Electronic Medical Records – Getting It Right and Going to Scale

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Driving Factors

- Patient Safety

- Quality

- Reduction in cost

- Consumer interests

- Best Practice, evidence-based medicine

It's about data and knowledge

- Aggregation of data about the consumer from all points of care in order to provide a complete, dependable, accurate, and timely view of the person and health-related events

- Continued extraction of knowledge from data and immediate and direct application of that knowledge in the process of care

- A comprehensive EHR system with embedded decision support is the enabler.

Electronic Health Record

- The EHR must present to the health care provider all pertinent data at the time and point of care, coupled with the knowledge to effectively use that data to make decisions and to prevent medical errors and insure quality care.

- The data must be collected for all sources and sites of care and includes data required for administrative management as well as clinical management.

- The data must be connected with knowledge through decision support algorithms and clinical guidelines to address issues of safety, quality and cost effective care.

What must be in place

- Data standards
  - Reference Information Model
  - Common data elements
  - Common data types
  - Common terminology
  - Clinical templates
- Ability to share data and knowledge
  - Data interchange standards
  - Common content architecture standards
  - Common minimum set of functions for the EHR
  - Infrastructure to support required connectivity
  - Common methods of knowledge representation

Shared repositories at national or international levels

- Master set of data objects or elements
- Common, integrated terminology sets
- Registered clinical documents using a standard architecture
- Registered clinical templates
- Registered clinical guidelines using standard format
- Registered decision support algorithms in standard format
- Registered disease registries in standard format

Barriers

- Proven value, obvious solution
- Leadership, infrastructure and vision
- Standards, adoption and implementation
- Providers, incentives and work concerns
- Cost, how much and who pays
- Business case, migration strategies
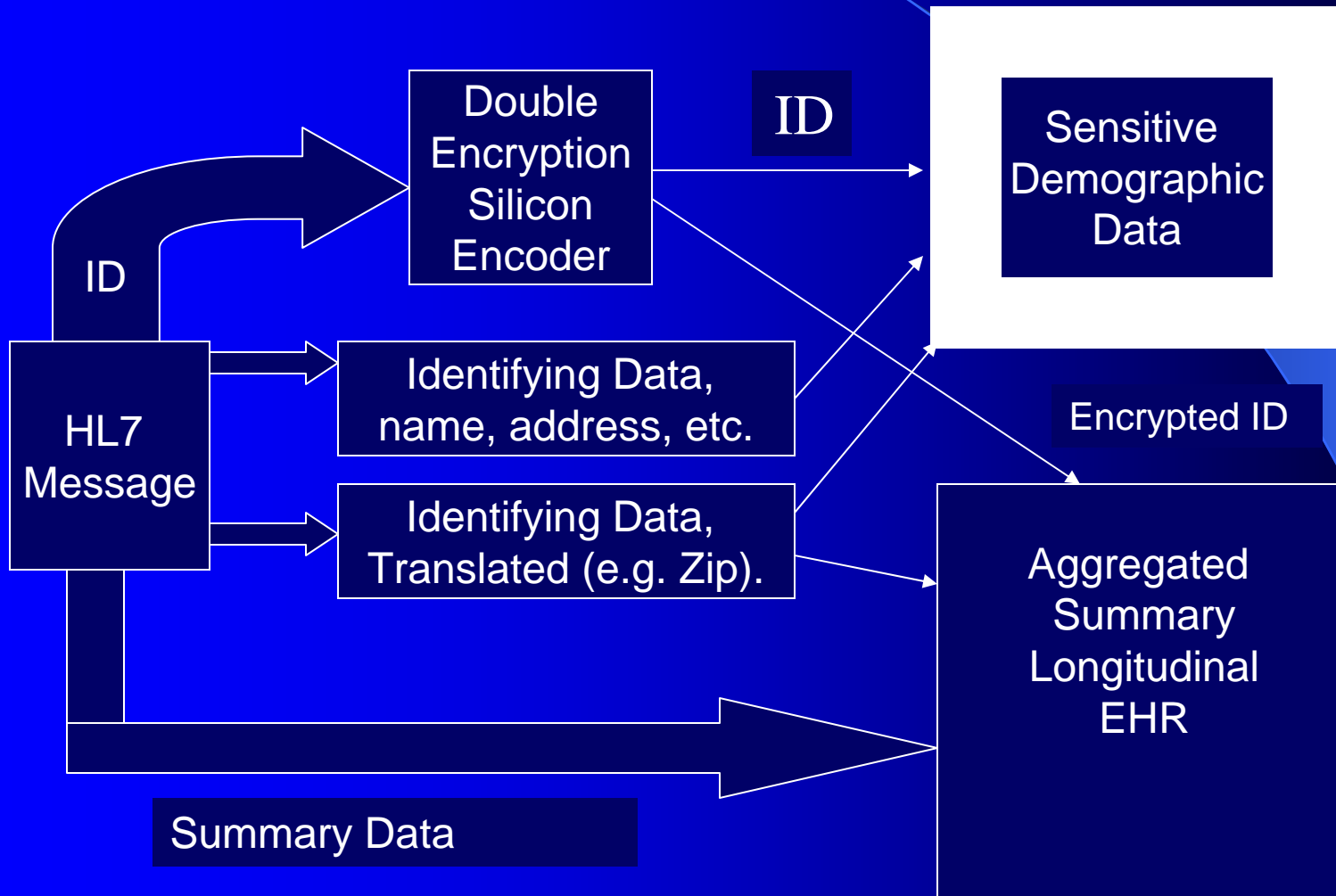
The Three Views of the EHR

