

# Desirable Skills, Attributes and Knowledge Whither Informatics and Wisdom



Christopher G. Chute, M.D., Dr.P.H.  
Professor and Chair, Medical Informatics  
Mayo Clinic  
Rochester, Minnesota

MLA Informationist Conference  
NLM, April 2002

# Define < medical | health > Informationist

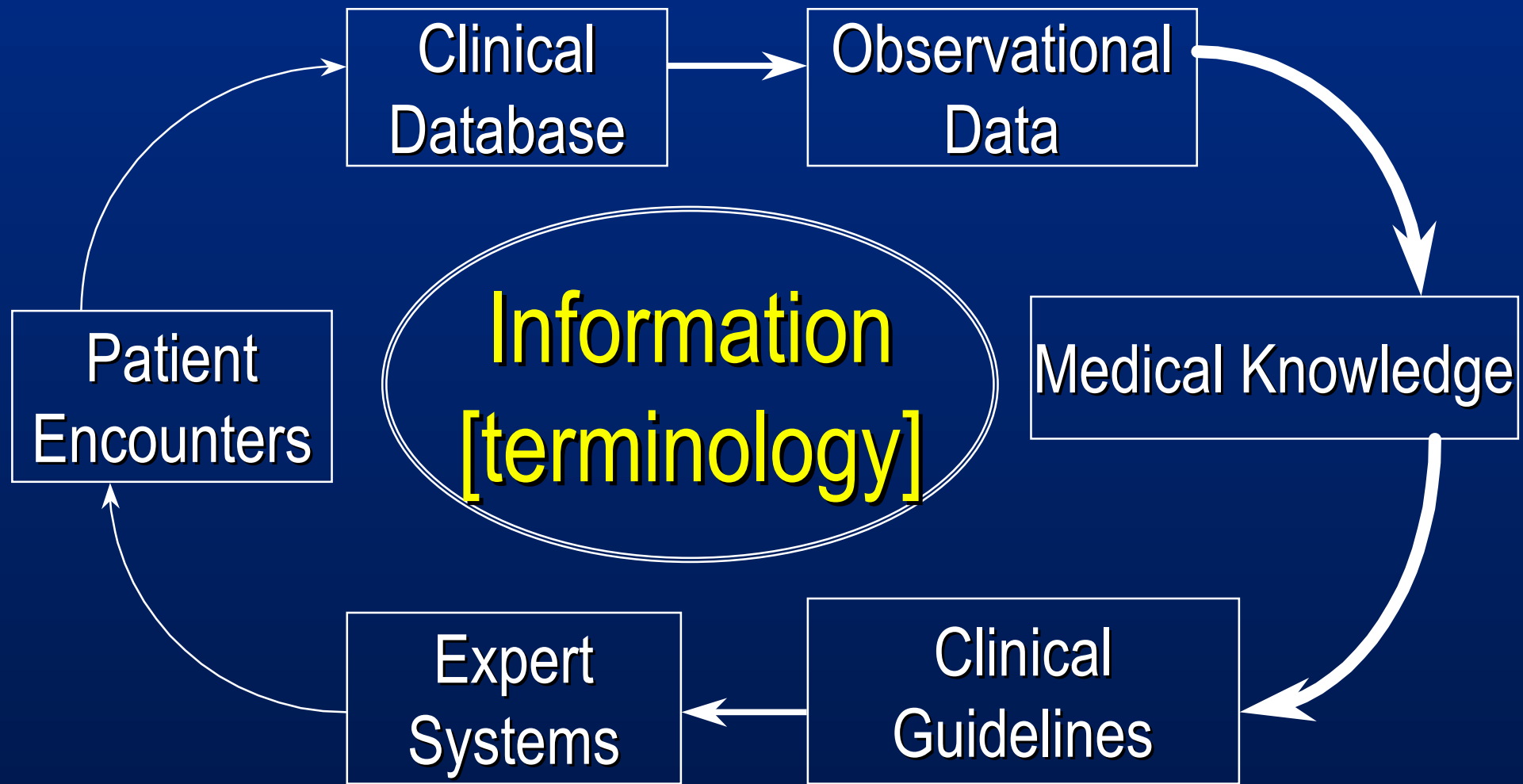
- No
- An information specialist at the interface of clinical practice, knowledge representation, information retrieval, and decision logic.

