

Health and Medical
Research Fund:

2018-19 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 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 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.

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 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

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.

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.

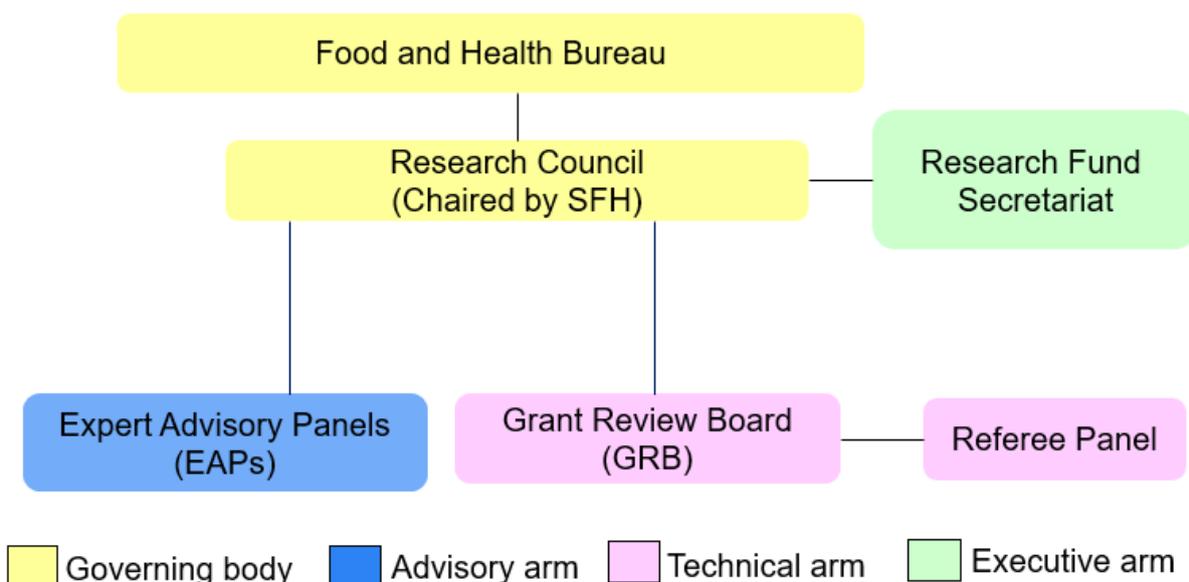
In general, members of any disciplines or profession in health or health-related field can apply for funding. Grants may be awarded to tertiary institutions, hospitals, medical schools, non-governmental organisations or other appropriate

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

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. The next Health Research Symposium will be held on 12 June 2019 to disseminate research findings, recognise excellent research and health promotion projects, facilitate academic exchange and further collaborative healthcare research.

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 (the Bureau).

Highlights of 2018-19

Investigator-initiated Research Projects

Of the 1,673 investigator-initiated research projects funded under the HMRF, 1,229 projects have been completed. These projects cover most research topics under the thematic priorities on –

- (a) Health and Health Services – management and prevention of major non-communicable diseases including cardiovascular illnesses, cerebrovascular diseases, cancers; modifiable lifestyle factors including tobacco control, alcohol consumption behaviour and harm, mental health, injury prevention, sleep deprivation, exercise and health and environmental pollution; health

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.

services including primary care, chronic disease management and palliative care, elderly care and Chinese medicine;

- (b) Infectious Diseases – epidemiology, surveillance and control of emerging and re-emerging infectious diseases, antimicrobial resistance and vaccination programmes; and
- (c) Advanced Medical Research – paediatrics; neurosciences; clinical genetics, and clinical trials.

During the year, final reports of 195 completed 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.

The two-tier peer review process for the applications submitted to the 2017 HMRF Open Call for the Investigator-initiated Research Projects⁴ was conducted from April to September 2018. According to the thematic priorities (*Appendix B1*) and the established criteria, of the 814 applications received by the closing deadline, the RC endorsed GRB's recommendations on funding 209 applications in November 2018. The funding results were announced in December 2018.

Health Care and Promotion Scheme⁵ (HCPS)

Of the 330 funded health promotion projects, 291 projects have been completed. These projects cover topics under the thematic priorities on encouragement of healthy balanced diet and physical activities, strengthening of preventive care, empowerment of patients in chronic disease management, mental health promotion, injury prevention and promotion of organ donation.

During the year, final reports of 12 completed projects were assessed. Projects with findings are uploaded onto the website <https://rfs.fhb.gov.hk> for public access.

⁴ The 2017 open call was announced in December 2017 with closing deadline on 29 March 2018.

⁵ After the consolidation of the Health and Medical Research Fund (HMRF) and the Health Care and Promotion Fund (HCPF), on-going health promotion projects (i.e. Health Promotion projects and Seed Funding Scheme projects) previously funded by the HCPF are monitored under the ambit of the Health Care and Promotion Scheme (HCPS). Projects currently under the HCPS will be funded by the HMRF after the funding balance of the former HCPF has all been committed.

The 2018 HCPS Open Call was issued in April 2018 and a total of 105 funding applications were received by the closing date on 31 July 2018. In accordance with the thematic priorities (*Appendix B2*) and the established assessment criteria, the GRB's recommendations on funding 14 applications were endorsed by the RC in November 2018. Funding results were announced in December 2018.

