

A Public Health Knowledge Management Repository that Includes Grey Literature

Debra Revere

myPublicHealth Project

Center for Public Health Informatics

University of Washington, Seattle, WA, USA

[drevere at u.washington.edu](mailto:drevere@u.washington.edu)

Outline of talk

Introduction to myPublicHealth

Why myPublicHealth?

Project goals

Methods

Results

Conclusions & Further Work

Questions

Project Team

Sherrilynne Fuller – PI, Co-Director CPHI

Debra Revere – Research Coordinator

Paul Bugni – Lead Software Engineer

Liz Hillinghouse & Qui Yuan – Programmers

Jim Wallace – IT Support

Anne Turner – Workflow Lead

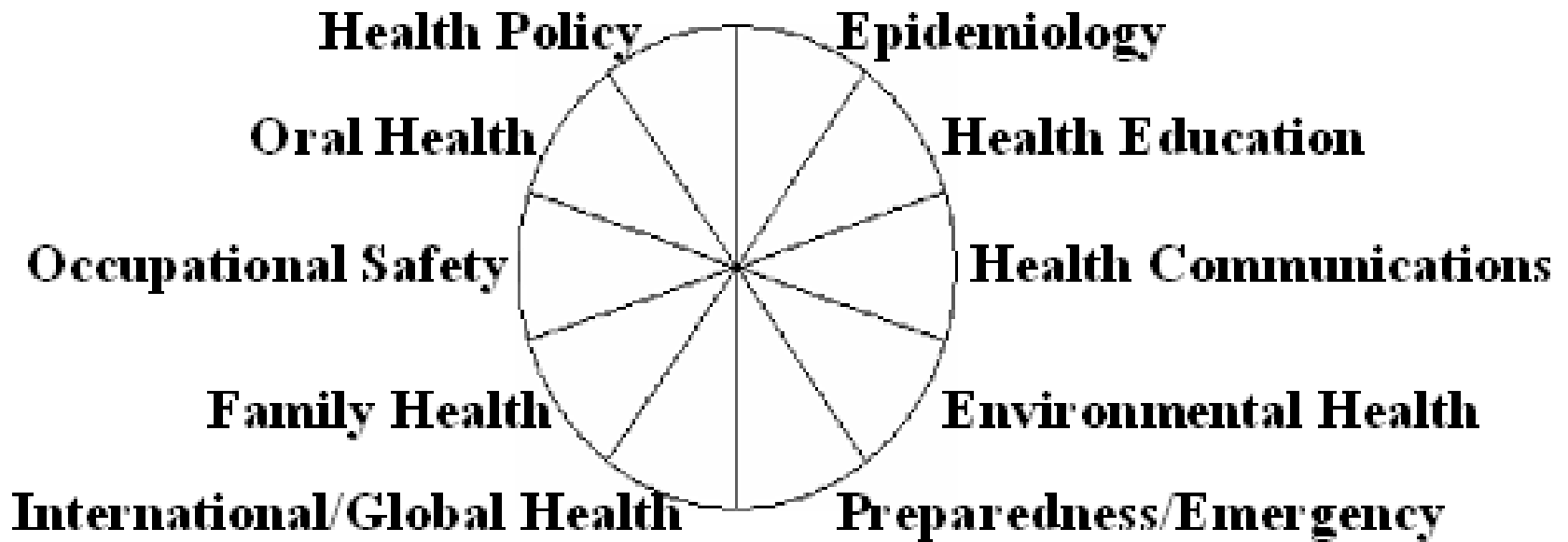
Yuki Durham, Amy Harper, Ann Madhavan &
Neil Rambo – Key Staff

