The Chinese University of Hong Kong

Data Sharing in Hong Kong: How's our Culture

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My Background

- BSc in Statistics, CUHK
- Statistical Programmer in Hospital Authority
- PhD in Public Health, CUHK
- Assistant Professor in Division of Gastroenterology, Department of Medicine and Therapeutics, CUHK
- Research Scientist (Statistician) in Hospital Authority
- Associate Professor (Research) in

Big Data Decision Analytics Research Centre, CUHK

Hong Kong

The Chinese University of Hong Kong

Land Size Around 1,100 km^2

Over 7 Million Population

Patient Loading in Hong Kong

Hospital Authority (HA)

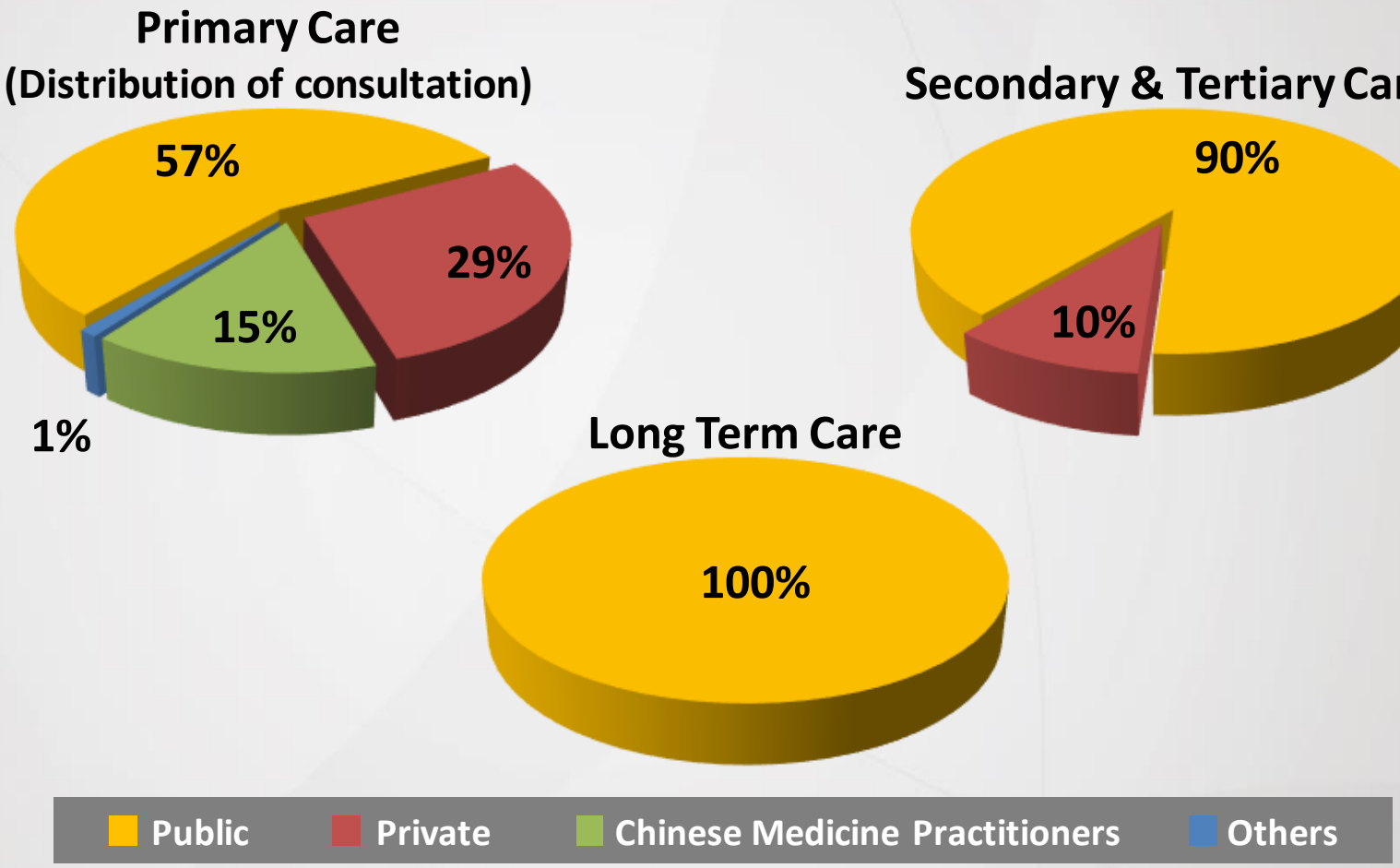
The HA is established under the Hospital Authority Ordinance in 1990. It has been responsible for managing Hong Kong's public hospitals services since December 1991.

