

# *2.06 Public Health State HIT Initiatives Driving Public Health Improvement in Wisconsin*

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# Topics

- To Understand HIT, Must Understand Medical Informatics
- Wisconsin's Public Health Information Network
- Wisconsin's LHII:
  - Public Health
  - Clinical Care
  - Personal Health
  - Health Research

# Medical Informatics

- The Systematic Application of Information and Computer Science and Technology to Medical Practice, Research, and Learning
- Scope includes the Conceptualization, Design, Development, Deployment, Refinement, Maintenance, and Evaluation of Systems Relevant to Medicine

# Medical Informatics Domains

## Functional Silos?

Bioinformatics

Molecular  
Cellular  
Genetic

Imaging  
Informatics

Tissues  
Organs

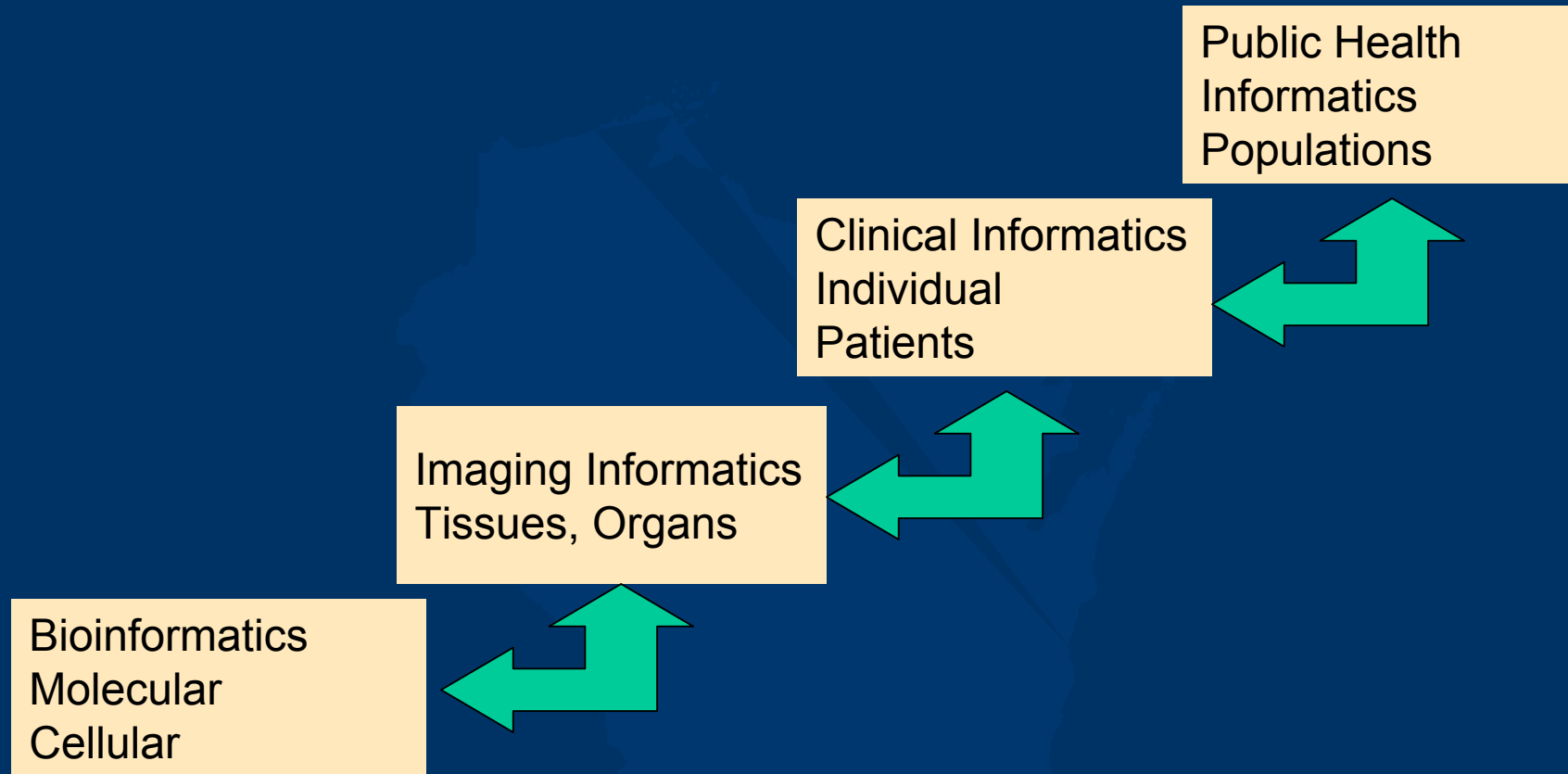
Clinical  
Informatics

Individual  
Patients

Public Health

Informatics  
Populations

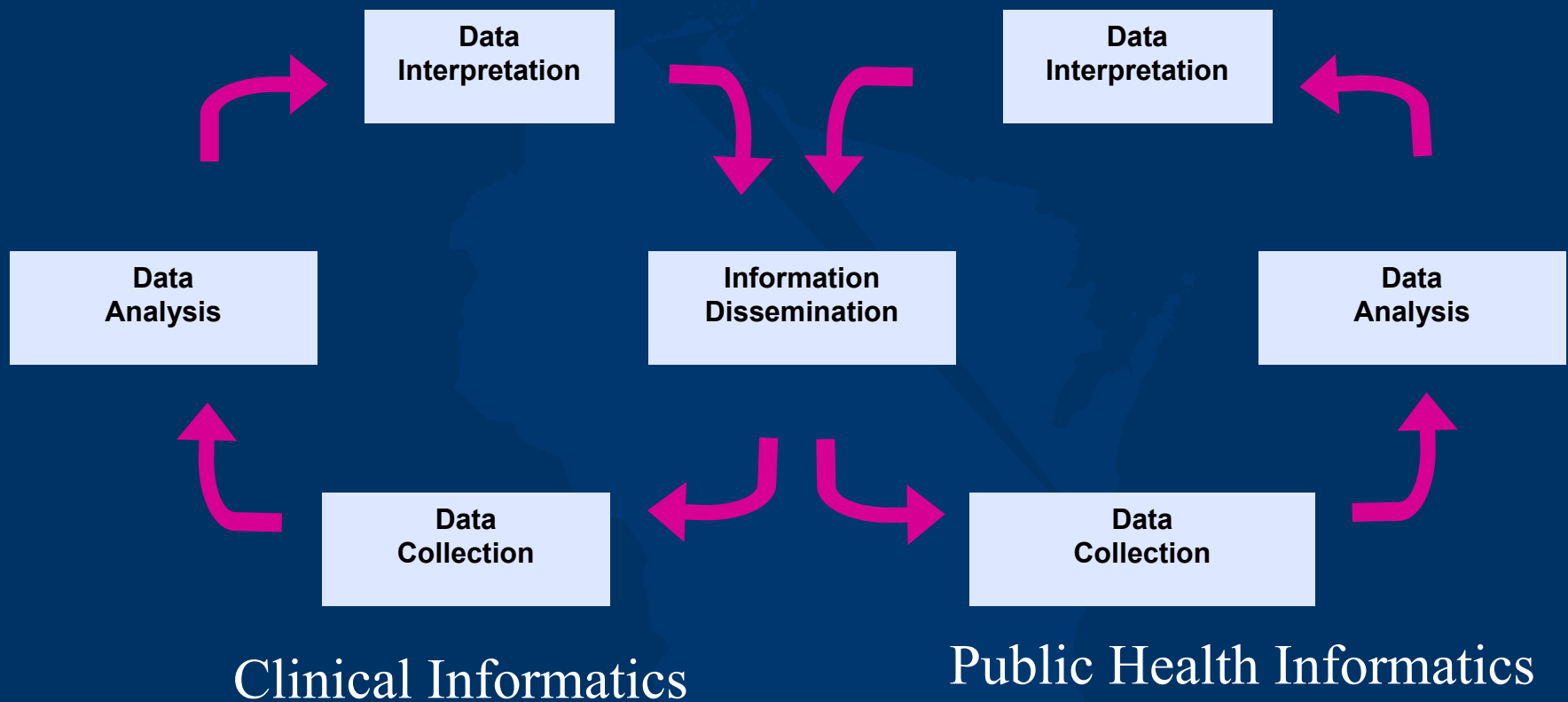
# Medical Informatics Hierarchy Spectrum



