PHSSR Research-In-Progress Series:

Bridging Health and Health Care

Wednesday, March 4, 2015 12:00-1:00pm ET

Leveraging Electronic Health Records for Public Health: *From Automated Disease Reporting to Developing Population Health Indicators*

Conference Phone: 877-394-0659
Conference Code: 775 483 8037#
Please remember to mute your phone and computer speakers during the presentation.

Agenda

Welcome: Angie Carman, DrPH, PHSSR National Coordinating Center, Assistant Professor, U. of Kentucky College of Public Health

Presenter:

"Leveraging Electronic Health Records for Public Health: *From Automated Disease Reporting to Developing Population Health Indicators"*

Brian Dixon, MPA, PhD, FHIMSS, Assistant Professor, Richard M. Fairbanks School of Public Health, Indiana University

Commentary:

Shaun J. Grannis, MD, MS, Associate Director, Regenstrief Institute Center for Biomedical Informatics

Joseph Gibson, MPH, PhD, Director of Epidemiology, Marion County Public Health Department, Indianapolis

Questions and Discussion

Future Webinar Announcements

PHSSR Mentored Researcher Development Awards

- 2-year awards providing protected time to complete PHSSR project, with research mentor and practice mentor (2013-2015)
- Four award recipients will present over six weeks

Identifying & Learning from Positive Deviant Local Public Health Departments in Maternal and Child Health **Tamar A. Klaiman, PhD, MPH, U. of Sciences, Philadelphia** (February 19)
Leveraging Electronic Health Records for Public Health: *From Automated Disease Reporting to Developing Population Health Indicators* **Brian Dixon, PhD, Indiana University**
Evaluating the Quality, Usability, and Fitness of Open Data for Public Health Research **Erika G. Martin, PhD, MPH, SUNY- Albany** (March 11)
Restructuring a State Nutrition Education and Obesity Prevention Program: *Implications of a Local Health Department Model* **Helen W. Wu, PhD, U. California Davis** (April 1)

Presenter

Brian Dixon, MPA, PhD, FHIMSS

Assistant Professor

Department of Epidemiology

Richard M. Fairbanks School of Public Health

Indiana University

Research Scientist, Regenstrief Institute

Center for Biomedical Informatics

Investigator in Residence, Center on Health Information and Communication, Department of Veterans Affairs

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Leveraging Electronic Health Records for Public Health: From Automated Disease Reporting to Developing Population Health Indicators

Brian E. Dixon, MPA, PhD, FHIMSS

March 4, 2015

IUPUI
RICHARD M. FAIRBANKS SCHOOL OF PUBLIC HEALTH
INDIANA UNIVERSITY
Indianapolis

Regenstrief Center for Biomedical Informatics
Better Health Through Informatics

Agenda

- The Neolithic Revolution in Public Health
  - A change in how PH accesses data
- Leveraging the Digital Health Infrastructure
  - Challenges for PH agencies
  - RWJF-funded projects to address the challenges
- Questions and Discussion

A Neolithic Revolution in Population Health

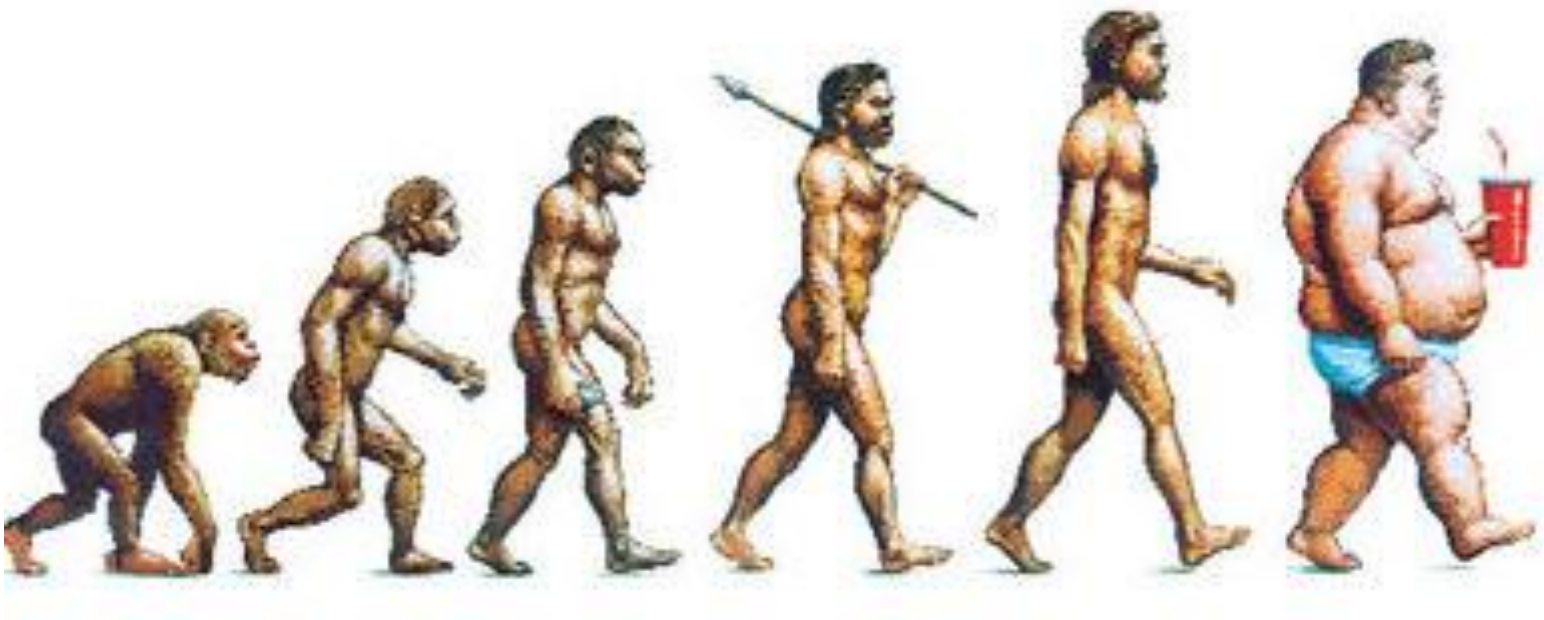
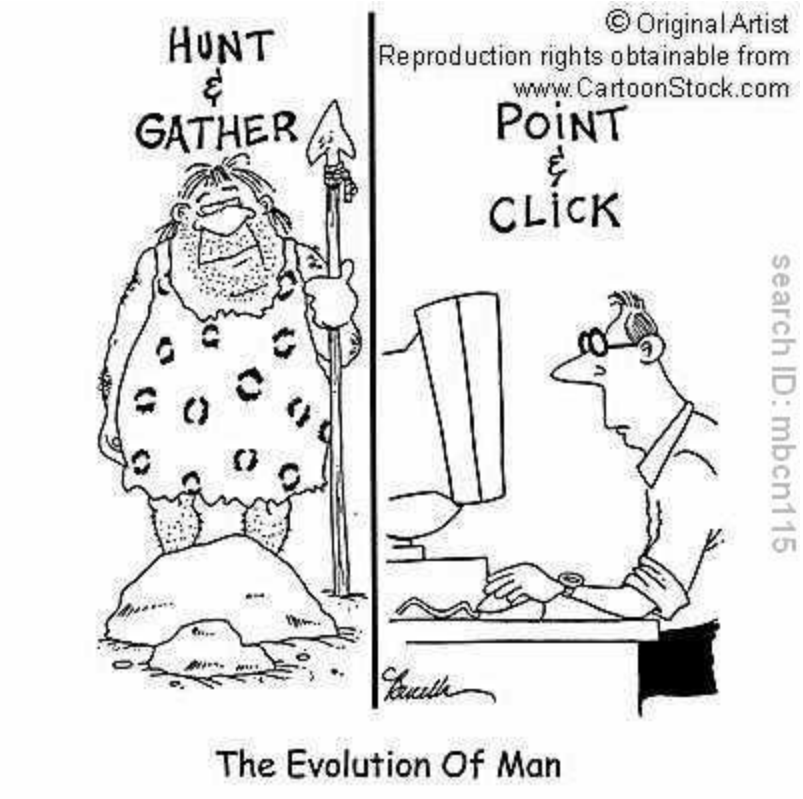
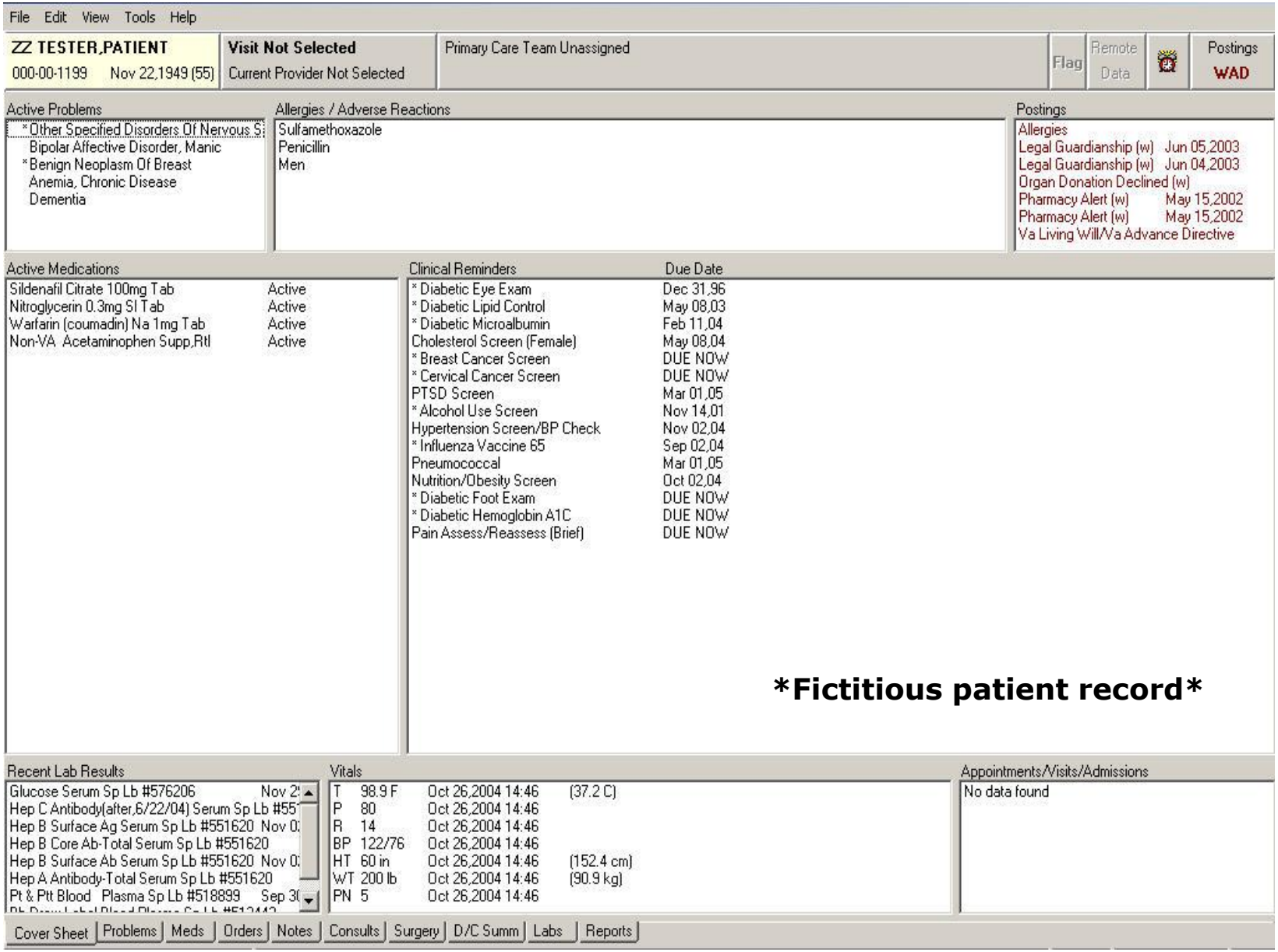