醫院管理局
HOSPITAL AUTHORITY

- 42 hospitals & institutions
- 47 Specialist Out-patient Clinics
- 73 General Out-patient Clinics
- 27,440 beds
- 70,000 staffs

  (Updated until 2015)

Hong Kong's 3-Tier Healthcare System



Source: 1) "Thematic Household Syrvey Report No.41". Census and Statistics Dept, September 2009
2) Public/private share by in-patient bed day in 2009 (HA & Dept of Health)

A Population Health Database in HA

Admission

AEIS
(Accident & Emergency Information System)

PsyCIS
(Psychiatric Clinical Information System)

OPAS
(Out-Patient Appointment System)

IPAS
(Integrated Patient Administration System)

Diagnosis

LIS
(Laboratory Information System)

RIS
(Radiology Information & Image System)

Procedures

OTRS
(Operating Theatre Record System)

ERS
(Endoscopy Record System)

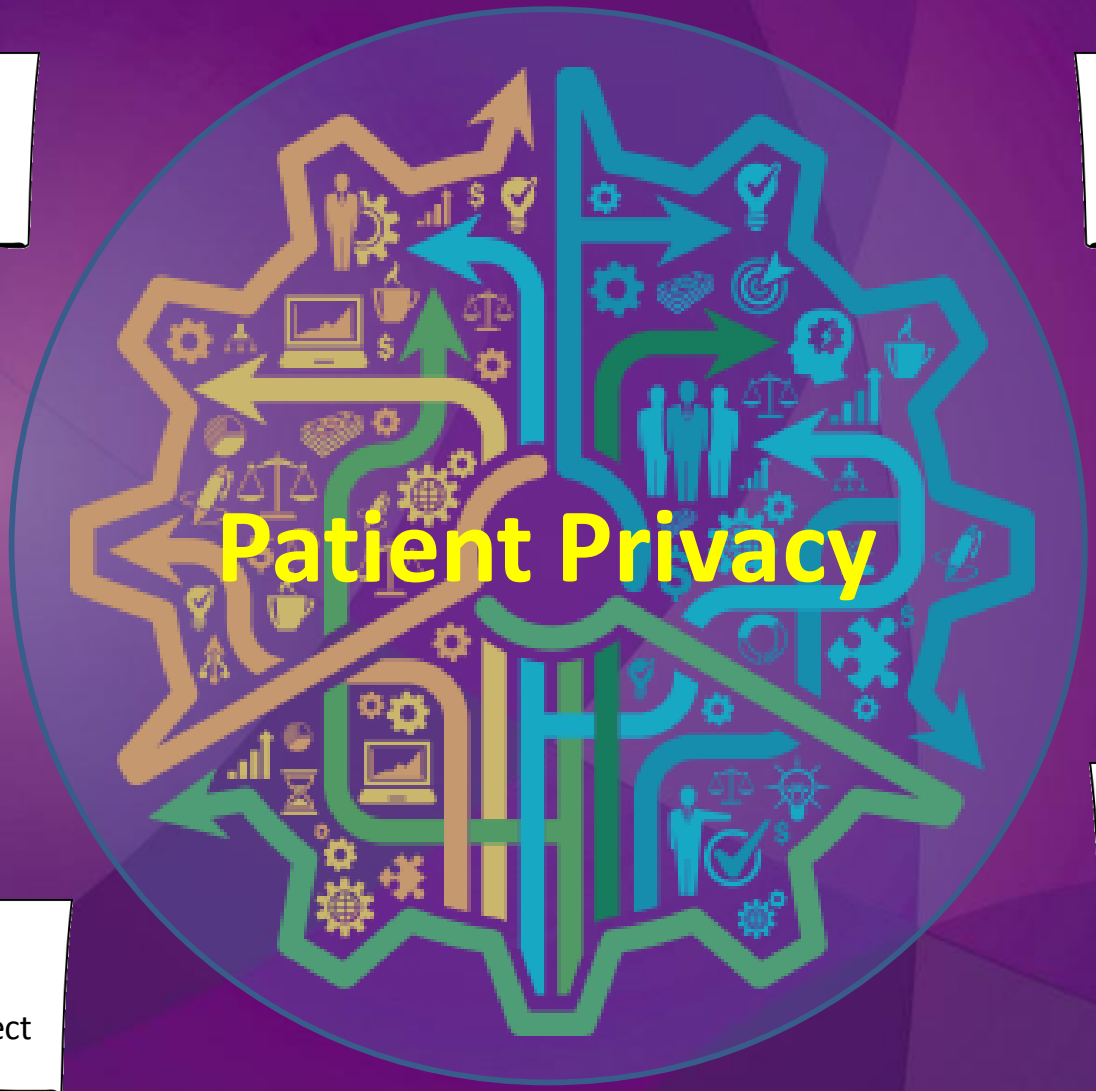
Drugs

PHS
(Pharmaceutical Supplies System)

CMS
(Clinical Management System)

Discharge

System VS Project



Workflow of Data Requests

Assess the protocol & clarify details of requests

Step 1: Acknowledge the request

Step 2: Conduct Internal Assessment **(Central Panel)**

Step 3: Finalize Data Requirement

Step 4: Receive ethics approval, Undertaking form, Data Request Form & Payment

Step 5: Execute Request & Release Data

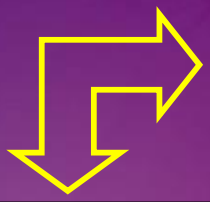
Central Panel for Data Requests

- Central Panel on Administrative Assessment (CPAA) was formed to handle external data requests:
  - To ensure the requested data are relevant to the protocol
  - To evaluate the requested data are of reasonable quality
  - To protect the personal data privacy
  - To assess the workload of data extraction is reasonable

- Decision for the data requests:
  (i) Accept; (ii) Conditional Accept; or (iii) Decline

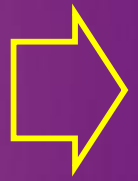
Latest updated until May 2013

Structure of Central Panel



Cluster Research Ethics Committees (RECs)

Chief Manager (CM) (Clinical Effectiveness & Technology Management) **Dr. XXX** **to act as Convenor**	Chief Manager (CM) (Statistics & Workforce Planning) **Ms. XXX to execute the process of data extraction**
Chief Information Officer **Dr. XXX to advise on data from IT systems**	Chief Information Security & Privacy Officer **Mr. XXX to advise on matters related to data privacy**



Directors' Meeting

+ / -

CMs of relevant COC/CCs **(to inform COC/CC members)**
Other relevant subject officers **(to check data quality)**

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Classification of Data Requests

A. **Identifiable** patient-based records

B. **De-identified** patient-based records

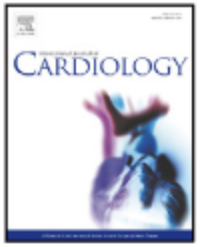
C. **Aggregate data** of HA patients / service utilization

An Example of Using the HA Dataset

Contents lists available at ScienceDirect

International Journal of Cardiology

journal homepage: www.elsevier.com/locate/ijcard



Cardiovascular mortality in hypertensive patients newly prescribed perindopril vs. lisinopril: A 5-year cohort study of 15,622 Chinese subjects

Kelvin K.F. Tsoi [a,b,1], Martin C.S. Wong [a,*,1], Wilson W.S. Tam [a,1], Hoyee W. Hirai [b,1], X.Q. Lao [a,1], Harry H.X. Wang [a,1], Mandy W.M. Kwan [a,1], Clement S.K. Cheung [c,1], Ellen L.H. Tong [c,1], N.T. Cheung [c,1], Bryan P. Yan [d,1], Helen M.L. Meng [b,1], Sian M. Griffiths [a,1]

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What can we (CUHK) do?