- Institutional/Provider
  - Inpatient
  - Outpatient
  - Nursing home
- Population or summary
  - Provides consolidation and linkage
- Personal
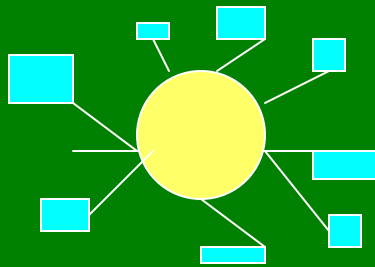
EHR Interoperability Diagram
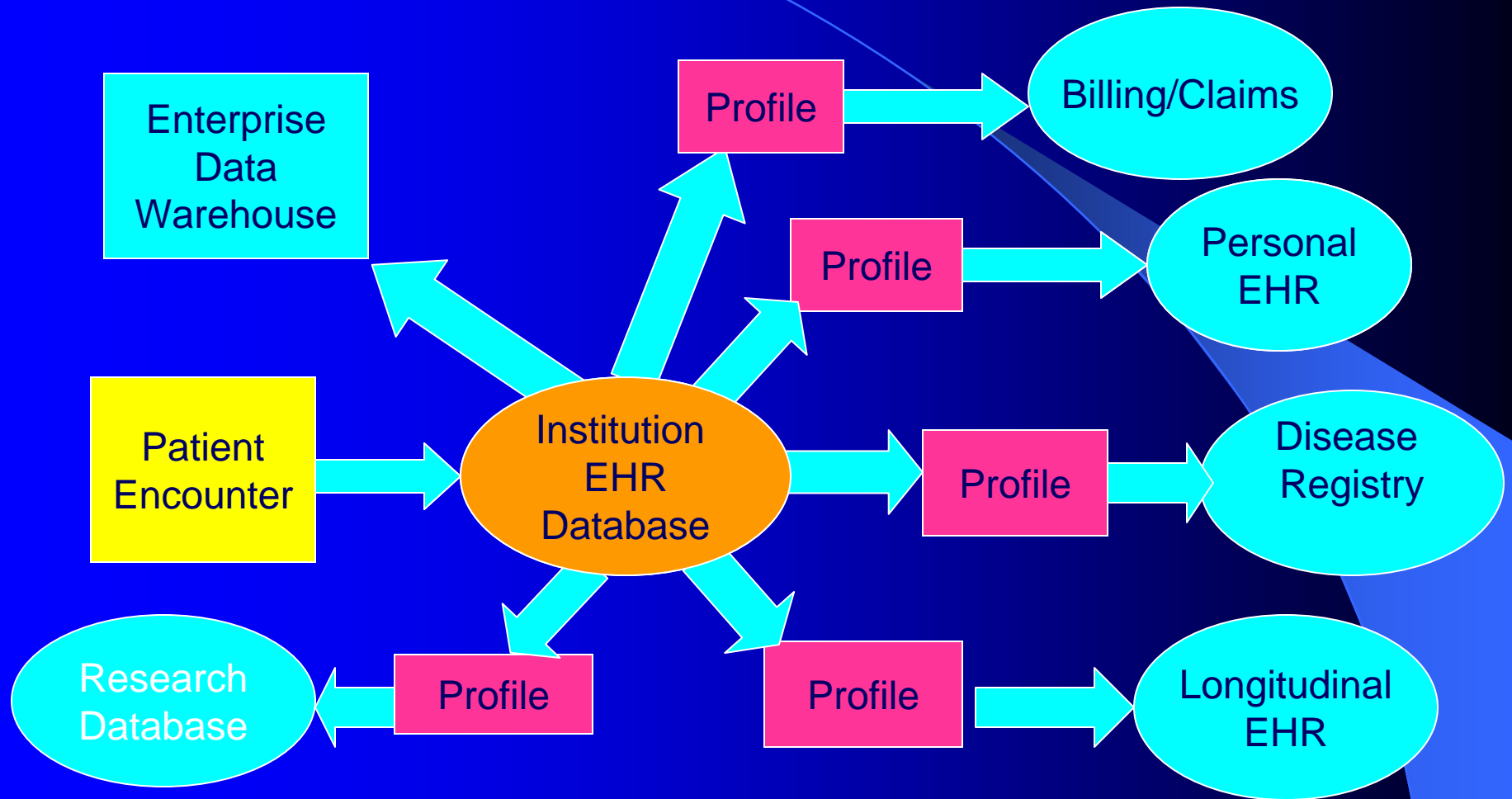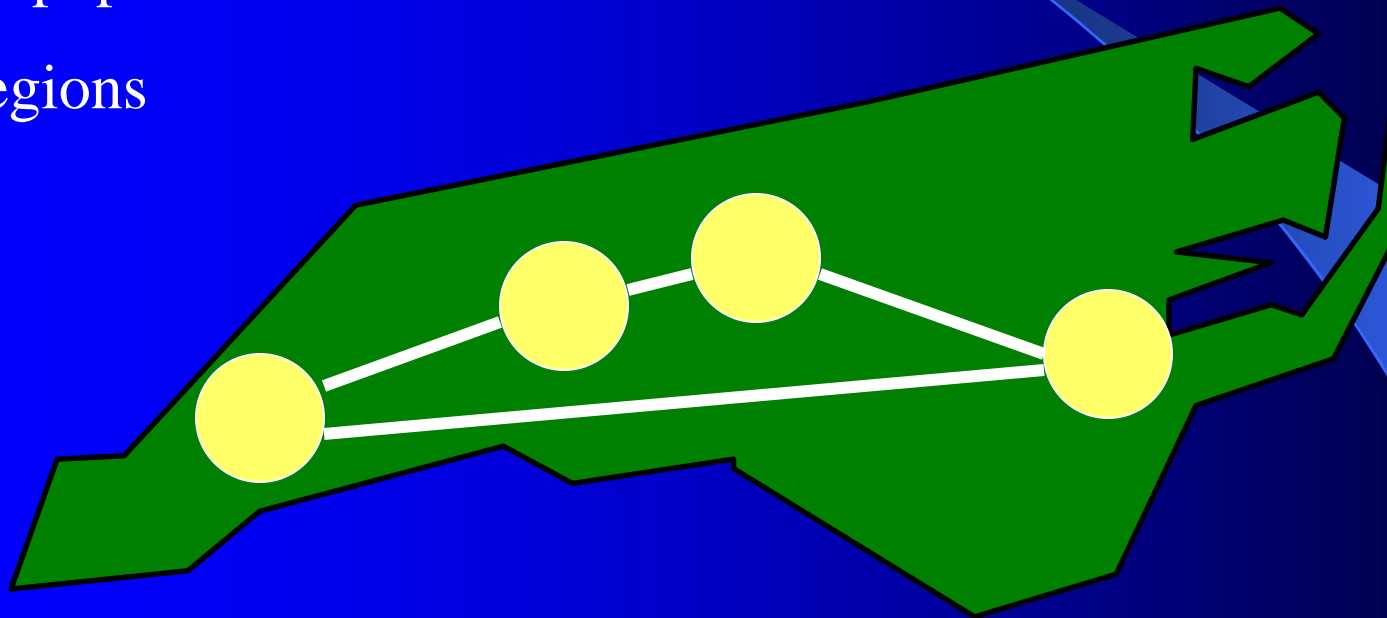

