THEMATIC PRIORITIES FOR INVESTIGATOR-INITIATED PROJECTS OF THE HMRF
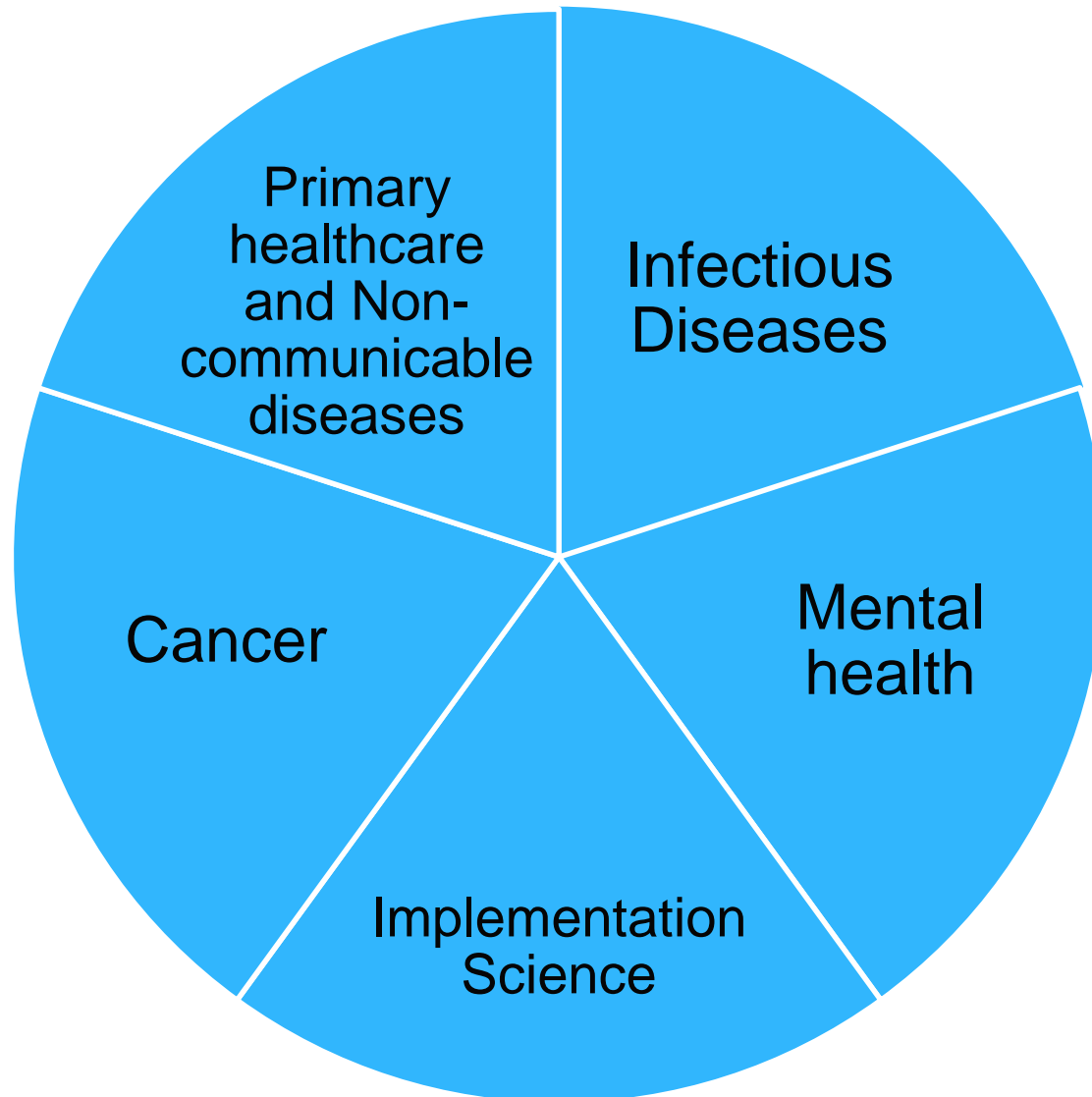
GOVERNANCE STRUCTURE

