

Health and Medical
Research Fund:

2019-20 Annual Report

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Health and Medical Research Fund (HMRF)

On 9 December 2011, the Legislative Council (LegCo) Finance Committee approved a new commitment of \$1,415 million for setting up the HMRF, by consolidating the former Health and Health Services Research Fund (HHSRF) and the former Research Fund for the Control of Infectious Diseases (RFCID), with a broadened scope for funding health and medical research in Hong Kong. Research projects funded under the former HHSRF and the former RFCID have been subsumed under the HMRF.

On 28 May 2016, the LegCo Finance Committee approved to increase the approved commitment for the HMRF from \$1,415 million by \$1,500 million to \$2,915 million to sustain its operation for another five years from 2017-18 to 2021-22 and expand the scope of the HMRF to incorporate the functions of the former Health Care and Promotion Fund¹ (HCPF). After the consolidation of the HMRF and the HCPF on 28 April 2017, the HCPF and the HCPF Committee (the governing body of the HCPF) were renamed as the Health Care and Promotion Scheme (HCPS) and the Health Care and Promotion Committee (HCPC) respectively.

To further streamline the operation of the HMRF, on 1 August 2018, the HCPC and its Promotion Sub-Committee (technical arm of the HCPC) were consolidated and subsumed under the Grant Review Board (GRB, technical arm of the Research Council (RC)) for providing technical support to the RC for the HCPS. The RC thus became the sole governing body of the HMRF to provide strategic steer for all funding schemes (including the HCPS) under the HMRF. In December 2018, the annual open call for investigator-initiated research projects and the annual open call for HCPS were consolidated into one single open call. There was no more annual open call for the HCPS in 2019.

The HMRF aims to build research capacity and to encourage, facilitate and support health and medical research to inform health policies, improve population health, strengthen the health system, enhance healthcare practices, advance standard and quality of care, and promote clinical excellence, through generation and application of evidence-based scientific knowledge derived from local research in health and medicine. It also provides funding support to evidence-based health

¹ The Health Care and Promotion Fund (HCPF) was established in 1995 to provide financial support for activities related to health promotion, preventive care and related research; and patients in need of treatment not available in Hong Kong, particularly in respect of rare diseases. In 2006, the HCPF Committee decided to revise the scope the HCPF to focus primarily on health promotion activities and disease prevention.

promotion projects that help people adopt healthier lifestyles by enhancing awareness, changing adverse health behaviours or creating a conducive environment that supports good health practices. The abstracts and the budget of approved projects are available at the website <https://rfs.fhb.gov.hk>.

The HMRF will consider funding health and medical research/projects in the following areas –

- (a) public health, human health and health services (e.g. primary care, non-communicable diseases, Chinese medicine, etc.);
- (b) prevention, treatment and control of infectious diseases, in particular emerging and re-emerging infectious diseases;
- (c) advanced medical research in the fields of paediatrics, neuroscience, clinical genetics and clinical trials; and
- (d) health promotion that facilitates mobilisation of local resources to promote good health and prevention of illness in the community.

The HMRF provides funding support for the following types of projects –

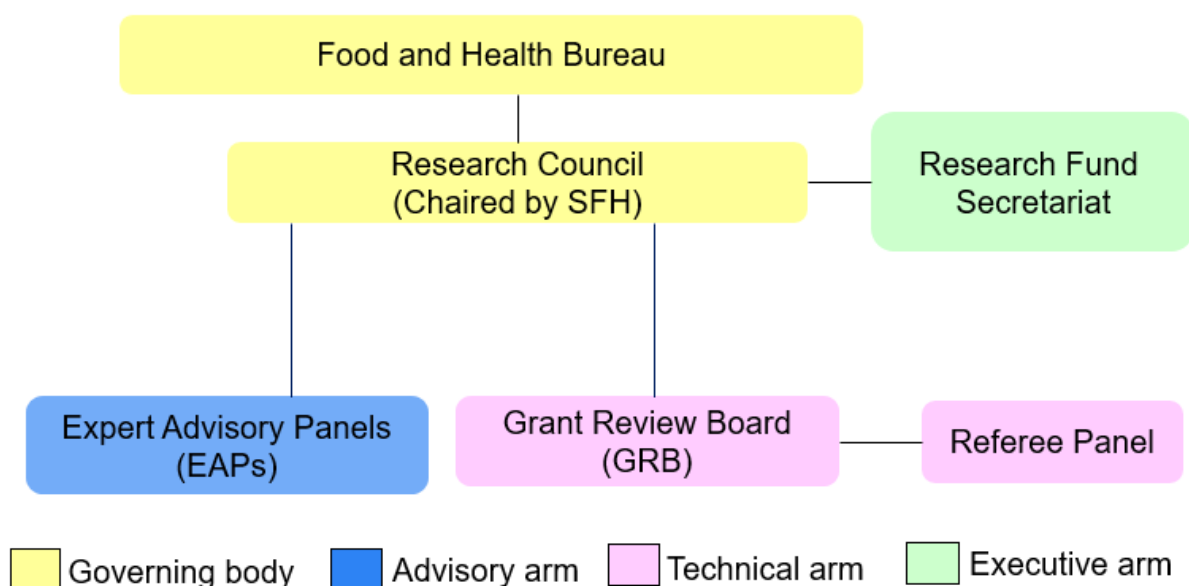
- (a) Investigator-initiated Projects (funding ceiling: \$1.5 million per project) – to support research studies and health promotion projects from individual applicants in response to "HMRF open call" invitations for grant applications guided by reference to the thematic priorities².
- (b) Government-commissioned Programmes – to support specific programmes commissioned to, inter alia, build research capacity, fill knowledge gaps, support policy formulation, address specific issues, assess needs and threats, etc. Funding may cover research projects, facilities, infrastructure and other capacity building initiatives as appropriate.
- (c) Research Fellowship Scheme (funding ceiling: \$1.2 million per award) – to enhance research capability and build research capacity to facilitate the translation of knowledge into formulation of health policy and clinical practice. Research fellowships will be awarded to eligible candidates covering a range of research areas and specialties on the advice of the RC.

