

Welcome!  
Quality Improvement at the Program Level  
will begin shortly

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and when prompted, state your full name*

## iLinc Housekeeping

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- For discussions, Stacy or Liz will ask you to unmute
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- Using the “chat” window, please tell us the names of the other attendees you are attending via iLinc with a group
- When the feedback window appears, please click in the radio button to make your selection
- We will take a short break at about 11 AM. We will start again promptly

# POLL

Which Center for Excellence Region are you located in?

A: Department of Health

B: Tacoma-Pierce County Health Department

C: Outside Washington State

D: Spokane Regional Health District



# Quality Improvement at the Program Level

September 21, 2011

## **Stacy Wenzl, MHPA**

Program Manager, Community Health Assessment

Spokane Centers for Excellence, Liaison

Spokane Regional Health District

**(509) 324-1698**

swenzl@spokanecounty.org

## **Liz Wallace, MS**

Epidemiologist

Community Health Assessment

Spokane Regional Health District

**(509) 324-1545**

ewallace@spokanecounty.org

# Learning Objectives

- Describe the differences and linkages between Big QI, Program Evaluation and Small QI
- Describe the CDC framework for conducting program evaluation
- Develop on-going program measures
- Select Program QI tools for each portion of the PDCA cycle

# Definition of Quality Improvement

A management process and set of disciplines that are coordinated to ensure that the organization consistently meets and exceeds customer requirements.

Bill Riley and Russell Brewer, Review and Analysis of QI Techniques in Police Departments, JPHMP Mar/April 2009



# Big QI

QI

Top management philosophy resulting in complete organizational involvement

Bill Riley and Russell Brewer, Review and Analysis of QI Techniques in Police Departments, JPHMP Mar/April 2009

- Tools in the Belt
  - Agency QI Plan
  - CHIP
  - Strategic Plan
- Agency performance management as the “belt”



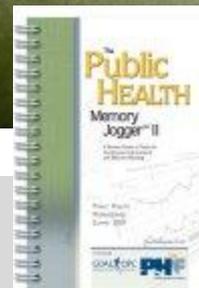
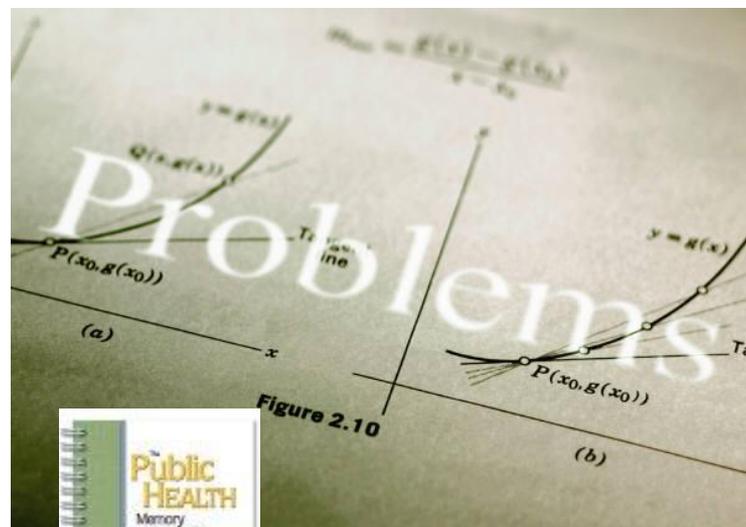
# Small qi

qi

Conduct of improving a process at the micro system level

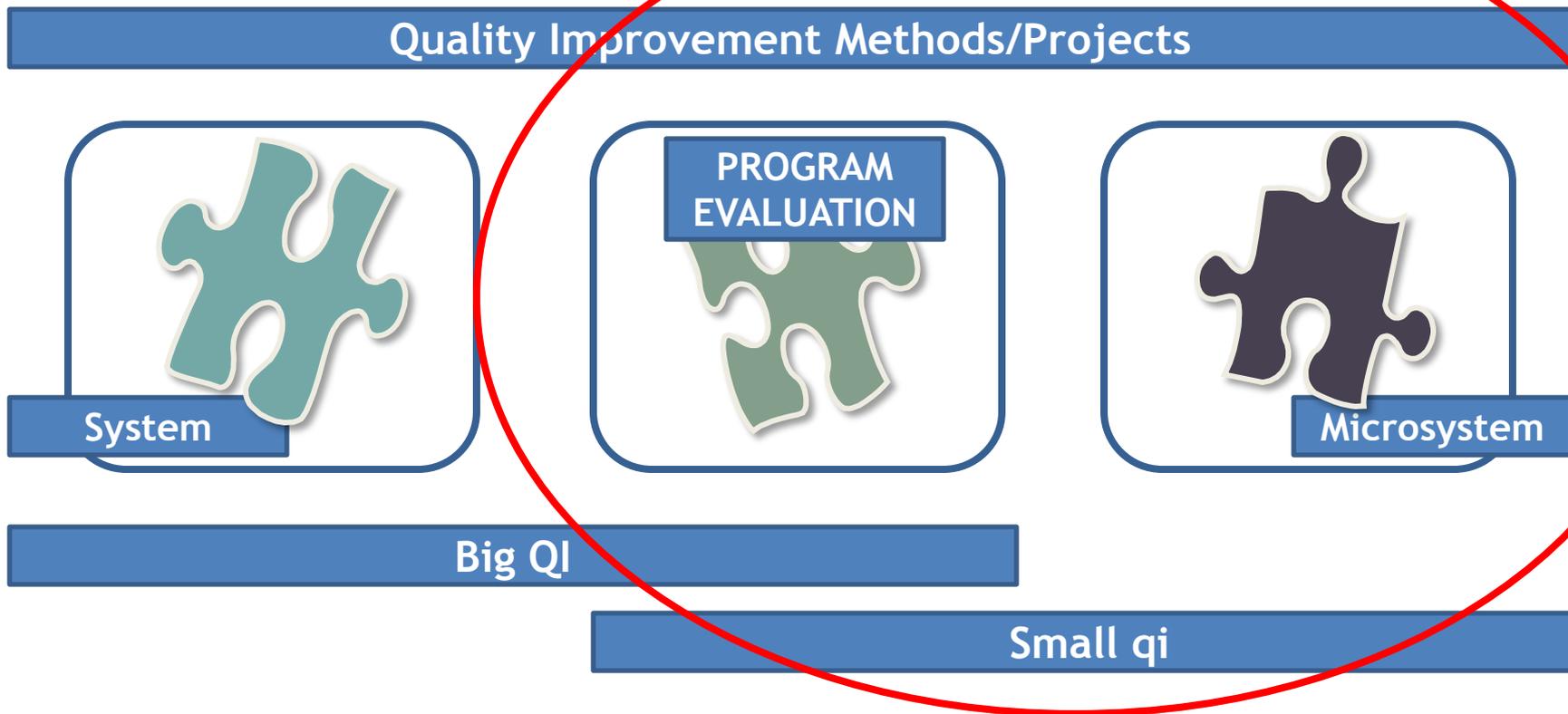
Bill Riley and Russell Brewer, Review and Analysis of QI Techniques in Police Departments, JPHMP Mar/April 2009

