

Amalga UIS

Experience at the Wisconsin Health Exchange

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Outcomes Based Information Exchange

The Wisconsin Example

Technology

Captures All Data

- 40+ hospitals, 120+ clinics and Medicaid claims data
- >50,000 messages/day and >400,000 real time queries during visits

Reduces Complexity

- 5-month implementation

Advances Discoverability

- The EDs can contribute information to support near-real-time effortless public health surveillance.
- Workflow = automated lookup of regional data as part of every patient encounter to aid clinician decision making
- Providers are able to identify high utilizer patients visiting multiple EDs through comprehensive patient history

Patient Summary: BROWN, QUINTIAR... | 20F | SUPERVIS OTH NORMAL...

Historical Summary Report

- HSS-V2
 - Complaint / Diagnosis - V2
 - Tests and Procedures - V2
 - Clinician Communication - V2
 - Encounters - V2
 - Member Lock-In (Medicaid Only...
 - Case Management (Medicaid On...
 - HMO Enrollment (Medicaid Only...
 - Medications - V2
 - Allergies - V2
 - Primary Care Physician - V2
 - Advance Directive / Living Will -...
 - Next of Kin - V2
 - Demographics - v2

BROWN, QUINTIARA
 DOB: 05/30/1988
 01
 Encounter Date: 02/24/2009

MRN:
 Encounter Number: 72335942
 PCP: WOC, GUMINA
 Document ID: 04c8cb15...

Medicaid Medications:
 NOTE: List may not be complete

Medication	Prescrib
METFORMIN HCL 1,000 MG TABLET	02/03/20
LEXAPRO 20 MG TABLET	01/15/20
LAMOTRIGINE 150 MG TABLET	01/15/20
CEPHALEXIN 500 MG CAPSULE	07/31/20
SPIRONOLACTONE 50 MG TABLET	10/27/20

Allergies / Adverse Reactions:
 NOTE: List may not be complete

Allergen	Reaction
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Encounters:
 From most recent to earliest since: 03/31/2008

Reg Date	Dischg Date	Location	Service	Complaint/Principal DX	Lab	Image	ECG	CCT
10/03/2009	10/03/2009	WHEATON FRANCISCAN HEALTHCAR	Emergency Department	CELLULITIS/ABSCESS DIGIT	--	--	--	M
09/27/2009	09/29/2009	WHEATON FRANCISCAN HEALTHCAR	Inpatient	NORMAL DELIVERY	--	--	--	M
09/26/2009	09/26/2009	WHEATON FRANCISCAN HEALTHCAR	Inpatient	NORMAL DELIVERY	--	--	--	M

CCT Messages:

CCT Messages	Source
WHEA	A - RX Bridge - Asthma - Patient provided asthma medication.
WHEA	A - RX Bridge - Asthma - Patient provided asthma medication.
WHEA	A - RX Bridge - Asthma - Patient provided asthma medication.
WHEA	A - RX Bridge - Asthma - Patient provided asthma medication.
WHEA	A - RX Bridge - Asthma - Patient provided asthma medication.

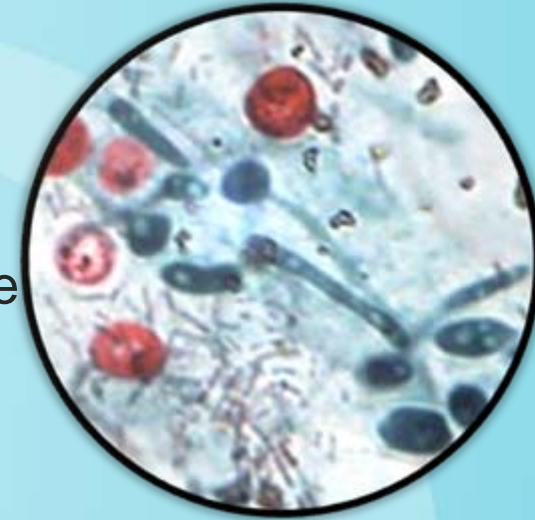
Patient summary view = Meds, allergies, encounters, other high priority info

Incremental growth in available data types over time

Five emergency encounters to three different facilities in past month

Untimely Data Prevents Recognition of Regional Pandemic

- Cryptosporidium contaminated the water supply after a severe episode of rain and flooding.
- Approximately 400,000 people fall ill before anyone is aware of the problem.