# Health Care Is An Information Intensive Industry

- Control of Health Care Costs ...
  - Improved Quality of Care ...
  - Improved Health Outcomes ...
  - Appropriate Use of Health Technology...
  - Compassionate Resource Management...
-  ***... depend upon information***
-  ***... Ultimately Patient Data***

# Cycle of Knowledge – Information Samsara

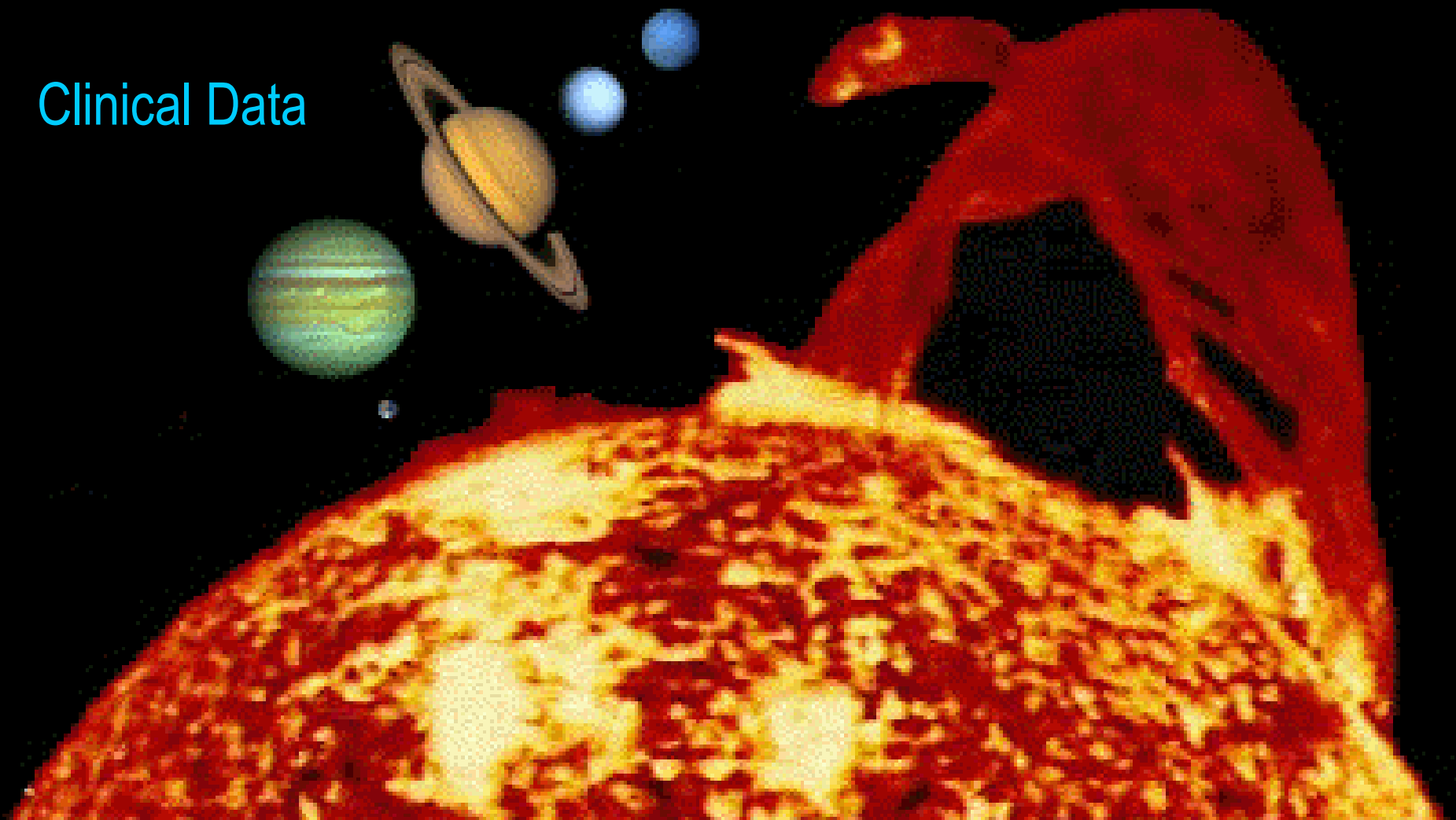
## Central Role of Information [terminology]



