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Institutional imperatives for the advancement of women in medicine and science through the COVID-19 pandemic



The multiple roles women have in societies, including in medicine and science, mean that many women have faced unique challenges personally and professionally since the start of the COVID-19 pandemic. Worldwide, women undertook 75% of unpaid care work before the pandemic.¹ According to the UN, “the world’s formal economies and the maintenance of our daily lives are built on the invisible and unpaid labour of women and girls”.² As external caregiving resources reduced substantially during the pandemic, the burden of caring for children, older adults, and others fell disproportionately on women. There have also been considerable negative impacts on the labour force. Millions of people lost their jobs, with women, and particularly women from marginalised groups, being most vulnerable.³ For example, a disproportionate number of job losses in the USA were among Black, Latina, and disabled women.⁴ The cost of doing nothing to counteract the impact of the pandemic on women’s employment is estimated to result in a loss of US\$13 trillion for the global economy by 2030.⁵

The pandemic has also had negative impacts on women’s health—eg, intimate partner violence has worsened in many settings,⁶ and there has been a mental health toll, particularly for women engaged in direct patient care and other essential services during the COVID-19 response.⁷ Here we highlight how to combat longer-term negative impacts of the pandemic on women’s career trajectories. Data from North America have shown women physicians are more likely than men to follow clinical guidelines and may have better patient care outcomes.⁸ Despite providing excellent care, women are more likely than men to want to work part time, partly due to competing responsibilities outside of work. In 2016 almost three-quarters of women physicians who participated in a US survey reported working part time or considering it within 6 years of having completed training.⁹ In Japan, women physicians often leave the workforce after childbirth and do not return to work, even years later.¹⁰ With women constituting substantial proportions of the physician workforce worldwide, innovative approaches are needed to ensure their retention, wellbeing, and advancement in medicine.^{11,12} The COVID-19 pandemic has amplified

the importance of ensuring that such innovations embrace an intersectional approach.¹³ Those with more than one marginalised identity, such as Black, Latina, LGBTQIA+, or disabled women, are impacted more by the challenges of gendered expectations, bias, and harassment than are others.

What can institutions do to hire, retain, and promote women in medicine in the pandemic context and for the long term? Mariam Mousa and colleagues’ metasynthesis of organisational interventions to promote gender equity in health-care leadership showed that effective strategies include policy changes such as family leave and flexible schedules, increasing the awareness of the challenges faced by women, formal mentoring networks, targeted leadership development, and measurements of cultural support.¹⁴ Mousa and colleagues concluded that successful efforts require committed leadership alongside monitoring and evaluation over time.¹⁴ Building on these findings and evidence of the impacts of the COVID-19 pandemic on women, we propose four strategies institutions that employ women physicians and medical scientists should pursue.

First, institutions must intentionally implement best practices to recruit, select, retain, and promote women to help them regain career footing lost during the COVID-19 pandemic and improve diversity in leadership positions.¹⁵ Such practices include criterion-based evaluations that set performance priorities and metrics a priori and transparency of role requirements and compensation.

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Unfortunately, the necessarily rapid decisions made during the pandemic might have amplified unconscious bias regarding women's competence or belonging in professional roles and compromised gains towards equity, particularly for minoritised women. Leaders and institutions can create more advancement opportunities for women by dedicating financial and human resources so organisation-wide policies are sustained in the long term, ensuring leaders are committed, incorporating accountability, collecting data, and adopting an intersectional lens.¹⁶

Second, institutions should ensure they provide paid parental leave and resources to support caregiving. Flexible options for work location and timing can be helpful if they are part of a broader approach that recognises the existence of family responsibilities for all employees. The pandemic has illustrated that employment flexibility initiatives can succeed if accompanied by the provision of adequate resources to allow workers to establish necessary boundaries and protect the time and space required for active work participation.⁷ Ready availability of professional caregiving services, generous paid leave policies to allow men and women to participate in family caregiving when necessary, and conscious efforts to destigmatise their use are crucial to facilitate the work participation of women.