Profiles contain business rules

Download Process

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Regional Linkages

Clinics
Hospitals
Dental
Pharmacies
Payers
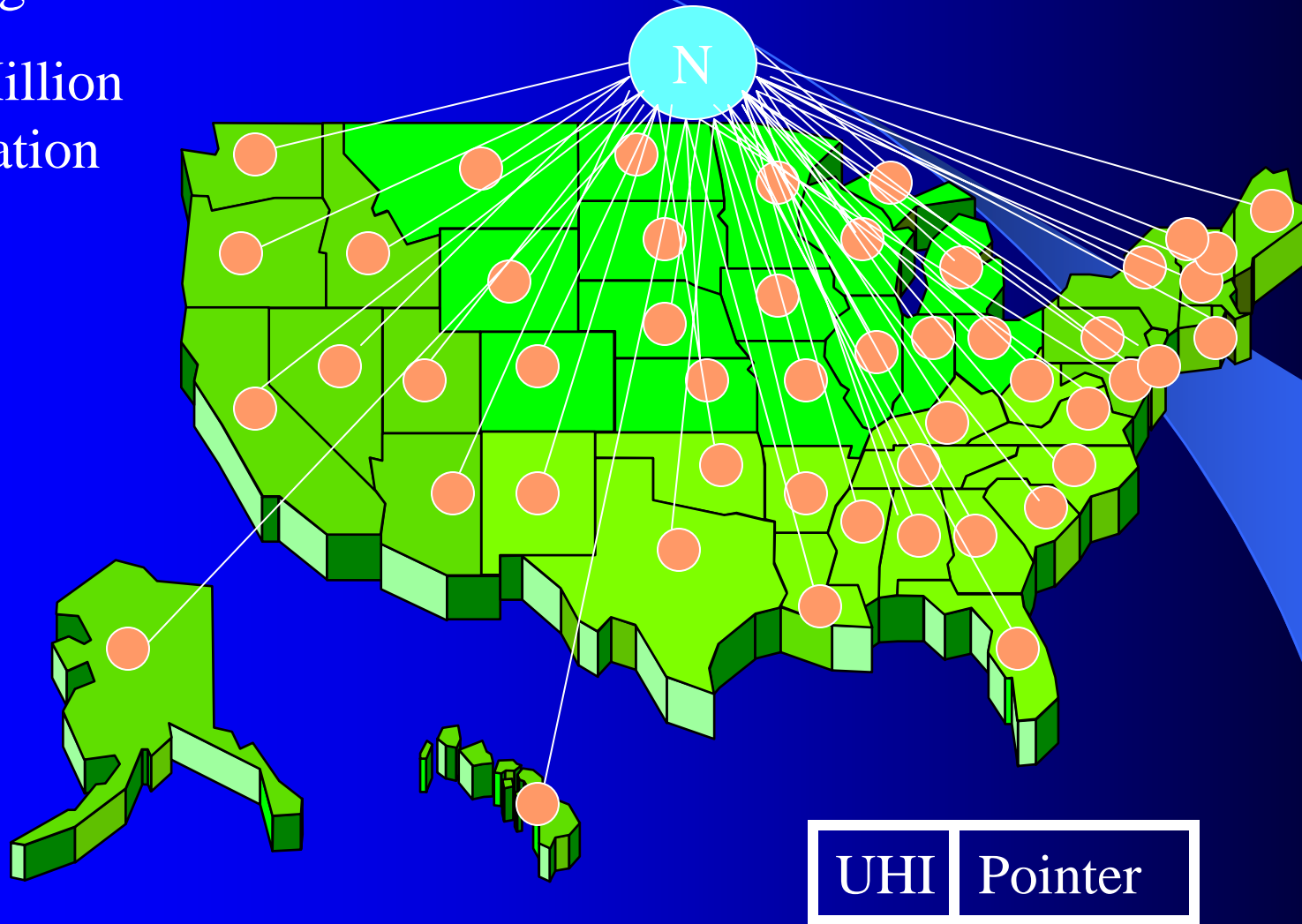Government

State-wide Linkage

8 M population

4 regions

| UHI | Pointer |

National Linkage

140 regions

280 Million
Population

N

UHI | Pointer

Issues

- Debate is not so much what should be done but what is possible and in what time frame
- Who will pay for IT and how?
- How do we motivate the industry to provide what is needed?
- How fast can we make it happen?
  - Incremental approach for all
  - Complete system for a few

Issues

- How does the health care model influence the IT model?
- Do we collect the same data?
- How does information flow differ?
- Are the barriers the same?
- How do we get scalability?
- How do we keep systems up to date?
- What can we share?
- What additional standards are needed? Where are the gaps?