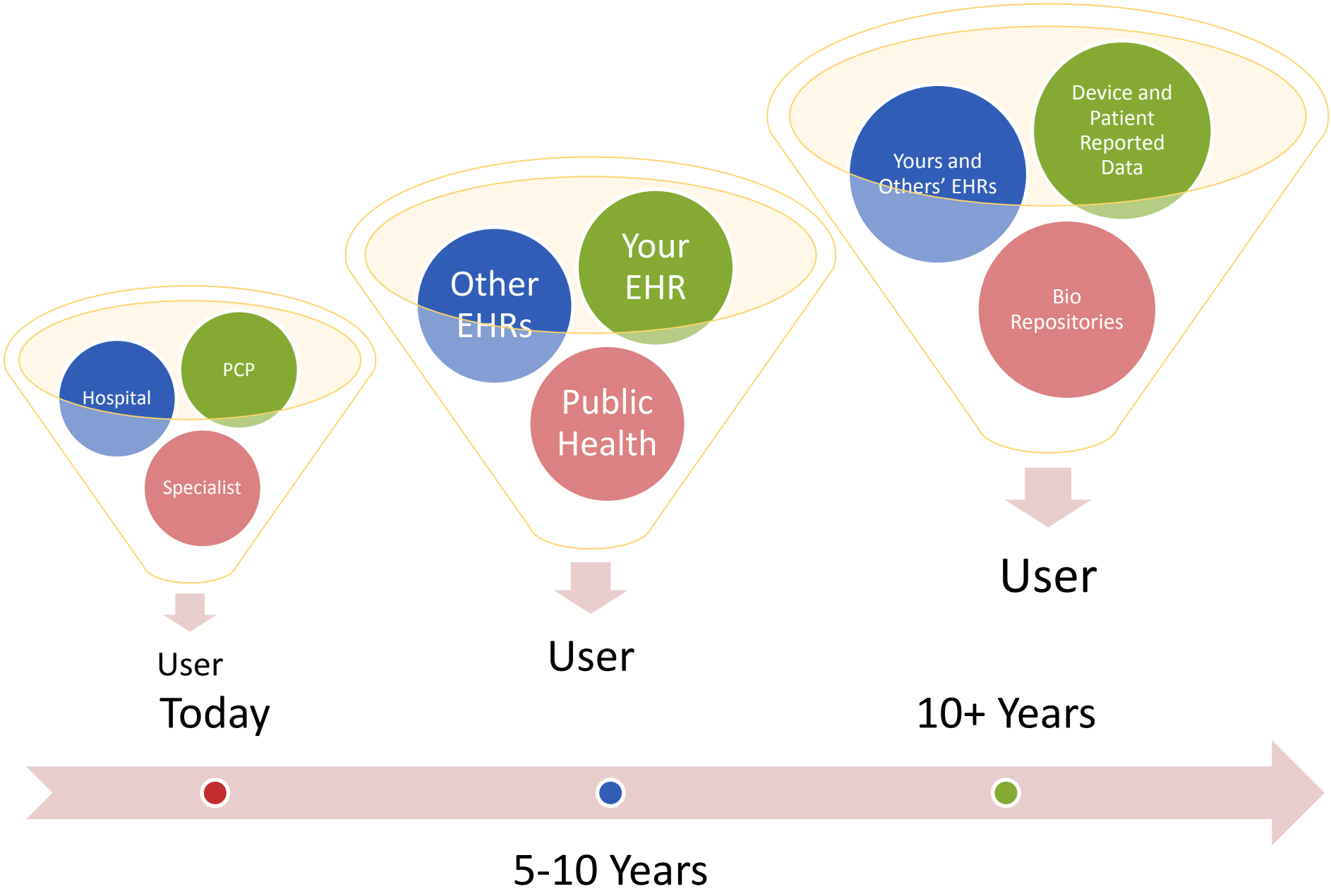
Photo from *El mono obeso* by JE Campillo; Accessed via http://www.uv.es/jgpausas/he.htm

The Revolution is in Data and Information Acquisition



Where Health Care Used to Be (and in some places still is)


File Edit View Tools Help
ZZ TESTER,PATIENT
000-00-1199 Nov 22,1949 (55)
Visit Not Selected
Current Provider Not Selected
Primary Care Team Unassigned
Flag
Remote Data
Postings
WAD
Active Problems
* Other Specified Disorders Of Nervous S
Bipolar Affective Disorder, Manic
* Benign Neoplasm Of Breast
Anemia, Chronic Disease
Dementia
Allergies / Adverse Reactions
Sulfamethoxazole
Penicillin
Men
Postings
Allergies
Legal Guardianship (w) Jun 05,2003
Legal Guardianship (w) Jun 04,2003
Organ Donation Declined (w)
Pharmacy Alert (w) May 15,2002
Pharmacy Alert (w) May 15,2002
Va Living Will/Va Advance Directive
Active Medications
Sildenafil Citrate 100mg Tab Active
Nitroglycerin 0.3mg Sl Tab Active
Warfarin (coumadin) Na 1mg Tab Active
Non-VA Acetaminophen Supp,Rtl Active
Clinical Reminders Due Date
* Diabetic Eye Exam Dec 31,96
* Diabetic Lipid Control May 08,03
* Diabetic Microalbumin Feb 11,04
Cholesterol Screen (Female) May 08,04
* Breast Cancer Screen DUE NOW
* Cervical Cancer Screen DUE NOW
PTSD Screen Mar 01,05
* Alcohol Use Screen Nov 14,01
Hypertension Screen/BP Check Nov 02,04
* Influenza Vaccine 65 Sep 02,04
Pneumococcal Mar 01,05
Nutrition/Obesity Screen Oct 02,04
* Diabetic Foot Exam DUE NOW
* Diabetic Hemoglobin A1C DUE NOW
Pain Assess/Reassess (Brief) DUE NOW
Fictitious patient record
Recent Lab Results
Glucose Serum Sp Lb #576206 Nov 2
Hep C Antibody(after,6/22/04) Serum Sp Lb #55
Hep B Surface Ag Serum Sp Lb #551620 Nov 0
Hep B Core Ab-Total Serum Sp Lb #551620
Hep B Surface Ab Serum Sp Lb #551620 Nov 0
Hep A Antibody-Total Serum Sp Lb #551620
Pt & Ptt Blood Plasma Sp Lb #518899 Sep 3
Vitals
T 98.9 F Oct 26,2004 14:46 (37.2 C)
P 80 Oct 26,2004 14:46
R 14 Oct 26,2004 14:46
BP 122/76 Oct 26,2004 14:46
HT 60 in Oct 26,2004 14:46 (152.4 cm)
WT 200 lb Oct 26,2004 14:46 (90.9 kg)
PN 5 Oct 26,2004 14:46
Appointments/Visits/Admissions
No data found
Cover Sheet
Problems
Meds
Orders
Notes
Consults
Surgery
D/C Summ
Labs
Reports


Hospital
PCP
Specialist
User
Today
Other EHRs
Your EHR
Public Health
User
5-10 Years
Yours and Others' EHRs
Device and Patient Reported Data
Bio Repositories
User
10+ Years

Fueling the Revolution

- Meaningful Use
  - Incentive program from CMS to encourage adoption and use of EHR systems
  - $21.6 billion paid to 355,000 EHs/EPs thru 2014

- Stage 2 MU requires HIE
  - Summary of care provided at least 10% of time
  - Laboratory reporting to public health

Meaningful Use

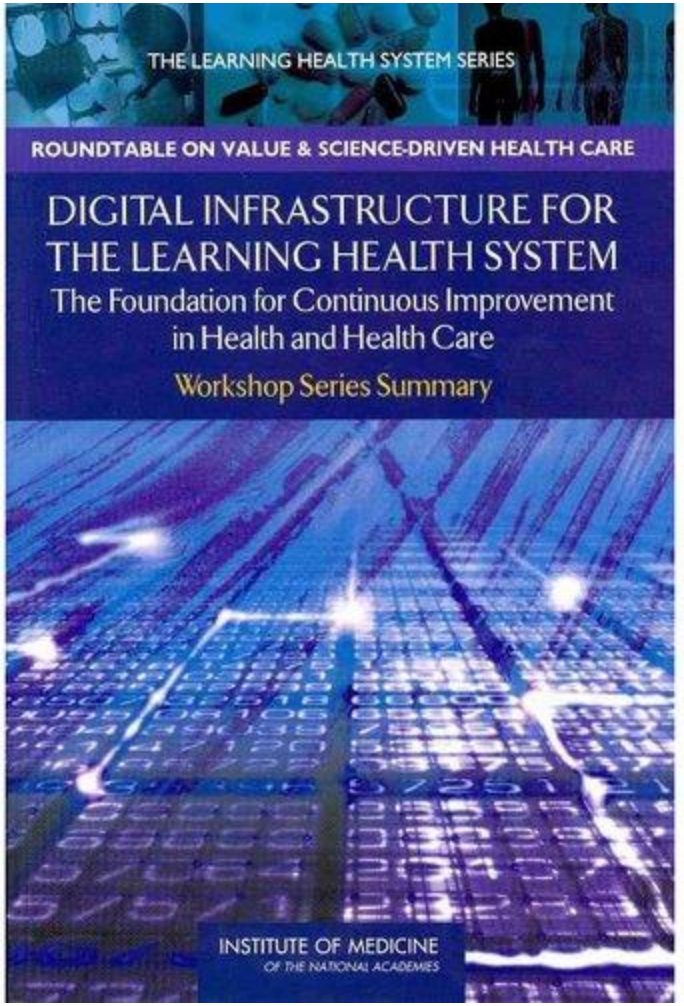
Eligible Hospitals and CAHs

Report on all 16 Core Objectives:

