

## Impacts of Digital Health Technologies to Health Equity

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Increasing evidence has risen about the necessity of digital health care technologies for solving critical challenges in the health care systems in low and middle-income countries. Digital health is seen as a promising tool for increasing health equity in a global level, with its potential to extend the coverage and access of health services related to both communicable and non-communicable diseases. Efficacy and cost-effectiveness are at core of the development and implementation of digital health, but important aspects such as health equity and accountability often seem to be overlooked. Without proper implementation and evaluation of digital health programs and solutions unexpected and negative impacts can emerge, further increasing the vulnerabilities of already marginalised groups.

While new health technologies are continuously developed and implemented, their social and ethical impacts have not been properly assessed yet, by neither the industry nor the academia. The present research is a contribution to the EU Horizon 2020 VOGAS and A-patch projects, and it investigates how new point-of-care triage test technologies can affect health equity among different groups of population, especially those whose bodies are marginalised. By point-of-care technologies we mean easy to use, portable and low-cost tests that can be used by first-contact health-care agents for identifying those who are in need of further medical care.

VOGAS is focused on the development of a non-invasive gastric cancer screening tool, and A-Patch is focused on developing non-invasive diagnostics technology for detecting tuberculosis. In addition to both projects being focused on point-of-care technologies, they share a common framework of Responsible Research and Innovation (RRI) that targets at producing socially acceptable solutions that include real value for users and for society, by following the five keys of public engagement, open access, gender, ethics and science education.

Research findings indicate a critical lack of scientific research on the social and ethical impacts of digital health technologies. The present study aims is to delineate and analyse the impacts, both positive and negative, of digital health technologies for increasing health equity, especially concerning the potential risks of such technologies exacerbating existing inequities surrounding public health. In the present study, intersectionality is adopted for the analysis of the relationship and interaction among various determinant factors of health inequity, including: social-economic status, race, ethnicity, gender, sexual orientation, mental illness and disability. The analysis and map of relevant social markers are essential for reaching socially and ethically acceptable outcomes in digital health. These can only be achieved with proper understanding of complex social and geographical contexts, and the proper assessment of the root causes of inequities and marginalisation of certain bodies.

**Key words:** digital health, health equity, intersectionality.

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