Consolidation of Annual Open Calls

The open call for Investigator-initiated Research Projects and the open call for HCPS were consolidated into one single open call (2018 HMRF Open Call) which was announced in December 2018. There will not be any open call for HCPS in 2019. All applications under the present broad scope of health and medicine can be submitted to the 2018 HMRF Open Call. Those falling under the thematic priorities (*Appendix B3*) will be given higher priority for funding. A total of 794 funding applications were received by the closing deadline on 29 March 2019. In accordance with the thematic priorities and the established assessment criteria⁶, the GRB's recommendations on funding applications will be considered by the RC. Funding results will be announced in October 2019.

Government-commissioned Programmes

Nineteen commissioned programmes have been approved in the areas of infectious diseases, mental health morbidity survey, healthcare manpower planning and projection, regulatory framework for healthcare professionals, Phase I Clinical Trials Centres, quality of healthcare for the ageing, risk of breast cancer, evaluation of Government's colorectal cancer screening pilot programme in Hong Kong, nurturing a breastfeeding friendly community, vitamin D status of infants, young children and pregnant women, review of growth charts for Hong Kong children, evaluating the impact of tobacco control policies in Hong Kong and Phase I Mental Health Survey. Six programmes have been completed.

⁶ 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, 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.

In addition, two Community Partnership Programmes on Mental Health Promotion in Hong Kong under the HCPS commenced in 2017. They aim at (a) devising, implementing, and evaluating interventions in the community to promote mental well-being and increase public awareness about mental health and (b) developing evidence-based interventions and training materials that could be further adopted by different community partners in the longer-term.

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 2019, the commissioning of five programmes was in progress: influenza vaccine with imiquimod in elderly and chronic illness subjects, local cohorts and follow-up studies, influenza research, early phase clinical trials on novel pharmaceutical products, and healthcare manpower planning and projection (base year 2017).

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 \$0.2 million 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 awards have been approved since the implementation of the Scheme.

The 2018 Open Call was issued in August 2018 and a total of 12 applications were received by the closing deadline on 16 November 2018. The Research Fellowship Assessment Panel's recommendations on funding applications will be considered by the RC. Funding results will be announced in April 2019.

Financial Position

The cash balance of the HMRF as at 31 March 2019 is \$1,937.5 million, with an uncommitted funding balance of \$1,275.6 million (i.e. funding available for new projects/programmes). The financial position of the HMRF for the 2018-19 financial year is at **Appendix C**.

The cash balance and the uncommitted fund balance (in cash basis) of the former HCPF⁷ as at 31 March 2019 is \$13.83 million and \$0.28⁸ million respectively. The audited accounts of the HCPS for the 2018-19 financial year ended 31 March 2019 are at **Appendix D**.

⁷ 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.

⁸ The uncommitted balance represented cash balance (\$13.83 million) less funds committed but not yet recognised (\$10.53 million) and accounts payable (\$3.02 million).

**Membership of
the Research Council and its Supporting Committees
(as at 31 March 2019)**

(A) *Research Council*

Chairperson

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

Members

Ms Mabel CHAU Man-ki

Dr Vincent CHENG Chi-chung

Prof Annie CHEUNG Nga-yin

Prof David HUI Shu-cheong

Prof Timothy KWOK Chi-yui

Prof LAU Chak-sing

Prof Diana LEE Tze-fan

Prof LEUNG Suet-yi

Prof LYU Aiping

Prof Alexandros MOLASIOTIS

Prof Hextan NGAN Yuen-sheung

Prof Joseph Sriyal Malik PEIRIS

Dr Gene TSOI Wai-wang

Prof YEOH Eng-kiong

Prof YIP Shea-ping

Dr YU Wai-cho

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

Consultant (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.

Members

Prof Felix CHAN Hon-wai

Prof Francis CHAN Ka-leung

Ms Mabel CHAU Man-ki

Prof David HUI Shu-cheong

Prof Nancy IP Yuk-yu

Prof Timothy KWOK Chi-yui

Prof Cindy LAM Lo-kuen

Prof LAU Yu-lung

Prof Gabriel Matthew LEUNG

Dr Patrick LI Chung-ki

Dr LO Su-vui

Prof David MAN Wai-kwong

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.

Members

Prof Anil Tejbhan AHUJA

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 Wai-yee

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

Prof Paul CHAN Kay-sheung

Dr David CHAO Vai-kiong

Prof Kathryn CHEAH Song-eng

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Dr Catherine CHEN Xiao-rui

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Prof Cecilia CHENG

Prof Christopher CHENG Hon-ki

Dr Rachel CHENG Pui-yan

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 Thomas CHUNG Wai-hung
Dr Benjamin John COWLING
Dr Daniel FONG Yee-tak
Dr Kenneth FONG Nai-kuen
Prof FUNG Kwok-pui
Dr FUNG Ying
Dr Anne FUNG Yu-kei
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

Dr Timothy LAI Yuk-yau

Prof LAM Ching-wan

Prof LAM Tai-hing

Prof LAM Tai-pong

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Prof Carly LAM Siu-yin

Dr David LAM Chi-leung

Prof Karen LAM Siu-ling

Prof Linda LAM Chiu-wa

Dr Wendy LAM Wing-tak

Dr Wiley LAM Tak-chiu

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

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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 June LEUNG Yue-yan

Dr Teresa LI Mun-pik

Dr William LI Ho-cheung

Dr Wilina LIM Wei-ling

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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

Dr Margaret MAK Kit-yi

Prof Bradley MCPHERSON

Dr Francis MOK Chun-keung

Prof Alexandros MOLASIOTIS

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 Jiangan

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 Chris WONG Kong-chu

Prof Frances WONG Kam-yuet

Prof Gary WONG Wing-kin

Dr 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

Dr 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 Guoping

Prof ZHAO Zhongzhen

Secretary

Consultant (Research Office)

Food and Health Bureau

(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

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 Implementation Science

Chairperson

Secretary for Food and Health

Members

Prof LIN Chia-chin

Prof Frances WONG Kam-yuet

Prof Martin WONG Chi-sang

Prof YEOH Eng-kiong

(iii) Expert Advisory Panel for Infectious Diseases

Chairperson

Secretary for Food and Health

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

(iv) Expert Advisory Panel for Mental Health

Chairperson

Secretary for Food and Health

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

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 - 2017 Open Call for Investigator-initiated Research Projects

Research Area 1: Health and Health Services

This area focuses on the cause, treatment, prevention of human diseases and the effectiveness and cost-effectiveness of healthcare services and policy.

