

RA Collins 高理德  
 JM Johnston 莊珍妮  
 AMY Tang 鄧美兒  
 WC Chan 陳偉智  
 CSH Tsang 曾守衡  
 SV Lo 羅思偉

## Summary of research projects supported by the Health Services Research Fund (HSRF) and the Health Care and Promotion Fund (HCPF)

Although Hong Kong currently enjoys a relatively affluent economy, public funding for academic research was only established formally, in the late 1980s. Currently, funding allocation for projects in the fields of biology and medicine typically accounts for approximately one third of the total research budget.<sup>1</sup> In recognition of the need for a dedicated avenue to support local health and health services research, the government established the Health Services Research Fund (HSRF) in 1993. The original ambit of the HSRF was to support research relevant to health and health care needs of the people of Hong Kong and specifically to local health services and public health research into assessment of health care needs, the operation of the health service, and the delivery of health care.

In 1995, the government established the Health Care and Promotion Fund (HCPF) with the objective of financing activities related to health promotion, preventive care and research; and to provide financial support so that patients could receive treatments that were not currently available in Hong Kong. Its original ambit was to support research that provides an information base for health promotion interventions to enhance good health and the prevention and early detection of diseases and disability in Hong Kong.

In 2002, the HSRF was re-focused to become the Health and Health Services Research Fund (HHSRF). The HHSRF aims to maximise population health, improve the quality of life, and enhance the standard and cost-effectiveness of the health system through funding research that generates new knowledge in areas of human health and health services.<sup>2</sup>

The HSRF/HCPF award competitive grants to support a diverse range of health research projects, with an emphasis on public health and health services. Application to the funds is open to all professionals engaged in health research in Hong Kong, including those in academic institutions, public and private health care sectors. Applications are subject to a stringent peer review by both international and local experts. Investigators of each finished project are required to submit a final report. When the final report is considered satisfactory (after peer review), the project is considered “completed”.

As of 31 December 2007, a total of 224 projects out of 975 applications were approved for funding (Fig 1). The success rate for applications was therefore 23%. In comparison, the award rate of the United Kingdom’s Medical Research Council research grant applications with a final decision date in financial years 2005-2006 and 2006-2007 were 19% and 24%, respectively.<sup>3</sup> The average success rate for all types of research projects supported by the United States National Institutes for Health over the period 1997-2001 was 31.5%.<sup>4</sup>

In Hong Kong, 224 approved projects worth HK\$87.24 million (HK\$7.8=US\$1) have been completed. The median funding amount per project was HK\$426 597 (range, HK\$6500-\$993 300). About one third (71/224, 31.7%) of the approved projects received equal to or less than HK\$100 000 (Fig 2). The usual funding ceiling for projects was HK\$800 000 and the standard maximum duration was 24 months. The final approved amount was at the discretion of the