Third, academic institutions should ensure that women researchers receive adequate funding to mitigate any longer-term impacts of the COVID-19 pandemic on their contributions to medical science. This support is needed because women have borne a disproportionate share of the burdens imposed by the pandemic, including losses in scholarly productivity¹⁷ and time for research.¹⁸ In addition to offering bridge funding to support researchers whose work was disrupted, institutions can target intramural support for topics more commonly studied by women, such as research on sex-related and gender-related differences in health. Institutions could also develop programmes to fund research support for employees with family caregiving responsibilities.¹⁹

Finally, institutions should more proactively address workplace gender bias and sexual harassment, which have worsened and taken on new forms with virtual work, particularly for non-white women.^{20,21} Institutions need to adopt approaches that go beyond mandatory training. Institutional leaders must explicitly embrace equity and inclusion and back up verbal commitments with aligned

and adequately resourced organisation-wide actions such as those listed above to create an environment in which bias and harassment are at the very least suppressed, if not eliminated. To be effective these efforts will require an intersectional lens. Cultural transformation requires not only allyship from the ground up but also from the top down. Institutions should incorporate equity, diversity, and inclusion metrics into the compensation of leaders to provide further motivation and accountability.

For both patient care and research, teams are stronger when they include women.^{22,23} The leading institutions of the future will be the ones who make the choice now, in this moment of uncertainty, to reverse the pandemic-induced backsliding of women's careers.

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Call for emergency action to limit global temperature increases, restore biodiversity, and protect health



The UN General Assembly in September, 2021, will bring countries together at a critical time for marshalling collective action to tackle the global environmental crisis. They will meet again at the biodiversity summit in Kunming, China, and the UN Climate Change Conference of the Parties (COP26) in Glasgow, UK. Ahead of these pivotal meetings, we—the editors of health journals worldwide—call for urgent action to keep average global temperature increases below 1.5°C, halt the destruction of nature, and protect health.

Health is already being harmed by global temperature increases and the destruction of the natural world, a state of affairs health professionals have been bringing attention to for decades.¹ The science is unequivocal; a global increase of 1.5°C above the pre-industrial average and the continued loss of biodiversity risk catastrophic harm to health that will be impossible to reverse.^{2,3} Despite the world's necessary preoccupation with COVID-19, we cannot wait for the pandemic to pass to rapidly reduce emissions.

Reflecting the severity of the moment, this Comment appears in health journals across the world. We are united in recognising that only fundamental and equitable changes to societies will reverse our current trajectory.

The risks to health of increases above 1.5°C are now well established.² Indeed, no temperature rise is “safe”. In the past 20 years, heat-related mortality among people older than 65 years has increased by more than 50%.⁴ Higher temperatures have brought increased dehydration and

renal function loss, dermatological malignancies, tropical infections, adverse mental health outcomes, pregnancy complications, allergies, and cardiovascular and pulmonary morbidity and mortality.^{5,6} Harms disproportionately affect the most vulnerable, including children, older populations, ethnic minorities, poorer communities, and those with underlying health problems.^{2,4}

Global heating is also contributing to the decline in global yield potential for major crops, falling by 1.8–5.6% since 1981; this, together with the effects of extreme weather and soil depletion, is hampering efforts to reduce undernutrition.⁴ Thriving ecosystems are essential to human health, and the widespread destruction of nature, including habitats and species, is eroding water and food security and increasing the chance of pandemics.^{3,7,8}

The consequences of the environmental crisis fall disproportionately on those countries and communities that have contributed least to the problem and are least able to mitigate the harms. Yet no country, no matter how wealthy, can shield itself from these impacts. Allowing the consequences to fall disproportionately on the most vulnerable will breed more conflict, food insecurity, forced displacement, and zoonotic disease—with severe implications for all countries and communities. As with the COVID-19 pandemic, we are globally as strong as our weakest member.

Rises above 1.5°C increase the chance of reaching tipping points in natural systems that could lock the

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