

**For Discussion
on 31 January 2005**

LegCo Panel on Health Services

Health and Health Services Research Fund

PURPOSE

This paper seeks Members' views on the Administration's proposal to increase the approved commitment for the Health and Health Services Research Fund (the "Fund") by \$16 million from \$10 million to \$26 million.

BACKGROUND

2. Health services research is important and useful in formulating policy relevant to maintaining an efficient and cost-effective health care system and maximising public health. In this regard, the Health, Welfare and Food Bureau (HWFB) has a long history of funding health services research. In 1994, the then Health and Welfare Bureau established the Health Services Research Fund (HSRF) to fund research on health services with a capital commitment of \$50 million. A review of the HSRF in 2001 resulted in the identification of new priority research themes based on local relevance and importance, and the research agenda was refocused in light of this new knowledge. In 2002, a decision was taken to wind up the HSRF and a new commitment of \$10 million for the Fund was approved by the Secretary for Financial Services and the Treasury under delegated authority. This new Fund, which has a new mode of operation, has a more focused research agenda in which thematic priorities, namely public health, health services and Chinese medicine have been developed to guide the direction of research and decision on funds allocation.

3. To be eligible for a grant, the proposed research project must be of high scientific merit and of potential local application and benefit. Each

application will be subjected to a two-tiered peer review process. In line with international experience, the criteria for vetting applications will be centred on the following broad principles -

- (a) degree of correlation with the priority of the Fund;
- (b) scientific quality of the proposed research project;
- (c) track record and research capacity of the applicant/applying institution; and
- (d) scientific opportunity in terms of potential to improve human health and health services.

A Research Council was established under the Fund which makes final decision on the allocation of research funds. It is chaired by the Secretary for Health, Welfare and Food and members include representatives from the Department of Health, Hospital Authority, academic institutions and private sector.

4. The Fund calls for application once per year. With the approved commitment of \$10 million in 2002, two open calls for applications were issued in November 2003 and September 2004, respectively. A total of 18 applications amounting to \$8.03 million from the 2003 round, which focused on the thematic priorities have been approved. The Research Council of the Fund is currently reviewing applications from the latest call and has identified a number of applications worthy of support that would require funding of about \$6 million. However, the uncommitted balance of the Fund is only \$1.97 million, which is insufficient to support these worthwhile projects. There is therefore a need to increase the commitment to continue the operation of the Fund.

JUSTIFICATION

Health services research has helped to support health policy formulation

5. Under the HSRF and the Fund, a total of 202 health services research projects have been funded since 1994. Of these, 175 have been completed, nine are currently in progress, and 18 are due to begin shortly. These projects are approved on the basis that the knowledge generated produces one or more of the following benefits -

- (a) enhance population health and improve quality of life;
- (b) enable health policy formulation based on locally relevant generated evidence;
- (c) improve cost effectiveness of the health care system;
- (d) improve the standards and effectiveness of care; and
- (e) facilitate private-public partnership and improve the delivery of healthcare services.

6. There are notable contributions of considerable public health importance that have arisen directly as a result of health services research. These include the re-orientation of the Government-sponsored cervical screening services to better target the clients, introduction of a new, cheaper and more effective treatment of recurrent peptic ulcer bleeding which resulted in a profound change in clinical practice, implementation of fees and charges in the Accident and Emergency services following research studies on its utilisation, and introduction of tobacco control legislation after studies demonstrated the harmful effects of smoking and beneficial effects of smoking prevention/cessation/reduction programmes. Details about the relevant research findings and contributions are at *Annex*.

7. Since the establishment of the Fund in 2002, a total of 18 projects which focused on the three themes, have been supported. The research studies are due to begin and we expect their findings to contribute to furthering population health and enhancing health policy formulation. A brief summary of some of these newly approved projects is given below as an illustration of their potential benefits -

- (a) *health services for cancer patients* - Several different studies have been approved that assess various treatment modalities to improve the quality of life and psychological well-being of cancer patients. The studies will increase our understanding of cancers in these groups and lead to more effective management of these conditions.

- (b) *care for the elderly with chronic diseases* - Three different studies with focus on an early detection of dementia in the elderly, new form of treatment for stroke, and an analysis of the risk factors for urinary tract symptoms, will help identify treatment and management modalities that will improve health outcome and reduce caregiver burden.
- (c) *health policy on exercise* - Three different studies will examine effectiveness of various types of exercise. These include the usefulness of a community management model to promote exercise for patients with chronic conditions, the effectiveness of stair climbing, Tai Chi and walking exercise in improving health. These studies will guide the adoption of effective interventions to promote exercise and translate ultimately into a reduction of use of health care facilities and resources.
- (d) *effectiveness of health service provision* - A study will evaluate effectiveness of different models of health care delivery in the primary care setting of General Out-patient Clinics in Hong Kong. The outcome of this study will inform policy maker of the need to review and revamp the primary health care delivery model in Hong Kong.

Increased health services research capacity and created strategic reserve of talent

8. Our funding and support for research has been instrumental in building research capacity and infrastructure in Hong Kong. It has enabled several hundred young talents (approximately two new research-related personnel are recruited for each funded project) to be recruited and trained in scientific and healthcare-related research techniques. These young researchers together with the established researchers in the universities and health sector form a pool of highly skilled staff engaged in health and health services research. This forms an important strategic research asset for improving population health and informing policy.

Critical mass of health-related research findings

9. Research summaries produced from completed projects are uploaded to the website of the Research Fund Secretariat of the HWFB for public access. In addition, these research findings have been distributed to about 500 different health-related organisations in Hong Kong (including universities, hospitals and medical clinics, professional societies/colleges and government departments). The research data represents an important knowledge resource for the health services research community in addition to being a public reference database.