Theme 1: Public Health

Ref. Code Major non-communicable diseases (NCD)

- PH-NC-1** ○ Identification and surveillance of socioeconomic and health-related risk factors associated with quality of life and major NCD in local population
- PH-NC-2** ○ Risk factors of cancers that has rising trends in Hong Kong in recent years including thyroid cancer, corpus cancer, prostate cancer, kidney cancer, non-small cell lung cancer and ovarian cancer
- PH-NC-3** ○ Effectiveness of interventions to tackle major NCD and their contributing factors, e.g. cancer, cardiovascular diseases, cerebrovascular diseases, diabetes mellitus, childhood nutrition and obesity
- PH-NC-4** ○ Extent and impact of food marketing on children's eating behaviour and body weight
- PH-NC-5** ○ Mechanisms for engaging patients and methods for enabling patient self-management for major NCD

Modifiable lifestyle factors

- **Tobacco control**
- PH-MF-1a** ■ Identification of factors and evaluation of methods to prevent uptake of smoking, e-cigarettes and novel tobacco products
- PH-MF-1b** ■ Effectiveness of strategies to reduce smoking prevalence in general population
- PH-MF-1c** ■ Effectiveness of smoking cessation programmes and publicity including new media
- PH-MF-1d** ■ Evaluation of tobacco control policies (including surveillance and intervention)
- **Alcohol consumption behaviour and harm**
- PH-MF-2a** ■ Identification of factors influencing drinking behaviour
- PH-MF-2b** ■ Effectiveness and cost-effectiveness of interventions to reduce alcohol-related harm

- PH-MF-2c ▪ Public health impact of alcohol tax change and/or alcohol marketing (including online media)
- PH-MF-2d ▪ Effect of restricting off-premises alcohol sale to underage people
- PH-MF-3a ▪ Assessment of people suffering from and at risk of developing mental disorders
- PH-MF-3b ▪ Risk and protective factors for mental disorders
- PH-MF-3c ▪ Effectiveness of interventions to promote mental well-being and optimise recovery from mental disorders
- PH-MF-3d ▪ Evaluation of models of community mental health interventions
- PH-MF-3e ▪ Mental health literacy of the general public
- PH-MF-4a ▪ Identification of risk factors and effectiveness of prevention methods, especially in the areas of domestic injury, sports injury, falls and drowning/ near drowning
- PH-MF-4b ▪ Study on the epidemiology and the clinical aspects of metal poisoning in Hong Kong
- PH-MF-5a ▪ Effects of sleep deprivation on physical and mental health outcomes
- PH-MF-5b ▪ Effectiveness of strategies to promote sleep hygiene
- PH-MF-5c ▪ Effects of sleep intervention to reverse the adverse outcomes in chronically sleep deprived individuals
- PH-MF-6a ▪ Effectiveness of exercise intervention to promote physical and psychological well-being in disease populations
- PH-MF-6b ▪ Effective strategies to promote physical activity in general population
- PH-MF-6c ▪ Relationships between fundamental motor development and physical literacy
- PH-MF-6d ▪ Exercise and cognitive health
- PH-EP-1 ▪ Epidemiology, identification and quantification of pollutants
- PH-EP-2 ▪ Impact of living environment on health
- PH-EP-3 ▪ Improve public health knowledge about linkages between health

- and climate
- PH-EP-4** ▪ Effectiveness of climate change adaptation and mitigation to protect health

Theme 2: Health Services

- **Primary care**
- HS-PC-1** ▪ Developing multidisciplinary health service models
- HS-PC-2** ▪ Evaluation of adoption of the Hong Kong Reference Frameworks in Primary Care Settings and identification of the associated enabling factors and/or barriers
- HS-PC-3** ▪ Effectiveness of primary care programmes and community-based interventions

- **Chronic disease management and palliative care**
- HS-CD-1** ▪ Service delivery models and intervention and implementation effectiveness for chronic disease management, palliative and end-of-life care
- HS-CD-2** ▪ Health economic analysis of the new targeted/biological therapies
- HS-CD-3** ▪ Effectiveness and safety of new medications or innovative devices in the management of obesity
- HS-CD-4** ▪ Effectiveness of end-of-life programmes in residential care homes
- HS-CD-5** ▪ Effectiveness of supportive and palliative/end of life care

- **Reducing avoidable hospitalisation**
- HS-RH-1** ▪ Effectiveness of programmes (e.g. geriatric service at the front door / Emergency Department) to reduce avoidable hospitalisation
- HS-RH-2** ▪ Evaluation of models of ambulatory care
- HS-RH-3** ▪ Health systems research to enhance co-ordination and continuity in the transitions of care, including supporting enhanced care in the community

- **Elderly care**
- HS-EC-1** ▪ Prevention of cognitive decline in old age, exploring intervention methods and models of care for dementia
- HS-EC-2** ▪ Promote the bone health of elderly population and to promulgate secondary prevention of fragility fractures
- HS-EC-3** ▪ Early return to function and quality of life after fragility fractures in elderly

