Health and Medical Research Fund - Thematic Priorities for 2016 Open Call

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 NCD and their contributing factors, e.g. cancer, cardiovascular diseases, cerebrovascular diseases, childhood nutrition and obesity
PH-NC-4 ○ Extent and impact of food marketing on children’s eating behaviour and body weight

Modifiable lifestyle factors
○ Tobacco control
  PH-MF-1a  Identification of factors and evaluation of methods to prevent uptake of smoking
  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
  PH-MF-2d  Effect of restricting off-premises alcohol sale to underage people

○ Promoting good mental health
  PH-MF-3a  Assessment of people suffering from and at risks of developing mental
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disorders

PH-MF-3b ▪ Risk and protective factors for mental disorders

PH-MF-3c ▪ Effectiveness of interventions to promote mental well-being and optimize recovery from mental disorders

PH-MF-3d ▪ Mental health literacy of the general public

- Injury and poisoning

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

- Sleep deprivation

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

- Exercise science and health

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

- Environmental pollution and climate change

PH-EP-1 ▪ Epidemiology, identification and quantification of pollutants

PH-EP-2 ▪ Impact 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
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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

- Chronic disease management and palliative care
  - HS-CD-1: Service delivery models and effectiveness for chronic disease management
  - HS-CD-2: Health economic analysis of the new target/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 to reduce avoidable hospitalisation
  - HS-RH-2: Evaluation of models of ambulatory care
  - HS-RH-3: Health systems research to support enhancing 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

- Evaluation on efficiency
  - HS-EE-1: Cost-effectiveness models for better management plans
  - HS-EE-2: Cost-utility comparisons between treatment options

- Use of modern information technology in healthcare
  - HS-IT-1: Improve quality and safety of patient care
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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 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 Laboratory-based strategies for detection
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)