- Tools in the Belt
  - Fishbone
  - Pareto
  - Flowcharts
- Program evaluation as the “belt”

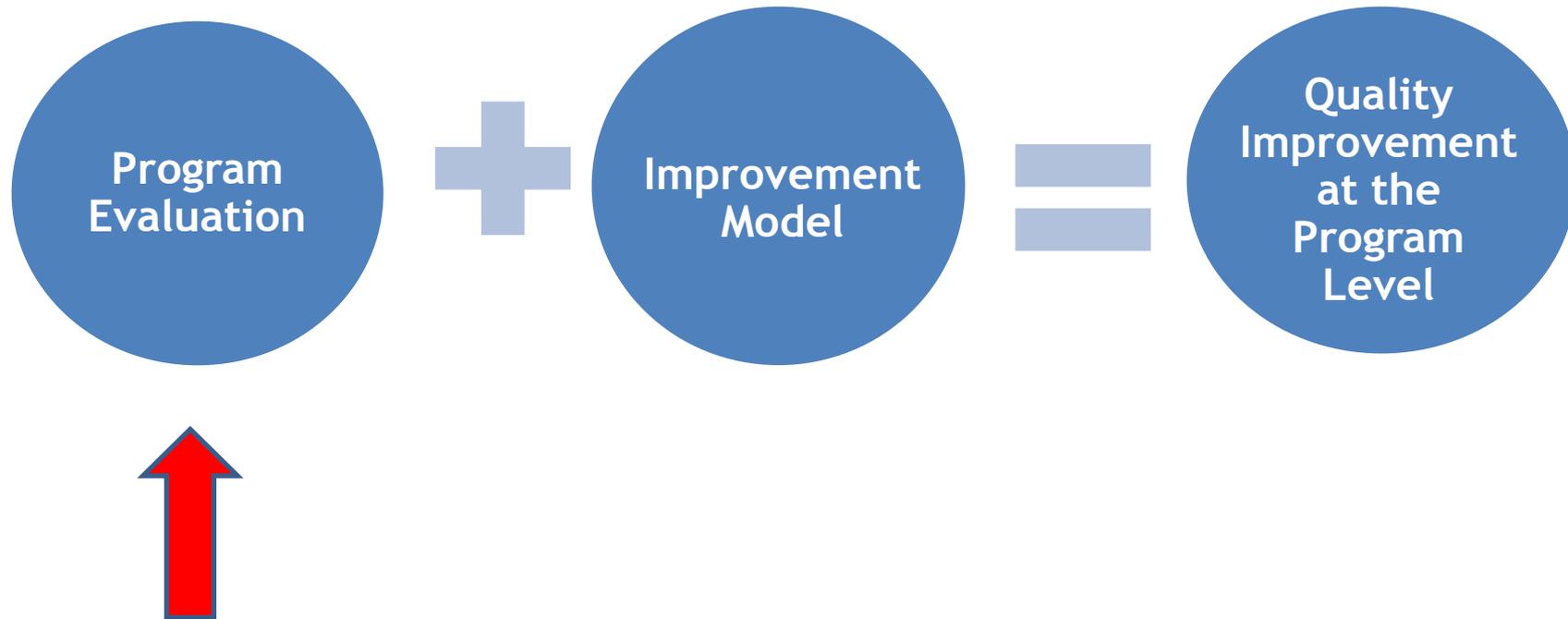


**PUBLIC HEALTH**  
ALWAYS WORKING FOR A SAFER AND  
HEALTHIER WASHINGTON

# Linking Big QI and small qi



# QI at the Program Level



# Program Evaluation: Defined

- **Evaluation** - is the systematic investigation of the merit, worth or significance of any “object.”
- **Program** - is any organized public health action/activity implemented to achieve some result.
- **Program Evaluation** - the systematic collection of information about the activities, characteristics, and outcomes of programs to make judgments about the program, improve program effectiveness, and/or inform decision about future program development.

# Poll

Referring to the definition of program evaluation just provided, do you have a systematic process of conducting program evaluation throughout your organization?

