. Women must be promoted to more leadership roles – there is no shortage of suitable candidates. Men can and should act as allies by promoting and mentoring women, confronting their own biases and tackling gender-based discrimination, including unequal parental responsibilities⁸.

Action on health equity requires data. Sex and gender data should be routinely collected by health providers and clinical trialists. Journals and publishers must get their own house in order and show leadership, including adopting the SAGER guidelines⁹, which require authors to provide details on how sex and gender data were considered in study design (*Nature Medicine* adopted these in a pilot phase in May 2022).

We hope that this Series will be a starting point for discussions on how to improve the health of women and girls as part of a route to achieving global health equity. We will continue to publish pieces in this Series throughout 2024, and we welcome input from our global readership.

Published online: 19 January 2024

References

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