Food and Health Bureau

Research Council
(Chaired by Secretary for Food and Health)

Research Fund Secretariat

Expert Advisory Panels (EAPs)

Grant Review Board (GRB)

Referee Panel
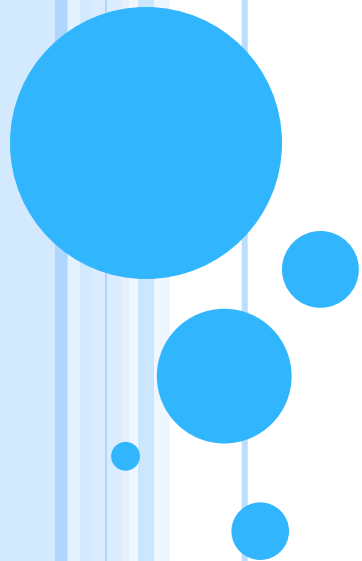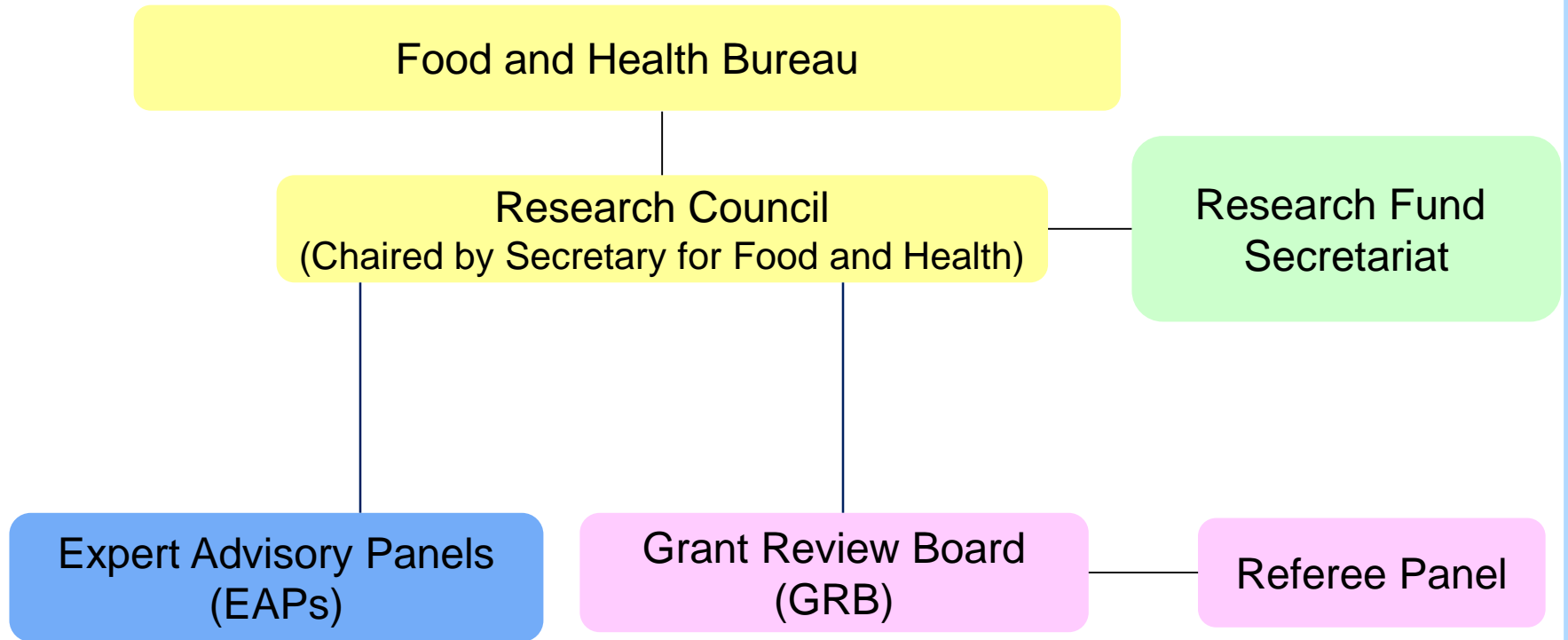
Governing body Advisory arm Technical arm Executive arm