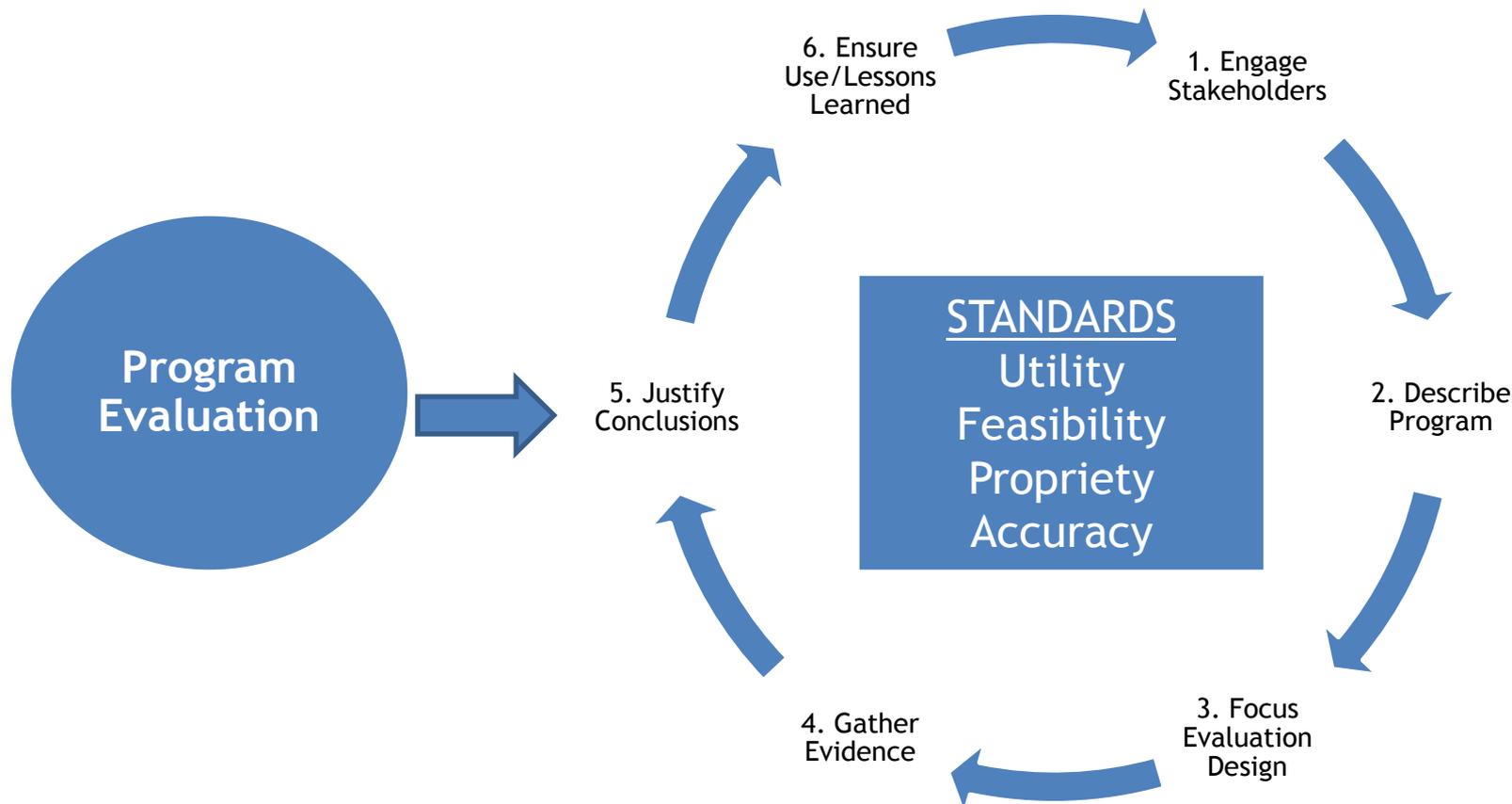
- A. Yes, we have system of program evaluation.
- B. Not yet, but working towards it.
- C. We evaluate programs informally, but have no standard system.
- D. Who has time for program evaluation?

# Program Evaluation: A philosophy

The best defense  
is a good offense.



# Program Evaluation (PE) in 6 Steps



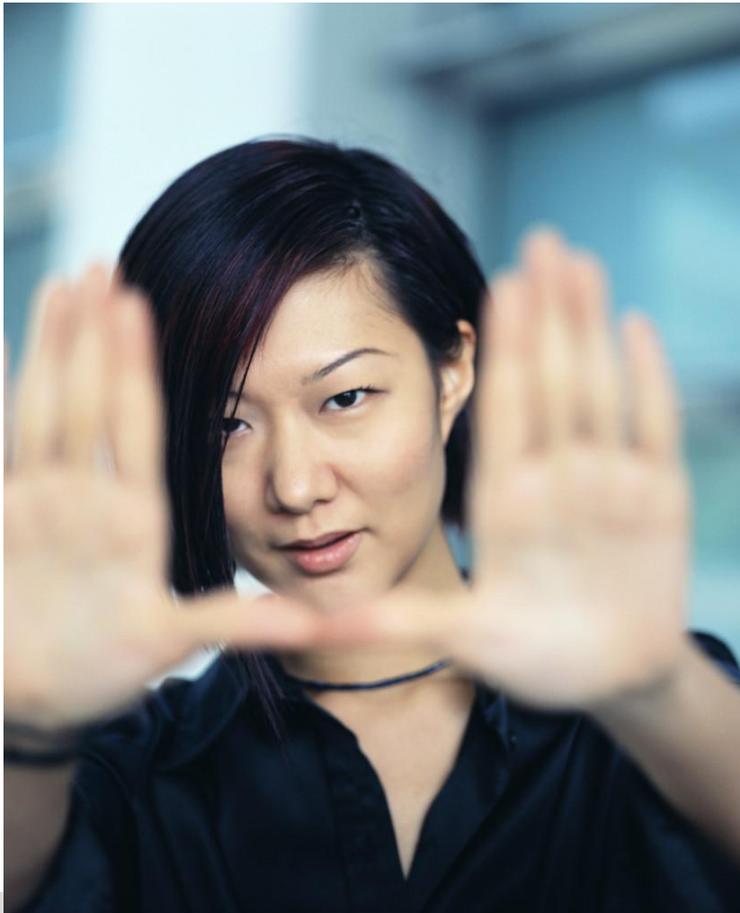
# The 4 Standards (Values) to Consider

- ***Utility***: Who needs the information and what information do they need?
- ***Feasibility***: How much money, time, and effort can we put into this?
- ***Propriety***: What steps need to be taken for the evaluation to be ethical?
- ***Accuracy***: What design will lead to accurate information?