- HS-EC-4 ▪ Effectiveness of structured fall prevention programmes for elders in the community
- HS-EC-5 ▪ Clinical application and service planning implication of frailty identification in older population
- **Evaluation on efficiency**
- HS-EE-1 ▪ Cost-effectiveness models for better management plans
- HS-EE-2 ▪ Cost-utility comparisons between treatment options
- HS-EE-3 ▪ Efficiency and effectiveness of health services
- **Use of modern information technology in healthcare**
- HS- IT-1 ▪ Improve quality and safety of patient care
- HS- IT-2 ▪ Enhance efficiency
- HS- IT-3 ▪ Facilitate public private collaboration
- HS- IT-4 ▪ Enhance the capacity and ability in ambulatory / community care

Theme 3: Chinese Medicine

- CM-1 Integrated approaches in combining Chinese and Western models of health care
- CM-2 Effectiveness of Chinese medicine in prevention/ treatment of human diseases
- CM-3 Interactions including efficacy and toxicity of combined Chinese-western medicine
- CM-4 Identifying quality control parameters for Chinese medicines

Research Area 2: Infectious Diseases

This area focuses on the research of infectious diseases which pose potential threats in Hong Kong and neighbouring areas.

Theme 1: Respiratory Pathogens (including influenza and tuberculosis)

- RP-1 Epidemiology (including mathematical modelling)
- RP-2 Transmission
- RP-3 Pathogenesis
- RP-4 Rapid diagnostic tests
- RP-5 Novel control approaches
- RP-6 Economic burden of disease
- RP-7 Vaccine and therapies

Theme 2: Emerging & Zoonotic Diseases

- EZ-1** Characterise new pathogens in animals that can infect humans
- EZ-2** Identification of risk factors that contribute to the emergence of disease
- EZ-3** Transmission
- EZ-4** Pathogenesis
- EZ-5** Development of diagnostic tests
- EZ-6** Surveillance methods for emerging infections
- EZ-7** Vaccine and therapies

Theme 3: Antimicrobial Resistance

- AR-1** Epidemiology and burden of multi-drug resistant organisms
- AR-2** Identification of risk factors for colonisation and infection
- AR-3** Mechanisms of resistance and its transfer
- AR-4** Novel tools for diagnosis or treatment guidance
- AR-5** Optimal infection control measures
- AR-6** Appropriate antimicrobial therapy and avoidance of antibiotic overuse
- AR-7** Effectiveness of programmes to promote antibiotic awareness in community and antimicrobial resistance

Theme 4: Vaccination Programmes

- VP-1** Development of new vaccines
- VP-2** Acceptability of vaccination programmes (e.g. pneumococcal vaccination in elderly) and factors affecting vaccination
- VP-3** Effectiveness and economic analysis of vaccine (e.g. effectiveness in seasonal influenza vaccine in local community and cost-benefit analysis of hepatitis A vaccine)
- VP-4** Measures to enhance vaccination of elderly, institutionalised or other at-risk populations

Theme 5: Technology Platforms

- TP-1** Application of the “omics” technologies in infectious diseases diagnosis and epidemiology studies
- TP-2** Application of the new mobile IT technologies in infectious disease surveillance and contact tracing
- TP-3** Genome sequencing and molecular epidemiology
- TP-4** Technology substitution/supplement for traditional pathogen typing

methods

Theme 6: Severe Sepsis

SS-1 Epidemiology in Hong Kong

Research Area 3: Advanced Medical Research

This area focuses on the development and use of new technologies, and treatment paradigms to improve human health. The following 4 themes are our priorities:

Theme 1: Clinical Genetics

- CG-1 Genetic and genomic study of major chronic and hereditary diseases in Hong Kong
- CG-2 Identification of biomarkers for common cancers using molecular biology approaches
- CG-3 Genetic counselling
- CG-4 Research on ethical, legal and social issues associated with advances in medical genetics and genomics

Theme 2: Clinical Trials

- CT-1 Assessing the safety and effectiveness of a new medication/ new device/ new indication of existing medication or device on a specific group of patients
- CT-2 Comparing the effectiveness in patients with a specific disease of two or more already approved or common interventions for that disease

Theme 3: Neuroscience

- NS-1 Epidemiology, identification of risk factors, prevention, diagnosis, treatment, management and rehabilitation of neurological diseases, particularly neurodegenerative diseases, stroke and injuries
- NS-2 Stem cell therapy and regenerative medicine

Theme 4: Paediatrics

PD-1 Epidemiology, identification of risk factors, prevention, diagnosis, treatment, management in the following special areas: Neonatology, respiratory, allergy, clinical immunology, dermatology, gastroenterology, haematology, oncology, metabolic, cardiovascular, surgical diseases and nutrition (Vitamin D supplementation to exclusive breastfed babies)

Thematic Priorities - 2018 Open Call for Health Care and Promotion Scheme

I. Tobacco control

While smoking is well known to cause many fatal diseases and cancers, continuous effort is required to put “what we know” into “what we do”. Measures to prevent and reduce tobacco exposure include –

- (a) Motivating smokers, in particular middle-aged men and women as well as elderly, to cease smoking and empowering them to forego cigarettes during the times of day when they face their toughest smoking triggers and peers; and
- (b) Exhorting youth, women or high-stress career workers not to start smoking and also to abstain from tobacco use and connecting them with proven evidence of its damage to health.

