



Editorial

Non-communicable diseases in a time of infection

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Viruses have really grabbed our attention over the last couple of years with COVID-19. Cases, transmission rate, R-number. We've become used to listening to virologists and intensivists talk about their work and a lay person would be forgiven for thinking public health is a specialty that is only focused on stopping infectious diseases.

Despite this focus, non-communicable diseases (NCDs) have not gone away and the WHO predicts a 'long-term upsurge in deaths from NCDs'.¹ That's why we wanted to shine a light on the innovations that are making a difference in combating these diseases. This special collection focuses on those innovations which have the potential to drive improvements across NCDs.

The positive news is that the pandemic forced innovation in many ways. The rise of telehealth was undoubtedly accelerated by the requirements of the pandemic. We look at this in digital health innovations for NCD management during the COVID-19 pandemic: a rapid scoping review² and also a practical example Challenges and opportunities in employing digital health to address self-management needs of people with NCDs in India.³

Lung cancer remains one of the world's major causes of early mortality but we have a very preventable cause—smoking. We invited our colleagues from Tobacco Control (tobaccocontrol.bmj.com) to look at the innovations in this space. While the journal has just celebrated its 30th anniversary the importance of innovation in public health remains. We look at Low-Income and Middle-Income Countries Leading the Way with Tobacco Control Policies⁴ and Innovations that harm: Tobacco product and packaging in low-income and middle-income countries.⁵

In diabetes, the rollout of continuous glucose monitoring is an innovation that has improved patient experience and outcomes for millions of those affected. Partha Kar *et al* from the UK discuss Flash Glucose Monitoring: The story so far and the journey ahead⁶ and the lessons that can be applied to other new technologies in managing NCDs. We also look at the potential for Machine-learning algorithm to non-invasively detect diabetes and pre-diabetes from ECG in an early-stage innovation report.⁷

NCD monitoring in other parts of the world may be limited by the availability of often expensive diagnostic devices and technologies but they still need innovative ideas that fit the local population. A nested feasibility trial 'Padayon'—a new digital health model for Diabetes and Hypertension in rural Philippines shows real insights about what you can do with low-cost digital devices even when offline.⁸

Beyond prevention, new innovations in medical devices are helping to better manage NCDs more effectively, efficiently and safely than before. Design and proof-of-concept evaluation of a touchless connector system for preventing peritoneal dialysis-associated peritonitis looks at the practical learning from development of a low-cost device for cost-constrained economies where dialysis cannot be accessed easily.⁹

In many parts of the world, community health workers are often the most important professional in shaping patient outcomes in health. Arming them with the knowledge they need to keep their population healthy is critical and design and development of a clinical decision support system for community health workers to support early detection and



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management of NCD looks at low-cost digital solutions to do this.¹⁰

Finally, National Institutes of Health Stroke Scale scores obtained using a mobile application compared with the conventional paper form—a randomised controlled validation study looks at the experience of Norway in moving from paper to digital in measuring stroke outcomes.¹¹

There are so many other areas where innovations are helping to reduce the burden of NCD. We hope this special collection highlights a few that will make a difference to both patients' lives and their health outcomes.

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