# **INFORMATICS & CPWI**

#### **IMPLEMENTATION & SUSTAINABILITY**

6/28/2017
DBHR Summer Institute





# WHAT IS PUBLIC HEALTH INFORMATICS?



to improve population health

capture, manage, analyze, use information

knowledge about systems (that)

Systematic application (of)

**MEANS** 

PHIFP definition

# MORE DEFINITIONS....



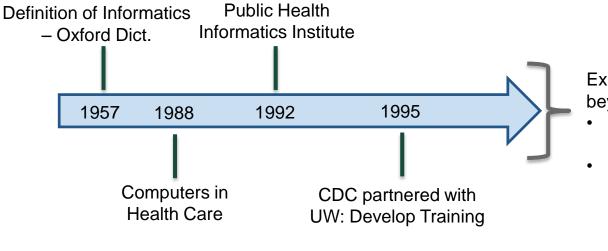


**Public health informatics** is defined as the systematic application of information and computer science and technology to public health practice, research, and learning. (Yasnoff et al. 2000)

**Public health informatics** is the systematic application of knowledge about systems that capture, manage, analyze and use information to improve population health. (APHIF, Project SHINE)

# **BRIEF HISTORY**





CDC working to:

- Develop informatics job descriptions
- Work with states in developing informatics divisions and work plans
- Develop training opportunities
- 2014 developed surveillance strategy to update systems with an informatics framework

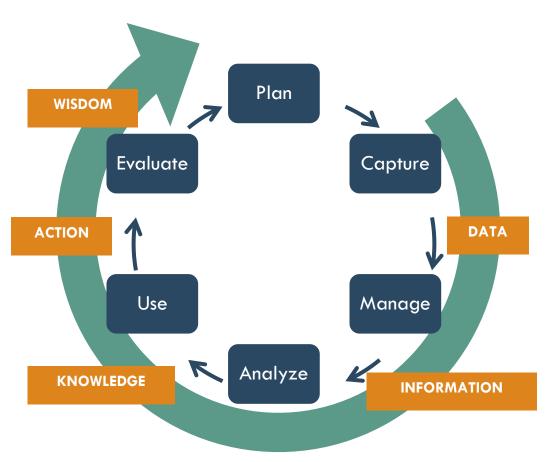
Expansion of the discipline beyond:

- National electronic surveillance systems
- Immunization registries



# INFORMATION VALUE CYCLE





# AN AGENCY THAT VALUES INFORMATION

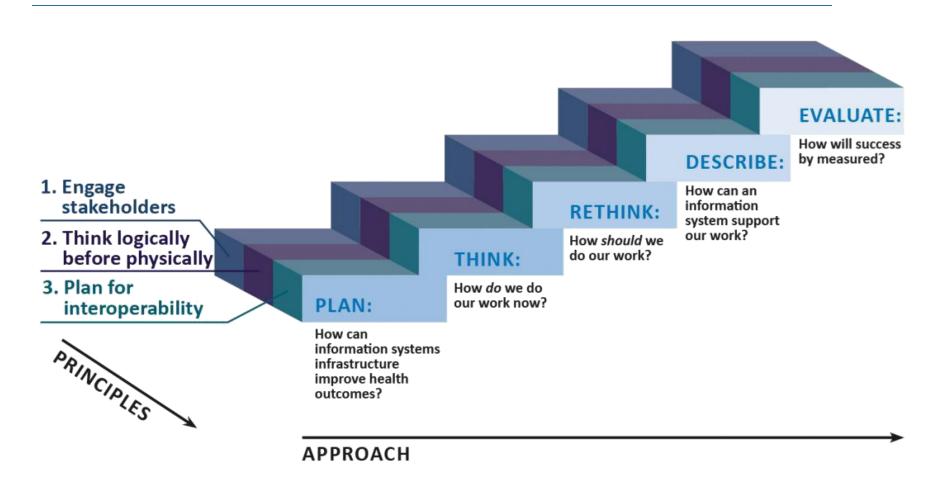
- Increases program effectiveness
- Promotes data-driven decision making
- Promotes continuous system improvement
- Prevents downstream informatics problems
- Develops economies of scale and scope
- Increases effectiveness of information systems
- · Reduces program costs



Public Health Knowledge Architects Just as architects plan buildings with the needs of a community in mind, informaticians plan data systems that produce the information professionals need to make sound public health decisions.