With an increasing promotion of e-cigarettes worldwide, there are valid concerns that use of e-cigarettes may enhance the attractiveness of smoking and never-smoking users may eventually switch to cigarette smoking. Besides, the trade also tries to promote e-cigarettes as smoking cessation aids. In August 2016, the World Health Organization (WHO) issued a report on e-cigarette which expresses that the evidence for the effectiveness of e-cigarette as a method for quitting smoking is limited and does not allow conclusions to be reached. Therefore, WHO recommends that efforts should be made to regulate these products appropriately, so as to minimise consequences that may contribute to the tobacco epidemic and to optimise the potential benefits to public health. Measures to prevent the use of e-cigarette include –

- (a) Discouraging the general public particularly youth from using e-cigarette, the contents of which, as well as e-liquid, are heterogeneous; and
- (b) Warning them about the possible harms of e-cigarettes.

The Hong Kong Government has proposed to amend the prescribed forms of the health warnings, the size and number of the health warnings and messages for the packet or retail container of cigarettes and tobacco products. Measures to evaluate the impact of the new requirements of pictorial health warnings include –

- (a) Increasing public’s knowledge and awareness of the harms of tobacco use as delivered by the new pictorial health warnings;
- (b) Reducing the chance for the non-smoking children/adolescents/adults to start smoking; and
- (c) Changing the behavioural responses of smokers, e.g. increasing the motivations and willingness of quitting smoking and the likelihood of a quit attempt.

II. Lifestyle, nutrition and physical activity

Adopting a healthy lifestyle, such as balanced diet and regular physical exercise, is fundamental for the prevention of chronic diseases. While the government initiatives are taking a stronger lead, community involvement should also be used to foster active living, encourage healthy eating, tackle obesity and promote a health-supportive workplace. Successful community involvement is based upon information and dialogue. An informed community can be part of the decision-making process and thus benefit from –

- (a) Enabling optimal young child feeding practices such as improving the nutritional quality of young children's diet, increasing consumption of fresh fruits and vegetables and reducing intake of processed food like artificially sweetened snacks and beverages, promoting developmentally appropriate feeding skills and behaviours;
- (b) Increasing the knowledge and support the healthy eating and physical activities of women and their families during pregnancy and lactation;
- (c) Effectively conveying the healthy eating and lifestyle promotion message to the ethnic minorities taking into consideration their cultural practices, in particular families with the young children, pregnant and breastfeeding women;
- (d) Improving the choice of affordable healthy food and beverages to families and decision makers of schools;
- (e) Effectively conveying to and supporting the younger generation the practice of healthy lifestyle, such as avoiding excessive screen time activities including internet addiction, unsafe sexual activities, alcohol and drug misuse, and maintaining balanced diet;
- (f) Increasing the public's awareness and knowledge of balanced diet in an easy-to-understand manner, for instance by taking the food pyramid as reference, so as to increase fruit and vegetables consumption and reduce salt, sugar and fat consumption in their diet;
- (g) Incentivising employers to create a safe and healthy working environment that promotes work safety, reduces risk of occupational hazards and supports the working population to practise health-enhancing behaviours. Actions include modification of the physical environment, enhancement of organisational policies and provision of task-related health knowledge to the employees; and
- (h) Encouraging the public to actively participate in physical activities in lieu of sedentary lifestyle.

III. Mental well-being

Good mental health is an integral part of good overall health. Mental well-being promotion incorporates any action taken to maximise mental health and well-being

among population and individuals by addressing the potentially modifiable determinants of mental health. Family, school, workplace and community are all important settings for mental well-being promotion. Actions are required to maintain and enhance mental well-being by –

- (a) Building mentally friendly policies, practices and atmospheres that reduce/relieve stress experienced by individuals;
- (b) Promoting social values that respect difference and diversity;
- (c) Raising public awareness and understanding of the ways to mental well-being as well as mental health literacy (e.g. common mental health disorders, depression and dementia);
- (d) Reducing stigma against people with and recovering from mental disorders;
- (e) Building relevant knowledge and personal skills that are targeted at the whole population, and tailored for different life stages and different settings (e.g. school, workplace and family), according to the specific needs, risks and protective factors;
- (f) Establishing community partnership to provide supportive environments and empower the public to engage in actions to promote mental well-being;
- (g) Empowering parents, carers and teachers to understand, promote and respond to issues related to the mental health and well-being of children and adolescents;
- (h) Promoting mental health and well-being for employers and employees in workplace settings; and
- (i) Encouraging active and healthy ageing.

IV. Injury prevention

Injuries cause significant mortality and morbidity in the community. Emphasis is placed on injury prevention which covers domestic injuries, sports injuries, falls and drowning/near drowning by –

- (a) Encouraging community stakeholders to take the lead in coordinating actions to prevent or reduce injuries;
- (b) Identifying environmental and behavioural risk factors of vulnerable populations;
- (c) Facilitating effective communication of injury data, development and implementation of prevention programmes that involve more extensive collaboration among public and private sectors, academics, professional groups and non-governmental organisations; and
- (d) Evaluating the effectiveness and health benefit of existing or past local programmes on safety promotion and injury prevention.

V. Reducing alcohol-related problems

Alcohol consumption is a well-proven and yet highly reversible risk factor for copious health and societal problems. Special attention has to be paid to the increasing trend of underage drinking and alcohol-related harms. Effective measures are through –

- (a) Identifying and engaging stakeholders that can represent a diverse constituency such as health professionals, academia, educational institutions, sports sector and parents, to denounce the use or promotion of alcohol;
- (b) Educating the public about immediate and long-term harmful effects of alcohol consumption, in particular the carcinogenic effects of alcohol, along with diseases related to alcoholism (e.g. liver cirrhosis, stroke, coronary heart disease and hypertension), and alcohol-related harms (e.g. road traffic accidents, domestic violence and sexual assault);
- (c) Helping young adults make informed decisions on alcohol use at the point of purchase or consumption;
- (d) Preventing binge drinking, in particular among young adults;
- (e) Enabling young people to resist peer pressure to drink and stay vigilant to misleading marketing tactics deployed by the alcohol industry; and
- (f) Empowering parents to discuss with their children on alcohol-related issues.

