

Editorial

Dissemination reports are concise informative reports of health-related research supported by the Health and Medical Research Fund administered by the Food and Health Bureau. In this edition, we present 13 dissemination reports of projects related to genetics, cancer, mental health, reproductive health, renal system, respiratory system, and the eye. In particular, three projects are highlighted due to their potentially significant findings, impact on healthcare delivery and practice, and/or contribution to health policy formulation in Hong Kong.

Balanced chromosomal abnormalities are common genetic variations that are major contributors to human genetic variation. They occur in both healthy and diseased individuals in about one in every 500 (0.2%) newborns. Most cases are not associated with a pathological phenotype, but they have an increased risk of developing multiple congenital abnormalities, autism spectrum disorders or intellectual disability. Chung et al¹ used whole-genome sequencing with paired end sequencing to localise breakpoints of balanced chromosomal abnormalities at the nucleotide level to substantially improve diagnostic resolution, compared with karyotyping and other cytogenetic methods. Understanding gene disruption in this way can guide genetic counselling and allow accurate and personalised disease risk prediction.

Fibrosis and cirrhosis are risk factors for development of hepatitis B virus-related hepatocellular carcinoma (HCC). Liver biopsy is often used to assess liver fibrosis but concerns on its invasiveness and complications limit its use. Wong et al² evaluated the combined use of liver stiffness

measurement based on transient elastography with enhanced liver fibrosis – a non-invasive assessment based on an algorithm of three serum biomarkers – to predict HCC in patients with chronic hepatitis B receiving antiviral treatment. The two-step algorithm could improve accuracy of predicting HCC, which could allow clinicians to better differentiate patients with hepatitis B virus for more specific surveillance, to improve survival and enhance use of resources.

Antenatal depression and postnatal depression affect maternal and infant health and effective interventions to reduce the risk of depression are required. Chan et al³ developed and tested the effectiveness of a mobile application (iParent) to disseminate essential knowledge on pregnancy and infant care to pregnant women and to reduce maternal postnatal depression among 660 pregnant women in Hong Kong. They found that pregnant women who used the app reported significantly lower level of postnatal depression than those who received treatment as usual. The iParent app is a low-cost user-friendly alternative to the traditional resource-consuming antenatal classes.

We hope you will enjoy this selection of research dissemination reports. Electronic copies of these dissemination reports and the corresponding full reports can be downloaded individually from the Research Fund Secretariat website (rfs2.fhb.gov.hk). Researchers interested in the funds administered by the Food and Health Bureau also may visit the website for detailed information about application procedures.

Supplement editor



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References

1. Chung BHY, Kan ASY, Chan KYK, et al. Analytical validity and clinical utility of whole-genome sequencing for cytogenetically balanced chromosomal abnormalities in prenatal diagnosis: abridged secondary publication. *Hong Kong Med J* 2022;28(Suppl 1):S4-7.
2. Wong GLH, Wong VWS. Dynamic change of LSM-HCC score and enhanced liver fibrosis score to predict hepatocellular carcinoma in chronic hepatitis B patients receiving antiviral treatment: abridged secondary publication. *Hong Kong Med J* 2022;28(Suppl 1):S11-3.
3. Chan KL, Leung WC, Tiwari A, Or KL, Ip P. Effectiveness of the iParent app for postnatal depression: a randomised controlled trial (abridged secondary publication). *Hong Kong Med J* 2022;28(Suppl 1):S17-8.