# Step 1: Engaging Stakeholders

- 3 Major Groups
  - Those in operations, those served, recipients of evaluation results
- Prioritize Considering
  - Credibility
  - Implementation
  - Advocacy
  - Funding

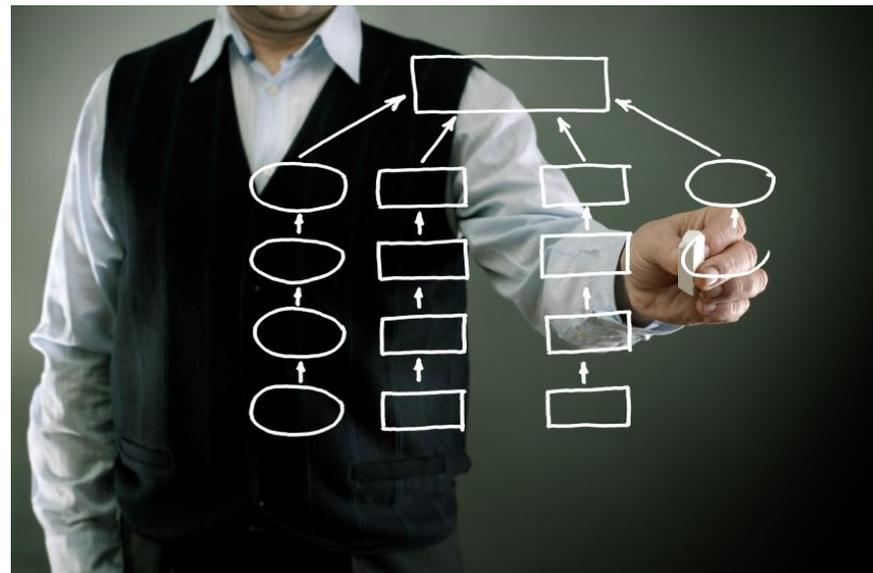
# Step 2: Describe the Program



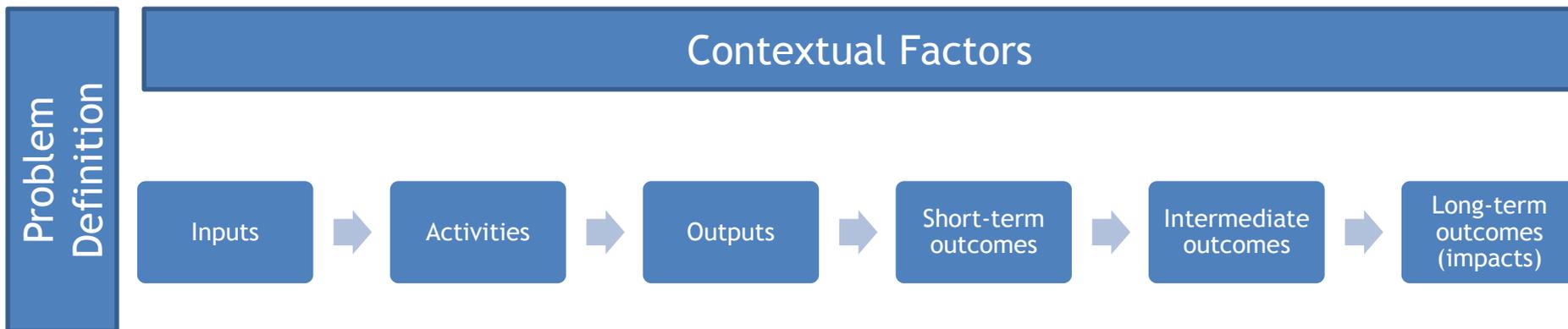
- A framework that...
  - Logically links resources, activities, and outcomes
  - Illustrates a program's theory of change
  - Identifies the measurements for program evaluation

# Step 2: Logic Model Parts

- Need
- Target(s)
- Outcomes
- Activities
- Outputs
- Resources/inputs



# Skeleton Logic Model



Contextual Factors						
Goal	Inputs	Activities	Outputs	Process	Impact	Outcome

# Step 2: Logic Model Relationships

- Linking activities to outcomes
- Arrows can go from:
  - Activities to other activities
  - Activities to outcomes
  - Early effects/outcomes to later one

# Common Struggles

- Task completed
- Perfecting a logic model
- Fear about being evaluated
- Not involving staff



# Logic Model Discussion

- What are you using?