VI. Promoting family doctor model of care

The family doctor model of care, which emphasises continuity of care, holistic care and preventive care, is essential to provision of primary care and achieving better health. Awareness and understanding of this model needs to be further promoted in the community so that patients will be more receptive to the care of their family doctor and reduce doctor-shopping behaviour. The required activities include –

- (a) Promoting the benefits of having a family doctor as the first point of contact in the healthcare system for continuous, comprehensive, coordinated and person-centred care;
- (b) Empowering the public to improve their own health and that of their family members by establishing a long term partnership with their family doctors and adopting a preventive approach in improving health;
- (c) Identifying the barriers to establish a long term partnership with one family doctor and recommend cost-effective measures to overcome such barriers; and
- (d) Demonstrating the benefits of health promotion measures and preventive health services to facilitate the general public to adopt the family doctor concept.

VII. Empowering patients and the community in the management of chronic diseases and strengthening preventive care in children and older adults

Reference frameworks on hypertension and diabetes as well as specific population group including older adults and children in the primary care settings are being promulgated by the government. These frameworks provide common reference to healthcare professionals for the provision of quality primary care in the community, as well as emphasising the importance of empowering patients, carers and the public to play an active role in health improvement, and disease prevention and management. The required activities include –

- (a) Equipping patients with diabetes mellitus and hypertension with the necessary knowledge and skills to properly manage these two chronic diseases and prevent complications and actively partner with their family doctors and allied health professionals in managing their diseases;
- (b) Promoting to the general public the benefits and importance of supporting their family members, neighbours and friends with diabetes mellitus and hypertension in managing their health conditions; and
- (c) Raising the public's awareness on the importance of health promotion and disease prevention for children and older adults.

VIII. Cancer prevention

Cancer is a major public health problem in Hong Kong. There is an increasing trend in the number of new cancer cases and registered cancer deaths as a result of various factors including ageing population and population growth. It is projected that the number of new cases of colorectal cancer, prostate cancers and female breast cancers will further increase. Primary prevention is of the utmost importance in reducing cancer risk. On the other hand, early detection of cancer symptoms and evidence-based screening for suitable cancers may lead to early treatment and better health outcome. The required activities include –

- (a) Raising public awareness and changing behaviour for primary prevention of cancer and related risk factors, such as unhealthy diet, physical inactivity, obesity, smoking and consumption of alcohol, and unsafe sex;
- (b) Promoting cancer awareness and empowering the public to recognise early warning symptoms of cancer, so as to seek prompt medical attention for early detection;
- (c) Promoting public awareness of evidence-based screening strategies, such as screening for cervical cancer and colorectal cancer;
- (d) Enhancing the public understanding about the potential pros and cons of screening tests, and the risk and potential harm of over-diagnosis and over-treatment for certain cancers, in particular for breast, colorectal and prostate cancers in order to make an informed choice; and

- (e) Facilitating underprivileged groups such as new immigrants, low income groups, marginalised groups and ethnic minority groups to receive regular cervical cancer screening.

IX. Breastfeeding

Breastfeeding provides optimal nutritional, immunological and emotional nurturing for growth and development of infants and is an effective way in primary prevention of chronic conditions in later life. Multi-level actions taken by health professionals and the community to support mothers to achieving optimal breastfeeding practices, in terms of exclusiveness and duration, include –

- (a) Promoting the awareness and compliance with the WHO's and local guidances on the appropriate marketing of formula milk and related products, and food products for infants and young children among the relevant stakeholders;
- (b) Promoting breastfeeding as the norm of infant and young child feeding to the general public, in particular the younger generation, through effective communication strategies;
- (c) Promoting breastfeeding friendly community facilities and the respect for mothers' freedom to breastfeed anywhere to the general public and service providers of public venues and public transport systems;
- (d) Empowering family members, in particular fathers and grandparents, and carers in supporting mothers to achieve exclusive and sustained breastfeeding;
- (e) Empowering and engaging healthcare professionals, especially for those working in the private sector, in supporting breastfeeding mothers by building relevant knowledge and personal skills on breastfeeding management and creating a breastfeeding friendly environment in the healthcare facilities;
- (f) Encouraging and enabling community stakeholders to provide effective mother-to-mother support;
- (g) Engaging and motivating employers and management of public venues to create breastfeeding friendly environments that support mothers to breastfeed in workplace and public venues respectively; and
- (h) Identifying and empowering specific subgroups of mothers who may have more barriers to initiate and sustain breastfeeding, e.g. teenage mothers, mothers of disadvantaged families and ethnic minority.

X. Healthy Use of Internet and Electronic Screen Products

With the increasing use of new technology in learning and the affordable package to keep oneself online with various electronic screen products, children start contacting such technology and using these products at a much younger age, even before they enter schools; primary school students are starting to browse Internet for homework

assignment and majority of students are spending significant amount of time everyday online for learning, entertainment and social networking. According to the e-Report of the Advisory Group on Health Effects on Use of Internet and Electronic Screen Products, inappropriate and excessive use of these products will result in adverse health effects especially to children and adolescents. The required activities include –

- (a) Raising public awareness on the potential health risks in inappropriate and excessive use of Internet and electronic screen products;
- (b) Promoting health messages and practice on appropriate use of Internet and electronic screen products through different channels and media to the general public; and
- (c) Enhancing parents, students and teachers to adopt appropriate practice and measures on healthy use of Internet and electronic screen products.