# Public Health Context of Medical Informatics

- **PHI Sits Atop The Medical Informatics Hierarchy & is Part of Clinical Research Enterprise**
- **Every Clinical Action Taken Informed by Evidence Based, Population Level Information (e.g. Clinical Trials)**
- **Public Health Informatics Is Fundamental to Each Medical Informatics Domain**

# Need to Foster Diffusion Model: Clinical and Public Health Informatics



Clinical Informatics

Public Health Informatics

← Two Way Information Flow →

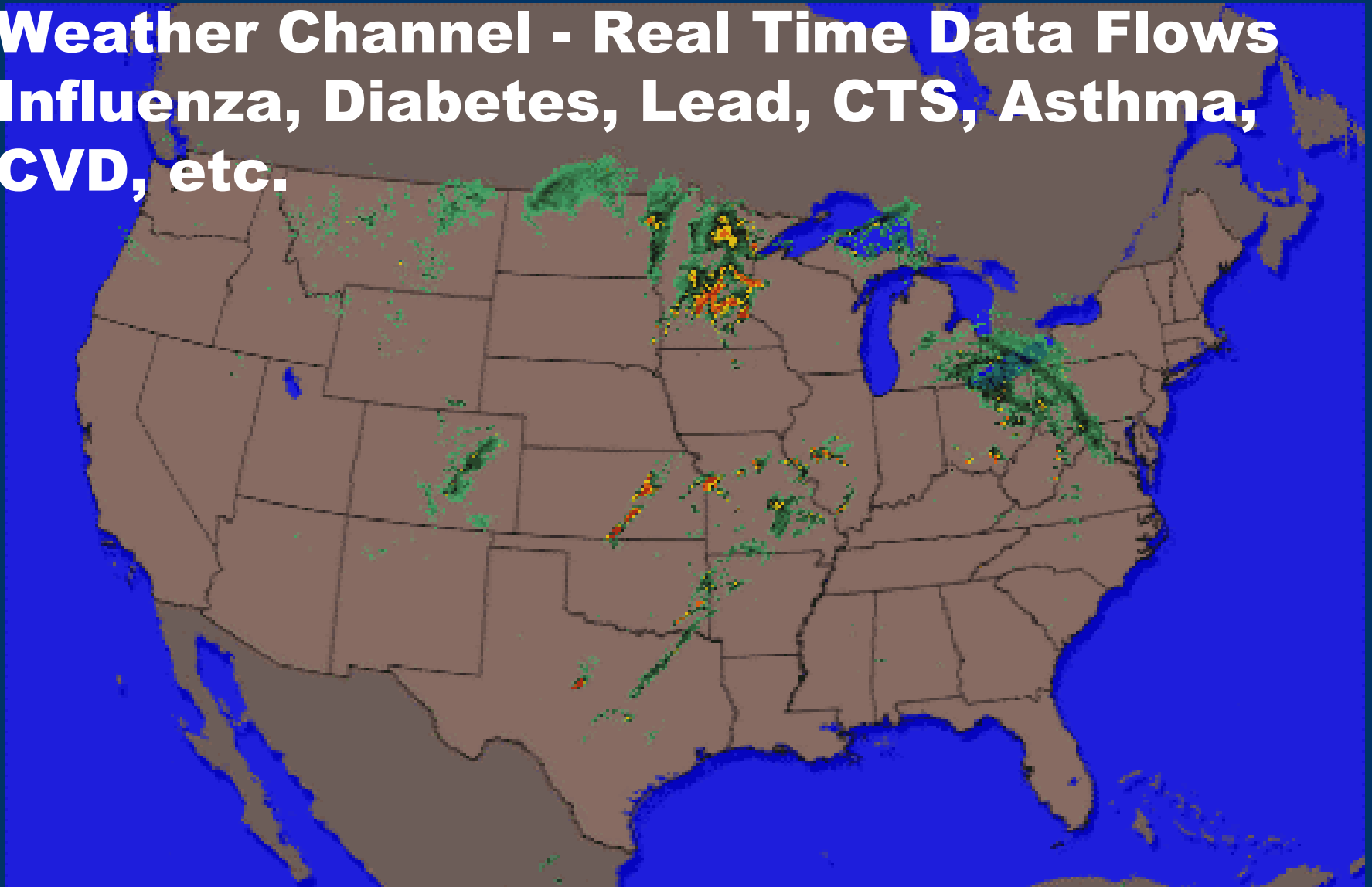
# PHIN Vision: The Public Health Weather Channel