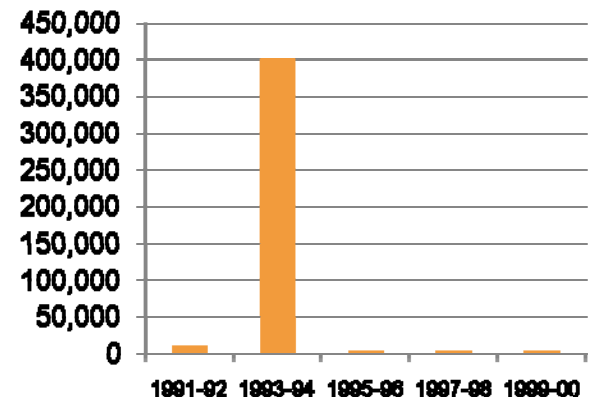
Problem

- Public health officials were **unaware** of outbreak until pharmacies called officials about unusually high sales of Immodium.

Outcome

- **Unnecessary deaths** and approximately 400,000 ill.

Number of Cases of Illness Due to Drinking Water Outbreaks, 1991 - 2000



Public Health Surveillance

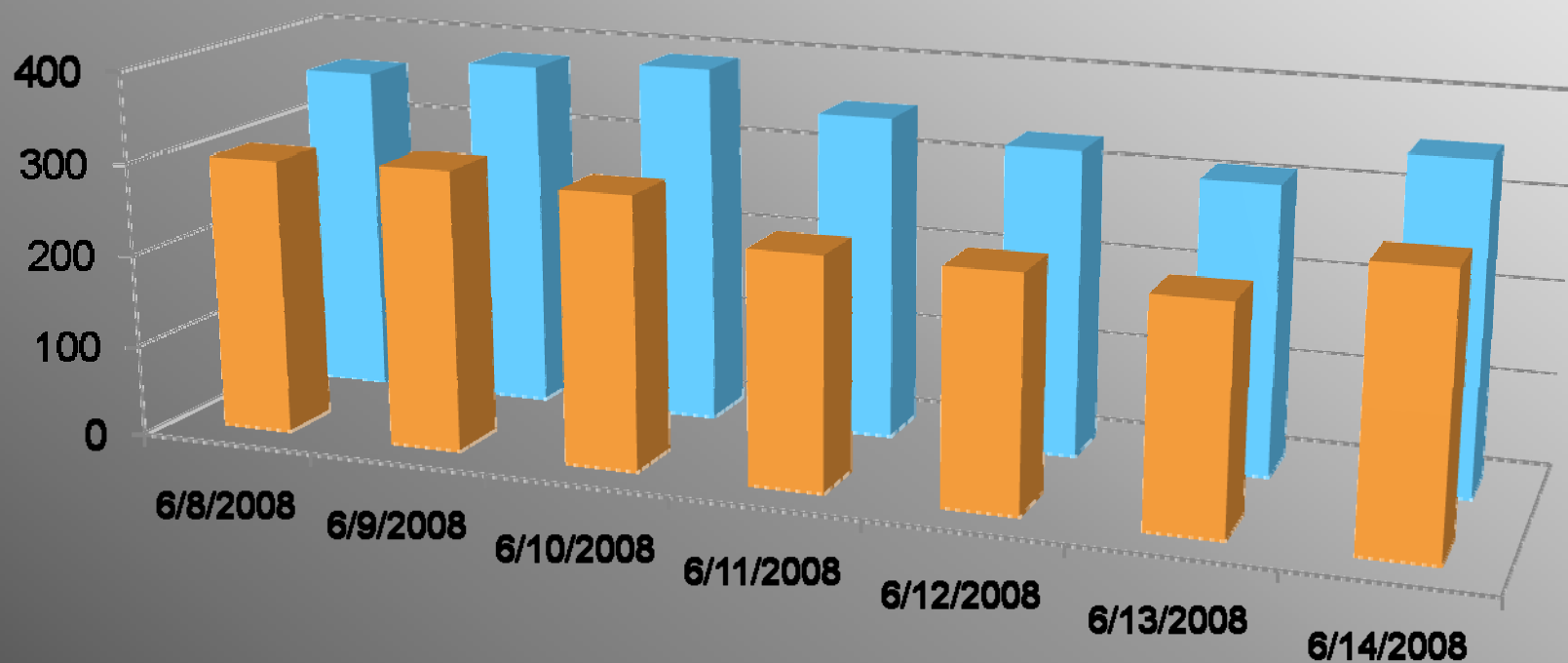


Disease Surveillance

- June 2008, Wisconsin was hit by worst floods in 50 years.
- New filters had been installed
- Did public water works improve?
- Is the water supply safe this time?