AnnMarie Kimball & John Kobayashi – Epidemiology
Consultants

Mark Oberle – Director, CPHI

Naomi Wilson – Center Manager

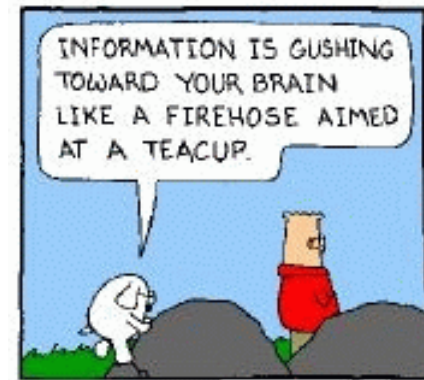
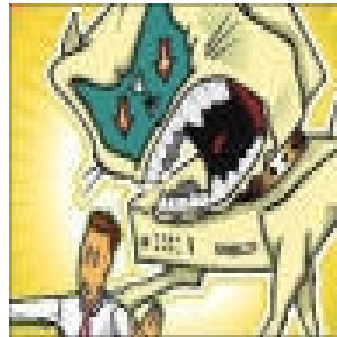
A Broad Interdisciplinary Field



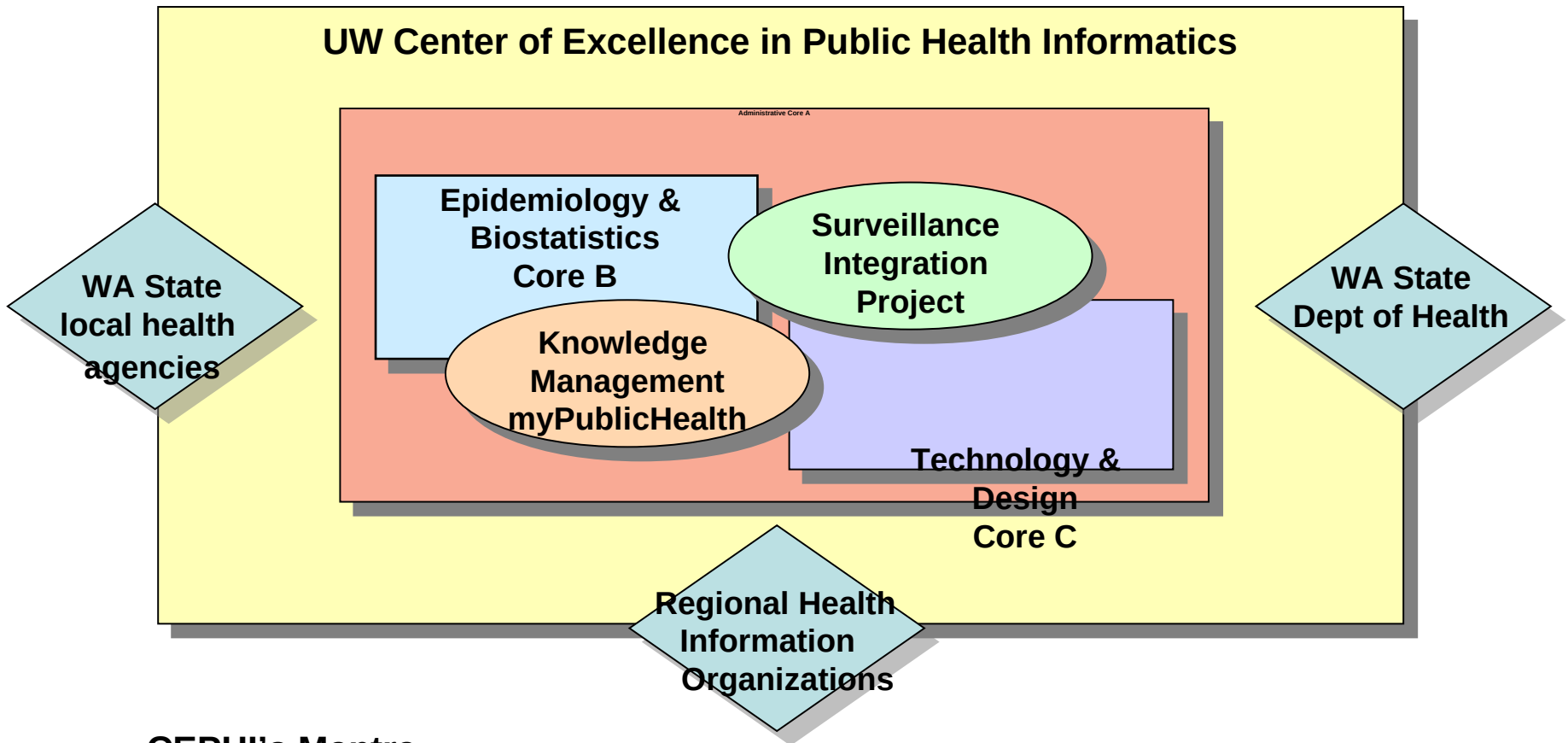
Public Health is unique in that it:



Too Much Information + Too Little Relevant/Timely Information



Center of Excellence in Public Health Informatics



CEPHI's Mantra

"Improving the public's health through information integration"

myPublicHealth Goals

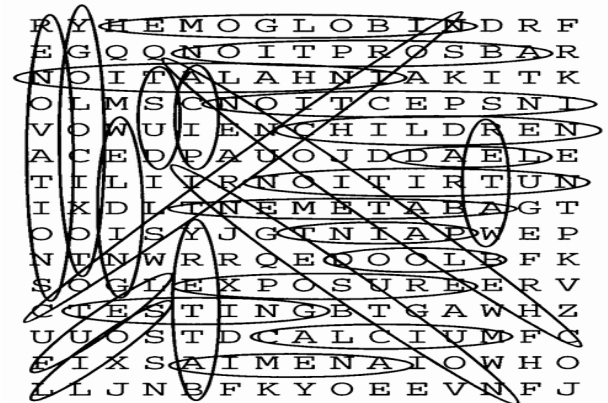
- A knowledge management system tailored to PH practitioners' information needs, work processes & environment
- Improve access to & use of digital information resources in support of evidence-based PH practice

Methods

1. Literature review
2. Inventory of info sources
3. Survey of existing CMSs & tools
4. Requirements
5. Workflow analysis

Task 1: Literature Review

1. Selection of info resources is influenced by job function, disciplines & training
2. PH wants resources that are easy to access & use, up-to-date, free, pre-digested & stable
3. One size does not fit all
4. People are the most reliable, available & commonly used resource
5. Trusted & authoritative content



sources

Revere D, Turner A, Madhavan A, Rambo N, Bugni PF, Kimball AM, Fuller SS. Understanding the information needs of public health practitioners: A literature review to inform design of an interactive digital knowledge management system. *J of Biomedical Informatics* 2007. To appear in Special Issue on Public Health Informatics.

Task 2: Information Resources Inventory

Sources/resources from literature review

Preliminary workflow assessment

Interviews & ad hoc suggestions

Matrix is organized by user roles and resource content areas

Resource Matrix

[edit]

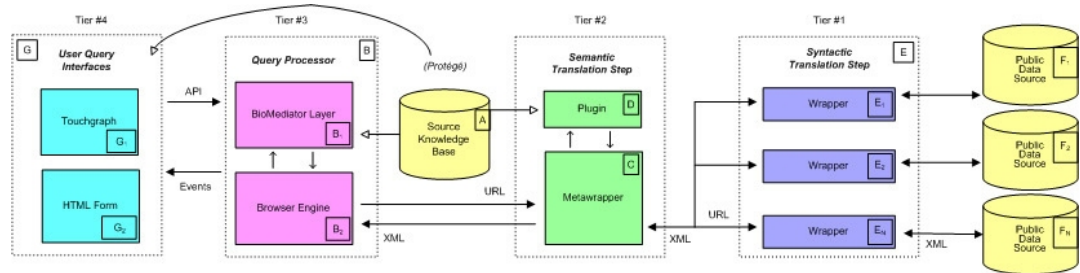
See [Table Help] for the syntax rules used to generate tables in [MediaWiki]