- We have NO dataset to share
- Our works are always on project-based
- My research focus also have to be “Disease Specific”
- but…

  We have research experience on open data

  We use platform to capture and visualize data (IBM Watson)

  Potential opportunities are coming

  - From open to ‘unopen’ data, e.g. US cancer registry
  - No data sharing Platform in China and Asia

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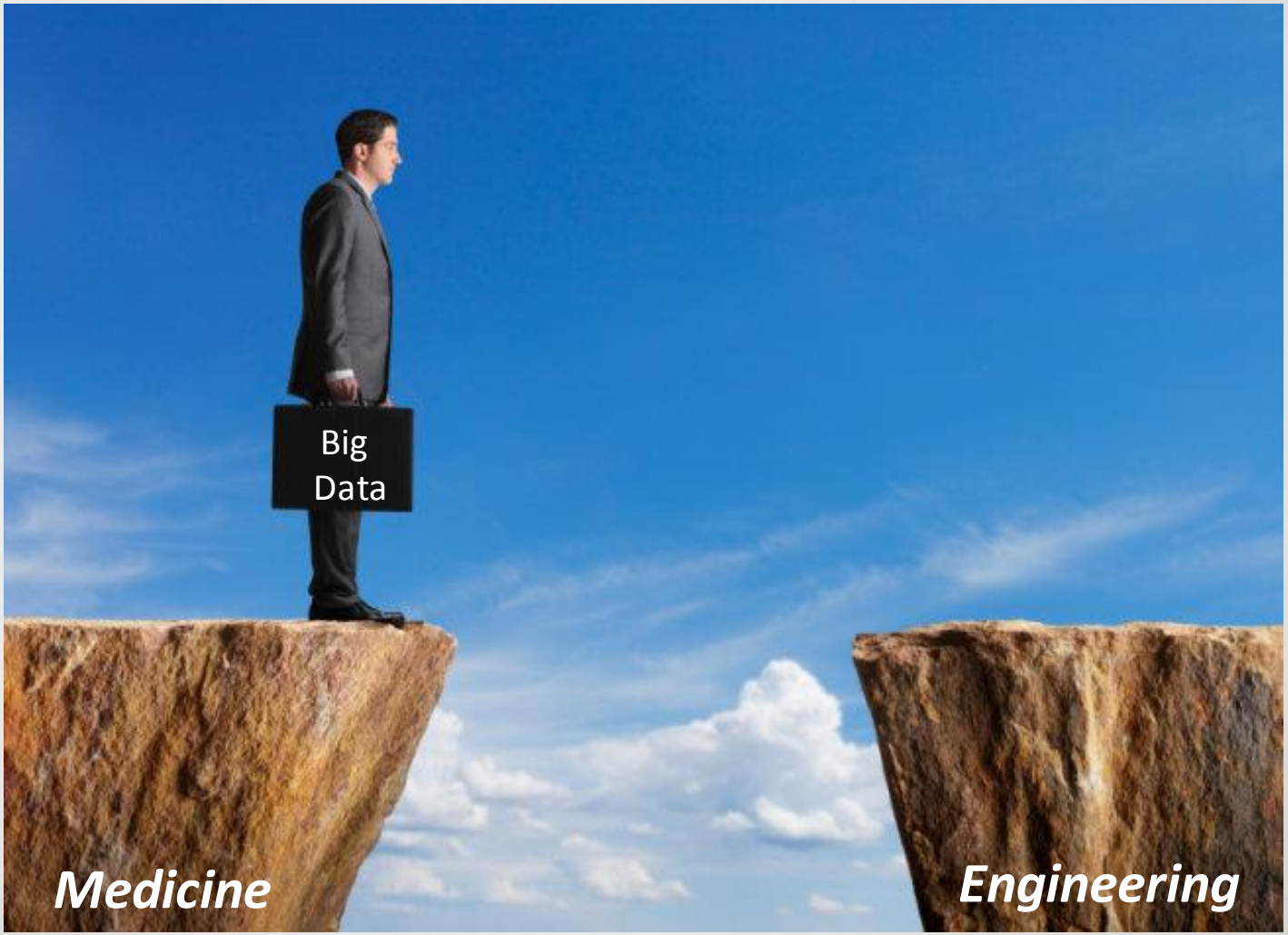
Interdisciplinary to Transdisciplinary



Thank you!

CU Medicine HONG KONG

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