- Real Time Data Feeds
- Complex Computations
- Simple Intuitive Displays
- Predictive
- Action Driven



# PHIN Vision:

**Weather Channel - Real Time Data Flows  
Influenza, Diabetes, Lead, CTS, Asthma,  
CVD, etc.**



# Wisconsin PHIN Vision

- Detection and Monitoring
- Analysis
- Information Resources/Knowledge Management
- Alerting and Communications
- Response
- Create and Reinforce public health partnerships
- ***Support Entire Medical Informatics Spectrum***
- ***Connect Clinics, Labs, Health Departments, Emergency Response***

# WI PHIN Portal – WWW.HAN.WISC.EDU



WISCONSIN HEALTH ALERT NETWORK

You are on the Wisconsin Public Health Information Network

Who's Online: 1

Search

Advanced Search

Home | My HAN | Topics | Survey | People | Training | Calendar | Data | Admin | Help

logout

Home

Latest Additions

Add To HAN

Archived Health Alerts/Advisories

Site News

## HAN Home

### Health Alerts:

#### HEALTH ALERT - Revised Influenza Prioritization Plan for Wisconsin.

Topic: [Immunization](#)

Posted: [Gabor, Gerald](#) Oct 07, 2004 04:30 pm Last modified: Oct 08, 2004 12:04 pm

CDC Interim Vaccination Recommendations and Wisconsin's Revised Influenza Prioritization Plan and Table of priority groups.

#### Associated Documents:

» [CDC Influenza Recommendations.pdf](#) (Added: Oct 07, 2004 04:33 pm - Downloaded: 114 times)

» [Revised 2004-05 Influenza Vaccine Plan.pdf](#) (Added: Oct 07, 2004 04:33 pm - Downloaded: 121 times)

» [Revised Influenza table 2004-05 .pdf](#) (Added: Oct 07, 2004 04:34 pm - Downloaded: 106 times)

» [Add Shortcut](#) » [Comments \(0\)](#)

### Health Updates:

#### STD\*MIS Process Flow

Topic: [NEDSS Project Team Documentation - Private](#)

Posted: [Locke, Alan](#) Oct 13, 2004 03:53 pm

MIS-Process flow and 4243/4151 comparison

» [Document](#) » [Add Shortcut](#) » [Comments \(0\)](#)

#### HRSA Reg 3 - Board Minutes Sept 8, 2004

Topic: [Region 3 Planning Team](#)

Posted: [Seebart, David](#) Oct 13, 2004 02:52 pm

» [Document](#) » [Add Shortcut](#) » [Comments \(0\)](#)

#### Hair Mercury Study - Need for Participants

Topic: [Epidemiology & Toxicology](#)

Posted: [Peters, Debi](#) Oct 04, 2004 02:48 pm Last modified: Oct 13, 2004 10:06 am

The Wisconsin Division of Public Health is seeking volunteers for a mercury study.

