



香港中文大學  
The Chinese University of Hong Kong



香港中文大學醫學院  
**Faculty of Medicine**  
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# Academic Degrees in Public Health

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# What are some future challenges that public health workers must be trained to face?

## Some Macro-level challenges:

- Demographic Transitions
- Provision of Affordable Care & Preventive Services
- Social Media and Informatics
- Climate Change
- Globalized Travel
- Rapid Community health assessments
- Integration of Health in All Government Policies

**Challenges are increasingly complex and require application of highly specialized skills and multi-level, multi-sectoral thinking**



# Future of Public Health will require specialized but cross-cutting training

## Challenges are Increasingly Complex

- Require input of highly trained professionals across multiple areas of expertise
- Will often requiring collaborative networks
- Intersectoral participation of stakeholders
- Rapid integration of emerging technologies



# From multi- disciplinarity

# To interdisciplinarity & transdisciplinarity



Towards Greater Synthesis in PUBLIC HEALTH



# Types of advanced degrees in Public Health

## Professional Degrees

- Master of Public Health (MPH)
- Master of Healthcare Management
- Master of Healthcare Administration
  
- Doctor of Public Health (DrPH)

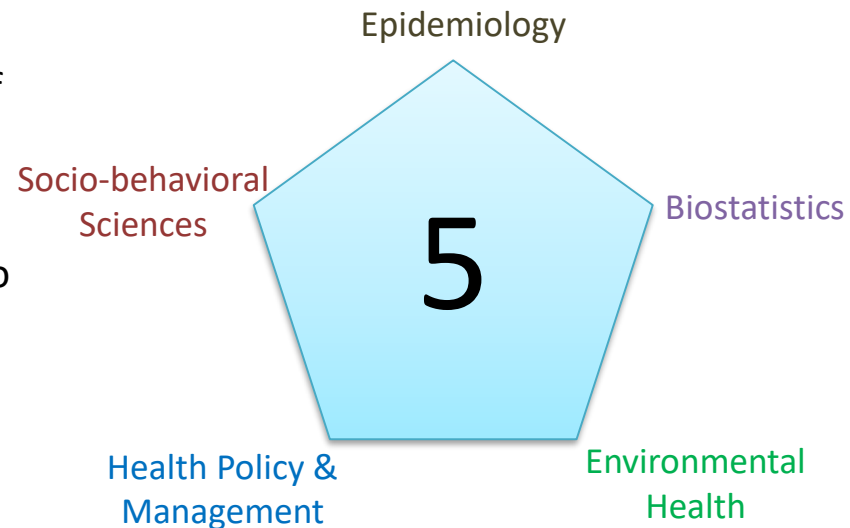
## Academic Degrees

- Master of Science (MSc)
- Master of Science in Public Health (MSPH)
- Master of Science in Epidemiology & Biostatistics
- Master of Philosophy (MPhil)
  
- Doctor of Philosophy (PhD)
- Doctor of Science (ScD)



# What are the differences between Professional Public Health & Academic Degrees?

- Professional degrees such as MPH or DrPH are designed to provide broad-based competencies across **health practice** and less on research.
- Coursework for a professional degree must typically include study of the **5 basic core competency** areas of public health.
- These practice-oriented program train professionals to develop, implement, and evaluate public health programs and policies as advisors, public health consultants, health officers and program managers.
- Some MPH programs will award a degree only to those with MD, JD or MBA background or some like MS of HSM will require work experience



# The Chinese University of Hong Kong

## Master of Public Health

- **Aims**

Provides broad public health perspectives and skills to assume effective leadership in public health practice in 3 domains of health improvement, health protection and health service

- **Learning outcomes**

Upon completion, students will be able to:

1. Bring their knowledge to bear on tackling contemporary public health issues
2. Integrate practice and theory
3. Develop the necessary perspectives, skills and experience
4. Provide informed and effective leadership in public health practice



