Business School
UNIVERSITY OF COLORADO DENVER

Information Systems Program

Module 1
DBMS Extensions and Example Data Warehouses

Lesson 6: Data Warehouse Standards in Health Care

Lesson Objectives

- Gain insights about the scope of moderate size data warehouses
- Grasp development difficulties
- Reflect about importance of incentives for voluntary data providers and usage difficulties

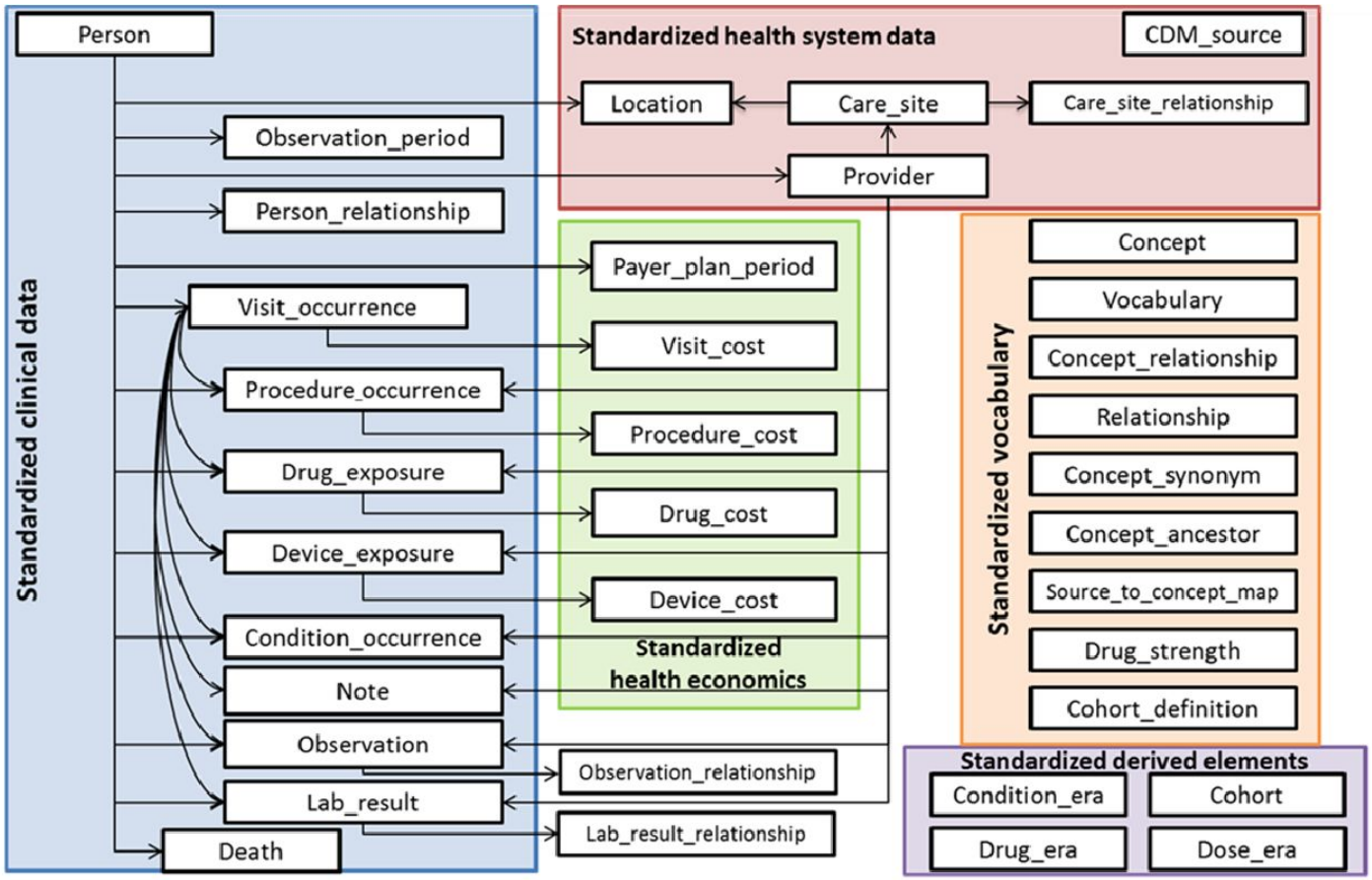
OMOP

- Observational Medical Outcomes Partnership
- Public/private partnership
- Standard vocabulary and data model
- Suite of tools for data integration, queries, and data generation procedures
- Follow on projects for research about medical evidence and open source software tools