# WI PHIN Today

- 3400 Registered Users Representing 1000 Organizations
- Information “Portal” For Public Health and Partners
  - Customized Content Based On User
  - Users Have Roles & Belong To Groups
- Integration of
  - Health Alert Network (HAN)
  - National Electronic Disease Surveillance System (NEDSS)
  - Surveillance Program Area Modules (PAMs)

# WI PHIN: Web-Based Surveys

HAN - Survey - View - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites Media Mail Print Links >>

City of Lab	<input type="text"/>
Name of individual completing this survey	<input type="text"/>
Phone Number	<input type="text"/>
Email	<input type="text"/>

2. Does your laboratory have a 24/7 telephone number?

Yes (Provide telephone number in 'other')

No

Other (please specify):

3. Please indicate which of the following is available in your laboratory:

Forensic evidence tape

Dry ice

Red top vacutainer without serum separator gel (5-7 ml.)

Gray or green top vacutainer without serum separator gel (5-7 ml.)

Cold packs for specimen shipping

Pressure-tested specimen containers for shipping diagnostic specimens or infectious substances

4. Please list all couriers (including both commercial and laboratory couriers) that you use to ship clinical specimens or isolates.

Done Internet

# WI PHIN: Online Courses

The screenshot shows a Microsoft Internet Explorer browser window displaying the KMI's eLMS website. The browser's address bar shows the URL "KMI's eLMS - Microsoft Internet Explorer". The website header includes the text "Department of Health & Family Services" and "Welcome Brian! | Logoff". The main navigation bar features the "TRIN Wisconsin" logo and the text "TrainingFinder Real-time Affiliate Integrated Network" with the "PHF" logo. Below the navigation bar, there is a date "Thursday, September 23, 2004" and a menu with items: Home, Course Search, Discussion Boards, Resources, Help, Core Competencies, and About This Site.

The main content area is divided into several sections:

- Spotlight:** A vertical list of links on the left side, including:
  - Centers for Public Health Preparedness
  - HAN - Wisconsin's Health Alert Network
  - Wisconsin Department of Health and Family Services
  - Wisconsin Public Health Core Competency Survey
  - Public Health Foundation Website
- Announcements:** A large empty box with a blue header.
- My Learning Record:** A box containing a list of links:
  - My Learning
  - Transcript
  - Certificates
  - Course Archive
  - My Account
- Upcoming Events:** A box containing the text "No Upcoming Events."

At the bottom of the page, there is a copyright notice: "© PHF 2003 - Confidentiality Statement". The browser's status bar at the bottom shows the date "Thursday, September 23, 2004".

# WI PHIN: Access To PAMs

West Nile Virus- Bird Report Summary - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites Media Print Mail Links >>

westnile

Home Bird Reports Data Summaries Logout

Bird Report Summary

Reporting Year 2004

County	Bird Species	Reported	Collected	Tested	Negative	Positive
<b>Ashland</b>	Blackbird, Unidentified	0	0	0	0	0
	Crow, American	1	1	1	0	1
	Jay, Blue	0	0	0	0	0
<b>Adams</b>	Crow, American	5	4	3	1	2
	Finch, Unidentified	0	0	0	0	0
	Jay, Blue	0	0	0	0	0
<b>Barron</b>	Crow, American	11	8	5	1	4
	Jay, Blue	1	1	1	1	0
<b>Bayfield</b>	Crow, American	2	2	2	2	0
	Jay, Blue	1	1	1	1	0
<b>Brown</b>	Blackbird, Unidentified	0	0	0	0	0
	Cardinal, Northern	0	0	0	0	0
	Crow, American	16	5	3	1	2
	Dove, Mourning	0	0	0	0	0
	Finch, Unidentified	0	0	0	0	0
	Grackle, Common	3	0	0	0	0
	Gull, Unidentified	0	0	0	0	0
	Hawk, Unidentified	1	0	0	0	0
	Jay, Blue	6	3	1	1	0
	Raven, Common	0	0	0	0	0
	Robin, American	1	0	0	0	0
	Shorebird, Unidentified	0	0	0	0	0
	Sparrow, House	0	0	0	0	0
	Sparrow, Unidentified	3	0	0	0	0
	Starling, European	0	0	0	0	0
	Warbler, Unidentified	0	0	0	0	0
	Waterfowl, Unidentified	0	0	0	0	0