EXPERT ADVISORY PANELS (EAPs)

- Primary healthcare and Non-communicable diseases
- Infectious Diseases
- Mental health
- Implementation Science
- Cancer

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Scope of HMRF

Supports <u>investigator-initiated</u> health and medical research as well as health promotion projects in the following broad areas -

- prevention, treatment and control of infectious diseases

  esp. emerging and re-emerging infectious diseases

- public health, human health and health services

  incl. primary care, NCDs, Chinese medicine, etc

- advanced medical research in specific fields

  esp. paediatrics, neuroscience, clinical genetics and clinical trials

- health promotion that facilitates mobilisation of local resources to promote good health and prevention of illness in the community.

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2020 HMRF Open Call – Thematic Priorities

➤ To stimulate research in key areas considered important by the Food and Health Bureau, thematic priorities are set and revised regularly.

➤ List of thematic priorities can be downloaded from Secretariat's website at https://rfs.fhb.gov.hk

➤ Enter the reference code of the most relevant thematic priorities in section 5b of the application form.

➤ If the application is outside the thematic priorities, please input "Outside thematic priorities"

➤ The application will be treated as incomplete if section 5b is not completed

➤ Priority for funding will be given to applications addressing the thematic priorities

➤ Thematic priorities are reviewed every year by Expert Advisory Panels and endorsed by Research Council

Infectious Diseases

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

Ref. Code	Thematic priority description
A-1-01	Promote research, evaluation and innovation for improved and novel diagnostics, vaccines and treatments against respiratory pathogens
A-1-02	Promote operational research for prevention, control and programme delivery
A-1-03	Promote research to better understand the pathogen characteristics and host factors that drive the impact of respiratory infections
A-1-04	Identify reasons for low 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 respiratory pathogens, develop and evaluate effective strategies to ameliorate resistance emergence
A-1-06	Investigate modes of transmission of respiratory pathogens (including determinants of contagiousness) and identify non-pharmaceutical interventions to limit its spread in hospitals and the community

INFECTIOUS DISEASES

Ref. Code	Thematic priority description
A-1-08	Identify new correlates of immune protection against respiratory pathogens
A-1-09	Assess threats from zoonotic or other emerging respiratory pathogens and develop methods for reducing zoonotic risk.
A-1-10	Developing methods and strategies for timely identification and treatment of tuberculosis (TB) reactivation in the elderly
A-1-11	Developing and testing new anti-TB drugs
A-1-12	Developing strategies to enhance adherence to treatment for TB
A-1-13	Epidemiology, novel diagnosis and treatment of atypical (non-TB) mycobacterial infection

INFECTIOUS DISEASES

Theme 2: Antimicrobial resistance

Ref. Code	Thematic priority description
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
A-2-06	Novel approaches to decolonise patients carrying multiple drug-resistant organisms, including antimicrobial therapy and/or faecal transplantation

Infectious Diseases

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

Ref. Code	Thematic priority description
A-3-01	Epidemiology, <mark>monitoring and management</mark> 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 human rat hepatitis E infection for better understanding on its local prevalence, associated risk factors and the route of transmission

INFECTIOUS DISEASES

Theme 4: HIV / AIDS

Ref. Code	Thematic priority description
A-4-01	Immune mechanisms underlying HIV/AIDS pathogenesis
A-4-02	Novel vaccines 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

INFECTIOUS DISEASES

Theme 5: Preparedness and response to pandemic and epidemic

Ref. Code	Thematic priority description
A-5-01	Utilising big data, artificial intelligence and –omics approaches for clinical and public health applications, including contact tracing, screening for infection, surveillance and clinical management
A-5-02	Evaluating psychological, societal and economic impact of infection control interventions
A-5-03	Developing assessment frameworks for ethical, legal and privacy issues on the use of digital health technology

Primary Healthcare (PHC) and Non-communicable Disease (NCD)