# The Historical Center of the Health Data Universe

## Billable Diagnoses

Clinical Data



# Copernican Healthcare

*(Niklas Koppernigk)*

Clinical Data

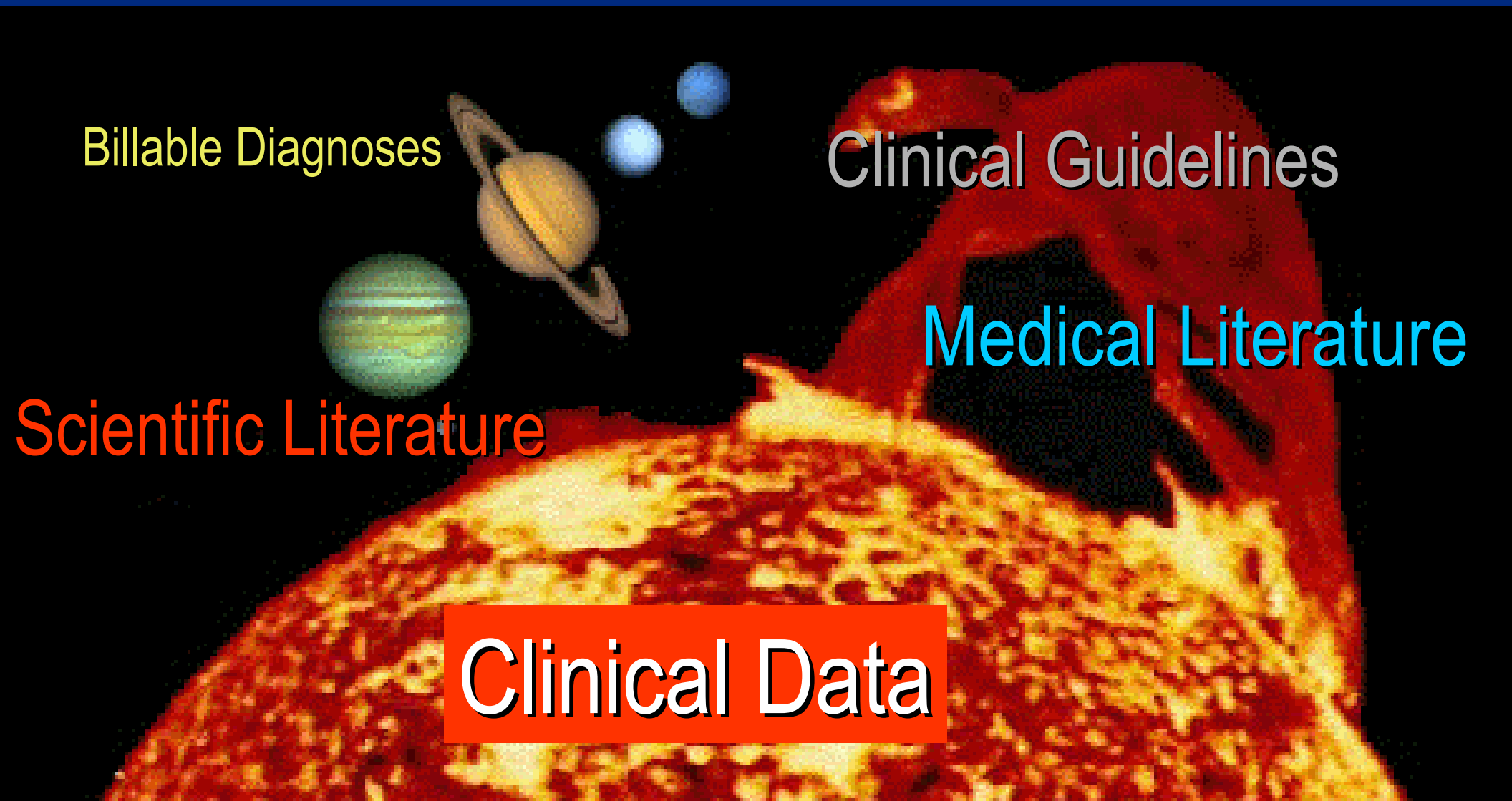
Billable Diagnoses

Clinical Guidelines

Medical Literature

Scientific Literature

Clinical Data



# If Clinical Data is the Center...

- How do we **organize** it?
- How do we **retrieve** it?
- How do we **recover new knowledge**?
- How do we **inference** from it?
- How do we make informed and responsible **decisions** for the best interests of the patient?
- What is the role of **Syntheses**?