Resource	Epidemiologist (2)	Health Officer (2)	Communicable Diseases Nurse(2)	Communicable Disease Program Manager (2)	Nurse Epi(2) & 4 CD Personnel & Public Health Nurses(2) & Epidemiologist(2)	Public Health Nurse (Immunization)	Adv Registered Nurse Practitioner
CCDM (Beyman) [d]	xx	xx	x	x	xxx	x	x
AAP Red Book [d]	x	x	x	xx	xxx	x	x
CDC Pink Book [d]	-	x	x	x	xx	-	-
State Dept Health [d]	x	x	x	xx	xxxxxx	-	x
CDC Website [d]	xx	-	-	xx(core curriculum TB)	xxxxxx	x (core curriculum TB)	x
WA State DOH Infection Disease Control Guide for School Staff (rev 01/2004) [d]	-	-	-	x	xx	x	x
Yellow Book [d]	x	-	-	x	x	-	-
MMWR Immunization Recommendations [d]	xx	-	x	-	x	-	-
MMWR STD Guidelines [d]	-	-	-	-	x	-	-
Principles and Practice of Infectious Diseases e-dition, 6th edition (Mandell) [d]	x	-	x	-	x	-	-
Google [d]	-	-	-	-	xx	-	x
ACIP Immunizations [d]	-	-	-	xxx	-	x	-
PHSC Website [d]	-	-	-	x (fact sheets for public)	-	-	-
WHO Website [d]	-	-	-	-	x	-	-
NHL.gov [d]	-	-	-	-	x	-	-

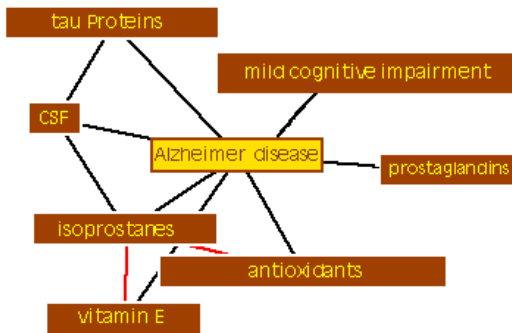
Task 3: CMS Survey

“Local” Content Management & Access Systems:

BioMediator



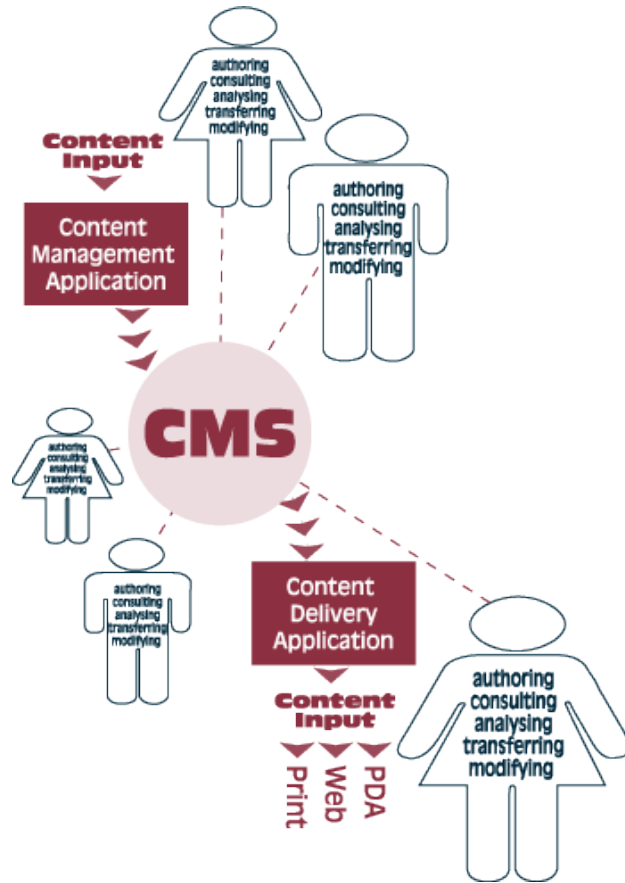
Telemakus



PrimeAnswers



Task 3 con't



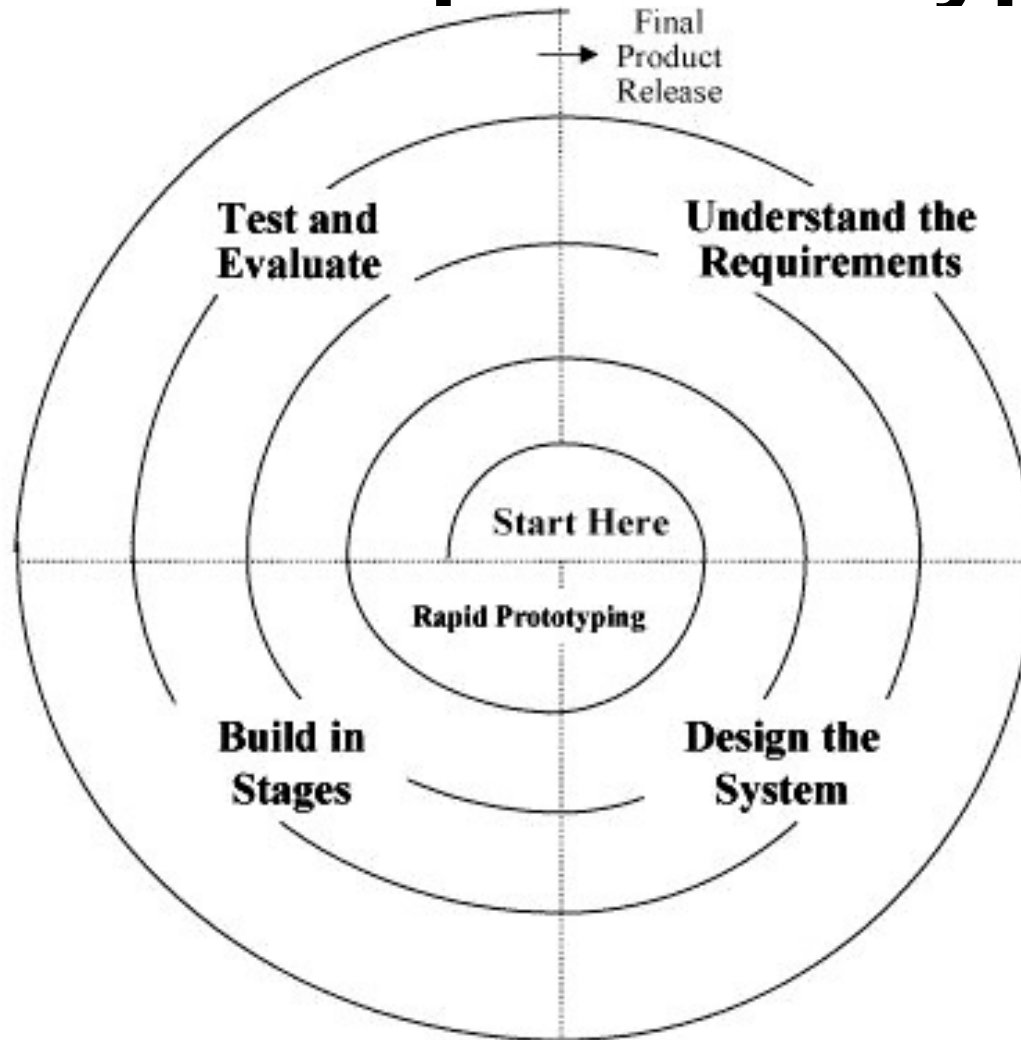
Open-source CMS
survey

Alfresco

Plone

WIKIs

Task 4: Rapid Prototyping



Task 4: Requirements

article discussion edit history

Requirements Document

Contents [hide]