1. Use computerized provider order entry (CPOE) for medication, laboratory and radiology orders
2. Record demographic information
3. Record and chart changes in vital signs
4. Record smoking status for patients 13 years old or older
5. Use clinical decision support to improve performance on high-priority health conditions
6. Provide patients the ability to view online, download and transmit their health information within 36 hours after discharge.
7. Protect electronic health information created or maintained by the Certified EHR Technology
8. Incorporate clinical lab-test results into Certified EHR Technology
9. Generate lists of patients by specific conditions to use for quality improvement, reduction of disparities, research, or outreach
10. Use certified EHR technology to identify patient-specific education resources and provide those resources to the patient if appropriate
11. Perform medication reconciliation
12. Provide summary of care record for each transition of care or referral
13. Submit electronic data to immunization registries
14. Submit electronic data on reportable lab results to public health agencies
15. Submit electronic syndromic surveillance data to public health agencies
16. Automatically track medications with an electronic medication administration record (eMAR)

The Learning Health System

- Learning Health System (LHS), a concept introduced by the Institute of Medicine
- Emphasizes health systems should leverage their data to continuously improve; and practice should inform research objectives
- EHR and HIE Systems lay the foundation for the LHS



LEVERAGING THE DIGITAL INFRASTRUCTURE FOR PUBLIC HEALTH

IUPUI | RICHARD M. FAIRBANKS SCHOOL OF PUBLIC HEALTH
INDIANA UNIVERSITY Indianapolis

Regenstrief Center for Biomedical Informatics

Results from 2010 NACCHO Survey

Mechanism	Percent of LHDs			
	Individual	Syndromic	Outbreak	Laboratory

Mechanism	Percent of LHDs			
	Restaurant Inspections (n=210)	Water Wells (Licensing and/or Testing) (n=179)	Lead Testing (n=175)	Environmental Health Tracking (n=190)

Mechanism	Percent of LHDs		
	Immunization Records (n=244)	Vital Records (n=171)	Home Visits by Public Health Nurses (n=199)
Paper Records	62%	56%	72%
Standalone Spreadsheet or Database	14%	13%	17%
Local Data Warehouse	13%	11%	15%
In a Web-Based Database	65%	59%	28%
A Shared Database (Other than Web)	22%	23%	16%

Challenges for PH Agencies

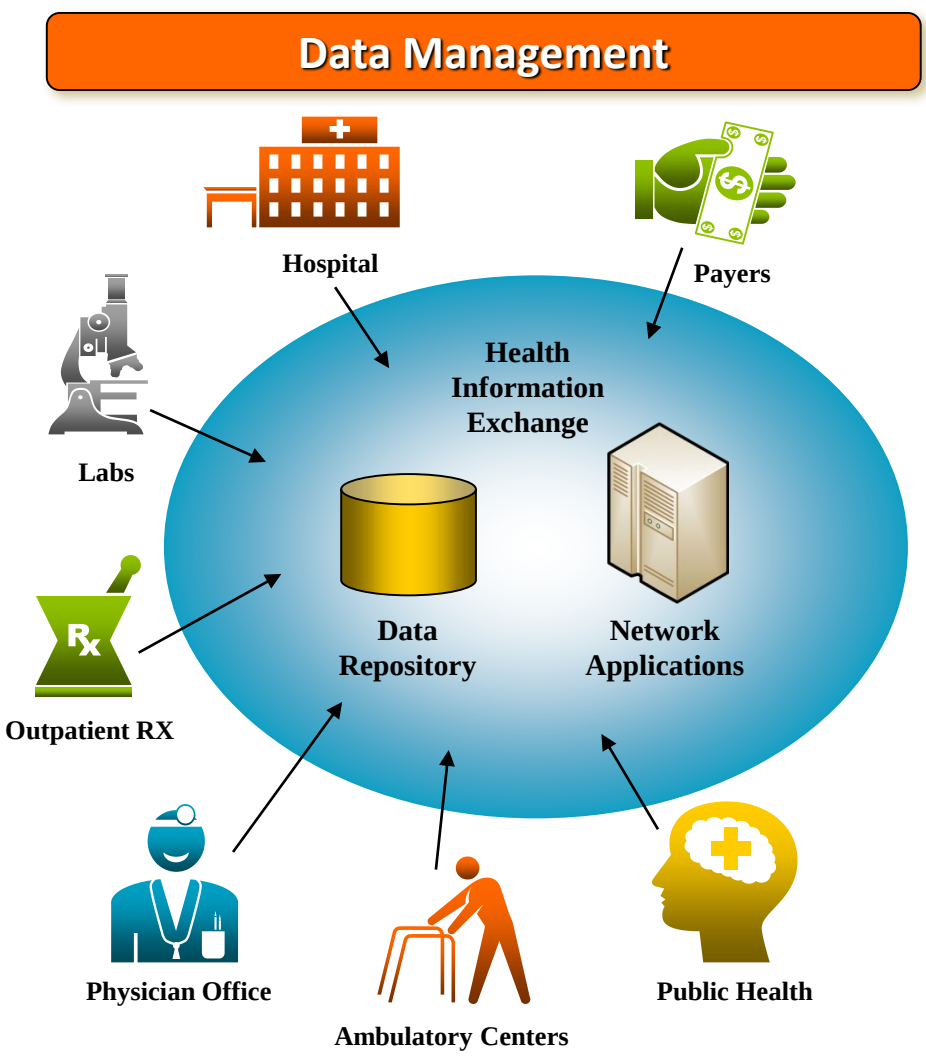
- PH Organizations Lag Behind Medicine
  - Aging infrastructure
  - Workforce unprepared for Brave New World
- Old Paradigms Won't Work
  - 2010s an era of instant gratification
  - Data must be open and usable
- Capacity to Evolve Limited
  - Limited $ available for investment
  - Limited workforce to advance systems

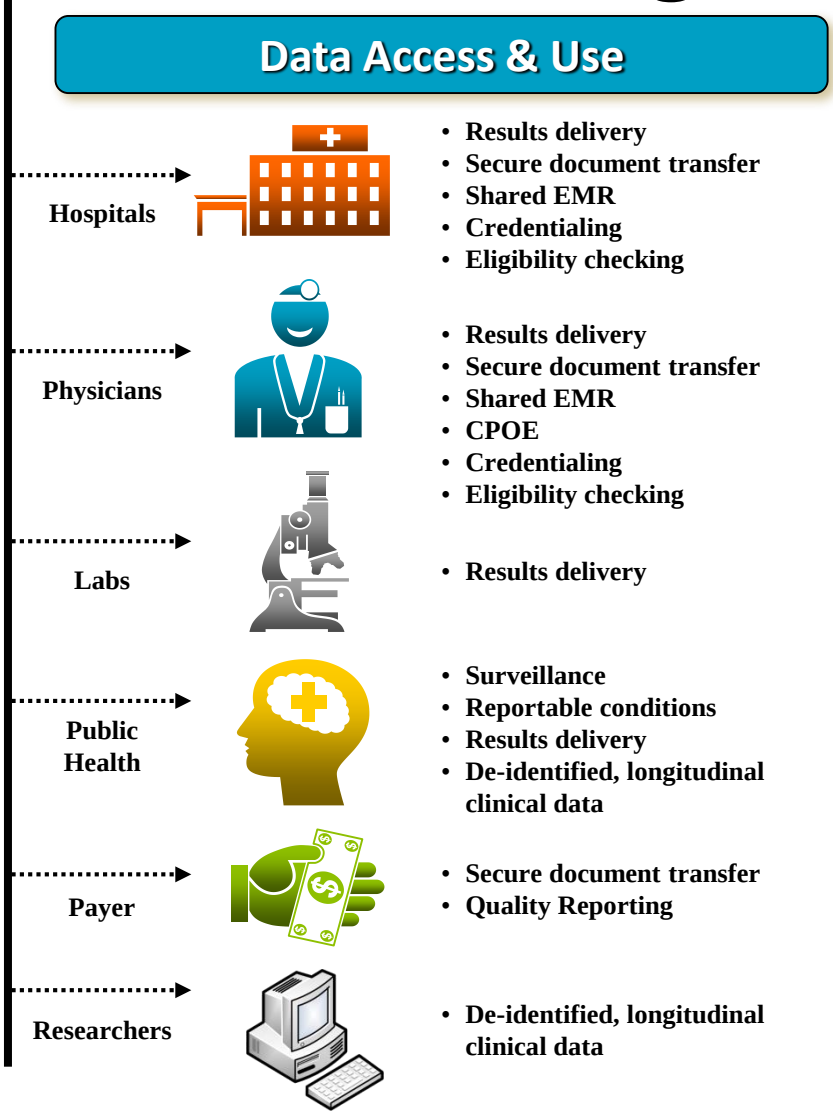
Two Projects

- Examining a provider intervention to automate reporting of vaccine-preventable diseases
  - Mentored Research Scientist Development Award No. 71596

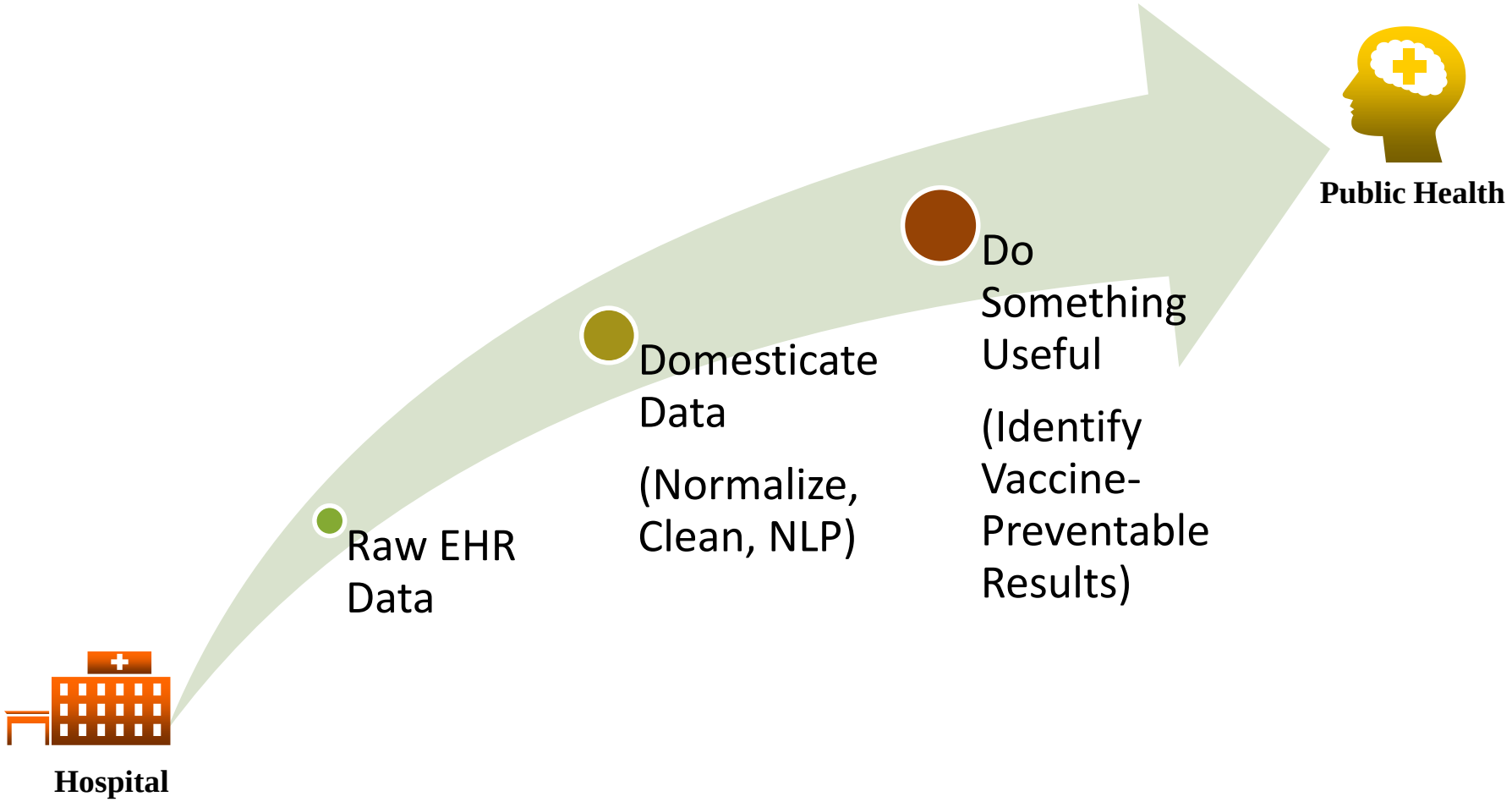
- Population EHR Data for Assessment at the Local level (PEDAL)
  - PHSSR No. 71271