² Thematic priorities of investigator-initiated projects are updated regularly after taking into account advice from the Expert Advisory Panels.

In general, members of any disciplines or profession in health or health-related field can apply for funding. Grants may be awarded to tertiary institutions, hospitals, medical schools, non-governmental organisations or other appropriate centres, units or services. Members of other disciplines, such as social welfare and education may also apply if the proposed projects are within the ambit of the HMRF.

In addition, the HMRF organises the Health Research Symposium every two years to provide a platform for experts, researchers, healthcare professionals and community partners to share their knowledge and achievements in various research and health promotion topics, and acknowledge outstanding projects funded by the HMRF.

Governance



SFH: Secretary for Food and Health

Chaired by the Secretary for Food and Health, the RC is responsible for providing strategic steer for funding health and medical research and health promotion projects, and overseeing the administration of the HMRF including the allocation of funds for approved grants. Its terms of reference are as follows –

- (a) to determine research agenda and funding control mechanism of the HMRF;

- (b) to approve procedures for inviting, and criteria for vetting grant applications;
- (c) to approve standard terms and conditions for grant-holders;
- (d) to approve funding allocation after peer-review process;
- (e) to approve processes for the ongoing monitoring and evaluation of approved research/projects;
- (f) to establish the GRB to carry out the technical work of the RC;
- (g) to disseminate key findings of funded projects; and
- (h) to supervise the management and investment of the fund.

The RC is supported by two arms – the Expert Advisory Panels³ as the advisory arm, and the Referee Panel, GRB and GRB Executive as the technical arm. Individual members of the Referee Panel are selected according to their specific field of expertise to review grant applications.

The membership of the RC and their supporting committees can be found at *Appendix A*. Their operation is supported by the Research Fund Secretariat of the Research Office under the Food and Health Bureau.

Highlights of 2019-20

Investigator-initiated Projects

The HMRF has supported 1,881 investigator-initiated research projects and 333⁴ health promotion projects funded under the HMRF, of which, 1,334 research projects and 300 health promotion projects have been completed. These projects cover most research topics under the thematic priorities on –

³ In August 2018, the Research Council (RC) endorsed to establish a series of Expert Advisory Panels to act as the advisory arm of the RC to (a) advise the RC on research policy and foci with respect to their specific areas of expertise and (b) make recommendations to the RC on the thematic priorities for the investigator-initiated studies/projects.

⁴ Including 310 projects funded by the former Health Care and Promotion Fund (HCPF). After the consolidation of the Health and Medical Research Fund (HMRF) and the HCPF, on-going health promotion projects previously funded by the HCPF are covered by the Health Care and Promotion Scheme (HCPS) under the expanded HMRF.

- (a) Health and Health Services – management and prevention of major non-communicable diseases including cardiovascular illnesses, cerebrovascular diseases, cancers and diabetes; modifiable lifestyle factors including tobacco control, mental health, injury prevention, sleep deprivation, exercise and health; reproductive health; health services including primary care, chronic disease management, elderly care and Chinese medicine;
- (b) Infectious Diseases – epidemiology, surveillance and control of emerging and re-emerging infectious diseases, antimicrobial resistance, and immunology and vaccination research;
- (c) Advanced Medical Research – use of biotechnology to identify the molecular basis of disease, develop novel screening, diagnostic methods and therapeutics/treatments in various medical fields including paediatrics, neurosciences, clinical genetics and clinical trials; and
- (d) Health promotion - reduction of alcohol-related problems, strengthening of preventive care in children and elderly, empowerment of patients in chronic disease management, mental health promotion, injury prevention and breastfeeding, women's health and sexual health.

During the year, final reports of 160 completed research projects and 11 completed health promotion projects were assessed. Projects with findings that merit wider dissemination to the research community are published as a supplement to the Hong Kong Medical Journal and uploaded onto the website <https://rfs.fhb.gov.hk> for public access.

Annual Open Call for Investigator-initiated Projects

The 2019 HMRF Open Call for Investigator-initiated Projects was announced in December 2019. Those falling under the thematic priorities (**Appendix B**) will be given higher priority for funding. Due to the COVID-19 pandemic, the closing deadline for application was deferred from 31 March 2020 to 30 September 2020. In accordance with the thematic priorities and the established assessment criteria⁵, the GRB's recommendations on funding

⁵ Grant applications are assessed through a stringent two-tier review process, first by the Referee Panel, and then by the Grant Review Board. The established assessment criteria for research projects include originality of the research topic, relevance to the scope of funding and thematic priorities, significance of the research question, quality of scientific content, credibility for study design and method, feasibility of the intended project, research ethics, translational potential/value, the past performance and track records of the grant applicants and research capability of the administering institution. The established assessment criteria for health promotion projects include potential impact in response to the health needs of the target local community,

applications will be considered by the RC. Funding results will be announced in March 2021.