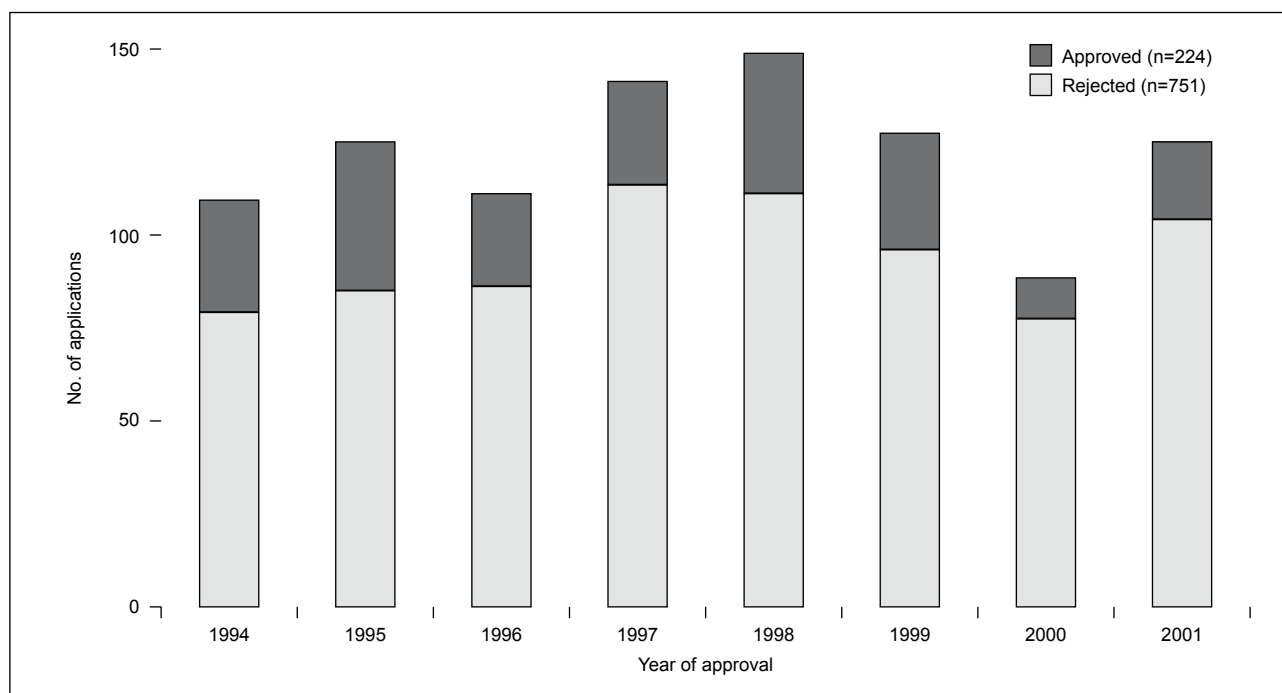
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 Hong Kong SAR Government**

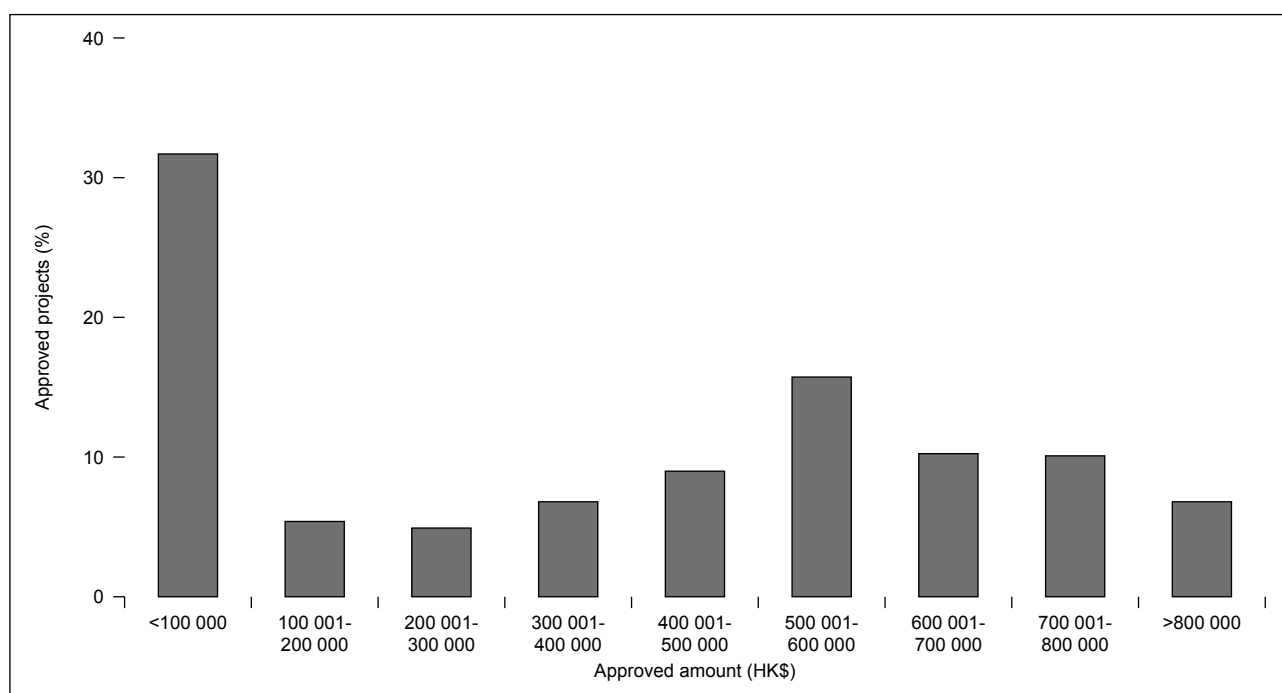
RA Collins, JM Johnston, AMY Tang, WC Chan, CSH Tsang, SV Lo