Health Information Exchange

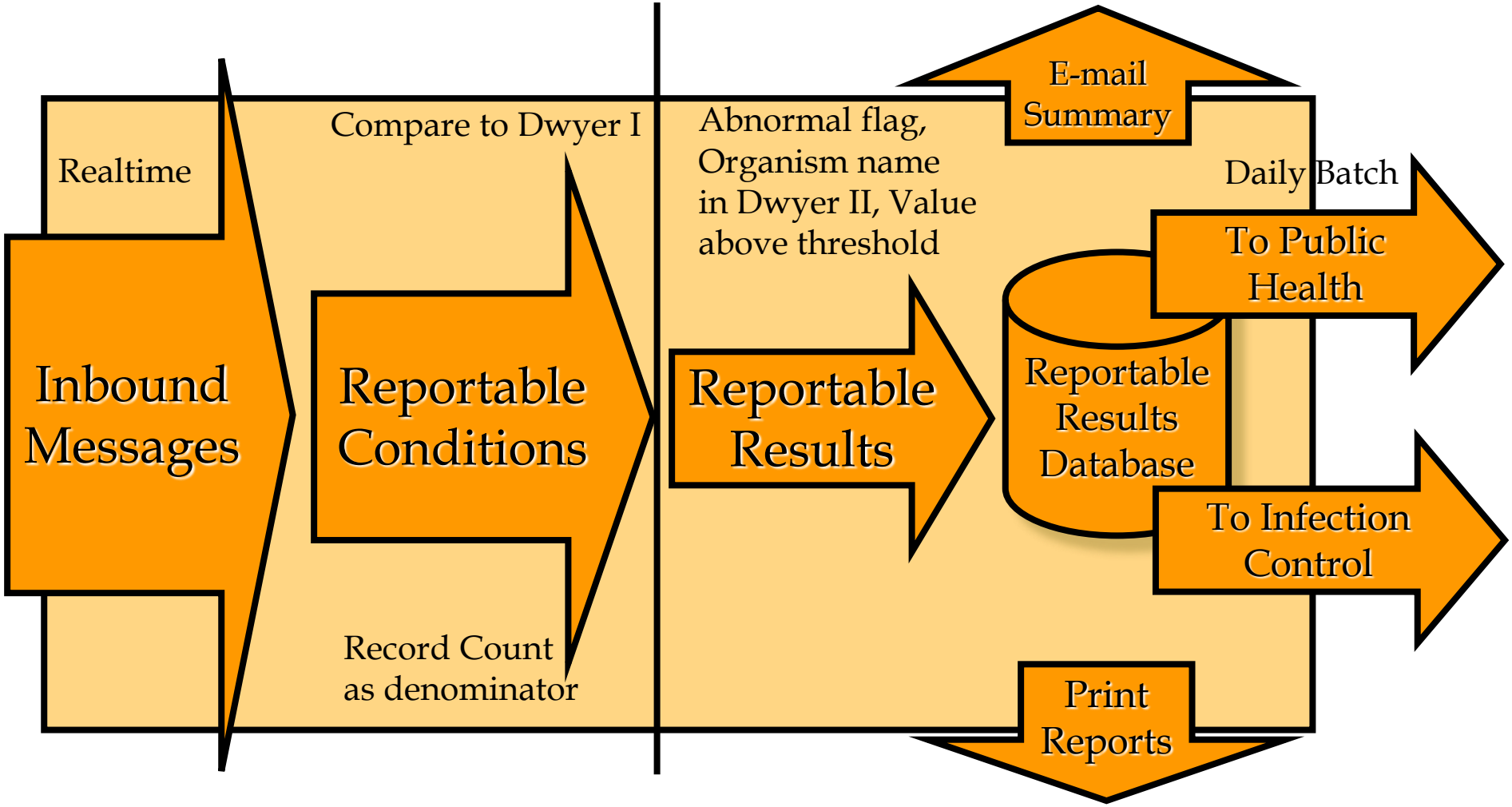




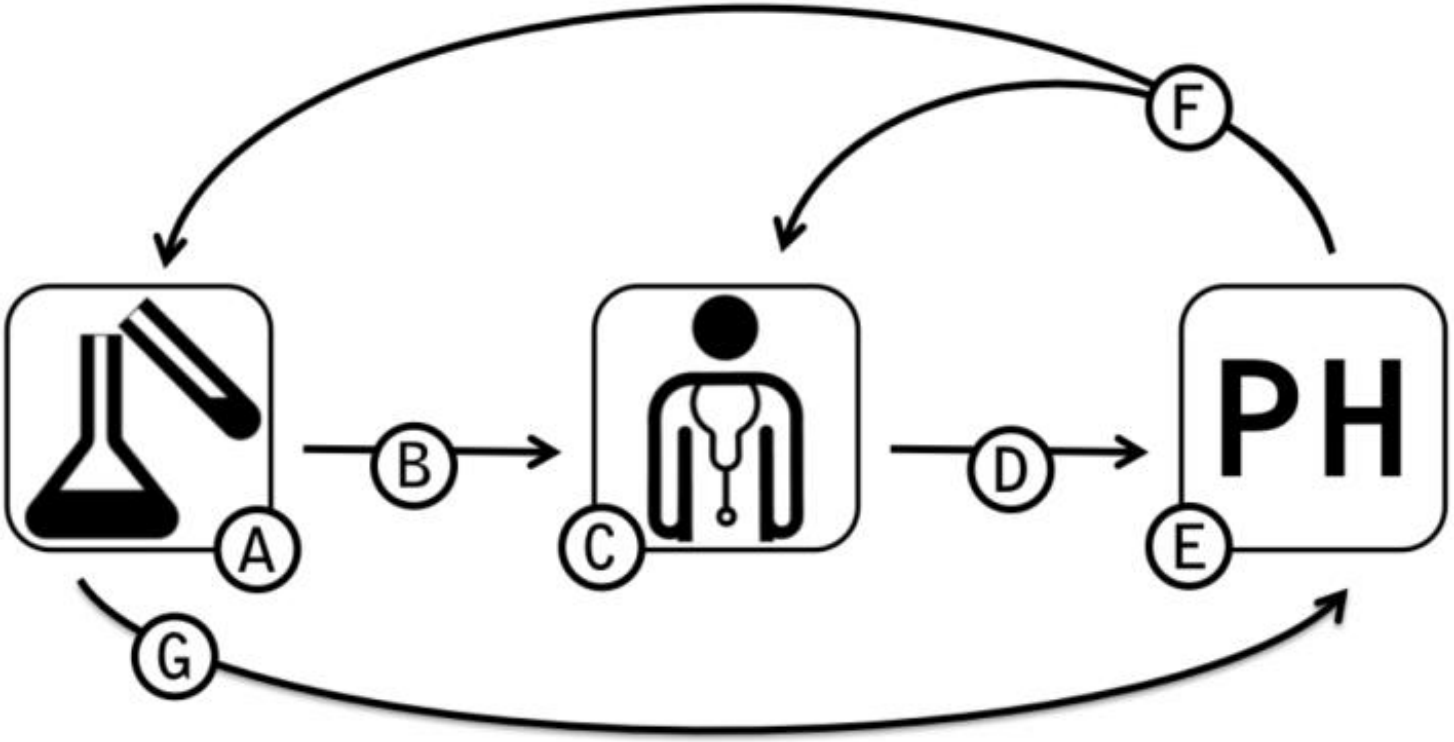
Domesticating Clinical Data



The Notifiable Condition Detector



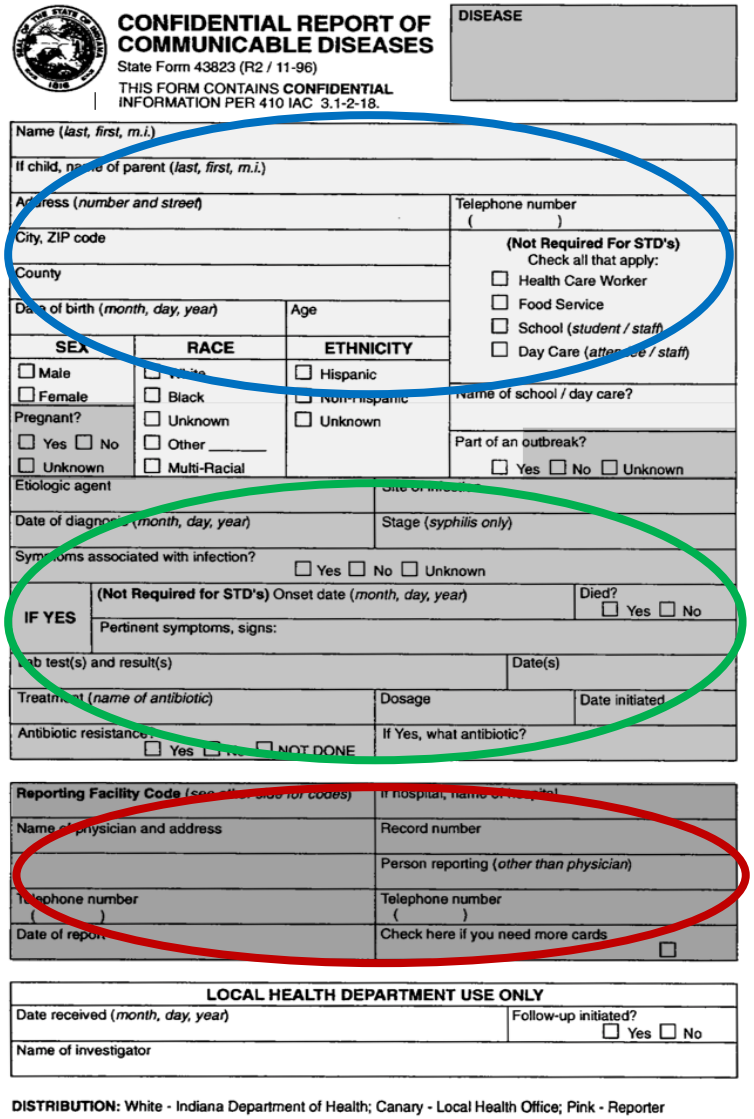
Traditional PH Reporting Workflow



Official State CDR Form

patient Information
Name
Address
Phone#
DOB
Gender
Race/ethnicity

provider Information
Physician name
Physician address
Phone#
Reported by
Report date



CONFIDENTIAL REPORT OF COMMUNICABLE DISEASES
State Form 43823 (R2 / 11-96)
THIS FORM CONTAINS CONFIDENTIAL INFORMATION PER 410 IAC 3.1-2-18.