Information About Today... Today!

GI Emergency Department Visits*



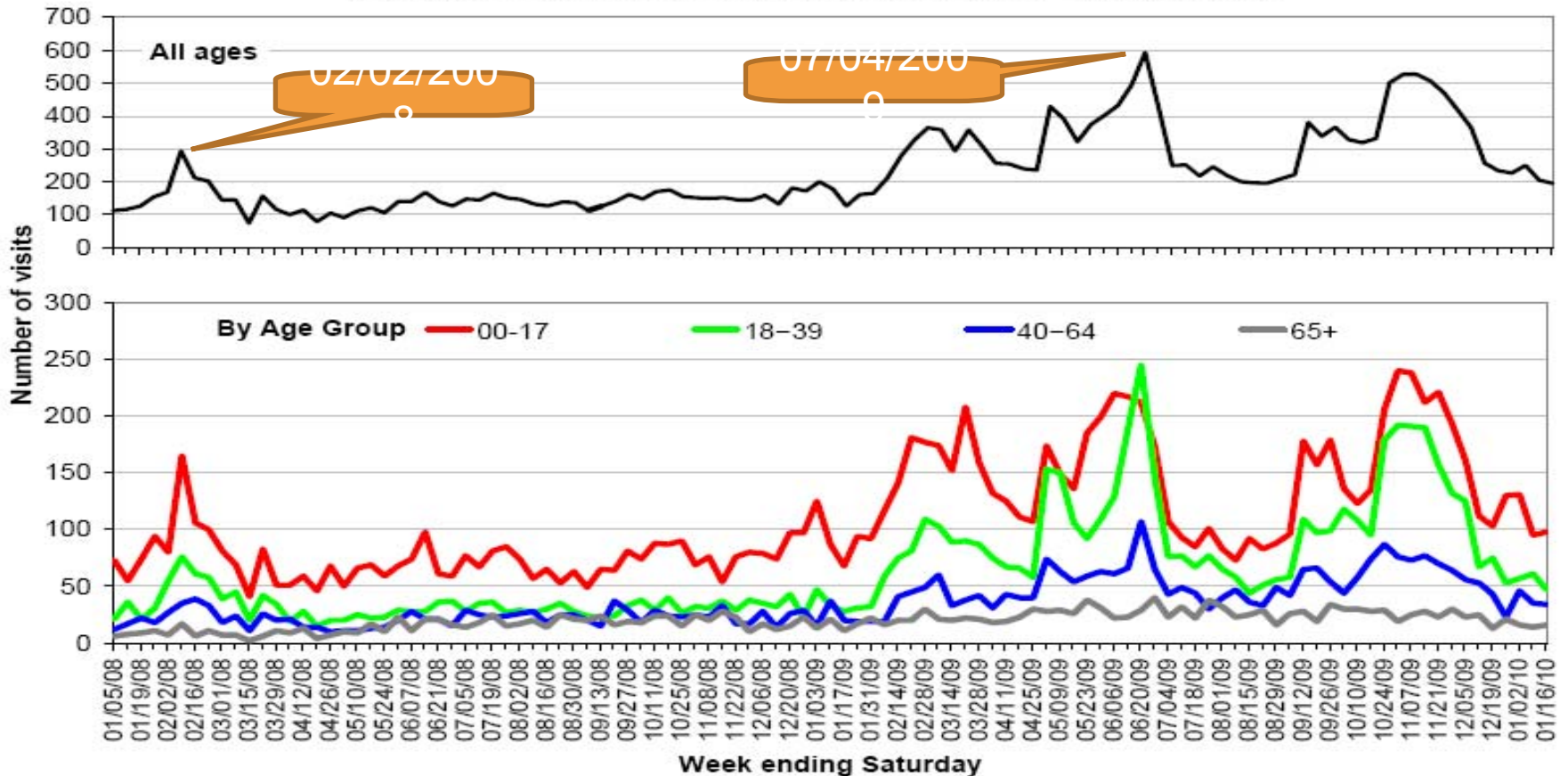
■ Milwaukee Water Works ■ All WHIE

Visit date (begin 72 hour period)

