Emergency Care Efficiency
Indianapolis

John T. Finnell, MD MSc
Research Scientist, Regenstrief Institute
Associate Professor of Emergency Medicine
Director, Informatics Division
Department of Emergency Medicine
Indiana University School of Medicine
Indiana Network for Patient Care

An operational, sustainable, community wide health information exchange
INPC Participants

- “All” Indianapolis med/surg hospitals
- Physician offices
- Community health centers
- Homeless care network
- Public school clinics
- County and State public health departments
- National laboratories
- Public schools
- Pharmacies
- PBMs
Data shared by all institutions

- All ED and outpatient visits
- All hospital discharges (dx, procedures)
- All inpatient laboratory results
- All outpatient laboratory results
- Immunizations
- All discharge summaries/admissions summaries
- All operative notes
- All radiology reports
- All surgical pathology reports
- Inpatient medications
- Tumor registry data
Indiana Network for Patient Care

- St. Vincent
- Clarian
- Morgan
- Wishard
- IUMG
- Global Patient Index
- Concept Dictionary
- Public Health
- Community
- St. Francis

Indiana Health Information Exchange

Global Patient Index

St. Vincent

Clarian

Morgan

Wishard

IUMG

Community

St. Francis

Concept Dictionary
Clinical Data Standards

- **Messages**
  - HL7 messages
  - DICOM messages
  - NCPDP messages

- **Content**
  - LOINC© for laboratory results content
  - CPT-4 for procedures content
  - ICD-9 for diagnoses content
  - RxNorm for medications content
  - SNOMED© for microbiology content
“Wiring” Healthcare

Current system fragments patient information and creates redundant, inefficient efforts

Future system will consolidate information and provide a foundation for unifying efforts

Current system fragments patient information and creates redundant, inefficient efforts

Future system will consolidate information and provide a foundation for unifying efforts

Hospital
Public health
Primary care physician
Specialty physician
Ambulatory center (e.g. imaging centers)
Physician office
Outpatient RX
Labs
Data repository
Network applications
Ambulatory centers
Public health

Payers

Hospital

Health Information Exchange

Data repository
Network applications

Ambulatory centers
Public health
Data Reuse
Patient Crossover

The graph illustrates the number of patients and the unique patients across different healthcare systems. Each system (A, B, C, D, E) is represented by a bar, with the blue portion indicating unique patients and the red portion showing crossover patients. The Y-axis represents the number of patients, ranging from 0 to 35,000.
Clinical Abstract

This partial medical history contains confidential patient information. Unauthorized use is subject to disciplinary action. File in correspondence section of medical record. Mental health, STDs, drug and alcohol abuse data from this institution only. More on-line at INPC.ORG.

Data From: WISHARD - CLARIAN - MARION_COUNTY

SAMPLE, INPC WISHARD  #X99999-8
Printed 18-Feb-08 at WISHARD
Public Health Emergency Surveillance System (PHESS)

- 67 Hospitals connected
- > 5,500 ED visits per day
Neurologic Syndrome
GI Syndrome
Success Factors

- Describe and deliver clear value to users (typically clinicians)
- Neutral Convener - “Data Switzerland”
- Proceed incrementally
- Develop a flexible, standards based infrastructure that can integrate an array of diverse clinical data