DISEASE

Name (*last, first, m.i.*)
If child, name of parent (*last, first, m.i.*)
Address (*number and street*)
Telephone number ( )
City, ZIP code
County
(Not Required For STD's) Check all that apply:
☐ Health Care Worker
☐ Food Service
☐ School (*student / staff*)
☐ Day Care (*attendee / staff*)
Date of birth (*month, day, year*)
Age
SEX: ☐ Male ☐ Female
RACE: ☐ White ☐ Black ☐ Unknown ☐ Other _____ ☐ Multi-Racial
ETHNICITY: ☐ Hispanic ☐ Non-Hispanic ☐ Unknown
Name of school / day care?
Pregnant? ☐ Yes ☐ No ☐ Unknown
Part of an outbreak? ☐ Yes ☐ No ☐ Unknown
Etiologic agent
Site of infection
Date of diagnosis (*month, day, year*)
Stage (*syphilis only*)
Symptoms associated with infection? ☐ Yes ☐ No ☐ Unknown
IF YES
(Not Required for STD's) Onset date (*month, day, year*)
Died? ☐ Yes ☐ No
Pertinent symptoms, signs:
Lab test(s) and result(s)
Date(s)
Treatment (*name of antibiotic*)
Dosage
Date initiated
Antibiotic resistance? ☐ Yes ☐ No ☐ NOT DONE
If Yes, what antibiotic?

Reporting Facility Code (*see other side for codes*)
If hospital, name of hospital
Name of physician and address
Record number
Person reporting (*other than physician*)
Telephone number ( )
Telephone number ( )
Date of report
Check here if you need more cards ☐

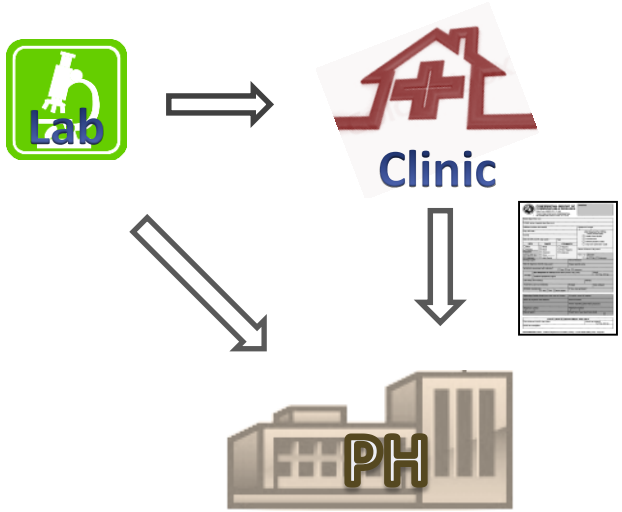
LOCAL HEALTH DEPARTMENT USE ONLY
Date received (*month, day, year*)
Follow-up initiated? ☐ Yes ☐ No
Name of investigator

DISTRIBUTION: White - Indiana Department of Health; Canary - Local Health Office; Pink - Reporter

lab Information
Etiologic agent
Test name
Test date
Treatment initiation date
Treatment (drugs)

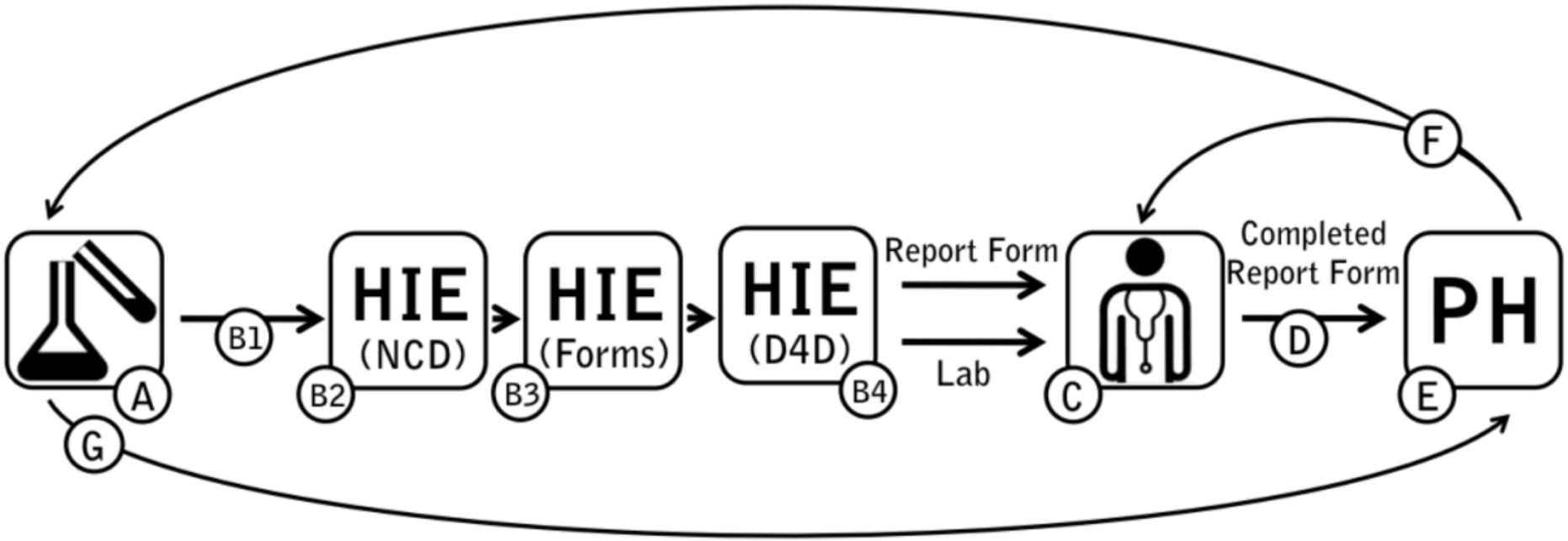
Study Objective

- Most reports to PH originate from labs

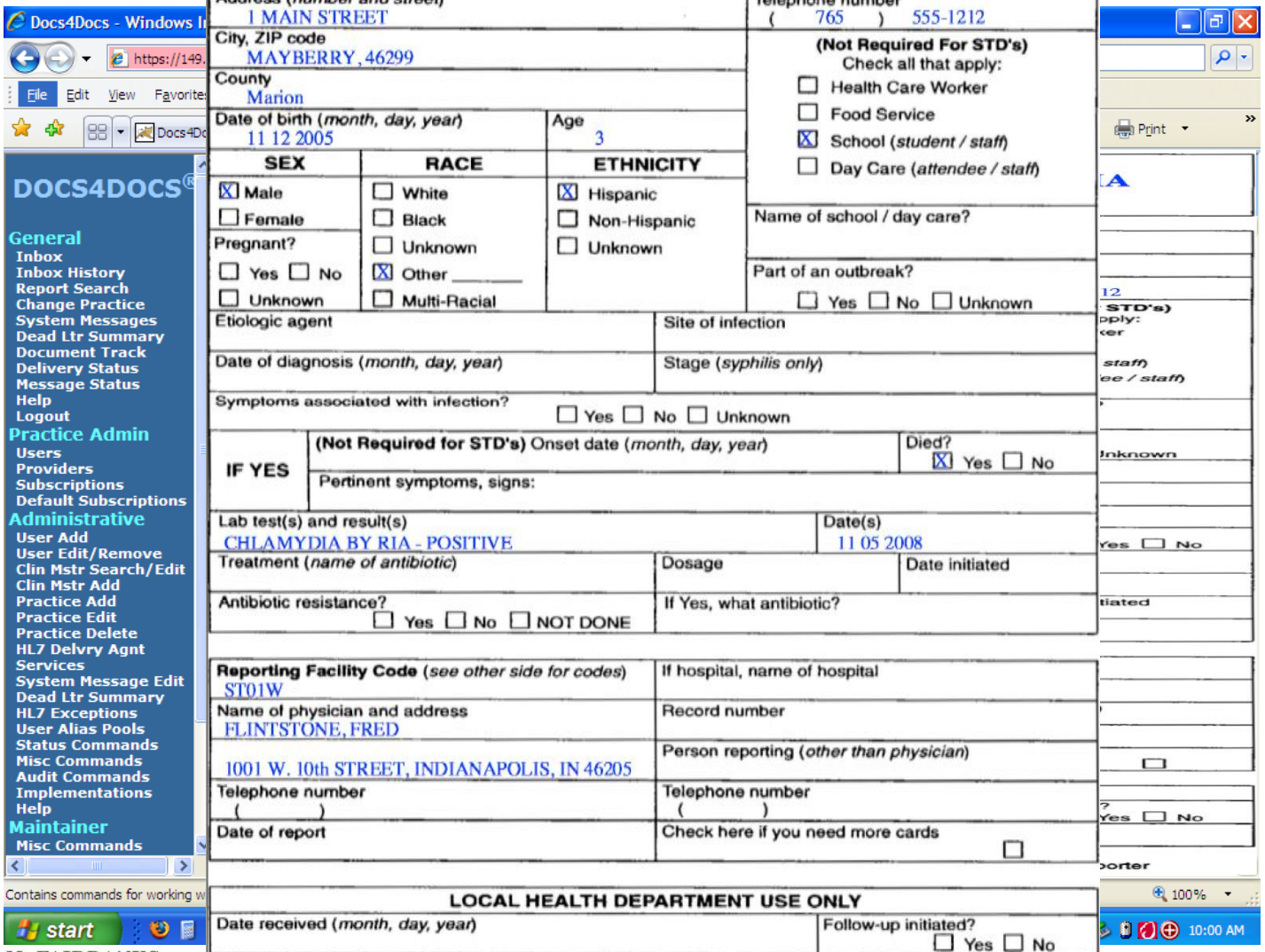


- We aim to increase reporting rates for providers using an automated process where CDR fields are pre-populated using EHRs

Enhanced PH Reporting Workflow



Pre-p orms



CONFIDENTIAL REPORT OF COMMUNICABLE DISEASES
State Form 43823 (R2 / 11-96)
THIS FORM CONTAINS **CONFIDENTIAL** INFORMATION PER 410 IAC 3.1-2-18.