*Unmute your lines please.*

# Logic Model Poll and Discussion

- **Poll**
  - Have you been able to analyze your data?
    - Yes
    - No
- **Why or why not? Let's discuss!**

# Logic Model Discussion

- Have you drawn any conclusions about your program based on this data?
  - Yes
  - No

# Logic Model Discussion

- Have you started any QI projects or used any QI tools to address needs/concerns found in evaluation findings?
  - Yes
  - No

*Please mute your lines again after discussion. Don't put us on hold. Thanks!*

# Step 2: Logic Model Considerations

Stage of Development



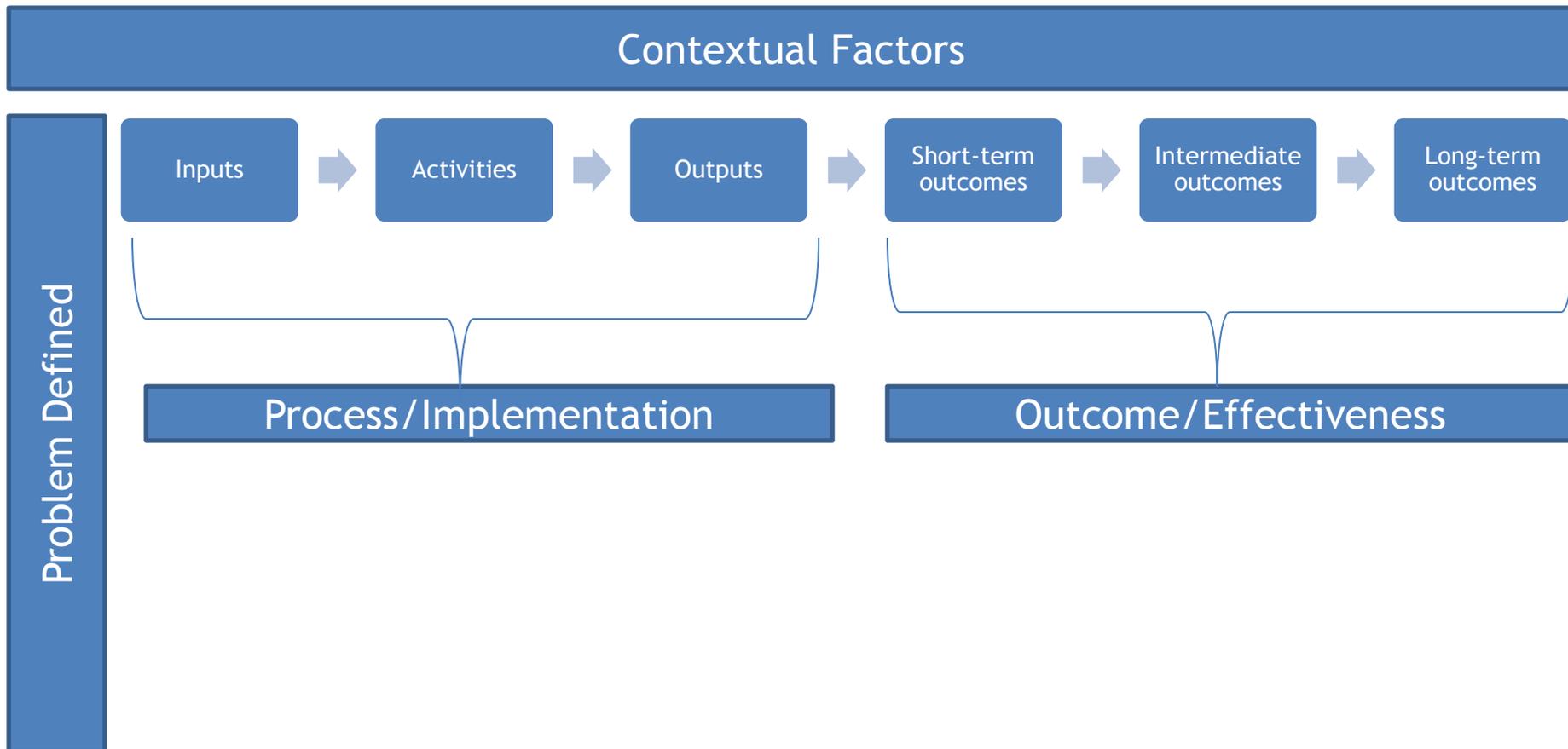
Context



# Step 3: Focus Evaluation Design

- Implementation
  - How much of our plan did we complete?
- Efficiency/Process
  - Timeliness, Satisfaction?
- Effectiveness/Efficacy outcomes
  - Of those targeted how many experienced benefit/ intended outcome ?
- Cost-effectiveness
  - What was the return on investment?
- Attribution
  - Did we do that?