Government-commissioned Programmes

Twenty-six⁶ commissioned programmes have been approved in the following areas –

- (a) **Infectious diseases** including studies on prevention, control and treatment of infectious diseases; surveillance and evaluation of clinical trials on influenza and vaccination programmes including use of imiquimod in elderly and chronic illness subjects;
- (b) **Non-communicable diseases** including identifying the risk of breast cancer; evaluation of Government's colorectal cancer screening pilot programme; and surveys on mental health morbidity in different age groups;
- (c) **Life-course research** including paediatrics such as nurturing a breastfeeding friendly community; survey on vitamin D status of infants, young children and pregnant women; and review of growth charts for Hong Kong children; and elderly care including review on end-of-life care and service models to improve quality of healthcare for the ageing;
- (d) **Clinical trials and cohort studies** including setting up of Phase I Clinical Trials Centres; conducting early phase clinical trials on novel pharmaceutical products; and following up various local cohorts relating to long-term use of aspirin, young-onset diabetes, late-onset dementia, depressive and anxiety symptoms, non-communicable diseases in "Children of 1997" birth cohort, environmental impact to households, elderly health services, primary care of hypertension and diabetes, and cardiovascular risk factors; and
- (e) **Research on policy issues** including review on healthcare manpower planning; review on regulatory framework for healthcare professional development; evaluating the impact of tobacco control policies in Hong Kong; and mental health promotion through community partnership programmes.

scientific evidence of effectiveness of the proposed health promotion activities, innovation, relevance to thematic priorities, feasibility of the proposal, evaluation plan of programme effectiveness, cross-sector collaboration, in particular collaboration between non-governmental organisations and tertiary institutions, track record of the applicants and the administering institution, justification of requested budget, impact and sustainability of the programme and potential to build community capacity in health promotion.

⁶ Including two commissioned programmes funded by the former Health Care and Promotion Fund.

Twelve programmes have been completed.

The final reports and dissemination reports of satisfactorily completed research programmes are posted on the website (<https://rfs.fhb.gov.hk>) for wider dissemination to the research community.

As at 31 March 2020, the commissioning of four programmes was in progress: Commissioned Research on Control of Infectious Diseases (Phase IV), Commissioned Paediatric Research at Hong Kong Children's Hospital, Commissioned Study on Mothers' Barriers to Sustain Exclusive Breastfeeding in the First Six Months, and Commissioned Research on the Novel Coronavirus Disease (COVID-19).

Research Fellowship Scheme

The Research Fellowship Scheme has been launched since 2015 to support researchers or professionals in their early to mid-career, particularly healthcare professionals to enhance their skills in public health research. Tertiary institutions funded by the University Grants Committee are invited to nominate fellowship applicants annually. The grant ceiling per award is \$1.2 million including up to \$0.4 million⁷ for local/overseas training/attachment relating to health services or public health, in particular public health policy topics. Higher priority would be given to applications which address the modifiable risk factors for non-communicable diseases namely smoking, alcohol drinking, unhealthy diet and physical inactivity. Twenty-eight awards have been approved since the implementation of the Scheme.

The 2019 Open Call was issued in August 2019 and closed on 19 November 2019. A total of 11 applications were received. The Research Fellowship Assessment Panel's recommendations on funding applications will be considered by the RC. Funding results will be announced in June 2020.

Health Research Symposium 2019

The Health Research Symposium 2019 (the Symposium) with the central theme

⁷ Since the 2019 Open Call for Research Fellowship Scheme, the budgets for training plan and research plan have been revised from \$0.2 million to up to \$0.4 million and about \$1 million to \$0.8 million respectively.

of “*Genomics and Big Data in Health and Disease*” was held on 12 June 2019 to disseminate research findings, recognise excellent research and health promotion projects, facilitate academic exchange and further collaborative healthcare research. Distinguished Speakers were invited to deliver keynote lectures on the topics of genomics, precision medicine, big data in biomedical discovery and applications of data analytics in Hong Kong. Leading local project teams from a variety of health-related disciplines shared their experience and outcomes of their funded projects on health and health services, infectious diseases, advanced medical research and health promotion. The Symposium attracted 481 participants in the fields of health and medical research and health promotion, including experts, academics, healthcare professionals and community leaders. Awards were presented to acknowledge the outstanding work supported by the HMRF.

Financial Position

The cash balance of the HMRF as at 31 March 2020 is \$1,717.56 million, with an uncommitted funding balance of \$793.94 million (i.e. funding available for new projects/programmes). The financial position of the HMRF for the 2019-20 financial year is at **Appendix C**.

The cash balance and the uncommitted fund balance (in cash basis) of the former HCPF⁸ as at 31 March 2020 is \$7.21 million and \$0.60⁹ million respectively. The audited accounts of the HCPS for the 2019-20 financial year ended 31 March 2020 are at **Appendix D**.

⁸ The Hospital Authority (HA) is the custodian and bookkeeper of the Health Care and Promotion Fund (HCPF). Annual audited accounts of the HCPF have been tabled at the Legislative Council since 2014-15. The cash balance comprised cash and cash equivalents and bank deposits held by the HA (recorded as amount due from the HA in the audited accounts for the HCPF (renamed as Health Care and Promotion Scheme on 28 April 2017)). Before the consolidation of the Health and Medical Research Fund and the HCPF, the uncommitted fund balance (in cash basis) of the former HCPF as at 31 March 2017 was \$5.25 million.

⁹ The uncommitted balance represented cash balance (\$7.21 million) less funds committed but not yet recognised (\$6.30 million) and accounts payable (\$0.31 million).

**Membership of
the Research Council and its Supporting Committees
(as at 31 March 2020)**

(A) *Research Council*

Chairperson

Secretary for Food and Health
(or Permanent Secretary for Food and Health (Health))

Non-official Members

Prof Juliana CHAN Chung-ngor

Dr Vincent CHENG Chi-chung

Prof Keiji FUKUDA

Prof Timothy KWOK Chi-yui

Prof LAU Chak-sing

Prof LEUNG Suet-yi

Prof LIN Chia-chin

Prof LYU Aiping

Prof David MAN Wai-kwong

Prof Tony MOK Shu-kam

Prof Hextan NGAN Yuen-sheung

Prof David SHUM Ho-keung

Prof Martin WONG Chi-sang

Prof YEOH Eng-kiong

Prof YIP Shea-ping

Dr YU Wai-cho

Ex-officio Members

Secretary for Innovation and Technology (or representative)

Director of Health (or representative)

Chief Executive of Hospital Authority (or representative)

Dean of the Faculty of Medicine of The Chinese University of Hong Kong
(or representative)

Dean of the Li Ka Shing Faculty of Medicine of The University of Hong
Kong (or representative)

Secretary

Head, Research Office
Food and Health Bureau

(B) Grant Review Board Executive

Terms of Reference:

The terms of reference of the Grant Review Board Executive are –

- (a) to assess and recommend action (on behalf of the Grant Review Board (GRB)) on requests for additional funds, budget revision and/or reallocation, changes to study design or methods, and changes to the principal applicant or administering institution;
- (b) to monitor the quality of the peer review including the assignment of referees to grants for review;
- (c) to monitor the response of grant applicants and grant-holders to requests by the GRB;
- (d) to evaluate and advise the GRB regarding changes to the grant or final report review process; and
- (e) to advise the Research Fund Secretariat on the monitoring of the progress of current research/projects.