DISEASE
CHLAMYDIA

Name (*last, first, m.i.*)
LABTESTING, HARRY M

If child, name of parent (*last, first, m.i.*)
BUNNY, BUGS Z

Address (*number and street*)
1 MAIN STREET

Telephone number
(765) 555-1212

City, ZIP code
MAYBERRY, 46299

County
Marion

Date of birth (*month, day, year*)
11 12 2005

Age
3

SEX	RACE	ETHNICITY
[X] Male	[ ] White	[X] Hispanic
[ ] Female	[ ] Black	[ ] Non-Hispanic
Pregnant?	[ ] Unknown	[ ] Unknown
[ ] Yes [ ] No	[X] Other _____	
[ ] Unknown	[ ] Multi-Racial	

(Not Required For STD's)
Check all that apply:
- [ ] Health Care Worker
- [ ] Food Service
- [X] School (*student / staff*)
- [ ] Day Care (*attendee / staff*)

Name of school / day care?

Part of an outbreak? [ ] Yes [ ] No [ ] Unknown

Etiologic agent

Site of infection

Date of diagnosis (*month, day, year*)

Stage (*syphilis only*)

Symptoms associated with infection? [ ] Yes [ ] No [ ] Unknown

IF YES

(Not Required for STD's) Onset date (*month, day, year*)

Died? [X] Yes [ ] No

Pertinent symptoms, signs:

Lab test(s) and result(s)
CHLAMYDIA BY RIA - POSITIVE

Date(s)
11 05 2008

Treatment (*name of antibiotic*)

Dosage

Date initiated

Antibiotic resistance? [ ] Yes [ ] No [ ] NOT DONE

If Yes, what antibiotic?

Reporting Facility Code (*see other side for codes*)
ST01W

If hospital, name of hospital

Name of physician and address
FLINTSTONE, FRED
1001 W. 10th STREET, INDIANAPOLIS, IN 46205

Record number

Person reporting (*other than physician*)

Telephone number ( )

Telephone number ( )

Date of report

Check here if you need more cards [ ]

LOCAL HEALTH DEPARTMENT USE ONLY

Date received (*month, day, year*)

Follow-up initiated? [ ] Yes [ ] No

Name of investigator

DISTRIBUTION: White - Indiana Department of Health; Canary - Local Health Office; Pink - Reporter

Research Design

- Controlled implementation
  - Clinics will receive pre-populated physician reporting forms in addition to standard D4D clinical messages
  - Baseline info collected before clinic goes live
  - Future sites are controls for early adopters

- Mixed methods approach
  - Quantitative metrics
  - Qualitative interviews

What are we measuring?

- Quantitative
  - Data completeness
  - Time from report to disease investigation
  - Reporting rates by clinic, disease

- Qualitative
  - Perceived completeness, timeliness
  - Perceived workload
  - Satisfaction with prepopulated forms

Project Status

- Baseline data collection completed
  - Existing counts of disease cases, data quality, and processes within public health department
  - Analyzing baseline numbers

- Intervention went live Sept 2014
  - Collecting post-intervention data
  - Beginning analysis of post-intervention data

Issue / Lesson Learned

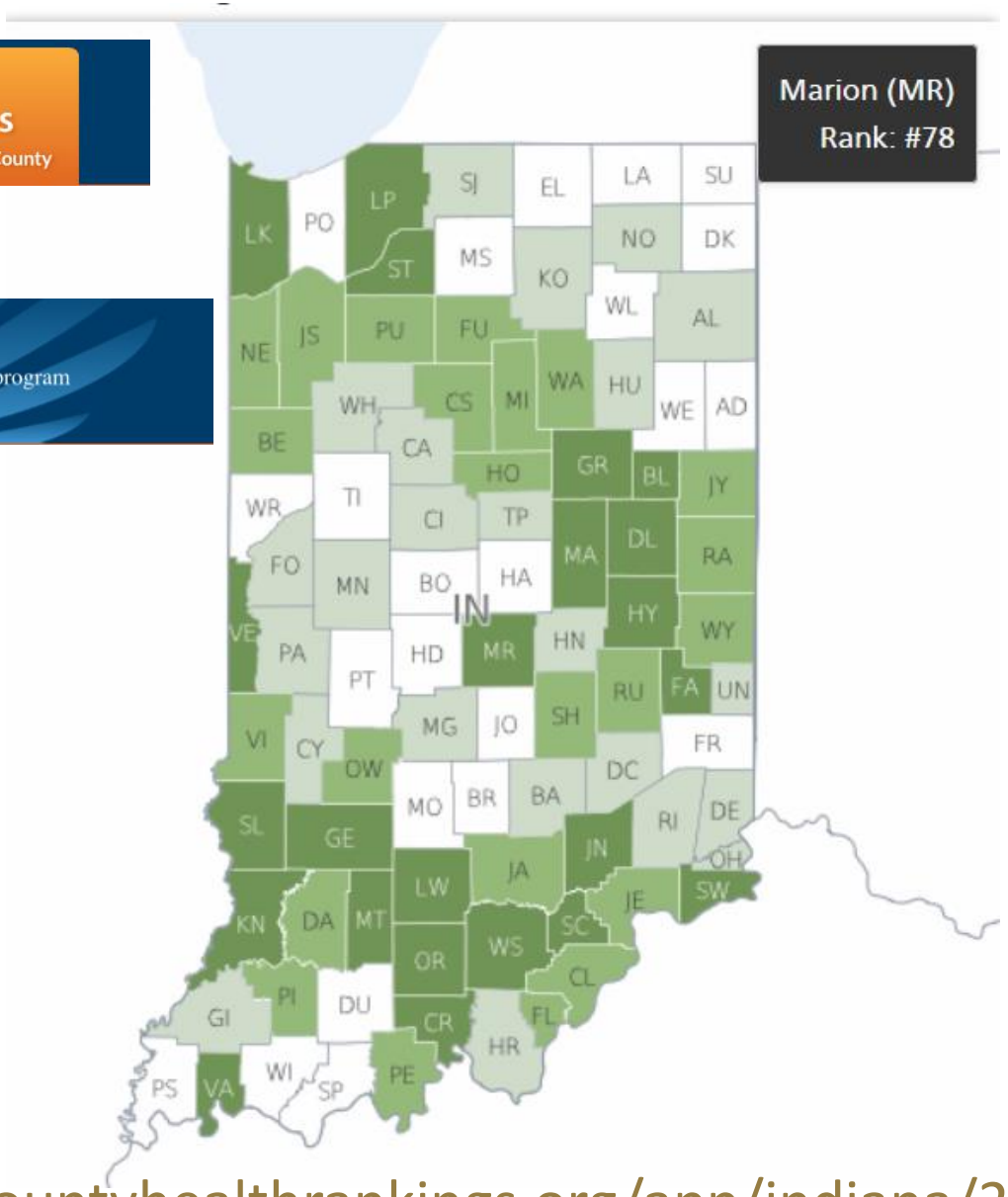
- Natural language processing of microbiology results is difficult
  - Labs serve multiple “customers” and PH is not at the top of their priority list
  - Standard outputs from LIS/LIMS hard to decipher using clear, standardized rules

- Although the codes for Rubella and Varicella IgG results are in the CDC RCMT, it does not mean that one should use them
  - Many false positive results

County Health Rankings & Roadmaps

Building a Culture of Health, County by County

A Robert Wood Johnson Foundation program



http://www.countyhealthrankings.org/app/indiana/2014/overview

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INDIANA UNIVERSITY Indianapolis

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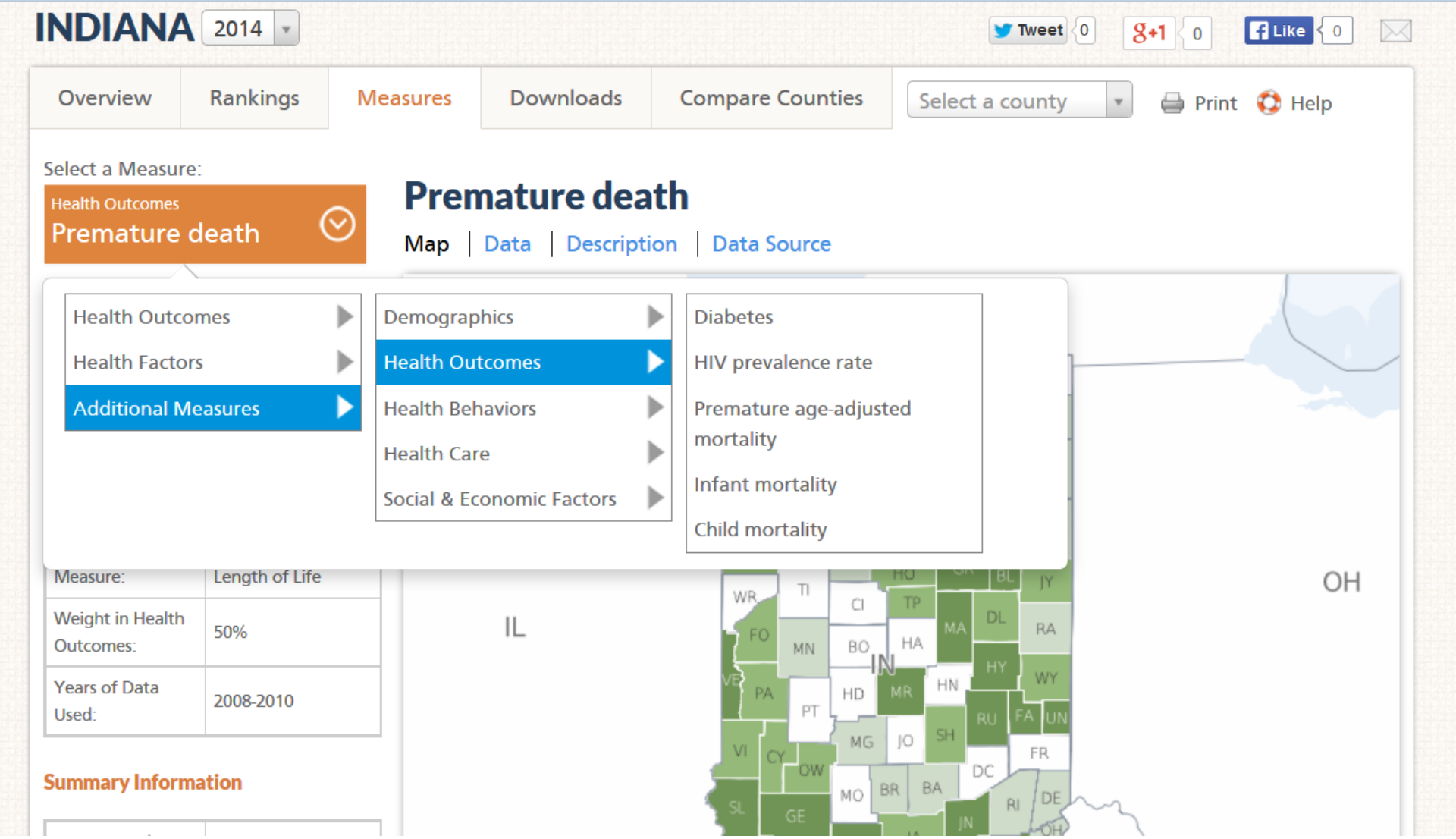