# The Chinese University of Hong Kong

## Master of Public Health (con't)

- **Competence**

- Apply core public health knowledge and skills to solve public health problems using principles from the fields of epidemiology, biostatistics, environmental health sciences, management, social and behavioral sciences and global health
- Describe and explain psychosocial, legal, ethical and political dimensions of public health issues, decisions and actions
- Identify sources of evidence and information about common public health issues and challenges; and develop and evaluate potential solutions using both quantitative and qualitative methodologies
- Apply the appropriate quantitative tools and methods to conduct program evaluation; determine appropriate use of data for problem identification and resolution
- Communicate effectively with peers and stakeholders of diverse backgrounds in teams and be able to articulate public health issues and solutions effectively to a general audience

- Designed in accordance with Hong Kong Qualification Framework Level 6 Master Degree Quality Framework





# The Chinese University of Hong Kong Master of Science and Postgraduate Diploma in Health Services Management

- **Aims**

- To provide students with advanced knowledge in health services management
- Concerned with the delivery, quality and costs of healthcare for individuals and populations

- **Vision**

To develop leadership skills, managerial capabilities, and expertise in healthcare management that enables safe, efficient, effective and responsive healthcare



# The Chinese University of Hong Kong Master of Science and Postgraduate Diploma in Health Services Management (con't)

## The 3 domains of administrative medicine

### PHM domain:

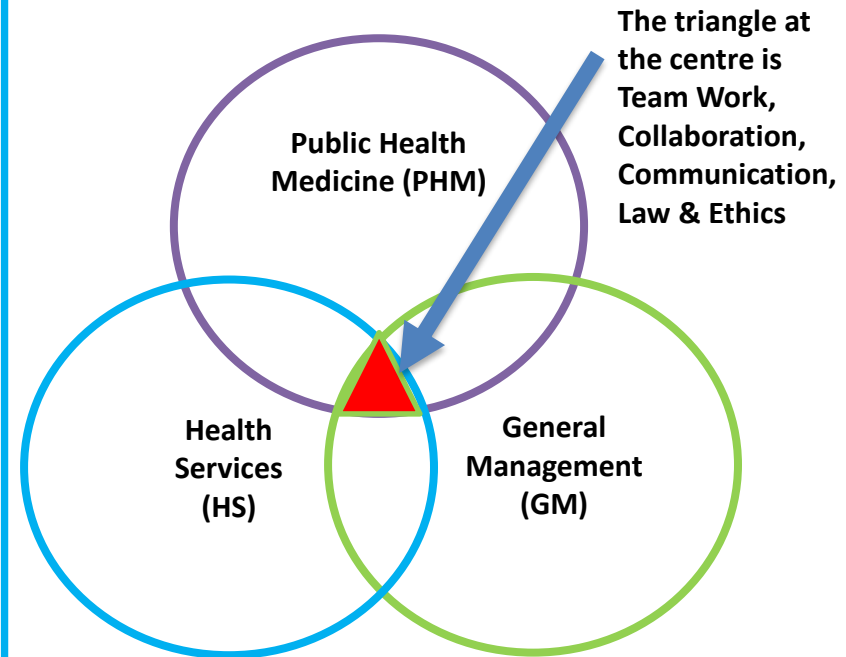
- ▶ Epidemiology & health statistics
- ▶ Global health
- ▶ Social determinants of health
- ▶ Environmental & occupational health
- ▶ Health promotion
- ▶ Health protection
- ▶ Health needs assessment

### GM domain:

- ▶ Management of people, resources & performance
- ▶ Managing change & influencing
- ▶ Organizational effectiveness
- ▶ Strategic management
- ▶ Marketing
- ▶ Leadership

### HS domain:

- ▶ Health system & policies
- ▶ Health economics & healthcare financing
- ▶ Health strategy & policy development
- ▶ Evidence-based healthcare & decision-making
- ▶ Healthcare planning & operations management
- ▶ Quality & safety
- ▶ Clinical governance



# The Chinese University of Hong Kong Master of Science and Postgraduate Diploma in Health Services Management (con't)

- **Upon completion**
  - Develop managing skills
  - Apply the principles of clinical practice, health economics, and decision analysis in managing clinical services
  - Understand the complex health services administration problems and to formulate appropriate solutions
  - Manage human and material resources for health services
  - Manage changes in informatics and technology
  - Understand and promote biomedical and managerial ethics
  - Understand good clinical and administrative practice in healthcare
  - Develop advocating and mediating role in a multidisciplinary environment, to effectively changes in culture and practice in the healthcare organizations and systems
- Designed in accordance with Hong Kong Qualification Framework Level 6 Master Degree Quality Framework