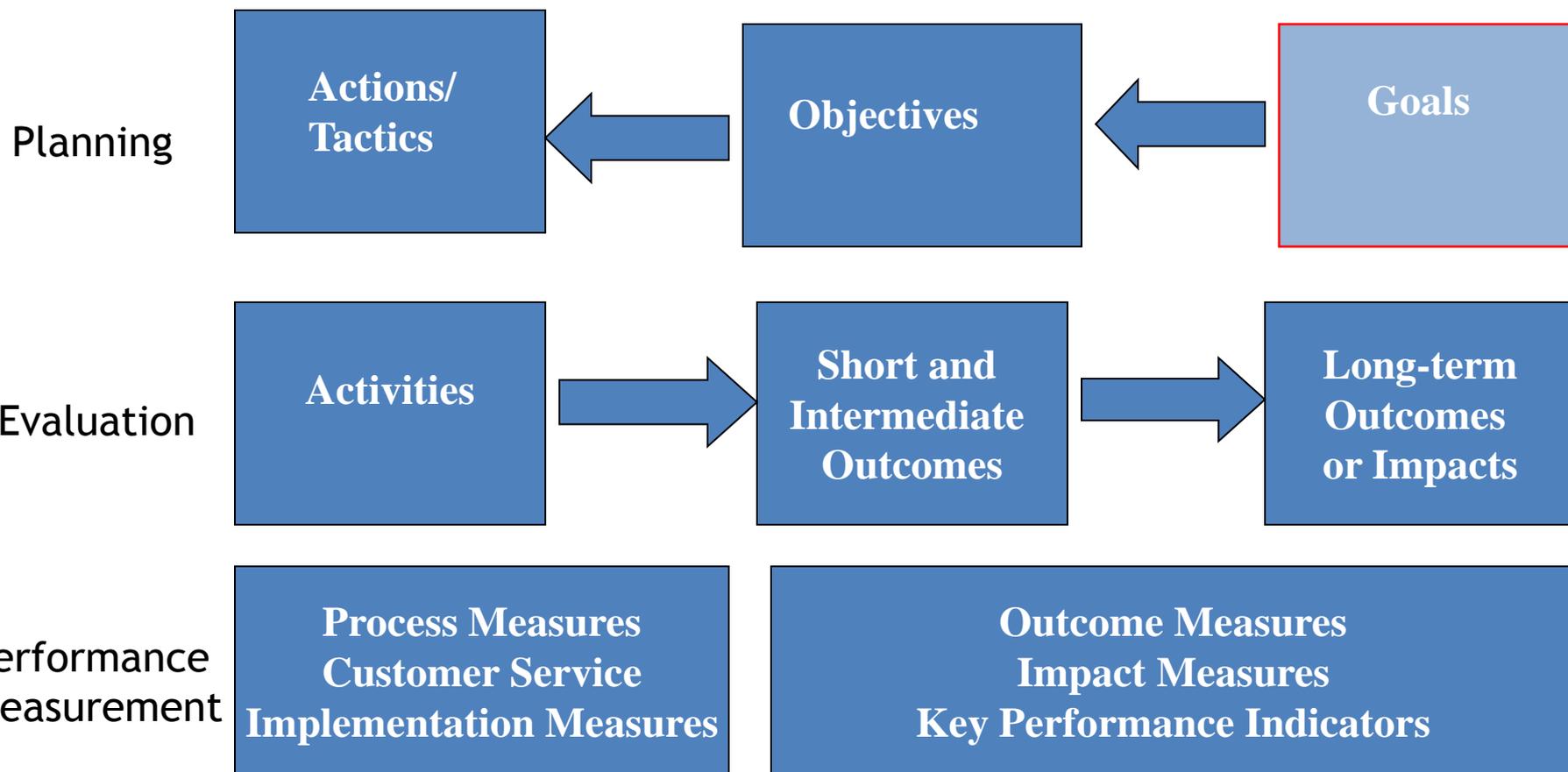
# Evaluation Designs



# Step 4: Gather Credible Evidence

- Plan for:
  - Indicators
  - Sources of data
  - Methods of data collection
  - Quality
  - Quantity
  - Logistics

# Linking Planning, Evaluation and Performance Measurement



# Performance Measurements

- Establish Targets or Goals
  - Industry benchmarks
  - Regulatory requirements
  - “Sister” organization’s data
  - Past performance
- Attributes
  - Meaningful, feasible, actionable



# Perfect Indicators/Measures

- Are sensitive
- Are consistent
- Are accurate



# Program Measures: Examples

Statement of Measure	Percent of Chlamydia cases (notifiable condition) reported to the LHJ with an investigation initiated within 3 days of receipt.
Target Population	All Chlamydia cases reported to Spokane Regional Health District
Numerator	# of Chlamydia cases with investigation initiated within 3 days of receipt
Denominator	Total # of Chlamydia cases investigated
Source of Data	Public Health Issue Management System (PHIMS-STDs)
Target or Goal	80%

# Unmute for Questions

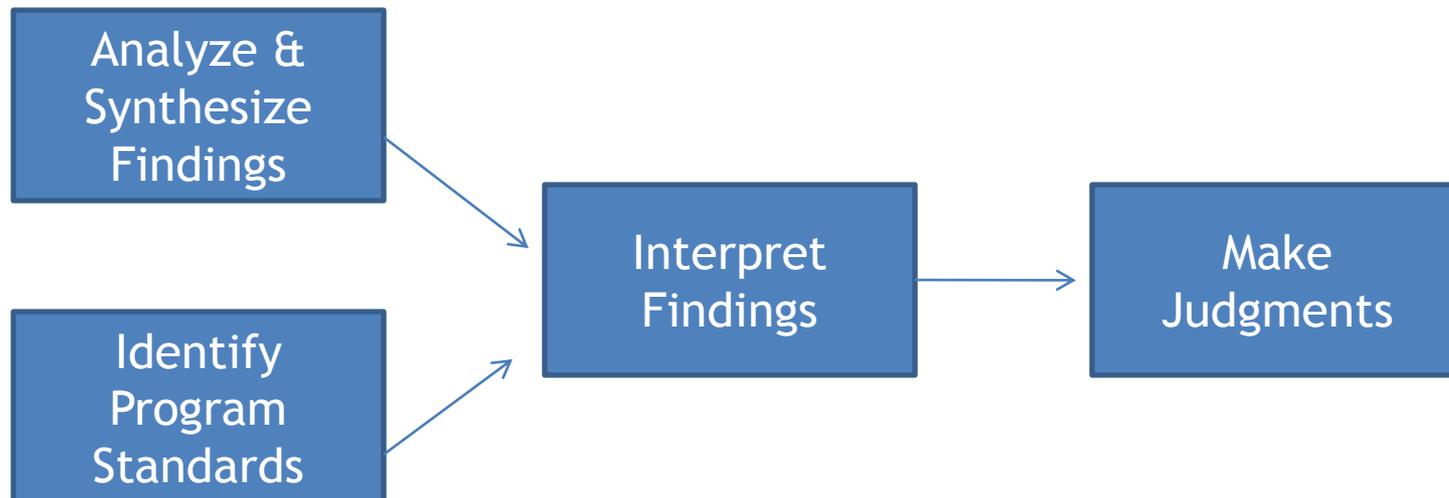
- What are your questions about creating and using performance measures?

*Please remember to remute your phones before we continue.*

# Step 4: Gather Credible Evidence

- Integrate Measurement System
  - Collecting data
  - Formatting and displaying data
    - Are you meeting customer needs?
    - Is there variation in performance?
    - Getting better or worse over time?