http://www.countyhealthrankings.org/app/indiana/2014/overview

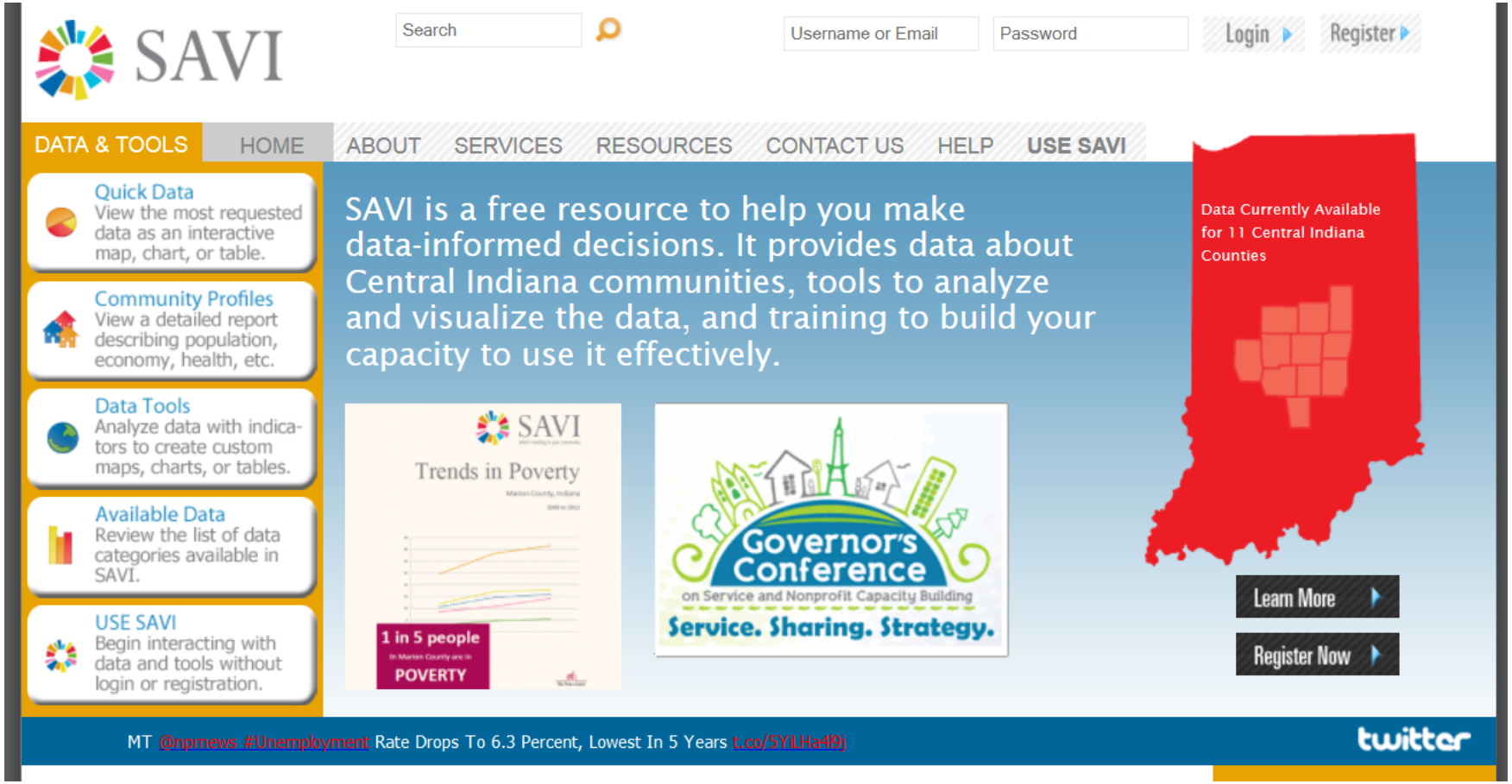
PEDAL Project Aims

1. Develop neighborhood-level indicators of population health using EHR integrated with a community information system;
2. Evaluate neighborhood-level indicators with respect to reliability, validity, feasibility, and perceived usefulness; and
3. Generate an integrated view of neighborhood-level indicators of health within a local health department jurisdiction, enabling review of information for planning and policy.

Can we get to neighborhood level?

- Sub-county: anything smaller than a county
  - LHD Planning Area (~40,000-50,000)
  - Zip code (~8,000)
  - Census tract (~4,000)
  - Census block group (~1,500)
  - Neighborhood

- What is a neighborhood?


SAVI
Search
Username or Email
Password
Login
Register
DATA & TOOLS
HOME
ABOUT
SERVICES
RESOURCES
CONTACT US
HELP
USE SAVI
Quick Data
View the most requested data as an interactive map, chart, or table.
Community Profiles
View a detailed report describing population, economy, health, etc.
Data Tools
Analyze data with indicators to create custom maps, charts, or tables.
Available Data
Review the list of data categories available in SAVI.
USE SAVI
Begin interacting with data and tools without login or registration.
SAVI is a free resource to help you make data-informed decisions. It provides data about Central Indiana communities, tools to analyze and visualize the data, and training to build your capacity to use it effectively.
SAVI
Trends in Poverty
1 in 5 people
POVERTY
Governor's Conference
on Service and Nonprofit Capacity Building
Service. Sharing. Strategy.
Data Currently Available for 11 Central Indiana Counties
Learn More
Register Now
MT @nprnews #Unemployment Rate Drops To 6.3 Percent, Lowest In 5 Years t.co/5YiLHa49j
twitter

www.savi.org

Measures

- Prevalence of diabetes; asthma and COPD; depression; STIs; and hypertension as well as other cardiovascular diseases
- Chlamydia screening
- HbA1c Testing for Patients with Diabetes
- HbA1c Controlled at <8% for Patients with Diabetes
- LDL-C Screening for Patients with CVD
- LDL-C Levels < 100 mg/dL for Patients with CVD
- Emergency Room Utilization for People With Asthma

Choosing Measures

- Participatory design and process
  - Engage range of public health stakeholders
  - Coordination with CTSI CHEP, ISDH

- Cast broad net, then narrow list
  - What is feasible given population incidence?
  - What is feasible given EHRs?
  - What is feasible given INPC?
  - What is feasible given geography?