Non-official Members

Prof Francis CHAN Ka-leung

Prof Paul CHAN Kay-sheung

Ms Mabel CHAU Man-ki

Prof David HUI Shu-cheong

Prof Nancy IP Yuk-yu

Prof Timothy KWOK Chi-yui

Prof Karen LAM Siu-ling

Prof LAU Yu-lung

Prof Gabriel Matthew LEUNG

Dr LO Su-vui

Prof David MAN Wai-kwong

Prof Alexandros MOLASIOTIS

Prof Joseph Sriyal Malik PEIRIS

Dr Thomas TSANG Ho-fai

Dr Gene TSOI Wai-wang

Prof Martin WONG Chi-sang

Prof YEOH Eng-kiong

Prof YIP Shea-ping

(C) *Grant Review Board*

Terms of Reference:

The terms of reference of the Grant Review Board are –

- (a) to advise Standard Operating Procedures for the grant submission and review process, and the assessment and dissemination of final reports;
- (b) to review and assess applications and recommend projects for funding;
- (c) to review and assess final and dissemination reports;
- (d) to promote the development of research in the areas of health and health services, controlling infectious diseases, advanced medicine and health promotion in the wider community;
- (e) to monitor the progress of approved projects; and
- (f) to monitor the financial performance of approved projects.