10. These research findings have also been presented in at least 105 local and overseas conferences. At least 180 peer-reviewed articles, conference proceedings and abstracts have also been published in local and overseas journals. The productivity of the Fund in terms of concrete deliverables is further testament to its usefulness to the health services research community and its potential to influence and direct health care policy.

FINANCIAL IMPLICATIONS

11. Based on the funding requirements of the two previous rounds of the Fund as mentioned in para 4 above, we estimate that each year the Fund will require at least \$4 to \$5 million to support the approved projects. We propose to increase the approved commitment by \$16 million from \$10 million to \$26 million, so as to allow the Fund to issue a further two to three rounds of applications from 2005 to 2007. A review of the Fund will be conducted in 2007 when all the 18 projects in the first round would have been completed.

ADVICE SOUGHT

12. Members are invited to comment on the proposal to increase the commitment of the Fund from \$10 million to \$26 million. Subject to Members' views, we shall submit the proposal to the Finance Committee for consideration.

Health, Welfare and Food Bureau
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**Examples of contributions of health services research
to public health policy formulation**

1. **Revamping cervical screening for women health** – local studies showed that Hong Kong's existing voluntary cervical screening services were not cost-effective and may lead to harm through over-screening subjects at low risk. Unscreened women are at a 2.7 – 10 times greater risk of cancer than screened women. As such, the current system is likely to have prevented only about 26% of new cervical cancer cases. However, a targeted screening programme which covers about 80% of the population and with a 3-4 year screening interval would prevent 70% of new cervical cancer cases. These findings have led the Department of Health's Cervical Screening Task Force to re-orientate its strategy and develop and implement the new Cervical Screening Programme since March 2004. Using the outcomes of this research the Task Force has also estimated the potential health care benefit of the new screening programme.
2. **Improving clinical treatment of diseases** – the finding of a health service research in 1997 that a one-week course of triple therapy greatly increased the cost-effectiveness of managing recurrent bleeding of peptic ulcers compared with the routine long-term medication resulted in a profound and fundamental shift in the clinical treatment of recurrent ulcer bleeding in Hong Kong and around the world. It is estimated that using just one-week triple therapy to prevent recurrent ulcer bleeding, approximately \$3,500 would be saved for every patient each year. Patients are no longer required to receive daily medication on a long term basis. Given that Hong Kong has one of the highest incidence of bleeding peptic ulcer in the world (169 per 100,000 population), such improvement in clinical treatment has a considerable impact on the health service. It not only generates significant savings to the health service due to the change in clinical practice, but also enhances enormously the quality of life of more than 11,300 bleeding ulcer patients in Hong Kong.
3. **Re-orientating healthcare delivery** – the finding of various research studies conducted between 1996 to 1999 that many people attended

Accident & Emergency departments with non-urgent cases due to the free and round-the-clock provision of these publicly funded services was instrumental in making the case for introducing fees and charges in an attempt to redirect non-urgent cases to primary health care providers and enhancing the service for those genuinely in need. The relevant research has also provided evidence-based information for the Hospital Authority to widely publicise its triage system to reduce the inappropriate use of Accident and Emergency services arising from public's ignorance or misconception about the services.

4. **Tackling smoking and tobacco related diseases** – the group of tobacco related studies conducted in these ten years have provided a series of 'firsts' in terms of high level evidence against the harm of tobacco smoking and the beneficial effects of smoking prevention/cessation/reduction programmes. These research findings resulted in a more informed debate on the anti-smoking and tobacco-control legislation and guided government support for smoking prevention/cessation/reduction programmes.

To optimise population health, the Government has utilised the research findings and placed health education and promotion high on its agenda, emphasizing the harmful effects of passive smoking on children and making appeal to parents to quit smoking. It was quantified that for a cohort of babies born in 1997 who were exposed to second hand smoke when they were still in the mother's womb, they would incur an additional 1 581 hospital attendances in their first year of life, costing over \$16.4 million. When they were further exposed to second hand smoke at home in their first year of life, they would have an extra 662 hospitalisation episodes, with a cost over \$7.0 million.

Local studies have further shown that a conservative estimate of the cost of smoking among adults for 1998 amounted to \$2.3 billion for health care and \$1.9 billion for productivity losses. It was observed that 80% of these health care costs were absorbed by the public sector, while 21% of the productivity losses were due to passive smoking at work. The effectiveness of various smoking cessation/reduction programmes was also demonstrated. Local studies have found the effectiveness of doctor's health advice, nursing support to mothers of sick children and

smoke quit line in helping smokers to quit. Based on this kind of research evidence, the Government therefore has supported health education and promotion activities, including smoking prevention/cessation/reduction programmes.

5. **Improving the quality of elderly care** – a most significant contribution in this regard has been the prevention of hip fractures, which greatly improve the quality of life of elders. For example, a research conducted in 2000/01 has found that the use of a hip protector can reduce the risk of hip fracture by 82%. This would also result in substantial reduction in the relevant health care expenditure since medical care for hip fracture is seven times more expensive than the associated costs of a hip protector.

The quality and cost-effectiveness elderly care services in Hong Kong have been improved by a number of research findings in this area. For example, in 1999 the use of an adapted chair to improve sitting posture has been found to effectively reduce the needs for restraints or frequent repositioning of very frail elders, which substantially improve their quality of life and reduce behavioural problems. The rehabilitation of elderly patients with hip fractures has also been redirected from hospital care to home care after it has been found that home care is equally effective in helping the patients to regain ambulation and functional ability.