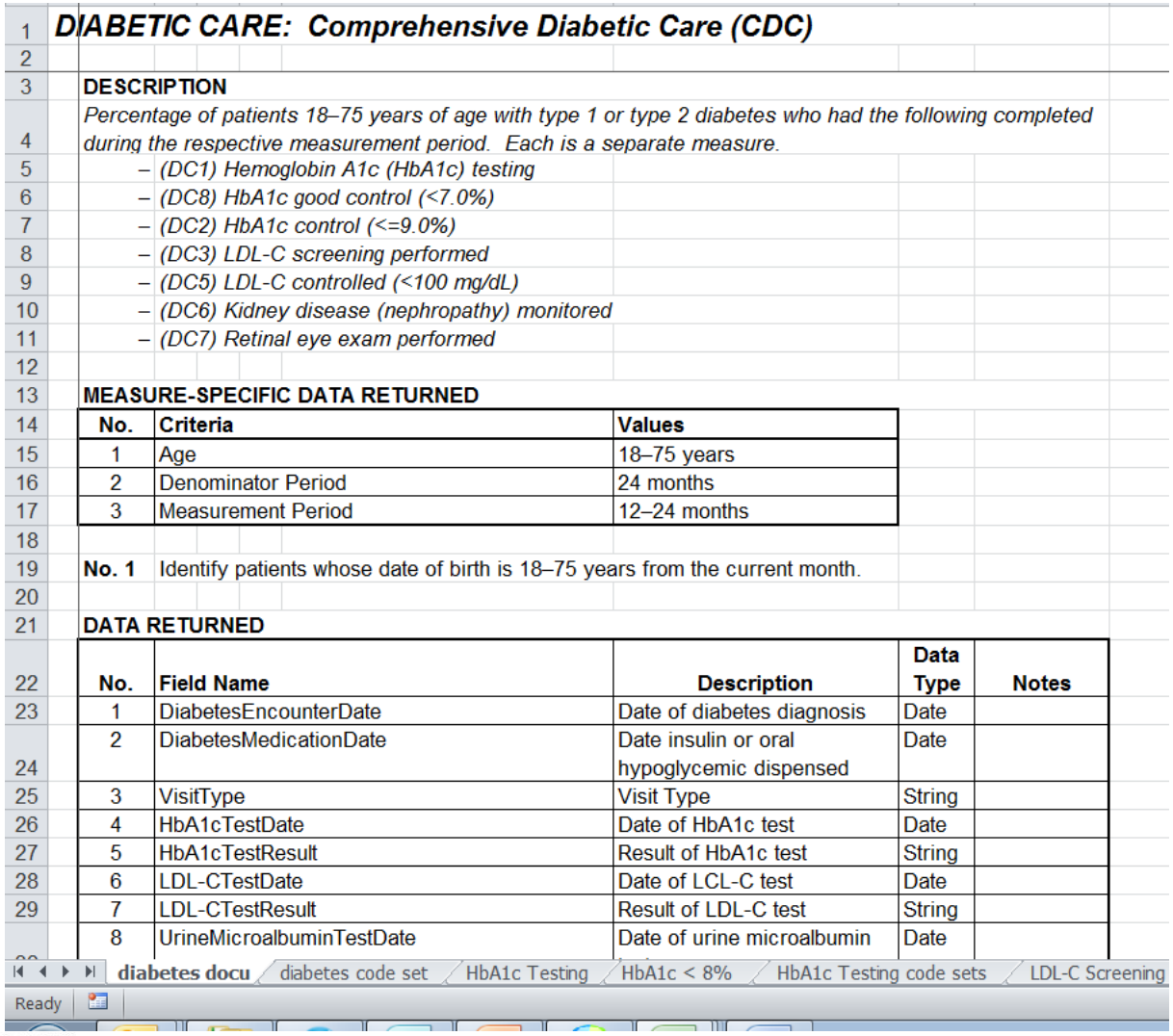
Measure Selection - Feasibility

1	Measure or Indicator	Likelihood of Electronic Capture in an EHR or PH System	Availability within a RHIO or IT Systems Accessible to Public Health	Prevalence of Disease or Occurrence per 1000 Popuation	Percentage of Health Care Market / Providers Contributing Data	Geographic Granularity, Enabling Use at Small Scales	Use for PEDAL?
2	Context for PEDAL	Captured in INPC Member Institutions	Transmitted to INPC by Member Institutions	Varies by Disease; Marion County, Indiana	~95% of Marion County	YES for PEDAL since data available at high quality (X,Y) coordinates	
19	HIV screening	10 - very likely; captured in structured format	10 - definitely available and likely all institutions		90%	10 - can defnitely scale down to the smallest levels	Yes
20	HPV vaccination coverage (single dose & completed series)	7 - likely	3 - unlikely to be available	97.2 (male) 384.3 (female)	10%	10 - can defnitely scale down to the smallest levels	No - Very challengin representative data small area
21	Emergency Room Utilization by People With Dental Pain/Infections	7 - likely	7 - available but may not for all instutitions		95%	10 - can defnitely scale down to the smallest levels	Yes
22	Prevalence of viral hepatitis – HBV and (especially) HCV	10 - very likely; captured in structured format	10 - definitely available and likely all institutions		95%	10 - can defnitely scale down to the smallest levels	Yes
	Evidence of violence/trauma (e.g., domestic violence)	3 - unlikely to be captured electronically or captured in free	3 - unlikely to be			10 - can defnitely scale down to the	No - Difficult to dete

Responses for PEDAL | General Matrix | Sheet3

Ready

Measure Definition



DIABETIC CARE: Comprehensive Diabetic Care (CDC)

DESCRIPTION

Percentage of patients 18–75 years of age with type 1 or type 2 diabetes who had the following completed during the respective measurement period. Each is a separate measure.

- *(DC1) Hemoglobin A1c (HbA1c) testing*
- *(DC8) HbA1c good control (<7.0%)*
- *(DC2) HbA1c control (<=9.0%)*
- *(DC3) LDL-C screening performed*
- *(DC5) LDL-C controlled (<100 mg/dL)*
- *(DC6) Kidney disease (nephropathy) monitored*
- *(DC7) Retinal eye exam performed*

MEASURE-SPECIFIC DATA RETURNED

No.	Criteria	Values
1	Age	18–75 years
2	Denominator Period	24 months
3	Measurement Period	12–24 months

No. 1 Identify patients whose date of birth is 18–75 years from the current month.

DATA RETURNED

No.	Field Name	Description	Data Type	Notes
1	DiabetesEncounterDate	Date of diabetes diagnosis	Date	
2	DiabetesMedicationDate	Date insulin or oral hypoglycemic dispensed	Date	
3	VisitType	Visit Type	String	
4	HbA1cTestDate	Date of HbA1c test	Date	
5	HbA1cTestResult	Result of HbA1c test	String	
6	LDL-CTestDate	Date of LCL-C test	Date	
7	LDL-CTestResult	Result of LDL-C test	String	
8	UrineMicroalbuminTestDate	Date of urine microalbumin	Date	

diabetes docu | diabetes code set | HbA1c Testing | HbA1c < 8% | HbA1c Testing code sets | LDL-C Screening

Ready

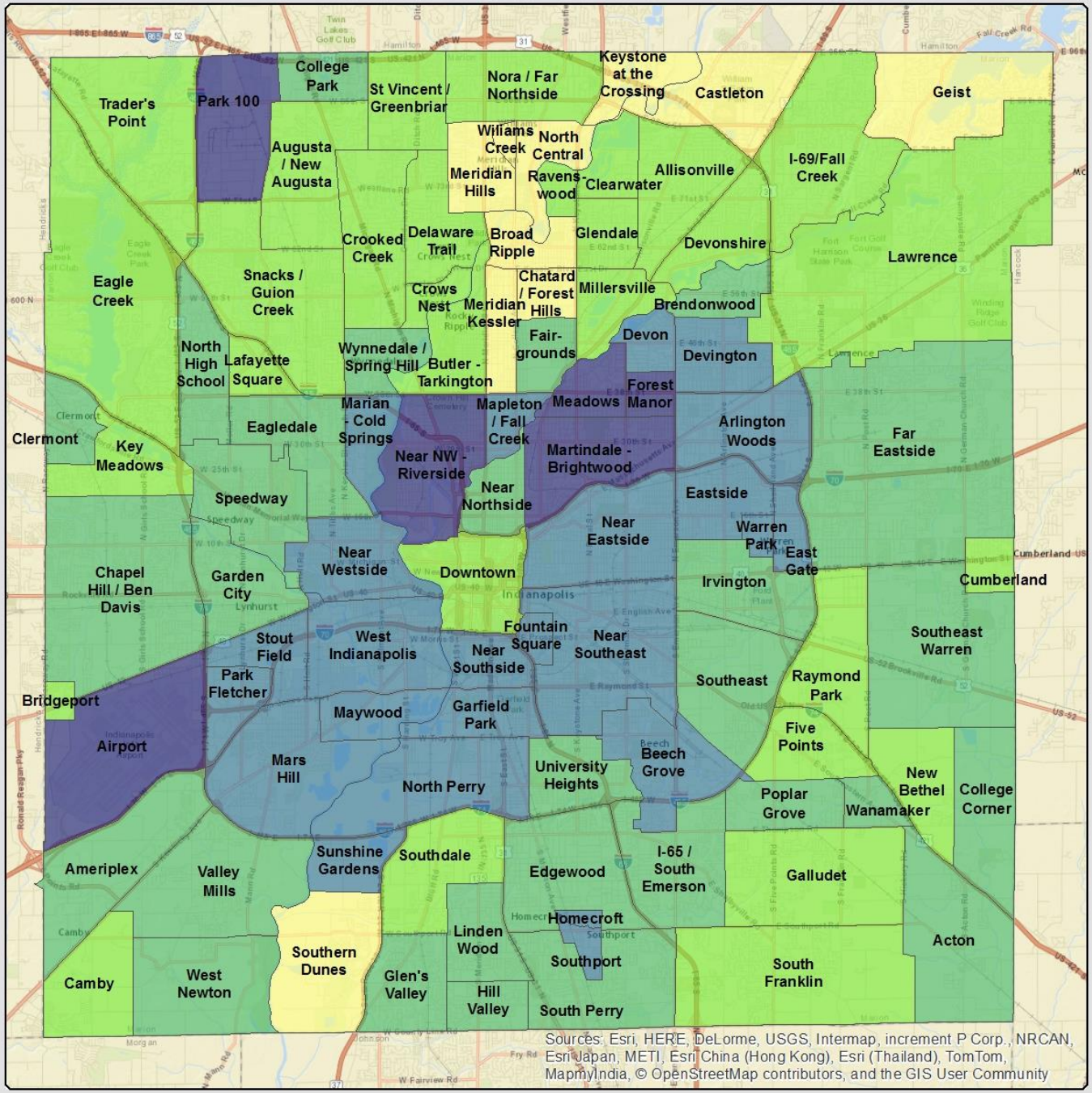
Data Analysis

- Internal Validation
  - Statistical techniques to optimize the variance over the geographic regions of interest
  - Factor analysis in conjunction with self organizing maps (SOMs)

- External Validation
  - Compare with MCPHD surveys, BRFSS
  - Explore quality of INPC data

Status of PEDAL

- Selected broad set of measures
  - Initially bit off a bit more than we can digest
- Defined nearly all measures
  - Numerator, denominator
- Internal validation with data from the INPC and SAVI
  - Optimizing prevalence models; adj for population
- External validation with MCPHD and other PH stakeholders
  - Creating maps, analysis sets for review



Diabetes Rates

2011-2013

Percent of INPC Patient Population Diagnosed with Diabetes by Neighborhood

- 1.5% - 3.32%
- 3.33% - 4.99%
- 5% - 6.54%
- 6.55% - 8.8%
- 8.81% - 16.07%

The Polis Center

Source: Indiana Network for Patient Care

0 2.25 4.5

Miles

Map created 11/7/2014
by The Polis Center at IUPUI

Successful Strategies for Innovation in PH Informatics

- Innovation = Feasible + Advance
  - Look at what is feasible given the digital infrastructure in your community
- Identify the biggest pain points
  - Ask providers what irks them
  - Ask PH system leaders what they need
- Don't boil the ocean
  - Start small then incrementally expand

Successful Strategies for Innovation in PH Informatics

- Standards are preferable
  - Select and utilize available, mature standards
  - Avoid creating new ones unless necessary
- Think critically about winners and losers
  - Where there is change, there is cost
- Don’t let perfect be the enemy of the good
  - 80% complete can often be good enough

Acknowledgements

- Thank you to my mentors
  - Shaun Grannis, MD
  - Joe Gibson, PhD

- These organizations fund my work
  - U.S. Agency for Healthcare Research and Quality
  - Robert Wood Johnson Foundation
  - U.S. Centers for Disease Control and Prevention
  - Merck-Regenstrief Program
  - Indiana State Department of Health
  - U.S. Department of Veterans Affairs

Questions?

Answers

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Commentary

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Questions and Discussion

Archives of all Webinars available at:

http://www.publichealthsystems.org/phssr-research-progress-webinars

Upcoming Webinars -- March 2015

Wednesday, March 11 (12-1pm ET)

Evaluating the Quality, Usability, and Fitness of Open Data for Public Health Research

Erika G. Martin, PhD, State University of New York-Albany

2013 PHSSR MRDA Award

Thursday, March 19 (1-2pm ET)

Cross-sector Collaboration Between Local Public Health & Health Care for Obesity Prevention

Eduardo J. Simoes, MD, University of Missouri and

Katherine A. Stamatakis, PhD, MPH, St. Louis University

Upcoming PHSSR Research in Progress Webinars April 2015

Wednesday, April 1 (12-1pm ET)

Restructuring a State Nutrition Education and Obesity Prevention Program: Implications of a Local Health Department Model

Helen W. Wu, PhD, U. California Davis ***– 2013 PHSSR MRDA Award***

Wednesday, April 8 (12-1pm ET)

Public Health Services Cost Studies: Tobacco Prevention, Mandated Public Health Services

Pauline Thomas, MD, New Jersey Medical School & NJ Public Health PBRN

Nancy Winterbauer, PhD, East Carolina University & NC Public Health PBRN

Tuesday and Wednesday, April 21-22

2015 PHSSR KEENELAND CONFERENCE, Lexington, KY

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