Ref. Code	Thematic priority description
B-01	Health and health services research on major NCD including cancer, diabetes mellitus, heart disease, stroke, hypertension, respiratory diseases and closely related diseases such as musculoskeletal disorders and injury and their 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 ageing population including sarcopenia, frailty and fracture, 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 NCD and avoidable hospitalisations
B-07	Development and evaluation of effectiveness and cost-effectiveness of collaborative, interdisciplinary, inter-sectoral and integrated care service models (including public-private interface) for prevention and management of NCD and multi-morbidity

MENTAL HEALTH

Ref. Code	Thematic priority description
C-01	Identify risk and protective factors and trajectories (including genetics, biological, environmental and social factors) <mark>at population level</mark> 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 <mark>and enhance mental wellbeing</mark> of the general public and destigmatise mental disorders
C-06	Study the influence of personal recovery of people from mental disorders

Mental Health

Ref. Code	Thematic priority description
C-07	Study effective measures to address physical and psychosocial needs and capacity ==of carers, and in particular vulnerable carers such as single mothers and elderly couples==
C-08	Apply innovative technology in the provision of ==accessible screening and preventative interventions and== services for mental disorder
C-09	Evaluate the impact of physical and mental comorbidity in people with mental disorders

Interdisciplinary research with a view to provide scalable, implementable, translational interventions under any of the thematic priorities listed in Mental Health is appreciated

CANCER

Ref. Code	Thematic priority description
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 rehabilitation and 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 tumors
D-06	Application of big data analytics to examine clinical information for better management of cancer patients

Cancer, Mental Health , Elderly Care

- Cancer and mental illness are NCD and they may fit thematic priorities under the three broad themes of Primary Healthcare and NCD, Cancer and Mental Health

- Care of the elderly/aging are included in the thematic priorities under PHC and NCD, as well as Infectious Diseases and Mental Health

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IMPLEMENTATION SCIENCE

- Implementation Science aims:
  - To promote the systematic uptake of research findings and other evidence-based information into routine practice
  - To assess the performance, and, hence, improve the quality and effectiveness of health services

- Proposals submitted under the thematic priorities of Implementation Science should aim to improve the existing healthcare system in terms of enhancing patient care or informing health policies

- Interested parties from non-academic institutions are highly recommended to collaborate with partners from academic institutions to prepare their implementation research proposals

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IMPLEMENTATION SCIENCE

- Established theories, frameworks, models and taxonomies can be used to analyse barriers and facilitators of implementation outcomes
  - Consolidated Framework for Implementation Research (CFIR)
  - Practical, Robust, Implementation Sustainability Model (PRISM)
  - Reach Effectiveness Adoption Implementation Maintenance (RE-AIM)
  - Theoretical Domains Framework (TDF)
  - Promoting Action on Research Implementation in Health Services (PARHiS)

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IMPLEMENTATION SCIENCE

Ref. Code	Thematic priority description
E-01	Strategies to implement health promotion, prevention, screening, early detection, and diagnostic interventions, as well as effective treatments, clinical procedures, or guidelines by enhancing the existing care systems through patient-level or system-level interventions
E-02	To develop strategies for contextualising clinical, patient-level and system-level interventions, 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

Implementation Science

Ref. Code	Thematic priority description
E-04	Implementation of multiple levels of interventions within community or health services settings to meet the needs of complex patients and diverse systems of care
E-05	Studies of dissemination strategies that aim to promote the use of research evidence in public policy and health care policy, and develop methods and measures focused on policy dissemination and implementation for policy contexts including assessment of applicability and adaptability. Formative studies that can inform the design of policy dissemination strategies are also of interest.

IMPLEMENTATION SCIENCE

Examples of implementation science research proposals in each HMRF Areas of Projects

HHS	An implementation science approach to adapting healthy movement behaviour guidelines for Hong Kong preschool-aged children
ID	Increasing rotavirus vaccine uptake: a randomised controlled trial
AMR	Implementation of multi-biomarkers algorithm for detection in Chinese obese individuals with non-alcoholic fatty liver disease
HP	Promoting advance care planning in persons with early dementia and their family caregivers in the community

THANK YOU