*NO EMERGENCY DEPARTMENTS
WERE BOTHERED IN THE
PRODUCTION OF THIS GRAPH

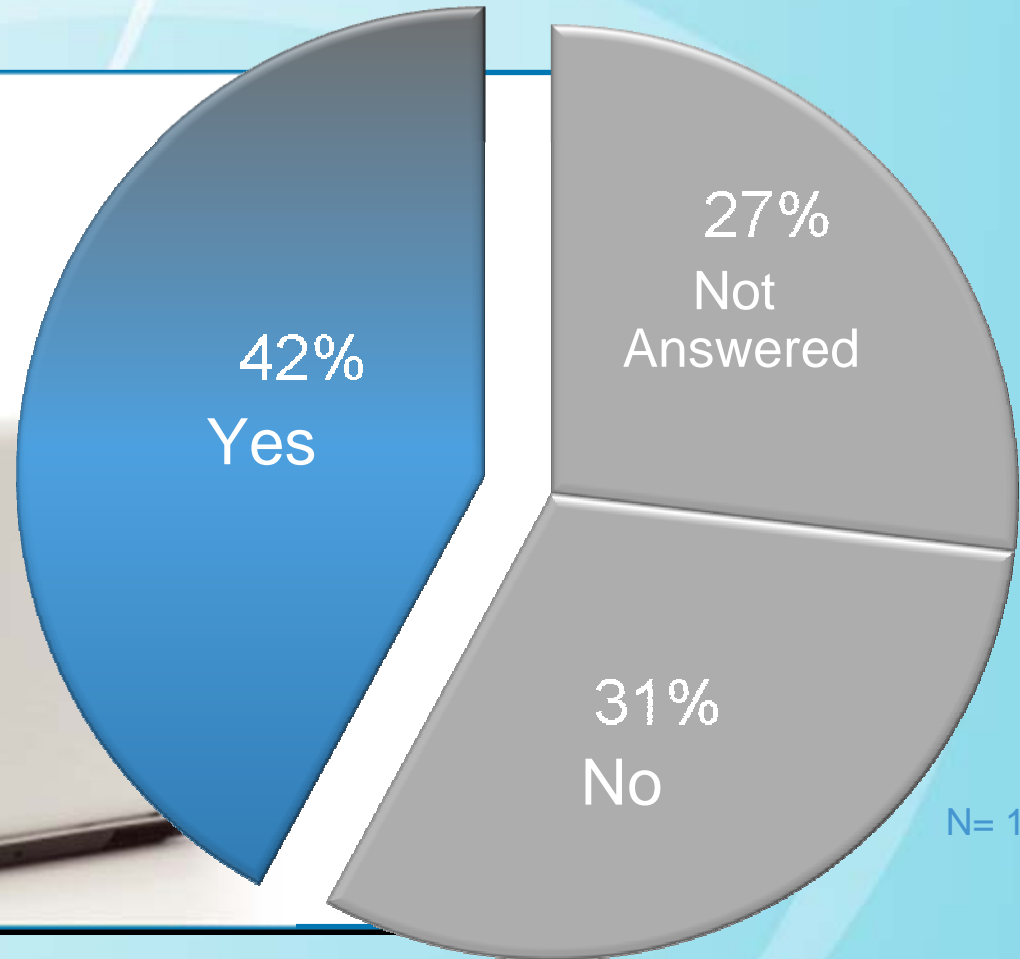
Information About Today... Today

Weekly Visits to Emergency Departments at 13 Hospitals in Southeastern Wisconsin for a Chief Complaint of 'Fever/Flu', January 5, 2008–January 16, 2010



Graphs show real-time electronic data on patient visits to 13 acute-care hospitals in Milwaukee, Racine, Walworth, Kenosha, Waukesha, and Washington counties. Data provided by the Wisconsin Health Information Exchange.

Did data obtained from a regional exchange system at point of care make a difference in patient care?



Study: Impact on Physician Ordering

Lab Orders

48%
decreased



16%
increased



23%
no change



Med Orders

53%
decreased



14%
increased



14%
no change



Imaging Orders

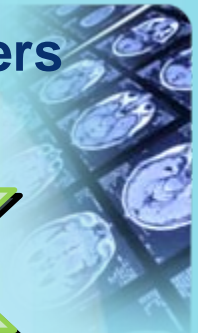
58%
decreased



14%
increased



21%
no change



Projection: Order reductions = **\$50 to \$150 saving** per person per
year

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