#### STRATEGIC APPROACH TO HEALTH INFORMATION SYSTEMS





### WCHD Informatics Framework



An Informatics-Savvy Health

**Department** is one that has an overall vision and strategy for how it uses information and information technology as strategic assets, supports a skilled workforce and has well-designed and effectively used information systems. (Public Health Informatics Institute)

Informatics vision and strategy

Informatics-Savvy Health Department

Skilled workforce

Well-designed, effectively-used systems







Public Health Accreditation Board Measures **VERSION 1.0** APPLICATION PERIOD 2011-2012 APPROVED MAY 2011

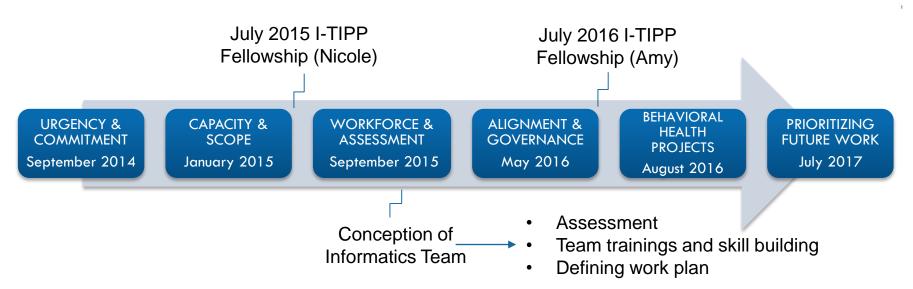






2012-2016





# STRENGTHENING HEALTH SYSTEMS THROUGH INTERPROFESSIONAL EDUCATION











# **MISSION**

Advance local and state health departments' involvement in health systems transformation by training the current and future public health workforce to use data to mobilize communities and improve health outcomes.

# COLLABORATIVE REQUIREMENTS DEVELOPMENT METHODOLOGY



Business Process Analysis

#### think

How do we do our work now?

- Define goals and objectives
- Model context of work
- Identify business rules
- Describe tasks and workflow
- Identify common task sets

Business Process Redesign

#### rethink

How should we do our work?

- Examine tasks and workflow
- Identify inefficiencies
- Identify efficiencies with repeatable processes
- Refine business processes and business rules
- Remodel context of work
- Restructure tasks and workflow

Requirements Definition

#### describe

How can an information system support our work?

- Define specific tasks to be performed for optimized business processes
- Describe the implementation of business rules
- Describe in words and graphics how an information system must be structured
- Determine scope of next phase of activities



# COLLABORATIVE REQUIREMENTS DEVELOPMENT METHODOLOGY



Business Process Analysis

#### think

How do we do our work now?