Corresponding author:

Dr Richard A Collins  
 Research Office, Food and Health Bureau,  
 18/F, Murray Building, Garden Road,  
 Central, Hong Kong SAR, China  
 Tel: (852) 3150-8983  
 Fax: (852) 3150-8993  
 E-mail: rfs@fhh.gov.hk



**Fig 1. Outcome of combined research grant applications submitted to the Health Services Research Fund (1994-2001), and Health Care and Promotion Fund (1996-2001)**



**Fig 2. Distribution of approved funds by grant size**

**Research Council.**

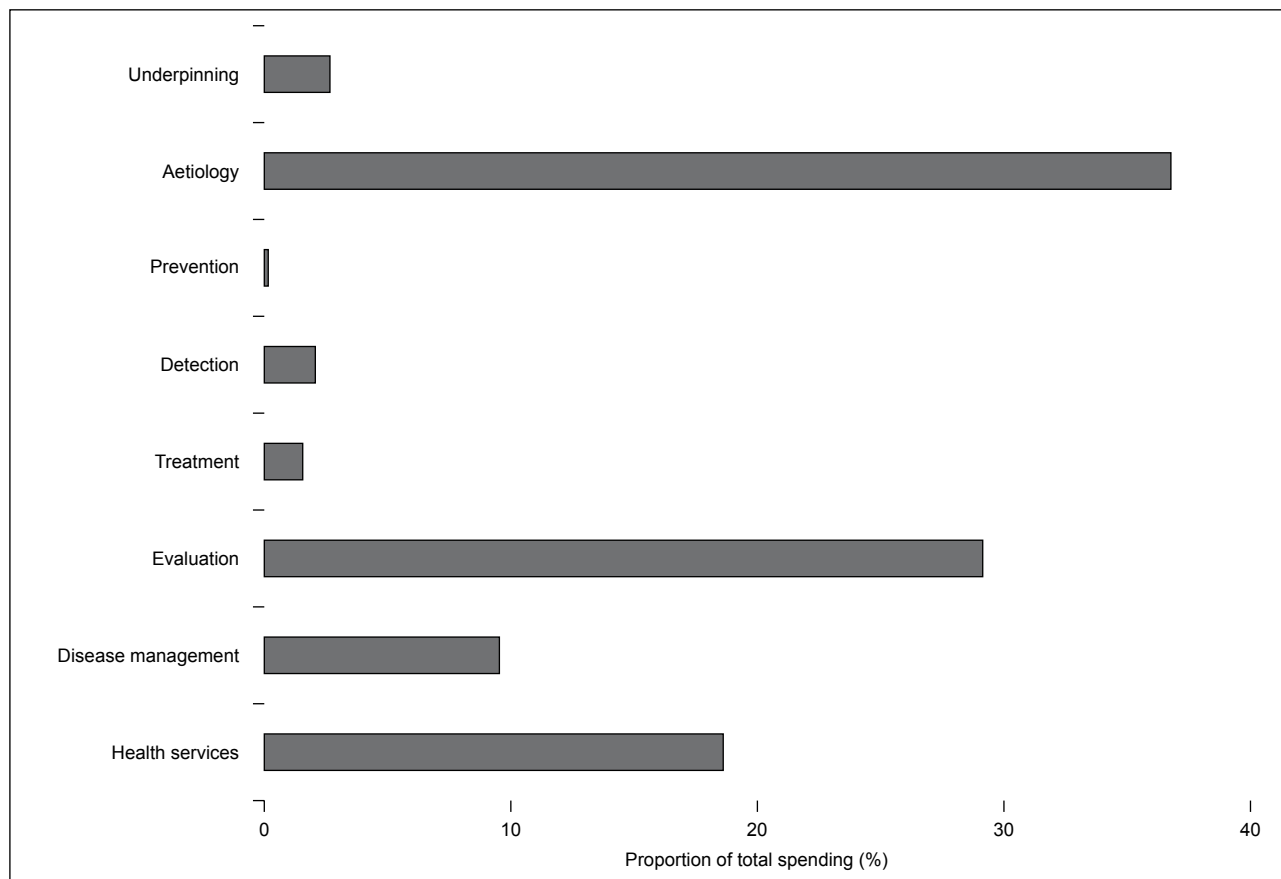
The majority of principal applicants of approved research grant applications (203/224, 90.6%) were based at tertiary academic institutions (Table). Principal applicants based at public hospitals supported by the Hospital Authority constituted the second largest group (14/224, 6.3%).