Done Internet

# WI PHIN: Calendar

HAN - Calendar - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Media RSS Print Mail News Links

You are on the Wisconsin Public Health Information Network  
Who's Online: 14

Advanced Search

Home | My HAN | Topics | Survey | People | Training | Calendar | Data | Admin | Help [logout](#)

Available Events

Add Event

My Events

**Available Events**

A calendar of public health events provides schedules of important activities in all areas of public health. Use the search bar below to find specific events. When creating a new event, please specify which audiences or topics an event is targeted for, as well as specifying to which category it belongs. Dates with active events are shown in **bold with a white background**.

<< September 2004 >>						
S	M	T	W	R	F	S
-	-	-	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	-	-

[» Hide Calendar](#)

**1 Available Calendar Event**

<u>CHEMPACK Planning Meeting</u>
Start Date: 09/27/2004 Time: 10:00am - 02:30pm Location: Madison Topic Association: CHEMPACK
CHEMPACK Ad Hoc Planning Committee Meeting
Contact: Joe Cordova Phone: 608 267-9010 Email: <a href="mailto:cordoja@dhfs.state.wi.us">cordoja@dhfs.state.wi.us</a>

[» Detailed View](#) Download to Palm:

Calendar Search

Events from: 9 / 23 / 2004

to: 9 / 30 / 2004

Category: All

Topic: All

Keyword:

Done Internet



# WI PHIN: Adding Content

HAN - My HAN Additions - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Media Refresh Print Mail Links

You are on the Wisconsin Public Health Information Network  
Who's Online: 13

**HAN**  
WISCONSIN HEALTH ALERT NETWORK

Advanced Search

Home | My HAN | Topics | Survey | People | Training | Calendar | Data | Admin | Help | logout

My HAN > My HAN Additions Index > **My HAN Additions**

My HAN Additions	
Status	Active
Resource Type	<input type="radio"/> Documents (Word, Excel, PDF) <input type="radio"/> Links (web addresses) <input type="radio"/> News (text) <input type="radio"/> Presentations (audio, streaming-media, Powerpoint) <input type="radio"/> Training Presentations
Moderator Approval	Not Approved (Content submitted to Public Topics are Automatically Approved)
Health Alert:	This resource is not a Health Alert
Health Advisory	This resource is not a Health Advisory
Title	<input type="text"/>
Short Description	<input type="text"/>
Extended Description (e.g. News text)	<input type="text"/>

Done Internet

# WI PHIN: Digests

- Content is “Pushed” to User (E-Mail)
- Digests Can Be Customized – Formatting and Delivery Date
- Types of Digests
  - Site Changes
  - Content Changes
  - Subscribed Topic Content
  - Events (Including Training Events)

# WI PHIN: Command Caller

- Multi-Modal Communications – Phone, FAX, Email etc.
- Invoked By Authorized Agents (“Activators”) Via Phone or Web
- Based On Pre-Defined Scenarios
  - Who Should Be Contacted
  - How Should Person Be Contacted
  - What Should Be Communicated

# WI Idea & PHIN - Rapid Technology Transfer UW - State - Global Economy

## Connecting Ideas

Strategies for the University of Wisconsin-Madison

### UW-Madison Strategic Plan

[Home](#)

[Executive Summary](#)

- [web version](#)
- [pdf format](#)

[Strategic Priorities](#)

- I. [Promote Research](#)
- II. [Advance Learning](#)
- III. [Accelerate Internationalization](#)
- IV. [Amplify the Wisconsin Idea](#)
- V. [Nurture Human Resources](#)

[Goals and Initiatives](#)

- [2003-2004 \(PDF\)](#)
- [2000-2002](#)

## IV. Amplify the Wisconsin Idea

The Wisconsin Idea offers a shared medium in which the university can help the state achieve its maximum potential as a participant in a world economy that embraces learning and the advancement of knowledge. As important as it remains for the university and the state to retain their historic partnership, the boundaries of the state are no longer sufficient guidelines for our influence. We are both members of an increasingly global community.