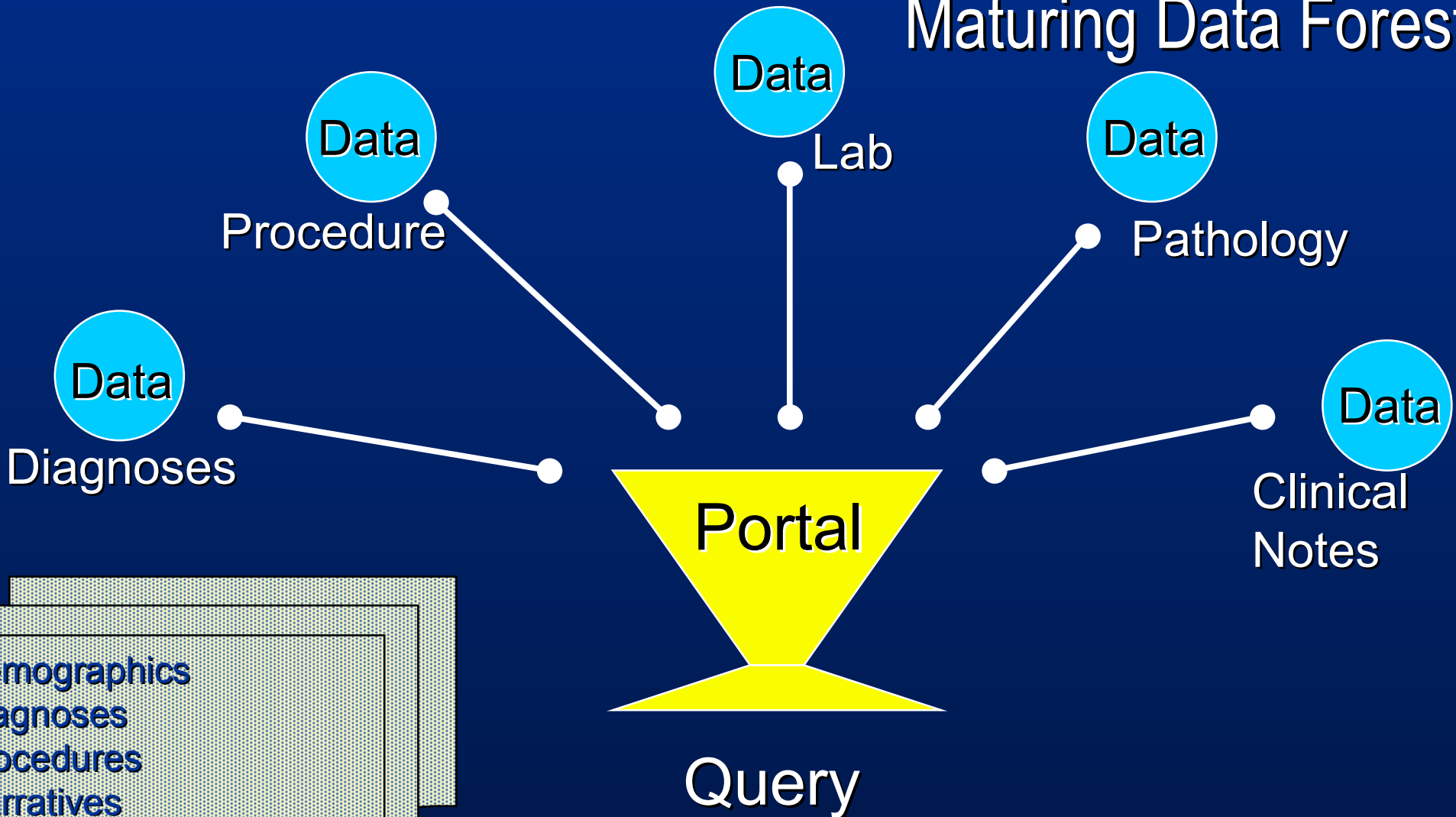
# Research Access Portal to Clinical Data RAPCD (*rhapsody*) Metadata meets Privacy

- Common Portal for Aggregated Retrieval
- Gateway to Ensure Policy and Regulatory Compliance
- Single Point of Interface for Clinical Data Stewards
- Minimize Performance Impact on Clinical Systems

# RAPCD Architecture

## Informationist: Forrester, Farmer? Fields and Formalisms.

### Maturing Data Forest



- Demographics
- Diagnoses
- Procedures
- Narratives
- Laboratories
- Pathology...

# Then What Training? Informationist

- Multidisciplinary Nature of Tasks
- Multiple Disciplines can and must contribute
  - ◆ Physicians, Librarians, Computer Scientists, Linguists, Health Policy, Decision Theory, Nurses, Pharmacists,  
...
- Is “Informationist” a discrete notion

# Homogeneity of Informationist?

- Physiologic metaphor
  - ◆ Body Organ of Body System
- Job Role Interpretation
  - ◆ Identifiable Person?
  - ◆ System of Information Infrastructure Support

# Informationist Training

- Role and Responsibilities are **fluid**
- Tools and Infrastructure are **nascent**
- Perception and reality still **inchoate**
- Remain in “1000 flowers” phase
- Premature to constrain or certify
- Evolution to role understanding continues

# Lest there be discouragement....

- Informationists in Medicine are Inevitable
  - ◆ Information intensive nature of Medicine
- Role will evolve as does supporting environment
  - ◆ Hybrid of human and machine resources
- Applaud initiatives to examine and initiate
  - ◆ Pilot programs, innovative enterprise, early adoption and adaptation

Christopher G. Chute MD, DrPH  
Professor and Chair, Medical Informatics  
Mayo Clinic  
Rochester, MN 55905

Ph: 507 284 5541

Fx: 507 284 0360

Em: [chute@Mayo.edu](mailto:chute@Mayo.edu)