Non-official Members

Dr Alma AU May-lan

Prof John BACON-SHONE

Prof BIAN Zhao-xiang

Prof CAI Zongwei

Prof CHAIR Sek-ying

Dr CHAN Wai-chi

Dr CHAN Wai-man

Prof CHAN Ying-shing

Prof Allen CHAN Kwan-chee

Prof Andrew CHAN Man-lok

Prof Chetwyn CHAN Che-hin

Prof Daniel CHAN Tak-mao

Dr Dorothy CHAN Fung-ying

Dr Douglas CHAN Nim-tak

Prof Emily CHAN Ying-yang

Dr Engle Angela CHAN

Prof Godfrey CHAN Chi-fung

Prof Henry CHAN Hin-lee

Dr Johnny CHAN Wai-man

Prof Juliana CHAN Chung-ngor

Dr Karen CHAN Kar-loen

Mr Leslie CHAN Kwok-pan

Dr David CHAO Vai-kiong

Prof Kathryn CHEAH Song-eng

Prof Gladys CHEING Lai-ying

Prof CHEN Honglin

Prof CHEN Zhiwei

Dr Catherine CHEN Xiao-rui

Dr Andy CHENG Shu-kei

Prof Cecilia CHENG

Prof Christopher CHENG Hon-ki

Dr Daniel CHEUK Ka-leung

Dr CHEUNG Kin

Prof CHEUNG Yiu-fai

Prof Annie CHEUNG Nga-yin

Prof Bernard CHEUNG Man-yung

Dr Michelle CHEUNG WONG Man-ying

Prof Raymond CHEUNG Tak-fai

Prof CHIEN Wai-tong

Prof James CHIM Chor-sang

Dr Regina CHING Cheuk-tuen

Dr Wilson CHING Yick-pang

Dr CHOI Cheung-hei

Dr CHOW Chun-bong

Prof Winnie CHU Chiu-wing

Prof William CHUI Chun-ming

Prof CHUNG Pak-kwong

Dr Brian CHUNG Hon-yin

Dr Benjamin John COWLING

Dr Daniel FONG Yee-tak

Dr Kenneth FONG Nai-kuen

Prof FUNG Kwok-pui

Prof Tony GIN

Dr William B GOGGINS

Prof James Francis GRIFFITH

Prof Sian Meryl GRIFFITHS

Prof Joseph Irvin HARWELL

Dr HO Lai-ming

Dr HO Pak-leung

Dr Daniel HO Sai-yin

Ms Kimmy HO Wai-kuen

Prof Rainbow HO Tin-hung

Prof HUANG Yu

Dr Wendy HUANG Yajun

Dr Ivan HUNG Fan-ngai

Dr Dennis IP Kai-ming

Prof Margaret IP

Prof Mary IP Sau-man

Dr Patrick IP

Prof JIN Dong-yan

Dr Janice Mary JOHNSTON

Prof KHONG Pek-lan

Prof KHOO Ui-soon

Mr LAI Chi-tong

Prof Daniel LAI Wing-leung

Prof Jimmy LAI Shiu-ming

Prof Paul LAI Bo-san

Prof Timothy LAI Yuk-yau

Prof LAM Ching-wan

Prof LAM Tai-hing

Prof LAM Tai-pong

Dr Andrew LAM Kwok-cheung

Prof Carly LAM Siu-yin

Prof Cindy LAM Lo-kuen

Dr David LAM Chi-leung

Prof Linda LAM Chiu-wa

Dr Wendy LAM Wing-tak

Prof LAO Lixing

Prof LAU Chak-sing

Prof Joseph LAU Tak-fai

Dr LEE Chi-chiu

Dr LEE So-lun

Dr LEE Yuen-lun

Dr Aaron LEE Fook-kay

Dr Calvin LEE Kai-fai

Prof Diana LEE Tze-fan

Dr Jenny LEE Shun-wah

Prof Tatia LEE Mei-chun

Dr LEONG Heng-tat

Dr LEUNG Chi-chiu

Mr LEUNG Kwok-fai

Prof LEUNG Po-sing

Prof LEUNG Suet-yi

Prof LEUNG Ting-fan

Prof LEUNG Ting-hung

Prof LEUNG Wai-keung

Dr LEUNG Wing-cheong

Dr Angela LEUNG Yee-man

Prof Cynthia LEUNG Man

Dr Eugenie LEUNG Yeuk-sin

Dr Gilberto LEUNG Ka-kit

Mr James LEUNG Wing-yee

Dr William LI Ho-cheung

Prof LIN Zhi-xiu

Prof LO Kwok-wai

Dr Janice LO Yee-chi

Dr Raymond LO See-kit

Prof Alice LOKE YUEN Jean-tak

Dr Lobo LOUIE Hung-tak

Dr Annissa LUI Wai-ling

Prof Grace LUI Chung-yan

Dr Christopher LUM Chor-ming

Prof Maria LUNG LI

Prof LYU Aiping

Prof Margaret MAK Kit-yi

Prof Bradley MCPHERSON

Dr Francis MOK Chun-keung

Prof John Malcolm NICHOLLS

Dr NG Wai-tong

Dr Bobby NG Hin-po

Prof Irene NG Oi-lin

Dr Roger NG Man-kin

Prof Simon NG Siu-man

Prof Hextan NGAN Yuen-sheung

Prof Marco PANG Yiu-chung

Prof Leo POON Lit-man

Prof Randy POON Yat-choi

Prof John A RUDD

Dr Catherine Mary SCHOOLING

Prof SHEN Jiangang

Prof Cindy SIT Hui-ping

Dr Andrew SIU Man-hong

Prof SZETO Cheuk-chun

Prof TAM Lai-shan

Dr Stanley TAM Kui-fu

Prof Kathryn TAN Choon-beng

Dr Joyce TANG Shao-fen

Prof Nelson TANG Leung-sang

Prof Sydney TANG Chi-wai

Prof Agnes TIWARI Fung-yee

Prof TO Ka-fai

Dr Tony TO Shing-shun

Dr Antonio TONG Chi-kit

Prof Kenneth TSANG Wah-tak
Mr Raymond TSANG Chi-chung
Prof George TSAO Sai-wah
Prof TSE Hung-fat
Mr TSE Hung-sum
Dr Gary TSE Man-kit
Prof Karl TSIM Wah-keung
Prof Stephen TSUI Kwok-wing
Dr Wendy TSUI Wing-sze
Ms Deborah WAN Lai-yau
Ms Eppie WAN Ho-yu
Dr Kelvin WANG Man-ping
Prof WING Yun-kwok
Mr WONG Cheuk-kin
Dr WONG Chun-por
Prof WONG Tze-wai
Prof WONG Yung-hou
Dr Cesar WONG Sze-chuen
Prof Frances WONG Kam-yuet
Prof Gary WONG Wing-kin
Prof Grace WONG Lai-hung
Prof Samuel WONG Yeung-shan

Prof Stephen WONG Heung-sang

Dr Victoria WONG Wing-yee

Prof Vincent WONG Wai-sun

Dr William WONG Chi-wai

Prof Patrick WOO Chiu-yat

Prof Joseph WU

Dr Kitty WU Kit-ying

Dr YAM Wing-cheong

Prof Bryan YAN Ping-yen

Prof Michael YANG Mengsu

Prof Maurice YAP Keng-hung

Prof YEUNG King-lun

Dr Rebecca YEUNG Mei-wan

Mr Silva YEUNG Tak-wah

Prof YU Weichuan

Prof Doris YU Sau-fung

Prof YUEN Kwok-yung

Dr John YUEN Wai-man

Prof Patrick YUNG Shu-hang

Prof Benny ZEE Chung-ying

Prof ZHANG Zhang-jin

Prof ZHAO Zhongzhen

Ex-officio Members

Dr Rachel CHENG Pui-yan

Dr Thomas CHUNG Wai-hung

Dr FUNG Ying

Dr Anne FUNG Yu-kei

Dr Raymond HO Lei-ming

Dr Wiley LAM Tak-chiu

(D) Expert Advisory Panels

Terms of Reference:

The terms of reference of the Expert Advisory Panels are –

- (a) to advise the Research Council (RC) on research policy and foci under their respective research area; and
- (b) to make recommendations to the RC on the thematic priorities for the investigator-initiated studies/projects.

(i) Expert Advisory Panel for Cancer

Chairperson

Secretary for Food and Health

Non-official Members

Prof Allen CHAN Kwan-chee

Prof Anthony CHAN Tak-cheung

Prof Ava KWONG

Dr Wendy LAM Wing-tak

Prof Raymond LIANG Hin-suen

Prof Maria LUNG LI

Prof Tony MOK Shu-kam

Prof Irene NG Oi-lin

Prof Hextan NGAN Yuen-sheung

Dr WONG Kam-hung

(ii) Expert Advisory Panel for Infectious Diseases

Chairperson

Secretary for Food and Health

Non-official Members

Prof Paul CHAN Kay-sheung

Prof David HUI Shu-cheong

Prof Ivan HUNG Fan-ngai

Prof Gabriel Matthew LEUNG

Prof Joseph Sriyal Malik PEIRIS

Prof YUEN Kwok-yung

(iii) Expert Advisory Panel for Implementation Science

Chairperson

Secretary for Food and Health

Non-official Members

Prof LIN Chia-chin

Prof Frances WONG Kam-yuet

Prof Martin WONG Chi-sang

Prof YEOH Eng-kiong

(iv) Expert Advisory Panel for Mental Health

Chairperson

Secretary for Food and Health

Non-official Members

Prof Eric CHEN Yu-hai

Prof CHIEN Wai-tong

Dr HUNG Se-fong

Prof Linda LAM Chiu-wa

Prof Winnie MAK Wing-sze

Prof Samson TSE Shu-ki

(v) Expert Advisory Panel for Primary Healthcare and Non-Communicable Disease

Chairperson

Secretary for Food and Health

Non-official Members

Prof Juliana CHAN Chung-ngor

Prof LAM Tai-hing

Prof Cindy LAM Lo-kuen

Prof Samuel WONG Yeung-shan

Prof Doris YU Sau-fung

Prof Patrick YUNG Shu-hang

Thematic Priorities - 2019 Open Call for Investigator-initiated Projects

(A) Infectious Diseases

Theme 1: Respiratory pathogens (Seasonal and zoonotic influenza, emerging respiratory viruses, and tuberculosis)

