EDITORIAL

We are delighted to bring you a series of dissemination reports of research projects supported by the *Research Fund for the Control of Infectious Diseases* (RFCID). This edition features projects commissioned by the Food and Health Bureau to address specific health problems, fill scientific gaps, and respond to public threats or needs. All the projects featured in this supplement were conducted by a consortium of institutions led by the Hospital Authority (HA). Several projects are highlighted due to their significant findings, impact on health care delivery and practice, and/or contributions to health policy formulation in Hong Kong.

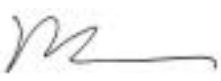
The outbreak of severe acute respiratory syndrome (SARS) in Hong Kong in 2003 undoubtedly presented an enormous challenge to the health care system. Indeed, its occurrence precipitated the establishment of the RFCID. It is appropriate therefore that the vast array of patient data collected during the outbreak should form the starting point for a variety of future research projects supported by the Fund. However, before this is possible, the data must be cleaned—a process involving the tracking and retrieval of missing episodes and clinical data and double-checking of dubious data. This was performed by the HA Head Office SARS research team in collaboration with frontline workers. Shung[1] describes how data from various operational systems were integrated into a tailor-made manual data collection system, enabling the construction of a comprehensive, accurate, and complete dataset that facilitated further analyses of a variety of clinically important questions related to SARS. The analysis laid foundations for conducting clinical and health services research studies in the event of future outbreaks of infectious disease in Hong Kong. The cleaned data were used to complete a number of studies that were subsequently published in peer-reviewed journals.

The origin of the 2003 SARS outbreak implicated live wild animal markets of southern China as having a role in the rapid evolution and spread of the coronavirus. The actual animal reservoir of the virus has now been identified as the horseshoe bat, with civet cats acting as an amplification host. While this new information limits the possibility of a re-emergence of SARS it does not inform on the therapeutic strategies to be taken if another outbreak occurs. One of the characteristic features of SARS was the development of progressive pneumonia and respiratory deterioration, for which patients often received ventilatory support and admission to an intensive care unit. The current strategy for the specific treatment of SARS includes suppression of coronavirus replication using antiviral agents and modulation of the immune response with corticosteroid or other agents. Yu and Lai[2] proposed that the severe respiratory complications associated with SARS-coronavirus infection could be prevented with lopinavir/ritonavir and ribavirin. They described a multi-centre, double-blind, randomised, placebo-controlled, parallel group sequential study to test this hypothesis. After a comprehensive review, the finalised trial protocol was registered with the HA (Protocol number CTC0281). It can be referred to and modified, if necessary, should a future outbreak of SARS occur in Hong Kong. Let us hope that it is never needed.

Given that many respiratory diseases are spread by droplet transmission of infectious particles, surprisingly little is known of this mode of transport. Even less is known of how modern medical equipment such as nebulisers contribute to the generation and spread of infectious aerosols in specialised settings such as clinics and wards. Li et al[3] set out to determine the fundamentals of aerosol spread produced by common respiratory activities (eg coughing) and nebuliser use in a simulated ward setting. The relationship and interactions between the size and mode of generation of infectious droplets, the ward layout (especially the distance between beds) and the type of ventilation system in use in particular wards are complex and appear to be important in determining the risk of infection. In an era of pandemic influenza preparedness, these findings are useful in formulating infection control policies for future outbreaks of respiratory infectious diseases.

We hope you find this selection of dissemination reports informative and enjoyable. These dissemination reports may be downloaded individually from the Research Fund Secretariat website (**http://www.fhb.gov.hk/grants**), where more information about the funds, including application procedures, can be found.

Supplement co-editors



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References

1. Shung EC. Data cleaning, maintenance, and analysis of the HA SARS Collaborative Groups database. Hong Kong Med J 2008;14(Suppl 1):11-3.
2. Yu WC, Lai ST. A protocol for a multi-centre, double-blinded, randomised, placebo-controlled trial on the efficacy and safety of lopinavir/ritonavir plus ribavirin in the treatment of severe acute respiratory syndrome. Hong Kong Med J 2008;14(Suppl 1):23-5.
3. Li YG, Chwang AT, Seto WH, Ho PL, Yuen PL. Understanding droplets produced by nebulisers and respiratory activities. Hong Kong Med J 2008;14(Suppl 1):29-32.