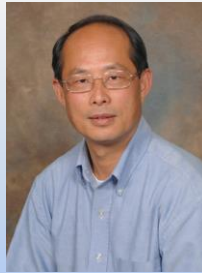




Second Plenary Session
ELECTRONIC HEALTH RECORDS FOR
INFORMED HEALTH CARE IN ASIA-
PACIFIC: LEARNING FROM EACH OTHER



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ELECTRONIC HEALTH RECORDS FOR
INFORMED HEALTH CARE IN ASIA-
PACIFIC: LEARNING FROM EACH OTHER



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Type of Big-Health Data

- Clinical Trials
- Medical claims databases
- Medical record databases
- Specific registry databases
- Spontaneous reporting systems
- Health survey databases
- Other health care databases (e.g., Biobank,.... National Death Index)

EHRs vs. EMRs

- Electronic health records (EHRs)
 - A systematic collection of electronic health information about a patient or population.
- Electronic medical records (EMRs)
 - A digital version of patient charts related to patient's diagnosis and treatment.
- EMRs and EHRs are often used interchangeably, but there are some differences.

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Objectives

- Health care data is essential for evidence-based decision making.
- EHR (or EMR) is an important resource for health care.
- Let us discuss EHR/EMR in Asia Pacific about their development, collection, data use, and privacy concerns.
- Discuss international experience and lessons-learned.

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Computing Center for a US Medicaid Database



1TB (1000 GB)
hard-drive
(passport size) in
2010



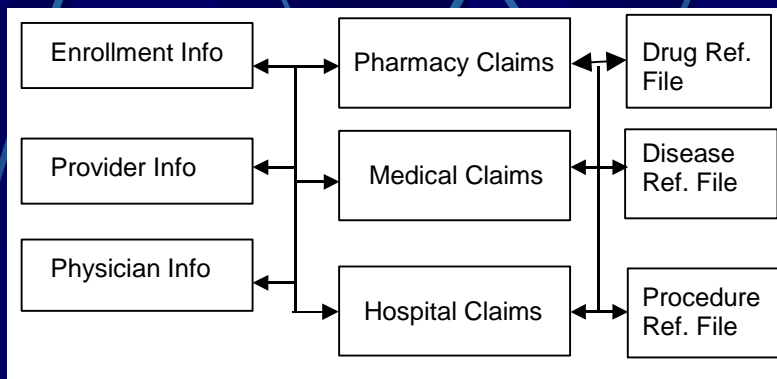
IBM
Mainframe
System
100GB unit
in 1992

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Relational Claims Database Schema

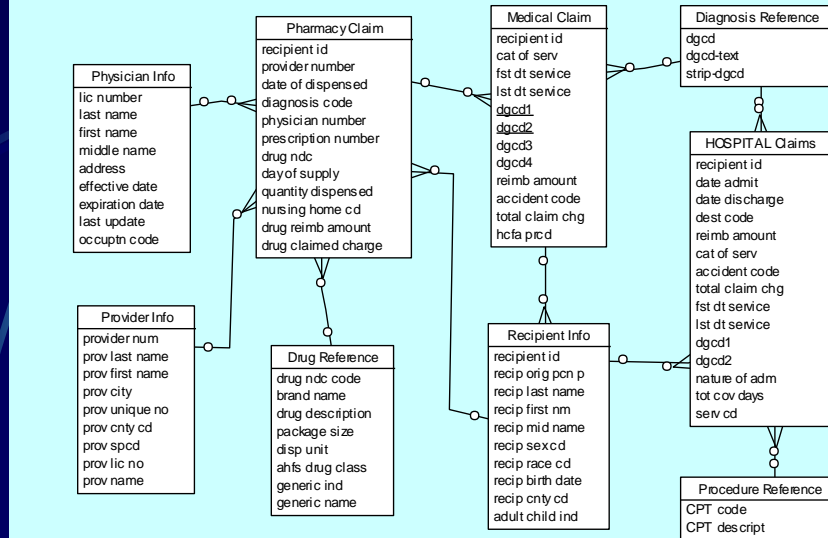
医药数据库结构概述



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Medicaid Claims Database Schema



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ISPOR International Health Databases

The screenshot shows the ISPOR International Digest of Databases website. The header includes the ISPOR logo and the text "International Society for Pharmacoeconomics and Outcomes Research". Below the header is a navigation bar with links: Home, About ISPOR, Membership, Meetings, Publications, Research Tools, Decision Making Tools, Awards, Education, Employment, and Advertis. The main content area is titled "ISPOR International Digest of Databases" and includes a search bar and a "JOIN ISPOR" button. Below this is a section titled "Browse by country" with a list of countries and the number of databases found for each. The list includes: Argentina (1 database), Australia (2 databases), Austria (3 databases), Belgium (1 database), Canada (11 databases), Chile (1 database), Czech Republic (1 database), Denmark (1 database), Estonia (1 database), Finland (1 database), France (1 database), Germany (8 databases), Greece (1 database), Hong Kong (1 database), Hungary (1 database), Iceland (1 database), Ireland (2 databases), Italy (8 databases), Japan (1 database), Korea (South) (1 database), and the United States (1 database). To the right of the list is a map of the world with markers indicating the location of each country. At the bottom of the page, there is a footer with contact information for ISPOR and a copyright notice for 2010.

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Examples of Health Databases in USA

Database Name	Country
National Hospital Discharge Survey (NHDS)	USA
National Health Interview Survey	USA
Third National Health and Nutrition Examination Survey (NHANES III)	USA
Medi-Cal Paid Claims File	USA
MarketScan Private Pay, Fee for Service, Encounter, Medicare, and Medicaid	USA
Boston City Hospital Birth/Maternity Survey	USA
Department of Veterans Affairs (VA) - Patient Treatment File Database	USA
Department of Veterans Affairs (VA) - Outpatient Clinics Database	USA
Group Health Cooperative of Puget Sound	USA
California Birth Defects Monitoring Program	USA
SEER-Medicare Database	USA
American Association of Poison Control Centers Toxic Exposure Surveillance System (TESS)	USA
Rochester Epidemiology Project (REP)	USA
Vaccine Adverse Event Reporting System (VAERS)	USA
FDA Adverse Event Reporting System (AERs)	USA

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Examples of Health Databases in UK

VAMP Research Data Bank (now GPRD?)	UK	3
PEMBase (Drug Safety Research Unit database based on Prescription-Event Monitoring)	UK	2
Medical Data Index (MDI)	UK	2
Morbidity Statistics From General Practice	UK	2
Committee on Safety of Medicines Register of Adverse Reactions	UK	2
Northern Ireland D.U.R.U. Database (Drug Utilization Research Unit)	UK	2
MEMO: Tayside Record Linkage System/Medicine Monitoring Unit	UK	1
UK MediPlus® General Practice Patient Records (GPRD)	UK	1
MEMO - Scotland	UK	1
International Studies of Infarct Survival (ISIS) - Lidocaine Controlled Trials Database	INT UK contact	2
Medicines Control Agency: General Practice Research Database (used to be VAMP?)	UK	1

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Implications of Big-Health Databases Overview

- A number of health databases exist worldwide for research. Every database has its characteristics, advantages, and limitations.
- We need to identify the most appropriate database(s) for specific research needs according to geographical area, disease category, population characteristics, and medical specifications.