Ref. Code

- A-1-01 ○ Promote research and innovation for improved and novel diagnostics, vaccines and treatments against influenza
- A-1-02 ○ Promote operational research for influenza prevention, control and programme delivery
- A-1-03 ○ Promote research to better understand the virus characteristics and host factors that drive the impact of influenza
- A-1-04 ○ Identify reasons for low influenza vaccine coverage, especially in high risk groups; develop and evaluate strategies to improve vaccine uptake
- A-1-05 ○ Identify mechanisms and risk factors for the emergence of resistance to antiviral agents to influenza, develop and evaluate effective strategies to ameliorate resistance emergence
- A-1-06 ○ Investigate modes of transmission of respiratory viruses (including determinants of contagiousness) and identify non-pharmaceutical interventions to limit its spread in hospitals and the community
- A-1-07 ○ Develop novel and effective surveillance methods that allow early detection of respiratory viruses at the community level
- A-1-08 ○ Identify new correlates of immune protection against influenza virus infections
- A-1-09 ○ Develop novel therapeutics and vaccines for influenza and other emerging respiratory viruses and / or evaluate their effectiveness using experimental, clinical or public health approaches
- A-1-10 ○ Assess threats from zoonotic influenza viruses or other emerging respiratory viruses and develop methods for reducing zoonotic risk.
- A-1-11 ○ Developing methods and strategies for timely identification and treatment of tuberculosis (TB) reactivation in the elderly
- A-1-12 ○ Developing and testing new anti-TB drugs
- A-1-13 ○ Developing strategies to enhance adherence to treatment for TB
- A-1-14 ○ Epidemiology, novel diagnosis and treatment of atypical (non-TB) mycobacterial infection

Theme 2: Antimicrobial resistance

Ref. Code

- A-2-01 ○ Development of novel diagnostics tools to aid diagnosis and treatment of infections and antimicrobial resistance
- A-2-02 ○ Development of novel preventive measures for antimicrobial resistance
- A-2-03 ○ Development of novel antimicrobials or other alternative agents
- A-2-04 ○ Promoting awareness and education regarding antimicrobial resistance, infection prevention and control, and antibiotic stewardship
- A-2-05 ○ Investigate the role of animal husbandry, wild-life and the environment

- A-2-06 ○ in contributing to the increase of antibiotic resistance in humans
- A-2-06 ○ Novel approaches to decolonise patients carrying multiple drug-resistant organisms including antimicrobial therapy and/or faecal transplantation

Theme 3: Vector-borne diseases (including mosquito-, other insect-, and rodent-borne diseases)

Ref. Code

- A-3-01 ○ Epidemiology of vectors, reservoirs and human infection of vector-borne diseases
- A-3-02 ○ Developing and testing novel molecular biology-based diagnostic assays to rapidly identify locally acquired cases of vector-borne disease
- A-3-03 ○ Novel therapeutic strategies for vector-borne diseases
- A-3-04 ○ Development and evaluation of strategies to minimise the risk of vector-borne diseases from establishing endemic transmission within Hong Kong
- A-3-05 ○ Examine the epidemiology of rodent-related hepatitis E infection for better understanding on its local prevalence, associated risk factors and the route of transmission

Theme 4: Human Immunodeficiency Virus (HIV) / Acquired Immune Deficiency Syndrome (AIDS)

Ref. Code

- A-4-01 ○ Immune mechanisms underlying HIV/AIDS pathogenesis
- A-4-02 ○ Novel vaccine for eliciting protective immune responses
- A-4-03 ○ Innovative small molecule and immunotherapeutic drugs (including antibody drugs)
- A-4-04 ○ Therapeutic interventions to cure HIV infection or latency eradication

(B) Primary Healthcare and Non-communicable Disease

Ref. Code

- B-01 ○ Health and health services research on major NCD including cancer, diabetes mellitus, chronic diseases of cardiovascular system, chronic respiratory diseases, cerebrovascular diseases, and chronic musculoskeletal disorders and their associated risk factors including unhealthy diet, physical inactivity, tobacco use, harmful use of alcohol, and psychosocial problems
- B-02 ○ Effectiveness of interventions to tackle NCD and their risk factors
- B-03 ○ Health and health services research tackling problems of an ageing population including sarcopenia and frailty, and promotion of healthy ageing
- B-04 ○ Identification of gene-environment interaction for NCD prevention and control
- B-05 ○ Application of big data analytics to assist diagnosis, treatment and rehabilitation of patients with NCD

- B-06 ○ Enhancing primary care services for the prevention of avoidable hospitalizations
- B-07 ○ Development and evaluation of effectiveness and cost-effectiveness of primary care and chronic disease care service model on NCD and multi-morbidity