Principal applicants based in private companies submitted few applications but had the highest funding success rate of any group (4/11, 36.4%).

A coherent approach to funding health research is important. A key step in this process is to determine the distribution of research funding across all types of research

**Table. Distribution of applicants to the Health Services Research Fund and Health Care and Promotion Fund (1994-2001)**

Institution	Universities	Hospital Authority	Non-governmental organisations	Private companies	Department of Health
Applications submitted	826	112	21	11	5
Applications approved	203	14	3	4	0
Success rate (%)	24.6	12.5	14.3	36.4	0



**Fig 3. Distribution of spending by research activity**

**Underpinning Research:** Research that underpins investigations into the cause, development, detection, treatment and management of diseases, conditions and ill health

**Aetiology:** Identification of determinants that are involved in the cause, risk or development of disease, conditions and ill health

**Prevention of Disease and Conditions, and Promotion of Well-Being:** Research aimed at the primary prevention of disease, conditions or ill health, or promotion of well-being

**Detection, Screening and Diagnosis:** Discovery, development and evaluation of diagnostic, prognostic and predictive markers and technologies

**Development of Treatments and Therapeutic Interventions:** Discovery and development of therapeutic interventions and testing in model systems and pre-clinical settings

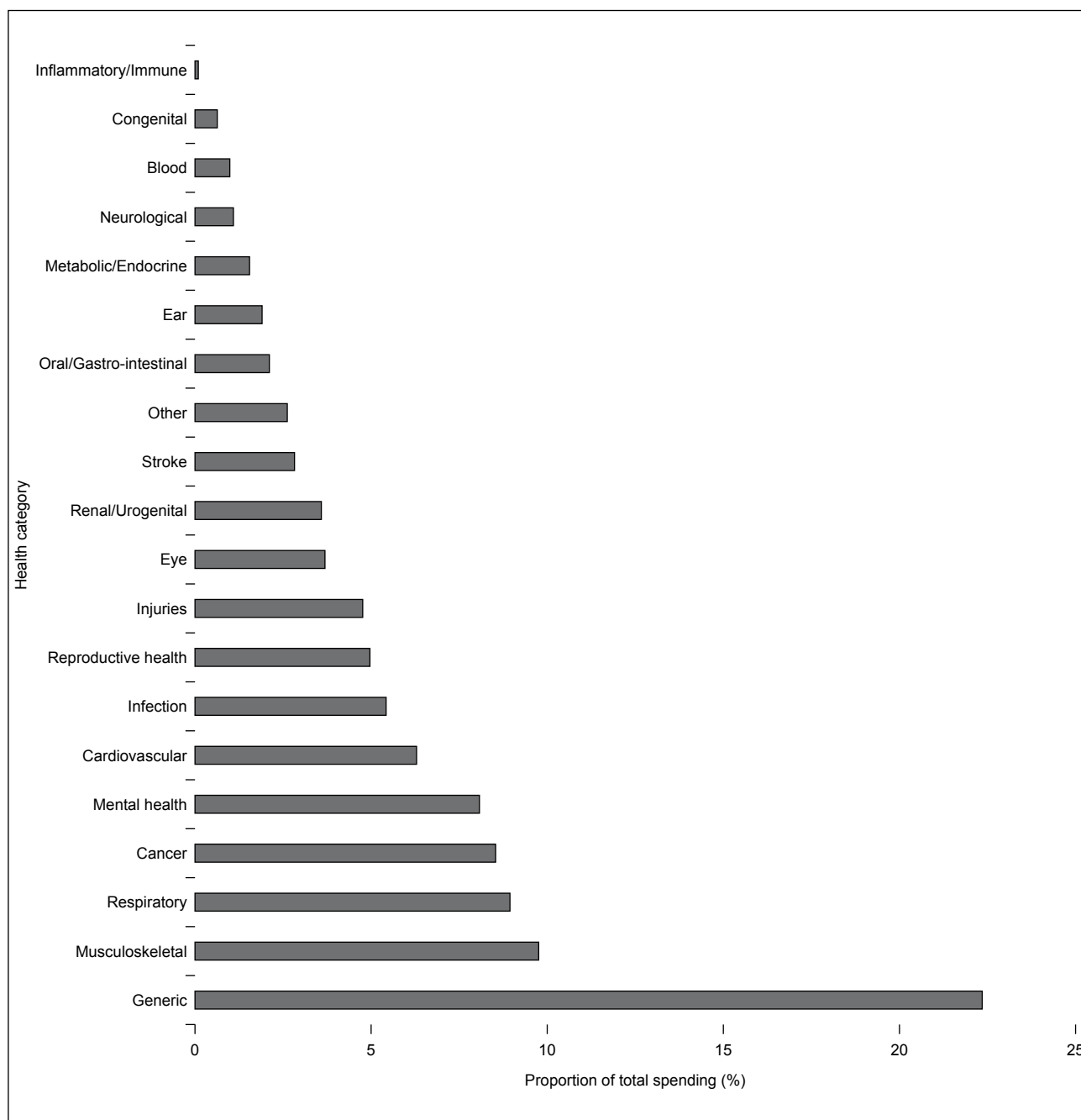
**Evaluation of Treatments and Therapeutic Interventions:** Testing and evaluation of therapeutic interventions in clinical, community or applied settings