- 1 Document State
- 2 Application Overview
 - 2.1 Objective
 - 2.2 Process
 - 2.3 Roles and Responsibilities
 - 2.4 Systems Interaction
 - 2.5 Roll-out Considerations
 - 2.6 Terminology
- 3 Functional Requirements
 - 3.1 Statement of Functionality
 - 3.1.1 Security
 - 3.1.2 Auditing
 - 3.1.3 Administration / Customization
 - 3.1.4 Reporting
 - 3.2 Scope
 - 3.3 Performance
 - 3.4 Usability
 - 3.5 Concurrency
- 4 Iterations
 - 4.1 First 1st Year Prototype
 - 4.1.1 Objectives
 - 4.1.2 Systems
 - 4.1.3 MyPH - Mechanism for users to personalize their view
 - 4.1.4 Roles
 - 4.1.5 Legal
 - 4.1.6 Query Forms
 - 4.1.7 Reporting - early feedback is critical
 - 4.1.8 Unanswered Questions
- 5 Unorganized

Document State

Early draft form.

Application Overview

Objective

Answers: Why are we doing this?

Process

System architecture

Interface design

Software components

Testing plans

Task 5: Workflow Analysis

Just because you build it

It doesn't mean "they will" come

Metadata Schema

Sources	Origin
Computer Interchange of Museum Information	Museum Computer Network, USA
Digital Geospatial Metadata	Federal Geographic Data Committee, USA
Dublin Core Metadata Element Set	Dublin Core Metadata Initiative, International
National Public Health Language Thesaurus	National Health Service, UK
PHDSC Vocabulary	Public Health Data Standards Consortium, USA
Public Health Information Network Messaging System	Centers for Disease Control and Prevention, USA
Reference Model for an Open Archival Information System (OAIS)	OCLC-RLG, USA
Unified Medical Language System	National Library of Medicine, USA

Prototype

Toolkits

Role-based resources

Searching

The screenshot shows the 'myPublicHealth Tools' website. At the top, a navigation bar includes links for HOME, Animals/Zoonoses, Datasets & Statistics, Emergency Response, Epidemiology, Guidelines & Best Practices, Research Information, Spatial Mapping, and Tutorials. A search bar labeled 'GO TO WA State Advisories & Alerts' is also present. On the left, a sidebar menu lists 'ROLE-BASED RESOURCES' with categories: Clinical Staff, Communicable & Infectious Disease Specialist, Community Health Specialist, Environmental Health Specialist, and Administrative Staff. The main content area is divided into several sections: 'ALERTS' (Health Alert Network, PandemicFlu Info), 'COMMUNICABLE DISEASES' (Search the CCDM, Influenza Tuberculosis, Search the Red Book), 'EMERGENCY LINKS' (King County, Kitsap County, National Center for Environmental Health, ToxFaqs), 'FIND LAWS & REGULATIONS' (Search WA State DOH, WACs, Title 42 RCW, Title 70 RCW), and 'FIND INFORMATION' (Search the CDC, Search WA State Dept of Health, Search WHO, Search the EPA, FIND ARTICLES & JOURNALS (Search PubMed/MEDLINE, Search FREE Journals, Search HealthLinks)). A footer section lists 'UNIVERSITY OF WASHINGTON RESOURCES' including the Center for Public Health Informatics, Health Sciences Libraries, Northwest Center for Public Health Practice, and School of Public Health and Community Medicine. Copyright information for 2008 is also visible.

Version 2.3

<http://myph.org/>

Conclusions

We believe that a state of the art public health knowledge management system that is integrated into a larger public health responses system will improve the efficacy and efficiency of locating and applying relevant information — regardless of “color” (black, white or grey) — to decision-making in public health practice.

THANK YOU

Questions