(C) Mental Health

Ref. Code

- C-01 ○ Identify risk and protective factors and trajectories (including genetics, biological, environmental and social factors) for development and prevention of mental disorders
- C-02 ○ Test novel and evidence-based approach for early interventions for mental disorders
- C-03 ○ Improve efficiency of health services delivery through health economic research
- C-04 ○ Develop innovative service model in community settings and environment, in particular those with medical-social collaboration to optimise recovery
- C-05 ○ Identify means to increase mental health literacy of the general public and destigmatize mental disorders
- C-06 ○ Study the influence of personal recovery of people from mental disorders
- C-07 ○ Study effective measures to address carer's physical and psychosocial needs and capacity
- C-08 ○ Apply innovative technology in the provision of services for mental disorders
- C-09 ○ Evaluate the impact of physical and mental comorbidity in people with mental disorders

(D) Cancer

Ref. Code

- D-01 ○ Epidemiology studies on cancer risk factors that can help formulate strategies for primary prevention
- D-02 ○ Use of appropriate screening strategies for early identification and treatment of cancer
- D-03 ○ Development of novel diagnostic tools; new treatment modalities including advanced surgical techniques, systemic therapy and radiotherapy to reduce mortality and morbidity
- D-04 ○ Development and evaluation of cancer survivorship care delivery to address long-term and late effects of cancer
- D-05 ○ Applied research in genetics and genomics for personalised medicine, in particular target therapies for different tumours
- D-06 ○ Application of big data analytics to examine clinical information for better management of cancer patients

(E) Implementation Science

Implementation science is a methodological approach that is *applicable to any of the research areas* under the Health and Medical Research Fund. Broadly speaking, the term implementation research describes the scientific study of the processes used in the implementation of initiatives as well as the contextual factors that affect these processes.¹ Of particular interest are the following –

Ref. Code

- E-01 ○ Strategies to implement health promotion, prevention, screening, early detection, and diagnostic interventions, as well as effective treatments, clinical procedures, or guidelines in existing care systems
- E-02 ○ To develop strategies for contextualising clinical and practice-based evidence for implementation of clinical health service and community based practice
- E-03 ○ To conduct formative and process evaluation for improving implementation outcomes
- E-04 ○ Implementation of multiple evidence-based practices within community or health services settings to meet the needs of complex patients and diverse systems of care

¹ David H. Peters, Nhan T. Tran, Taghreed Adam. Implementation research in health: a practical guide. Alliance for Health Policy and Systems Research, World Health Organization, 2013.

Health and Medical Research Fund
Financial Report for the year ended 31 March 2020

	HK\$	HK\$
Cash balance as at 31.3.2019		1,937,517,316.33
Grants paid for the period from 1.4.2019 to 31.3.2020		(219,956,337.96)
<u>Former RFCID</u> Commissioned project grants	(551,727.61)	
Investigator-initiated project grants	(0.00)	
	(551,727.61)	
<u>HMRF</u> Commissioned project grants	(68,629,310.31)	
Investigator-initiated project grants	(140,984,069.13)	
Research fellowships	(4,231,342.09)	
Health Care and Promotion Scheme	(2,218,516.06)	
	(216,063,237.59)	
Direct operation costs paid	(3,341,372.76)	
Cash balance as at 31.3.2020		1,717,560,978.37
Less:		(923,624,661.62)
<u>Former RFCID</u> Fund committed but not yet paid:		
Commissioned project grants	(1,171,892.89)	
Investigator-initiated project grants	(0.00)	
	(1,171,892.89)	
<u>HMRF</u> Fund committed but not yet paid:		
Commissioned project grants	(289,514,727.95)	
Investigator-initiated project grants	(595,145,026.01)	
Research fellowships	(17,776,800.83)	
Health Care and Promotion Scheme	(20,016,213.94)	
	(922,452,768.73)	
Uncommitted balance as at 31.3.2020		793,936,316.75

**HEALTH CARE AND PROMOTION SCHEME
INDEPENDENT AUDITOR'S REPORT AND AUDITED ACCOUNTS
FOR THE YEAR ENDED 31 MARCH 2020**

**INDEPENDENT AUDITOR'S REPORT
TO THE RESEARCH COUNCIL (THE "COUNCIL")****Opinion***What we have audited*

The accounts of the Health Care and Promotion Scheme ("HCPS") funded by the Hong Kong Special Administrative Region ("HKSAR") Government set out on pages 4 to 8, which comprise:

- the balance sheet as at 31 March 2020;
- the statement of income and expenditure for the year then ended;
- the statement of changes in total fund for the year then ended; and
- the notes to the accounts of HCPS, which include a summary of principal accounting policies.

Our opinion

In our opinion, the accounts of HCPS for the year ended 31 March 2020 are properly prepared, in all material respects, in accordance with the accounting policies set out in Note 2 to the accounts of HCPS.

Basis for Opinion

We conducted our audit in accordance with Hong Kong Standards on Auditing ("HKSA") issued by the Hong Kong Institute of Certified Public Accountants ("HKICPA"). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Accounts of HCPS section of our report.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Independence

We are independent of HCPS in accordance with the HKICPA's Code of Ethics for Professional Accountants ("the Code"), and we have fulfilled our other ethical responsibilities in accordance with the Code.

Emphasis of Matter – Basis of Accounting and Restriction on Distribution and Use

We draw attention to Note 2 to the accounts of HCPS, which describes the basis of accounting. Our report is intended solely for the Council or other related parties of the HKSAR Government (if necessary), and should not be distributed to or used by any other parties for any purpose. Our opinion is not modified in respect of this matter.



**INDEPENDENT AUDITOR'S REPORT
TO THE RESEARCH COUNCIL (THE "COUNCIL")**

Responsibilities of the Council for the Accounts of HCPS

The Council is responsible for the preparation of the accounts of HCPS in accordance with the accounting policies set out in Note 2 to the accounts of HCPS, and for such internal control as the Council determines is necessary to enable the preparation of the accounts of HCPS that is free from material misstatement, whether due to fraud or error.

In preparing the accounts of HCPS, the Council is responsible for assessing HCPS's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless there are events or conditions that have caused or may cause the Council to cease HCPS to continue as a going concern.