**Management of Diseases and Conditions:** Research into individual care needs and management of disease, conditions or ill health

**Health and Social Care Services Research:** Research into the provision and delivery of health and social care services, health policy and studies of research design, measurements and methodologies

activity and all areas of health and disease. We used the approach developed by the United Kingdom Clinical Research Collaboration (UKCRC) to clarify funding distribution of HSRF/HCPF research grants.<sup>5</sup> The Health Research Classification System developed by the UKCRC is a two-dimensional analytical framework enabling research to be classified according to eight different types

of activity (Research Activity Codes) and according to one of 21 different areas of health or disease under investigation (Health Categories). The distribution of approved funds according to research activity is shown in Figure 3. The majority of approved funding (84.3%) supported research related to aetiology (36.7%), evaluation of treatments and therapeutic interventions (29.1%), and health and social



**Fig 4. Distribution of research spending by health category**

care services research (18.5%).

The distribution of research spending by health category is shown in Figure 4. In the period 1994 to 2001, the five most prominent areas of research were: generic health relevance (22.4%), musculoskeletal disorders (9.8%), respiratory diseases (8.9%), cancer (8.5%), and mental health (8.1%). The health categories were based on the International Classification of Diseases and contained 21 separate groupings that encompass all diseases, conditions and areas of health. Generic health relevance refers to research applicable to all diseases and conditions or to the general health and well-being of individuals.

Specific outcomes and impact of research supported by the funds has been described in detail elsewhere.<sup>6</sup> Briefly, research supported by the funds has resulted in substantial outcomes as measured by a multi-level payback framework and is comparable to the outcomes and impacts of health research funds administered by other developed economies.

### Conclusions

The HSRF and HCPF have supported a diverse array of health care related research in Hong Kong. Many of the studies supported have had major impacts on health

care policy and practice, not only in Hong Kong but also internationally.

### Acknowledgements

The Food and Health Bureau wishes to thank all applicants who submitted research grant applications to the HSRF and HCPF over the years. We also thank research grant administrators at the various institutions who monitored the progress of approved grants. We also thank peer reviewers, both local and overseas, who gave of their time to assess grant proposals sent to them. We thank Dr Liam O'Toole, Dr Janet Valentine, and Dr Andrew Speakman of the UKCRC for advice and discussion. We thank the Research Fund Secretariat staff, especially Gigi CC Leung, Amanda WY Leung, Ida NM Lai, Ada YC Sun, and Cynthia KY

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