XI. Organ Donation

Traditional beliefs and family factors, such as the traditional mindset of full body burial, objection by family members, the issue being irrelevant to young people, and elderly people who consider their organs as not suitable, together with certain misunderstandings and worries about the process of organ transplantation and organ donation registration have led to reservations about organ donation. Therefore, it is important to enhance public understanding about organ donation so as to alleviate their concerns and to increase their willingness to donate organs after death. The required activities include –

- (a) Strengthening publicity and promotion to enable the public to realise how organ donation may save a person's life or significantly improve their health and quality of life, and reduce their misunderstandings and worries;
- (b) Encouraging the public to express their wish of donating organs to family members so that they could accomplish their wish to benefit others after death; and
- (c) Encouraging the public to become prospective organ donors through online registration at the Centralised Organ Donation Register or sending organ donation registration forms to the Department of Health.

Thematic Priorities - 2018 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 ○ Identify reasons for low influenza vaccine coverage, especially in high risk groups; develop and evaluate strategies to improve vaccine uptake
- A-1-02 ○ 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-1-03 ○ 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-1-04 ○ Develop novel and effective surveillance methods that allow early detection of respiratory viruses at the community level
- A-1-05 ○ Identify new correlates of immune protection against influenza virus infections
- A-1-06 ○ 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-1-07 ○ Assess threats from zoonotic influenza viruses or other emerging respiratory viruses and develop methods for reducing zoonotic risk.
- A-1-08 ○ Developing methods and strategies for timely identification and treatment of tuberculosis (TB) reactivation in the elderly
- A-1-09 ○ Developing and testing new anti-TB drugs
- A-1-10 ○ Developing strategies to enhance adherence to treatment for TB

Theme 2: Antibiotic 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 in contributing to the increase of antibiotic resistance in humans

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

Ref. Code

- A-3-01 ○ Developing and testing novel molecular biology-based diagnostic assays to rapidly identify locally acquired cases of vector-borne disease
- A-3-02 ○ Development and evaluation of strategies to minimise the risk of vector-borne diseases from establishing endemic transmission within Hong Kong

(B) Primary Healthcare and Non-communicable Disease

Ref. Code

- B-01 ○ Health and health services research on major NCD namely cancer, diabetes mellitus, cardiovascular diseases, chronic respiratory diseases and musculoskeletal disorders and their contributing risk factors
- B-02 ○ Effectiveness of interventions to tackle NCD and their contributing factors
- B-03 ○ Identification of gene-environment interaction for NCD prevention and control
- B-04 ○ Application of big data analytics to assist diagnosis, treatment and rehabilitation of patients with NCD

Ref. Code

- B-05 ○ Enhancing primary care services for the prevention of avoidable hospitalizations
- B-06 ○ 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 robotic surgery, chemotherapy 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.⁹ 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 ○ Evaluating clinical, health services and community practices that are not evidence-based
- E-03 ○ Implementation of multiple evidence-based practices within community or health services settings to meet the needs of complex patients and diverse systems of care

⁹ 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 2019

	HK\$	HK\$
Cash balance as at 31.3.2018		2,142,311,975.30
Grants paid for the period from 1.4.2018 to 31.3.2019		(204,794,658.97)
<u>Former HHSRF</u> Commissioned project grants	(0.00)	
Investigator-initiated project grants	(962,171.08)	
	(962,171.08)	
<u>Former RFCID</u> Commissioned project grants	(177,806.00)	
Investigator-initiated project grants	(0.00)	
	(177,806.00)	
<u>HMRF</u> Commissioned project grants	(52,014,119.83)	
Investigator-initiated project grants	(145,675,295.06)	
Research fellowships	(3,182,969.33)	
	(200,872,384.22)	
Direct operation costs paid	(2,782,297.67)	
Cash balance as at 31.3.2019		1,937,517,316.33
Less:		(661,920,360.83)
<u>Former HHSRF</u> Fund committed but not yet paid:		
Commissioned project grants	(0.00)	
Investigator-initiated project grants	(0.00)	
	0.00	
<u>Former RFCID</u> Fund committed but not yet paid:		
Commissioned project grants	(1,723,620.50)	
Investigator-initiated project grants	(0.00)	
	(1,723,620.50)	
<u>HMRF</u> Fund committed but not yet paid:		
Commissioned project grants	(120,713,219.09)	
Investigator-initiated project grants	(505,910,941.55)	
Research fellowships	(14,470,654.69)	
Health Care and Promotion Scheme	(19,101,925.00)	
	(660,196,740.33)	
Uncommitted balance as at 31.3.2019		1,275,596,955.50

Health Care and Promotion Scheme
For the year ended 31 March 2019

Audited Accounts
Health Care and Promotion Scheme
For the year ended 31 March 2019

The main bodies responsible for the Health Care and Promotion Scheme (the Scheme) are the Health Care and Promotion Committee (the Committee) and the Health Care and Promotion Board (the Board). The Committee is responsible for the overall management of the Scheme and the Board is responsible for the day-to-day management of the Scheme.

The accounts have been prepared in accordance with the Financial Reporting Manual (FRM) issued by the Financial Reporting Council (FRC) and the Health Care and Promotion Scheme (Accounts) Regulations 2018. The accounts have been prepared on a going concern basis and are subject to audit by the Auditor General for Wales.

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Independent Auditor's Report

To the Research Council (the "Council")
Health Care and Promotion Scheme
For the year ended 31 March 2019

Opinion

We have audited the accounts of the Health Care and Promotion Scheme (the "Scheme") 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 2019, and the statement of income and expenditure for the year then ended and statement of changes in fund for the year then ended, and a summary of significant accounting policies and other explanatory information.

