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We need a broader perspective on innovations to advance a women and health agenda

Although biotech innovations have contributed to improvements in health outcomes, we need more comprehensive health innovation to tackle persistent gender and intersectional equity gaps, argue **Karla Unger Saldaña and colleagues**

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Every year millions of women lose their lives to largely preventable conditions such as cardiovascular disease, complications from pregnancy and childbirth, and cervical cancer.¹ Technological innovations have contributed to improved health outcomes for women, but their impact has been uneven.² Technology development for women's health, also referred to as "femtech," is on the rise but by itself cannot resolve the root causes of women's unmet health needs.³ Transformative progress for women globally demands much more.

Firstly, health innovation needs to be reimagined beyond purely biological or technological solutions to embrace innovations at the sociocultural, health system, and policy levels. Secondly, women's needs and context must be foundational to design and implementation of new health technologies. Thirdly, women's expertise and leadership should be integrated across the innovations ecosystem and technology life cycle, so that women centred health solutions are effective, scalable, and sustainable.

Reimagining innovations through an intersectional approach

Deep rooted patriarchal structures systematically disadvantage women within economic, sociocultural, and political spheres and put their health at risk. These pervasive societal gender hierarchies and dynamics reduce women's power to access health information, to make their own health decisions, and to leverage economic resources for healthcare services use.^{4 5} Additionally, multiple social identities, including ethnicity, gender, sexual orientation, socioeconomic status, and disability, intersect to affect women's experience of systems of social privilege and oppression.⁶ Intersectionality is a framework that recognises how overlapping inequities create synergistic barriers. These impede a person's access to preventive services, delay help seeking behaviours and diagnoses, and reduce access to timely treatments. For example, indigenous women in low income rural areas may encounter gender and racial biases in healthcare services, reduced health literacy, and transportation and socioeconomic barriers to accessing care.⁷

To meaningfully improve health outcomes for women worldwide and close gender and intersectional equity gaps, solutions must encompass sociocultural, financial, policy, and health system innovations. Otherwise, technological innovations risk widening health inequities. Cervical cancer exemplifies this.

Highly effective vaccines and screening tests exist for cervical cancer. However, uptake remains low in countries where they are most needed and among marginalised populations in otherwise well resourced settings because of cultural barriers, affordability, and fragmented care pathways.^{8 9} For example, cervical cancer is the leading cause of cancer morbidity and mortality among women in Africa, yet in 2023, only 60% of the 47 countries in the WHO African region had a national HPV immunisation programme and first dose coverage was less than 60% in these countries.¹⁰ Just 11% of women living in low income countries are estimated to have ever been screened for cervical cancer compared with 84% of women aged 30-49 years in high income countries.¹¹

While mobile applications can help to increase women's access to important health information and improve health outcomes, their success depends on reaching women who need them.¹² Mobile phone ownership is increasing, but male ownership is higher than women's, especially in poor and rural areas.^{5 13} When women do have access to a household mobile phone, health information needs to be crafted in comfortable and confidential ways.¹⁴ The digital divide is bolstered by patriarchal structures. Specific contextual sociocultural norms must be better understood and confronted for digital health technologies to improve health and reduce health inequities.

Including women in design of innovation

Public and patient involvement, including participatory research methods, is increasingly understood to be vital to the success of health innovation and implementation.^{15 16} It is critical that women in all their diversities be involved throughout the innovation cycle in women's health, from problem identification to intervention design, implementation, and evaluation. Their involvement is more likely to result in innovations tailored to meet their needs, increasing the likelihood of adoption and improved health outcomes. Frameworks to guide patient involvement typically map to the health technology innovation stages, highlighting the potential for women's leadership and active collaborative partnerships throughout the process. Practical guidance on how to look beyond the technology to the person, context, and system is emerging. This human and equity centred approach should be actively encouraged and adopted.¹⁷

A key consideration in the human and equity centred approach is who the leaders are in health innovation: whose creativity, whose thoughts, and whose lived experiences are at the core.¹⁸ The historical under-representation of women in engineering, patenting, and leadership roles has fundamentally distorted which innovations are pursued and which reach the market—skewing priorities away from pressing women’s health needs. For example, although women inventors file 35% more patents related to women’s health in the US than men, they comprise a mere 16% of all US patent holders.¹⁸ The health innovation space is dominated by male voices, leading to innovations that may overlook or inadequately meet women’s diverse needs and exclude the different problem solving perspectives that women could bring.¹⁹ When women lack seats at decision making tables, innovations tend to default to “techno fixes” divorced from lived experiences.¹⁸

Re-imagining the quest for women’s health innovation

To close persistent gender and intersectional equity gaps in health outcomes, we must fundamentally reimagine health innovations. We must transcend technology centric models in women’s health innovation and actively advance multilevel solutions. Context, equity, and women’s voices should be at the centre of health innovations design. Additionally, more women should be at the forefront of innovation design and decisions about which innovations get funded. This is not only a matter of equity but critical to ensure that health innovations become a transformative force that advances the health and wellbeing of women in all their diversities.

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