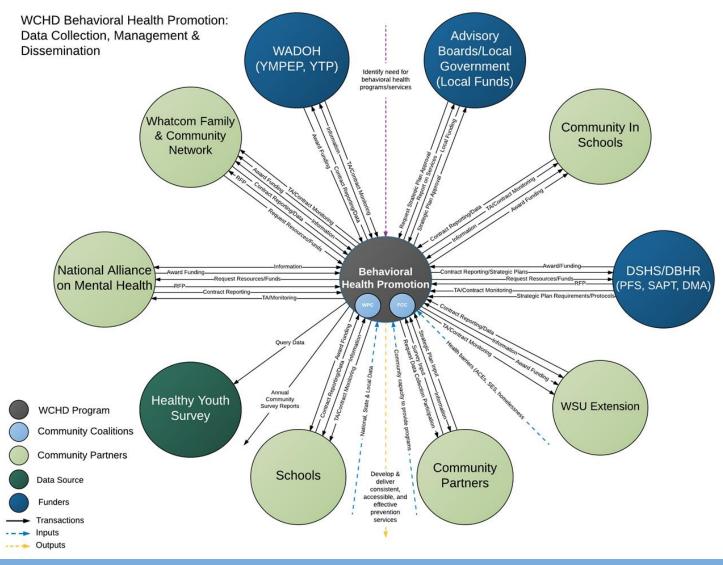
- Define goals and objectives
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## **Tools**

- Context Diagrams
- Business Process Matrix
- Issue Management Registers

## **CONTEXT DIAGRAMS**





## BUSINESS PROCESS MATRIX/LOGIC MODEL

Program		Behavioral Health	Behavioral Health Promotion						
Program Goal:		Promote healthy ch	Promote healthy children and families by decreasing the impact of substance use and mental health issues						
Contribution to WCH	D Population Re	sults: Children and adults	Children and adults are physically and mentally healthy. Families are strong and self-sufficient.						
Program Staffing:		FTE Program Spec	FTE Program Specialist, Joe Fuller, Program Specialist, Amy Hockenberry, Program Supervisor, Perry Mowery						
· ·		Performance Standards	Inputs	Activities	Outputs	Program Measures			
Objectives	Process	(Business Rules)	inputs	(Task Set)	Outputs	, and the second second			
collaboratively to increase community access to	Delivery of Behavioral Health Promotion Programs & Services	PHAB Standards: 4.1 Engage with community to id & address health problems 7.1 Assess service capacity and access to services 7.2 Identify and Implement strategies to improve access to health care 10.1 Use Evidence-based practices  Contract Requirements: DSHS/DBHR Prevention Services United General – Marijuana Prevention  Professional Standards: Strategic Prevention Framework  Laws/Other: HIPAA  Advisory Board: Behavioral Health Advisory Board	Resources:  Community capacity to provide programs/services  Youth barriers (ACEs, low SES, homelessness)  Partnerships: Schools Youth-serving organizations Whatcom Family & Community Network Law enforcement Civic & volunteer groups Healthcare professionals Organizations involved in reducing SA/MH promotion Media Business Community Tribal government Parents Youth  Data Systems: HYS DSHS Data Books, Risk Profiles Minerva Community Survey Data CHAT	<ol> <li>Identify need for behavioral health programs/services</li> <li>Assess community for resources and capacity</li> <li>Develop (select) programs/services with community partners</li> <li>Determine partner's capacity to deliver selected programs</li> <li>Build and finalize contracts with partner organizations</li> <li>Support the coordination of and build community capacity to deliver programs and services</li> <li>Monitor programs &amp; services for effectiveness</li> <li>Support and coordinate the community's capacity to manage any changes</li> </ol>	<ul> <li>Contract Reporting</li> <li>Survey Input</li> <li>DBHR Strategic Plans</li> <li>Leadership Boards/Local Government Reports on services</li> <li>Develop and deliver consistent, accessible, and effective prevention services</li> </ul>	Short Term/ Process Outcome: Community In Schools (CIS)  # of youth served Strengthening Families  # of families served  # of programs delivered WFCN/NAMI/Coalitions  # of events  # of partners involved  Medium Term/Results Outcome: Community In Schools (CIS)  Increase student attendance  Increase in grades  Decrease in discipline Strengthening Families  Pre- & posttest results WFCN/NAMI/Coalitions  Increased partnerships  Coalition Assessment Tool  Long Term/Is anyone better off? Healthy Youth Survey  30-day use of alcohol  30-day use of marijuana  Report of depression in last 12 months  Report of anxiety over the last 2			