### Goals

- To vigorously share advances in science and knowledge with the people of the state, the country, and the world.
- To expand university-state relationships in a way that reflects the new global economy

More...



# UW DoIT - PHIN

## Information Technology Transfer / Provider

THE UNIVERSITY OF WISCONSIN-MADISON MY UW

### COMPUTING@ UW-MADISON

[home](#) > [about](#)

**ABOUT DoIT**

- Human resources
- Billing office
- Research
- Reports
- Staff directory
- Groups

**FOR STUDENTS**

**FOR FACULTY/STAFF**

**SERVICES**

**HELP DESK**

**TECH STORE**

**FEEDBACK**

**SITE MAP**

**SEARCH**

go

**DoIT**  
DIVISION OF INFORMATION TECHNOLOGY

### ABOUT DOIT

## Division of Information Technology (DoIT)

[Quick List](#) • [Hours & Locations](#) • [Organization Chart \(.pdf\)](#)

### DoIT Profile 2004

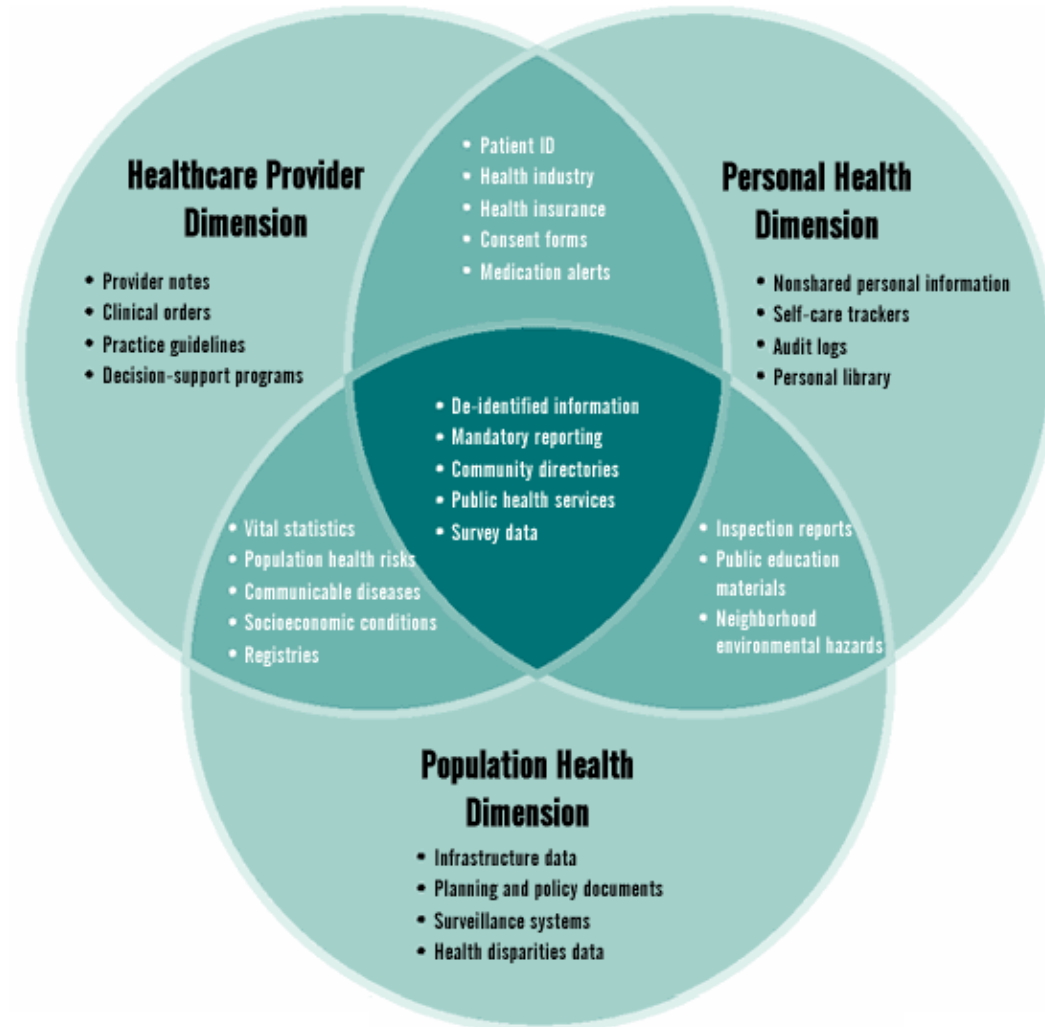


#### About DoIT

The Division of Information Technology (DoIT) provides a wide variety of technology services to the University of Wisconsin-Madison. DoIT also provides limited service to UW System and other State entities. Our services span desktop-to-server-to-mainframe computing, networks, telecommunications, Internet connectivity, administrative and academic systems, instructional technology, plus many support services. We work with colleges, departments and individuals to develop and implement new systems. At the same time, we provide quality service on current systems and work with our customers to migrate them from older technologies.

# Beyond PHIN: National Health Information Infrastructure

Examples of content for the three dimensions and their overlap



# Beyond PHIN: WI Local Health Information Infrastructure

- Statewide Data Exchange to Support
  - Health Care Provider Dimension
  - Population Health Dimension (PHIN)
  - Personal Health Dimension
  - 4<sup>th</sup> Dimension – Research

# WI Health Information Infrastructure

- Health Care Provider Dimension
  - Physician Order Entry
  - Clinical Notes
  - Clinical Decision Support
  - Clinical Practice Guidelines
  - Data Sharing for Service Delivery
  
  - Reduce Medical Errors / Redundant Testing / Waste
  - Improve Adherence Best / Evidence Based Practices