# The Chinese University of Hong Kong Master of Science and Postgraduate Diploma in Epidemiology and Biostatistics

- **Aim**

- To provide comprehensive training, conduct, and analysis of clinical and health research
- Use and interpret findings for patients care and policy making

- **Upon completion**

- Recognize the role and importance of epidemiological research for clinical practice and health care
- Form research questions that can be addressed by conducting an epidemiological study
- Design an epidemiological study for a particular research question
- Learn practical issues related to field work and data collection for an epidemiological study
- Analyze data by using SPSS and interpret the results
- Set up database efficiently as to describe and explore data graphically and statistically
- Test hypothesis statistically and interpret results of hypothesis testing correctly
- Write a scientific report for an epidemiological study in a format required by a peer-reviewed biomedical journal
- Critically read, interpret and use the results from epidemiological and statistical studies

- Designed in accordance with Hong Kong Qualification Framework Level 6 Master Degree Quality

Framework

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# Academic Masters Degrees in Public Health

- Academic public health degree are research-oriented and data driven
- Graduates have careers as research analysts, consultants, educators that use data to generate innovative solutions to public health problems
- The curriculum focuses on more *specialized* knowledge of that subject area
- Although interdisciplinary, typically do not require coursework in all 5 core public health areas
- Common Research-based Masters degrees in Public Health include:
  - MSc Biostatistics or MSc Epidemiology
  - MSc Computational Biology and Quantitative Genetics
  - MSc Environmental Health Sciences
  - MSc Global Health and Population
  - MSc in Health & Behavioral Sciences
  - MSc in Health Policy
  - MPhil in Public Health



# Research Doctorates in Public Health

## Doctors of Philosophy/ Doctor of Science

- The doctor of philosophy (PhD) and doctor of science (ScD) are advanced degree in research
- Provide comprehensive training in theory, data analysis methods and research design using experimental or quasi-experimental study designs.
- PhD/ScD graduates often seek for academic professions that involve teaching and research but as much one-third work for government agencies as policy advisors or in the private sector as biostatisticians for pharmaceutical corporations or management consultants for healthcare industry.
- Some research grants may require the Principal Investigator to possess a research doctorate



# The Chinese University of Hong Kong

## MPhil – PhD in Public Health:

### 2 streams articulated programmes (con't)

- **Aims**

Build the capacity in research methodologies related to public health, and community-oriented primary care

- **Field of study**

Health protection, health improvement and health service provision

- **Conducting independent research in:**

- Biostatistics
- Epidemiology
- Family Medicine and Primary Health Care
- Global Health and Humanitarian Medicine
- Health Promotion and Behavioural Health
- Health System, Policy and Management
- Infectious Diseases
- Occupational and Environmental Health



# The Chinese University of Hong Kong

## MPhil – PhD in Public Health:

### 2 streams articulated programmes (con't)

- **Years of completion:**

- **MPhil** – 2 years
- **PhD** – 3/4 years

- **Year 1 students:**

- a) complete 12 units of compulsory course work in 7 disciplines
- b) seminars and courses in thesis research in each academic year
- c) pass candidacy requirements include:
  - Qualifying assessments
  - Defence of written research proposal





# Triple challenge of Academic Degrees in Public Health

1. Academic degree programmes will increasingly need to integrate advances in the field, emerging technologies and state-of-the-art developments into the curriculum. Programs may need to specialize their areas of expertise for efficiency.
2. At the same time, programmes need to embrace an interdisciplinary (and even transdisciplinary) paradigm and train versatile researchers who can collaborate synergistically across disciplines by leveraging data resources and networks from non-traditional areas.
3. Academic degrees also face competition from professional degrees in similar fields which often have a more defined skillset, clearer career path and certification from accrediting bodies.



# Thank You!