### **ISSUE MANAGEMENT REGISTER**



#### **Issue Management Register**

Proje	oject Name: Program Manager: F				Project Manager:				
	When	What				Who	When		Other
#	Date Raised	Issue Description	Impact of Issue	Selected Solutions	Prioriy	Issue Owner	Due Date	Issue Status	Comments
1								Not Started	
2								Not Started	
3								Not Started	
4								Not Started	
5								Not Started	
6								Not Started	
7								Not Started	
								Not Started	

## BUSINESS PROCESS MATRIX/LOGIC MODEL



Program/Activity	The name of the program
Program/Activity Cools	Explains how the program supports one or more of the directions of the public health organization. Use the Summary Purpose Statement" from
Program/Activity Goal:	the 2017-2018 Budget Inventory of Services or write your own
Contribution to Coalition Results:	Select which Coalition Strategic Plan Desired Results does this program/activity, in conjunction with other public and private partners, contribute
Contribution to Coantion Results.	to?
Program Staffing:	List positions and staff member names who are part of the program

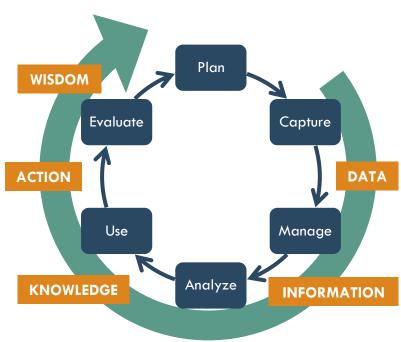
Program Objectives	Key Business Process	Performance Standards (Business Rules)	Inputs	Activities (Task Set)	Outputs	Program Measures
A concrete statement	Name for the group	A set of criteria that defines or	Information received by	The key set of activities	Information transferred	Short Term/ Process
describing what the	of activities that	constrains some aspect of the	the program from	that are carried out by	out from a process.	Outcome:
program seeks to	support this	program. Business rules are	external sources. Inputs	program staff.		
achieve. A well-	objective. There	intended to assert structure or	are not generated within			Example:
worded objective will	may be more than	to control or influence the	the program.			
be SMART: Specific,	one.	behavior. Examples include:				Medium Term/Results
Measurable,			Resources:			Outcome:
Attainable/Achievable,		PHAB Standards:	Partnerships:			
Realistic, and Time		Contract Requirements:	Data Systems:			Example:
Bound		Professional Standards:				
		Laws/Other:				Long Term/Health
		Advisory Board:				Status Indicator/Is
		•				anyone better off?
						•
						Example:
						·

#### **BUSINESS PROCESS MATRIX/LOGIC MODEL**



# **Examples**

- Strengthening Families Program
- Coalition Sustainability



## RESOURCES



- Public Health 3.0: A Call to Action to Create a 21<sup>st</sup> Century Public Health Infrastructure,
   U.S. Department of Health and Human Services. 2016.
- <u>Building an informatics-savvy health department: part I</u>, vision and core strategies. LaVenture M1, Brand B, Ross DA, Baker EL. J Public Health Manag Pract. 2014 Nov-Dec;20(6):667-9.
- Building an informatics-savvy health department II: operations and tactics. LaVenture
   M1, Brand B, Ross DA, Baker EL. J Public Health Manag Pract. 2015 Jan-Feb;21(1):96-9.
- Making Public Health Informatics Visible: Communication an Emerging Field,
   FrameWorks Institute, September 2015.
- <u>Common Ground: Public Health Preparedness Toolkit</u>: Tools and Methodology for Business Process Analysis and Redesign, Public Health Informatics Institute. 2011.
- <u>Taking Care of Business: A Collaboration to Define Local Health Department Business</u> Processes, Public Health Informatics Institute. 2006.
- Informatics & Interoperability Roadmap, Washington State Department of Health.
   2016.

# QUESTIONS & THANK YOU

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