

Editorial

In the fight against the COVID-19 pandemic, since April 2020, the Health Bureau and the Health and Medical Research Fund have approved a total of HK\$556 million to commission 70 COVID-19-related research studies covering 105 projects. Substantial new knowledge and findings have been generated and have contributed significantly to the fight against the pandemic. In this edition, we present 12 dissemination reports of these commissioned projects. In particular, three projects related to healthcare system response, surveillance, and psychological impact of COVID-19 are highlighted.

In an outbreak of new or emerging infectious disease, for example COVID-19, a system of early detection, assessment, and response (S-EDAR) is essential for control. Yeoh et al¹ conducted an in-depth mixed-methods investigation on how Hong Kong's S-EDAR could be enhanced for control of public health threats across a range of different transmission scenarios to inform future preparedness and response plans. The investigation reviewed COVID-19 pandemic responses among six middle to high income jurisdictions in Asia, conducted interviews and focus groups among key local informants, and gained insights from local and overseas experts. A comprehensive and structured S-EDAR framework was developed, in which 14 domains (including preparedness, readiness, response, and recovery) and 37 major recommendations were presented, enabling preparedness, operational readiness, and timely response for strengthening health system and community resilience for future pandemics.

Surveillance of sewage for evidence of virus genetic material could provide a scalable, cost-effective strategy for measuring population-level infections. Zhang et al² tested for the presence of SARS-CoV-2 RNA in community sewage from

various sites across Hong Kong to provide early warning signals for re-emergence of COVID-19 in local communities and to supplement clinical tests. The sewage test results obtained provided a basis for identifying buildings and places for statutory public health actions to uncover infected patients, assisting the government in implementing timely actions to achieve early identification, isolation, and treatment of infected patients in local communities. The study demonstrated the feasibility and utility of sewage surveillance and lays the foundation for its wider implementation to supplement clinical surveillance.

The psychological impacts of the COVID-19 pandemic and the factors associated with higher risk of developing mental health issues have not been studied extensively. Shum et al³ adopted a mixed-methods approach to examine Hong Kong residents' level of psychological trauma and their behaviours regarding COVID-19 infection prevention. They aimed to determine the sociodemographic correlates of high psychological trauma and poor health behaviours, as well as the underlying reasons for people's choice to adopt or not adopt appropriate preventative measures. Among over 3000 survey respondents, the prevalence of potential post-traumatic stress disorder 1 year after the start of the COVID-19 pandemic was 12.4%. Participants who had lower education, were unemployed, had lower personal income, and spent more time watching news reports of COVID-19 had greater psychological trauma. Personal experiences and social networks influenced vaccination barriers and incentives. Trust and confidence in the vaccine were key determinants of motivation for vaccination. Stigma towards healthcare workers, trust in the government, and cultural perceptions of vaccines affected vaccination decisions.

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References

1. Yeoh EK, Hung CT, Wong ELY, et al. Hong Kong's early detection, assessment, and response system (S-EDAR) for infectious disease outbreak: abridged secondary publication. *Hong Kong Med J* 2025;31(Suppl 4):S4-8.
2. Zhang T, Deng Y, Leung GM, et al. Grid monitoring of SARS-CoV-2 in sewage for early warning of community outbreaks: abridged secondary publication. *Hong Kong Med J* 2025;31(Suppl 4):S20-1.
3. Shum DHK, Cao Y, Siu JYM. Emotions, knowledge, attitudes, and behaviours during the COVID-19 pandemic: a mixed-methods study (abridged secondary publication). *Hong Kong Med J* 2025;31(Suppl 4):S31-3.