  - Automate Disease Reporting to Public Health



# WI Health Information Infrastructure

- Population Health
  - Disease Surveillance
  - Evidence Based Community Intervention Practice
  - Health Disparities
  - Planning and Policy
  - Infrastructure Data
  
  - Automate Disease Surveillance
  - Automate Public Health Practice

# WI Health Information Infrastructure

- Personal Health
  - Non Shared Personal Health Information
  - Self Care Trackers
  - Personal Health Reference Library
  - Interaction With Providers
  - Literacy Support
  
- Improved Patient Compliance
- Improved Patient Outcomes
- Improved Population Health

# WI Health Information Infrastructure

- The Missing 4<sup>th</sup> Dimension - Health Research
  - Clinical Trials Support
    - Harmonize IRB Review & Patient Consent
    - Harmonize Recruitment
    - Automate Analysis
  - Public Health Research
  - Personal Health Decision Support Research
- Make WI A National Center for Biomedical Research
  - Grow State Economy
  - Create Jobs
  - Increase Pace of Medical Discovery
  - Improve Health Outcomes
  - Improve Population Health (Healthiest Wisconsin)
- Networked Research Enterprise (NIH Roadmap)

# Health Care - Public Health Informatics Domain Interaction

Viral Respiratory Disease Surveillance Temte et. al.  
(1999)

- ✓ Laboratory Reporting – Outbreak / Course of Respiratory Viral Pathogens Circulating in Population
- ✓ Training, Real-Time Feedback to Residents
- ✓ Antibiotic prescribing 68% Lower for Upper Respiratory Infections
- ✓ Education and Public Health Monitoring of Circulating Respiratory Viruses can Increase Disease Knowledge and Reduce Unnecessary Antibiotic Use.
- ✓ Population Health Domain Improves Health Care Domain

# WI LHII Explorations

- ✓ Use Existing Initiatives, or
- ✓ Create Non-Profit Voluntary Data Exchange
- ✓ Governing Board – Providers, Payers, Public Health, Health Care Financing
- ✓ Physician Science Advisory Board
- ✓ Technical Advisory Board
- ✓ Use PHIN Initially to Support Data Exchange
- ✓ Wisconsin Health Information Summit

# Thank You!

✓ Questions?

✓ Further Reading on WI PHIN at:

✓ <http://ehp.niehs.nih.gov/docs/2004/7150/abstract.html>