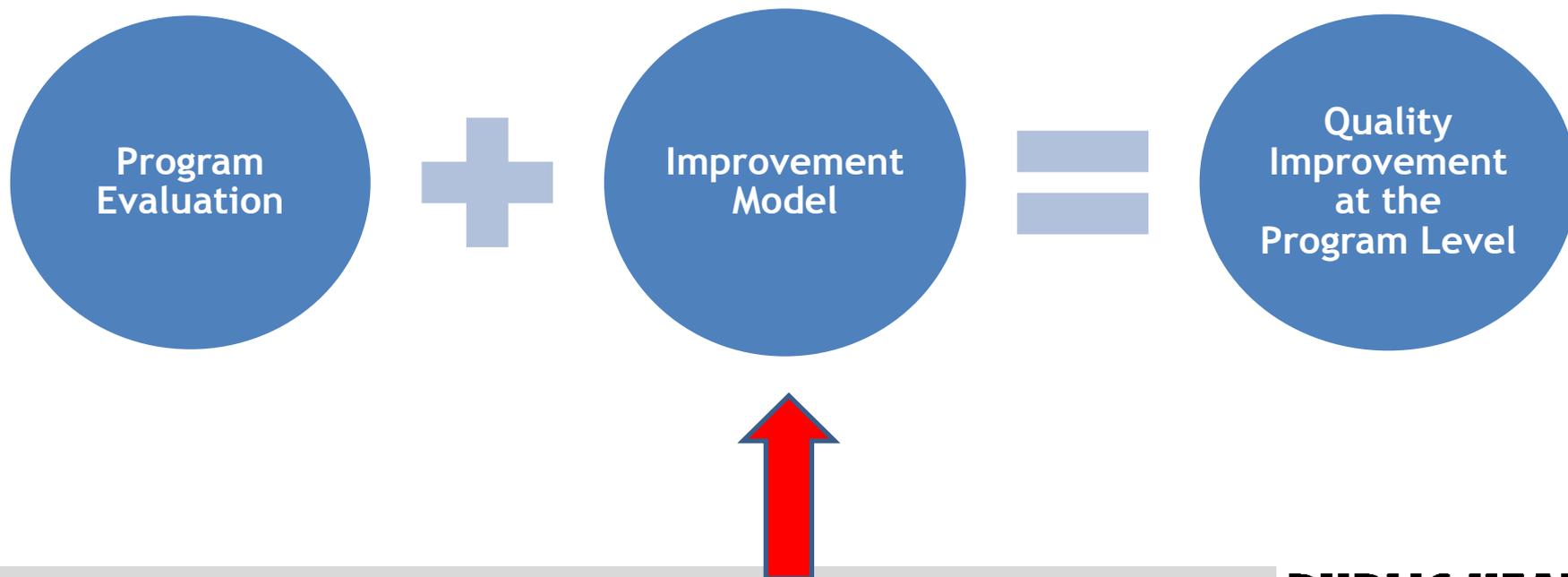
# Step 5: Justify Conclusions



# Step 6: Ensure Use and Share

- Monitor progress against goals
- Producing desired progress on outcomes?
- Justify need for further funding/support
- Ensure effective programs
- Find opportunities for continuous quality improvement

# QI at the Program Level



# Quality Management Principles

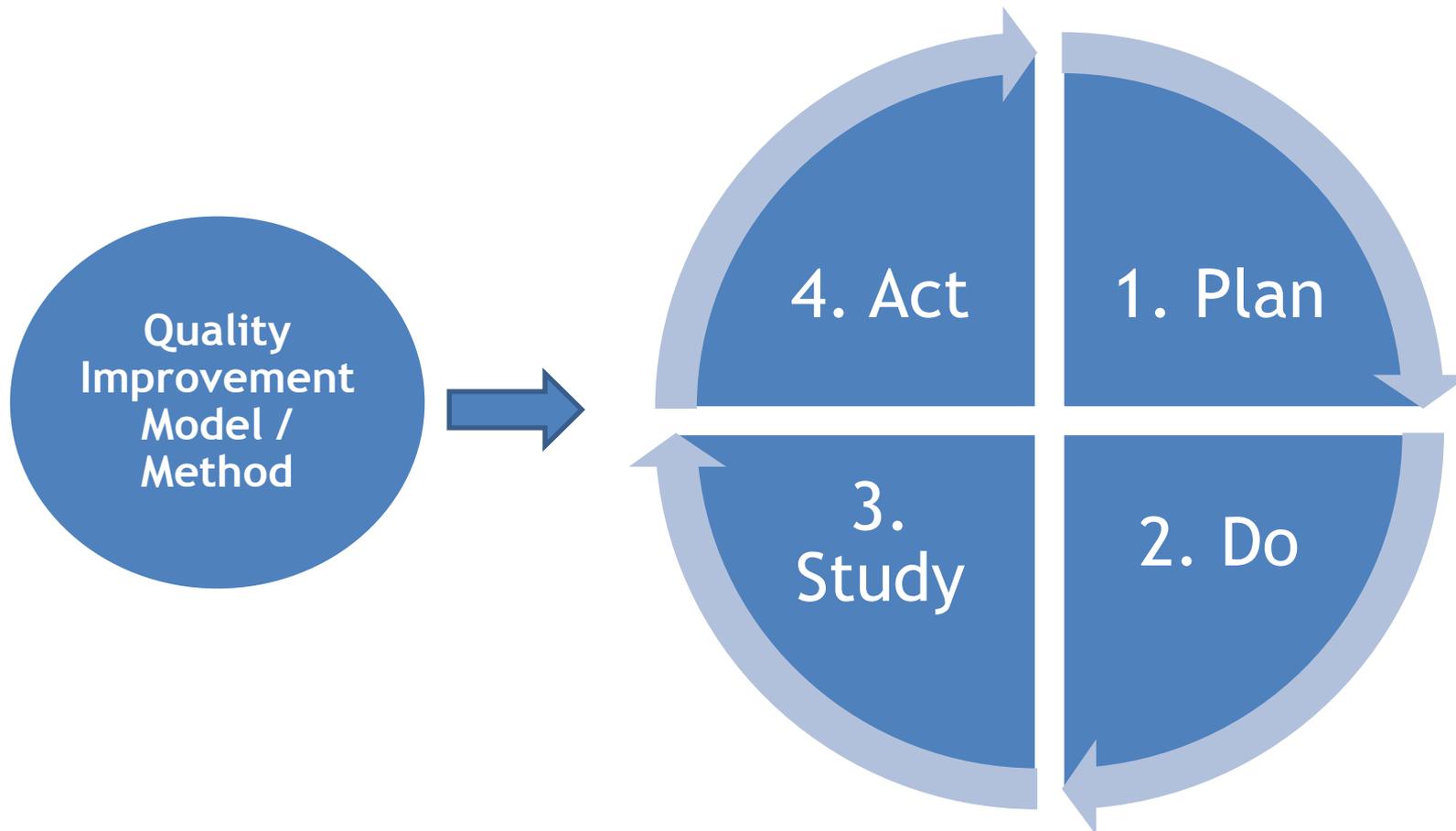
- Meeting customer requirements
- Understanding variation
- Standardizing process
- Using continuous scientific method

