

## Health innovation laboratory

An innovation laboratory or lab refers to a physical or virtual space that encourages the creation, development and implementation of novel ideas. An innovation lab can be referred to by many different titles, such as idea lab, innovation centre, creativity lab, makerspace, etc.<sup>[1]</sup> An innovation health lab should utilise a proven scientific approach that focuses on fostering innovation, research and development of new technologies, solutions, and approaches to improve healthcare delivery, patient outcomes, and the overall healthcare ecosystem.<sup>[2]</sup> These labs could serve as incubators for innovative ideas, technologies, and start-ups that aim to transform various aspects of healthcare. A number of institutions have set up such labs in their institutions, such as the Washington University School of Medicine (Healthcare Innovation Lab),<sup>[2]</sup> Public Health Institute (Population Innovation Lab),<sup>[3]</sup> Harvard University (Health Systems Innovation Lab),<sup>[4]</sup> University of Delaware (Health Innovation Lab)<sup>[5]</sup> and Massachusetts Institute of Technology (H-lab),<sup>[6]</sup> to name a few.

The main themes of these innovation labs are research and development, collaboration, prototyping and testing, incubation and acceleration, data analytics, patient-centredness, education and training and community engagement and shared decision-making. For example, the Population Health Innovation Lab (PHIL) of the Public Health Institute<sup>[3]</sup> provides an opportunity to explore new options for innovation to public health similar to change management, through new perspectives on old challenges in Silicon Valley institutions. They work directly with communities in need by moving beyond the symptoms to address the root issues and the systems at the heart of the challenge, by bringing together a wide range of communities, innovators, funders and public health professionals to use new tools and methodologies in new ways. Similarly, the Health Systems Innovation Lab at Harvard University and H-lab in the Massachusetts Institute of Technology are global research and training labs that use research, education, translation and innovation activities to work with students, governments, the private sector, multilateral entities and civil society to promote policy and practice, and accelerate the diffusion of health system innovations. These examples provide good models of innovation labs that have the potential to contribute to and improve patient experience, operational processes and the business model of users, and enable innovative healthcare dynamics for complex health problems. However, there is a need to understand the distinguishing structural and managerial traits of these labs in developing countries for their effective implementation.<sup>[7,8]</sup>

Post-pandemic health systems in South Africa (SA) and other countries in the region have demonstrated a need for fresh thinking to solve the unprecedented complexities and challenges associated with the current global health crisis. The current health system challenges are characterised by their complexity, overlapping risks, mechanisms and treatment, multisystemic nature and broad societal impact. Siloed approaches of thinking and innovation are poorly suited to address these problems. There is a need for transdisciplinary science in these innovation labs that could integrate knowledge, tools and thought strategies from various fields for tackling challenges that exist, and provide a platform for interfacing between multiple fields.

Such innovation labs could play a pivotal role in driving implementation of National Health Insurance (NHI) in SA by fostering creativity, and supporting lateral thinking and the development of solutions that could lead to better patient care, improved healthcare delivery and cost efficiencies within the healthcare system.

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*South Afr J Public Health* 2023;6(3):e1524. <https://doi.org/10.7196/SAJPH.2023.v6i3.1524>