In our opinion, the accounts of the Scheme for the year ended 31 March 2019 have been properly prepared, in all material respects, in accordance with the accounting policies of the Scheme as set out in Note 2 to the accounts.

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" section of our report. We are independent of the Scheme 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. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

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

We draw attention to Note 2(a) to the accounts, which describes the basis of accounting. As a result, the accounts may not be suitable for another purpose. Our report is intended for the Council to table at the Legislative Council or other related parties of the HKSAR Government (if necessary), and should not be used for any other purpose. Our opinion is not modified in respect of this matter.

Other Information

The Council of the Scheme is responsible for the other information. The other information comprises the information included in this annual report but does not include the accounts and our auditor's report thereon.

Our opinion on the accounts does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the accounts, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the accounts or our knowledge obtained in the audit or otherwise appears to be materially misstated. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.



Independent Auditor's Report

To the Research Council (the "Council")
Health Care and Promotion Scheme
For the year ended 31 March 2019

Responsibilities of the Council

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

In preparing the accounts, the Council is responsible for assessing the Scheme'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 the Council intends to cease operations, or have no realistic alternative but to do so.

Auditor's Responsibilities for the Audit of the Accounts

Our objectives are to obtain reasonable assurance about whether the accounts 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. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with HKSA's 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 these accounts.

As part of an audit in accordance with HKSA's, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the accounts, 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")

Health Care and Promotion Scheme

For the year ended 31 March 2019

Auditor's Responsibilities for the Audit of the Accounts (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 the Scheme'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 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 the Scheme to cease to continue as a going concern.

We communicate with those charged with governance 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 'Ming Chiu', written in a cursive style.

Certified Public Accountants

Hong Kong, - 4 SEP 2019

The engagement director on the audit resulting in this independent auditor's report is:

Or Ming Chiu

Practising Certificate number: P04786

Health Care and Promotion Scheme

Balance Sheet

As at 31 March 2019

	<i>Note</i>	2019 <i>IHK\$</i>	2018 <i>HKS</i>
Current Assets			
Interest receivable		1,157	554
Amount due from the Hospital Authority	3	8,978,950	15,710,144
Cash and cash equivalents		<u>4,952,891</u>	<u>5,845,281</u>
		<u>13,932,998</u>	<u>21,555,979</u>
Current Liabilities			
Accounts payable		<u>3,022,568</u>	<u>2,919,113</u>
Net Assets		<u><u>10,910,430</u></u>	<u><u>18,636,866</u></u>
<i>Represented by:</i>			
Accumulated fund		<u>10,910,430</u>	<u>18,636,866</u>
Total Fund		<u><u>10,910,430</u></u>	<u><u>18,636,866</u></u>

Approved and authorised for issue by the Research Council on 4 SEP 2019



Dr. Edmond MA Siu-keung
Secretary of Research Council

Health Care and Promotion Scheme

Statement of Income and Expenditure

For the year ended 31 March 2019

	<i>Note</i>	2019 <i>HK\$</i>	2018 <i>HK\$</i>
Income			
Interest income		<u>317,052</u>	<u>334,886</u>
Expenditure			
Grants		8,043,488	6,815,202
Administrative fees	4	<u>-</u>	<u>19,545</u>
		<u>8,043,488</u>	<u>6,834,747</u>
Deficit for the year		(7,726,436)	(6,499,861)
Other comprehensive income		<u>-</u>	<u>-</u>
Total comprehensive loss for the year		<u>(7,726,436)</u>	<u>(6,499,861)</u>

Health Care and Promotion Scheme**Statement of Changes in Fund**

For the year ended 31 March 2019

	2019 <i>HK\$</i>	2018 <i>HK\$</i>
Total fund at beginning of year	18,636,866	25,136,727
Total comprehensive loss	<u>(7,726,436)</u>	<u>(6,499,861)</u>
Total fund at end of year	<u><u>10,910,430</u></u>	<u><u>18,636,866</u></u>

Health Care and Promotion Scheme**Notes to the Accounts**For the year ended 31 March 2019

1. GENERAL INFORMATION

The Health Care and Promotion Scheme (the “Scheme”), 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 the Scheme 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, the Scheme has been incorporated into the Health and Medical Research Fund (the “Fund”). The Research 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 the Scheme. The Hospital Authority (“HA”) acts as an agent for providing accounting services to the Scheme which includes keeping the accounts of the Scheme and investing the capital money not required immediately in accordance with the guidelines approved by the Research Council.

2. PRINCIPAL ACCOUNTING POLICIES**(a) Basis of preparation**

The principal accounting policies adopted in the preparation of the accounts of the Scheme 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 the Scheme 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

- (i) Grants are recognised on an accrual basis upon receiving of claims from grant applicants for reimbursements of expenses.
- (ii) Administrative fees are recognised on an accrual basis. Audit fee of the Scheme is borne by the FHB.

Health Care and Promotion Scheme

Notes to the Accounts

For the year ended 31 March 2019

2. PRINCIPAL ACCOUNTING POLICIES (CONTINUED)

(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.

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

4. ADMINISTRATIVE FEES

	2019 <i>HKS</i>	2018 <i>HKS</i>
Publicity	-	14,190
Other administrative fees	-	5,355
	<u>-</u>	<u>19,545</u>

Note: Starting from 1 April 2018, all administrative fees are borne by the Health and Medical Research Fund as the remaining fund balance for the Scheme has been committed for meeting the expenditure for approved projects in future years.