Health and Medical Research Fund - Thematic Priorities

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.

Theme 1: Public Health
a. Major non-communicable diseases (NCD)
   ○ Identification of factors that influence health behaviour, particularly modifiable lifestyle factors
   ○ Effectiveness of interventions to tackle NCD and their contributing factors, e.g. cancer, cardiovascular diseases, cerebrovascular diseases, childhood obesity
   ○ Extent and impact of food marketing on children’s eating behaviour and body weight

b. Modifiable lifestyle factors
   ○ Tobacco control
     ▪ Identification of factors and evaluation of methods to prevent uptake of smoking
     ▪ Effectiveness of smoking cessation programmes and publicity including new media
     ▪ Evaluation of tobacco control policies

   ○ Alcohol consumption behaviour and harm
     ▪ Identification of factors influencing drinking behaviour
     ▪ Effectiveness and cost-effectiveness of interventions to reduce alcohol-related harm
     ▪ Public health impact of alcohol tax change
     ▪ Effect of restricting off-premises alcohol sale to underage people

   ○ Promoting good mental health
     ▪ Assessment of the mentally ill and ex-mentally ill
     ▪ Risk and protective factors for mental disorders
     ▪ Effectiveness of interventions to promote mental well-being
     ▪ Mental health literacy of the general public

   ○ Injury and poisoning
     ▪ Identification of risk factors and effectiveness of prevention methods, especially in the areas of domestic injury, sports injury, falls and drowning/near drowning
Health and Medical Research Fund - Thematic Priorities

c. Environmental pollution and climate change
   ○ Epidemiology, identification and quantification of pollutants
   ○ Impact on health
   ○ Improve public health knowledge about linkages between health and climate
   ○ Effectiveness of climate change adaptation and mitigation to protect health

Theme 2: Health Services

a. Primary care
   ○ Developing multidisciplinary health service models
   ○ Evaluation of adoption of the Hong Kong Reference Frameworks in Primary Care Settings and identification of the associated enabling factors and/or barriers.
   ○ Effectiveness of primary care programmes

b. Chronic disease management and palliative care
   ○ Service delivery models and effectiveness for chronic disease management
   ○ Effectiveness of supportive and palliative/end of life care
   ○ Symptom management
   ○ Preventable vision loss
   ○ Service delivery and treatment of chronic skin diseases with significant adverse impacts on health-related quality of life, such as psoriasis

c. Reducing avoidable hospitalisation
   ○ Effectiveness of programmes to reduce avoidable hospitalisation
   ○ Evaluation of models of ambulatory care
   ○ Health systems research to support enhancing care in the community

d. Elderly care
   ○ Prevention of cognitive decline in old age, exploring intervention methods and models of care for dementia
   ○ Effectiveness of structured fall prevention programmes for elders in the community
   ○ Effectiveness of end-of-life programmes in residential care homes

Theme 3: Chinese Medicine

a. Establishing safety and quality profiles for certain Chinese herbs and medicines
b. Interactions between Chinese medicines and Western medicines

c. Integrated approaches in combining Chinese and Western models of health care

d. Effectiveness of Chinese medicine in prevention/treatment of human diseases
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)
a. Epidemiology (including mathematical modelling)
b. Rapid diagnostic tests
c. Novel control approaches
d. Economic burden of disease

Theme 2: Emerging & zoonotic diseases
a. Characterise new pathogens in animals that can infect humans
b. Identification of risk factors that contribute to the emergence of disease
c. Development of diagnostic tests
d. Surveillance methods for emerging infections

Theme 3: Antimicrobial resistance
a. Epidemiology of multi-drug resistant organisms
b. Identification of risk factors for colonisation and infection
c. Mechanisms of resistance and its transfer
d. Laboratory-based strategies for detection
e. Optimal infection control measures including screening
f. Appropriate therapy

Theme 4: Vaccination programmes
a. Development of new vaccines
b. Acceptability of vaccination programmes
c. Measures to enhance vaccination of elderly, institutionalised or other at-risk populations

Theme 5: Technology platforms
a. Application of modern technology to control infectious diseases, particularly hospital-acquired (nosocomial) infections
b. Genome sequencing and molecular epidemiology
c. Technology substitution/supplement for traditional pathogen typing methods
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
a. Genetic and genomic study of major chronic and hereditary diseases in Hong Kong
b. Identification of biomarkers for common cancers using molecular biology approaches
c. Genetic counselling
d. Genetic education

Theme 2: Clinical Trials
a. Assessing the safety and effectiveness of a new medication/ new device/ new indication of existing medication or device on a specific group of patients
b. Comparing the effectiveness in patients with a specific disease of two or more already approved or common interventions for that disease

Theme 3: Neuroscience
a. Epidemiology, identification of risk factors, prevention, diagnosis, treatment, management and rehabilitation of neurological diseases, particularly neurodegenerative diseases, stroke and injuries
b. Stem cell therapy and regenerative medicine

Theme 4: Paediatrics
Epidemiology, identification of risk factors, prevention, diagnosis, treatment, management in the following special areas: Neonatology, respiratory, allergy, clinical immunology, dermatology, nutrition, gastroenterology, metabolomics, haematology, oncology, cardiovascular and surgical diseases