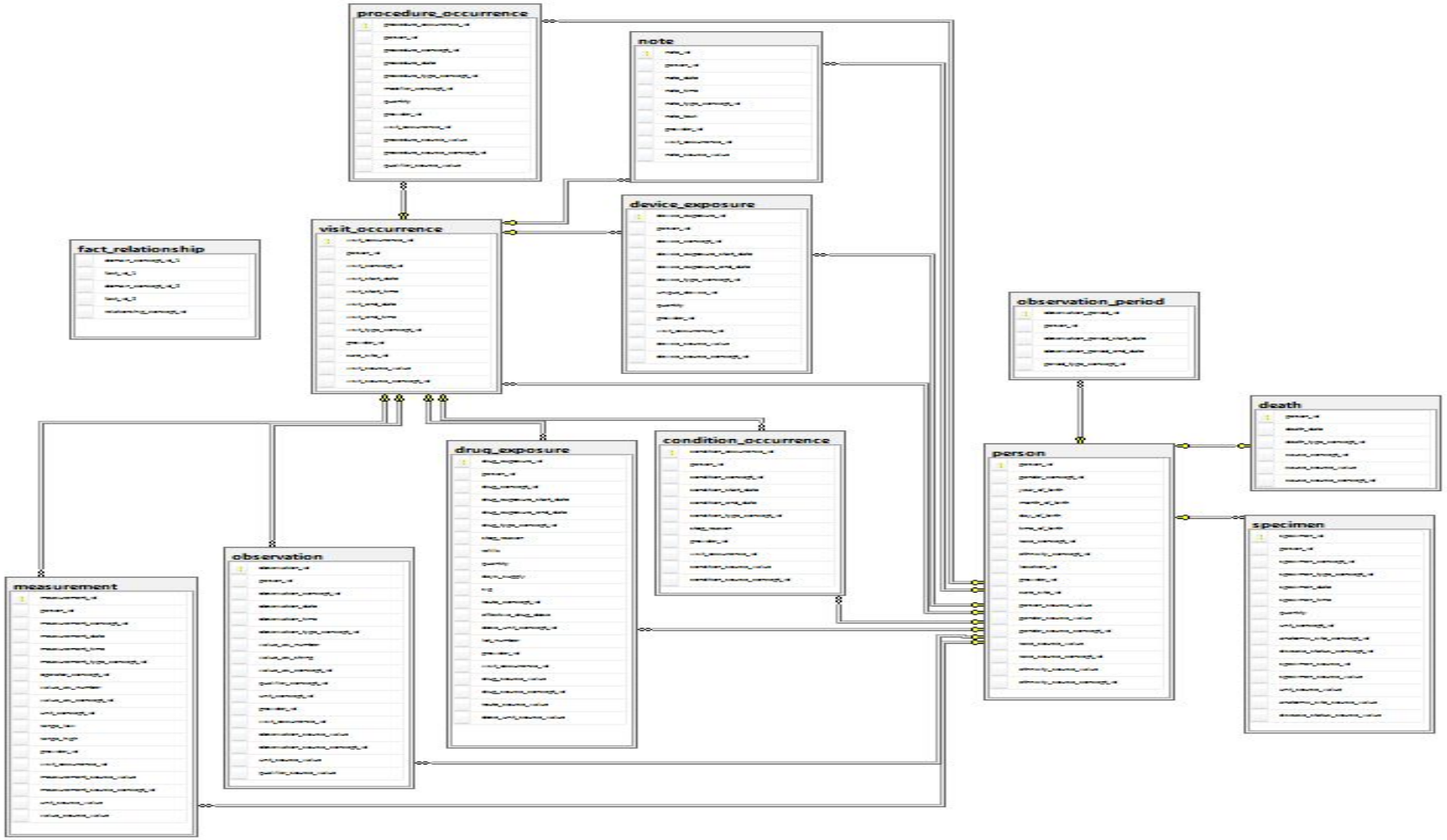
Common Data Model (CDM)

- Treatment (drug, procedure), Occurrence (observation, visit, condition, death, exposure)
- Person
- Provider
- Cohort
- Location
- Organization
- Care site
- Payer plan
- Time

CDM Schema Diagram



Schema Diagram for Clinical Data



Schema Pattern Variations

- M-N relationships complicate schema patterns
- Clinical data
  - Person to measurement (1-M)
  - Person to visit occurrence (1-M)
  - Visit occurrence to measurement (1-M)

SAFTINet

- Scalable Architecture for Federated Translational Inquiries Network
- Significant implementation of OMOP data model
- Supports comparative effectiveness and quality improvement research
- Network of clinical and Medicaid claims data
- Data integration tools and query portal

SAFTINet Data Model

- **Occurrence (visit, condition, death, procedure, observation)**
- **Person**
- **Provider**
- **Organization**
- **Care site**
- **Time**

Governance and Usage

- 14 health care organizations, 100 primary care practices, 500 providers, 400,000 patients
- Claims from payers in 3 states
- Established governance committees
- Usage difficulties with internal review boards and approval of data providers

Summary

- Standards for observation medical data
- OMOP Common Data Model
- SAFTINet federated data warehouse
- Optional participation by data providers