Auditor's Responsibilities for the Audit of the Accounts of HCPS

Our objectives are to obtain reasonable assurance about whether the accounts of HCPS as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. We report our opinion solely to you, as a body, in accordance with our agreed terms of engagement, and for no other purpose. We do not assume responsibility towards or accept liability to any other person for the contents of this report. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with HKSAAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the accounts of HCPS.

As part of an audit in accordance with HKSAAs, we exercise professional judgment and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the accounts of HCPS, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Council.



**INDEPENDENT AUDITOR'S REPORT
TO THE RESEARCH COUNCIL (THE "COUNCIL")**

Auditor's Responsibilities for the Audit of the Accounts of HCPS (Continued)

- Conclude on the appropriateness of the Council's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on HCPS's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the accounts of HCPS or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause HCPS to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the accounts, including the disclosures, and whether the accounts represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with the Council regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

A handwritten signature in black ink, appearing to read "PricewaterhouseCoopers", is written over a large, stylized, light-colored graphic element.

PricewaterhouseCoopers
Certified Public Accountants

Hong Kong, 30 October 2020

HEALTH CARE AND PROMOTION SCHEME

BALANCE SHEET

	Note	At 31 March 2020 HK\$	At 31 March 2019 HK\$
Current Assets			
Interest receivable		2,479	1,157
Amount due from the Hospital Authority	3	-	8,978,950
Cash and cash equivalents		7,210,530	4,952,891
		<u>7,213,009</u>	<u>13,932,998</u>
Total Assets			
Fund			
Accumulated fund		6,908,969	10,910,430
		<u>6,908,969</u>	<u>10,910,430</u>
Total Fund			
Current Liability			
Accounts payable		304,040	3,022,568
		<u>304,040</u>	<u>3,022,568</u>
Total Liability			
		<u>304,040</u>	<u>3,022,568</u>
Total Fund and Total Liability			
		<u>7,213,009</u>	<u>13,932,998</u>



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Ms Angel FAN On-ki
Secretary of Research Council

The notes on pages 7 to 8 are an integral part of the accounts.

HEALTH CARE AND PROMOTION SCHEME**STATEMENT OF INCOME AND EXPENDITURE**

	For the year ended 31 March 2020 HK\$	For the year ended 31 March 2019 HK\$
Income		
Interest income	194,025	317,052
Expenditure		
Grants	<u>(4,195,486)</u>	<u>(8,043,488)</u>
Deficit for the year	<u><u>(4,001,461)</u></u>	<u><u>(7,726,436)</u></u>

HCPS had no components of comprehensive income other than “deficit for the year” in the year presented. Accordingly, no separate statement of comprehensive income is presented as HCPS’s “total comprehensive income” was the same as the “deficit for the year” .

The notes on pages 7 to 8 are an integral part of the accounts.

HEALTH CARE AND PROMOTION SCHEME**STATEMENT OF CHANGES IN TOTAL FUND**

	Accumulated fund HK\$
At 1 April 2018	18,636,866
Deficit for the year	<u>(7,726,436)</u>
At 31 March 2019	10,910,430
Deficit for the year	<u>(4,001,461)</u>
At 31 March 2020	<u><u>6,908,969</u></u>

The notes on pages 7 to 8 are an integral part of the accounts.

HEALTH CARE AND PROMOTION SCHEME**NOTES TO THE ACCOUNTS****1. General information**

The Health Care and Promotion Scheme (“HCPS”), formerly known as Health Care and Promotion Fund, was established by the Hong Kong Government in 1995 with an injection of HK\$80 million approved by the Finance Committee of the Legislative Council for the purpose of increasing health promotion and disease prevention. The objective of HCPS is to provide funding support to health promotion projects that empower people to adopt healthier lifestyles by enhancing awareness, changing adverse health behaviours or creating a conducive environment that supports good health practices.

As from 28 April 2017, HCPS has been incorporated into the Health and Medical Research Fund (the “Fund”). The Research Council (“the Council”) chaired by the Secretary for Food and Health supervises the management and investment of the Fund. The Research Fund Secretariat is housed in the Research Office of the Food and Health Bureau (“FHB”), which is responsible for providing administrative and logistic support to HCPS. The Hospital Authority acts as an agent for providing accounting services to HCPS which includes keeping the accounts of HCPS and investing the capital money not required immediately in accordance with the guidelines approved by the Council.

2. Principal accounting policies**(a) Basis of preparation**

The principal accounting policies adopted in the preparation of the accounts of HCPS are set out below. The accounts have been prepared on a going concern and accrual bases, and under the historical cost convention.

(b) Revenue recognition

Revenue is recognised when it is probable that the economic benefits will flow to HCPS and when the revenue can be measured reliably.

Interest income from bank deposits is recognised on a time proportion basis using the effective interest method.

(c) Expenditure

Grants are recognised on an accrual basis upon receiving of claims from grant applicants for reimbursements of expenses.

Audit fee of the accounts of HCPS is borne by the FHB.

(d) Cash and cash equivalents

Cash and cash equivalents comprise cash at bank and demand deposits, and other short-term highly liquid investments that are readily convertible to a known amount of cash and are subject to an insignificant risk of changes in value, having been within three months of maturity when acquired.

HEALTH CARE AND PROMOTION SCHEME

NOTES TO THE ACCOUNTS

2. Principal accounting policies (Continued)

(e) Accounts payable

Accounts payable are recognised initially at fair value and subsequently measured at amortised cost using the effective interest method, unless the effect of discounting would be insignificant, in which case they are stated at cost.

3. Amount due from the Hospital Authority

The prior year amount due from the Hospital Authority represents principal and accrued interest income of bank deposits held by the Hospital Authority for HCPS. The amount due is unsecured and has no fixed terms of repayment. Interest income accrued on these bank deposits is recognised as income in HCPS's statement of income and expenditure.

4. Approval of the accounts of HCPS

The accounts of HCPS were approved by the Council on 30 October 2020.