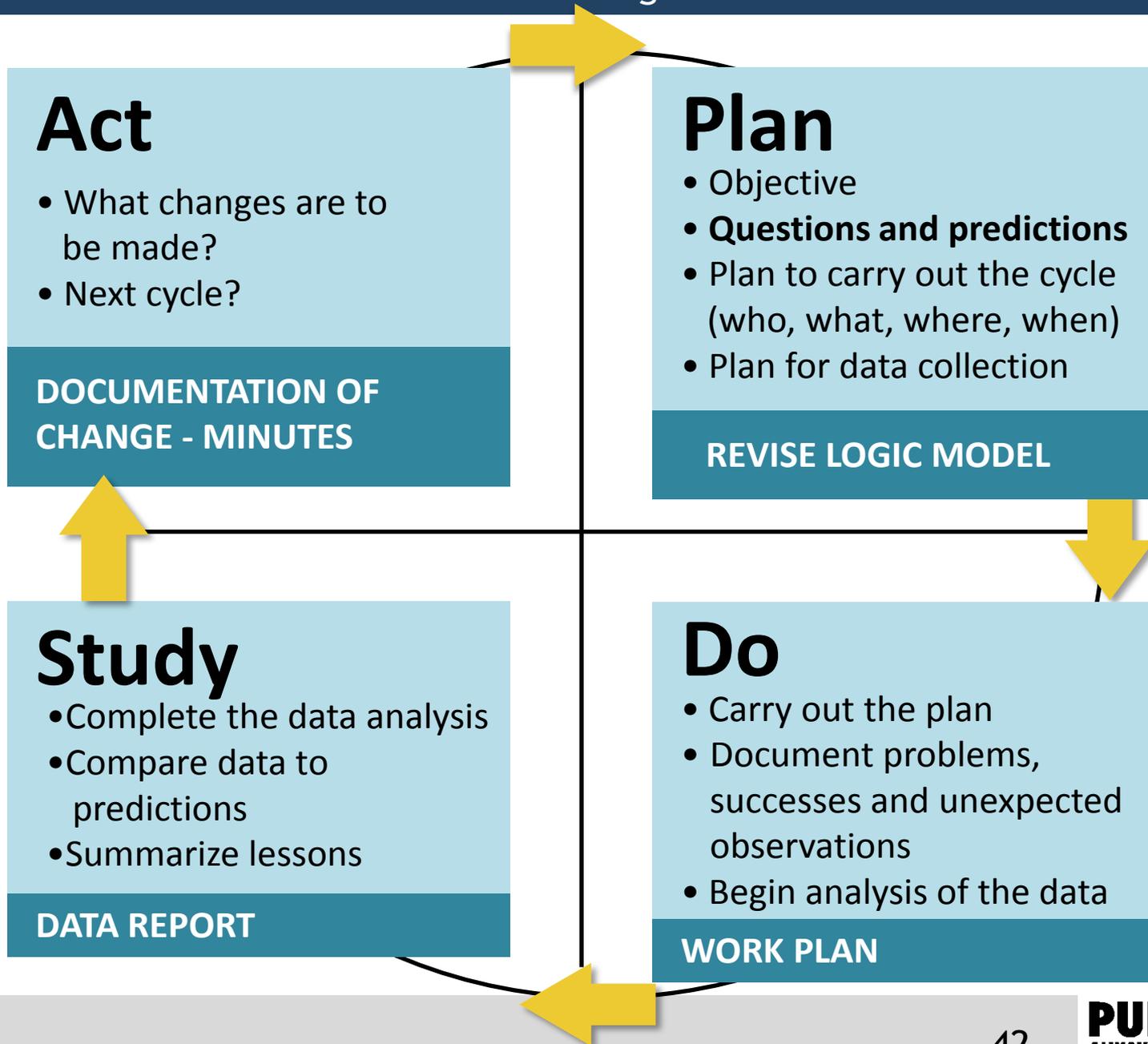
# Quality Improvement Models

- Define-Analyze-Change-Evaluate
- Plan, Do, Study, Act (PDSA/PDCA)
- Define-Measure-Analyze-Improve-Control (six sigma)
- Sort-Set-Shine-Standardize-Sustain (LEAN)
- Rapid Cycle Improvement (RCI)
- Adapting/Adopting Promising Practices

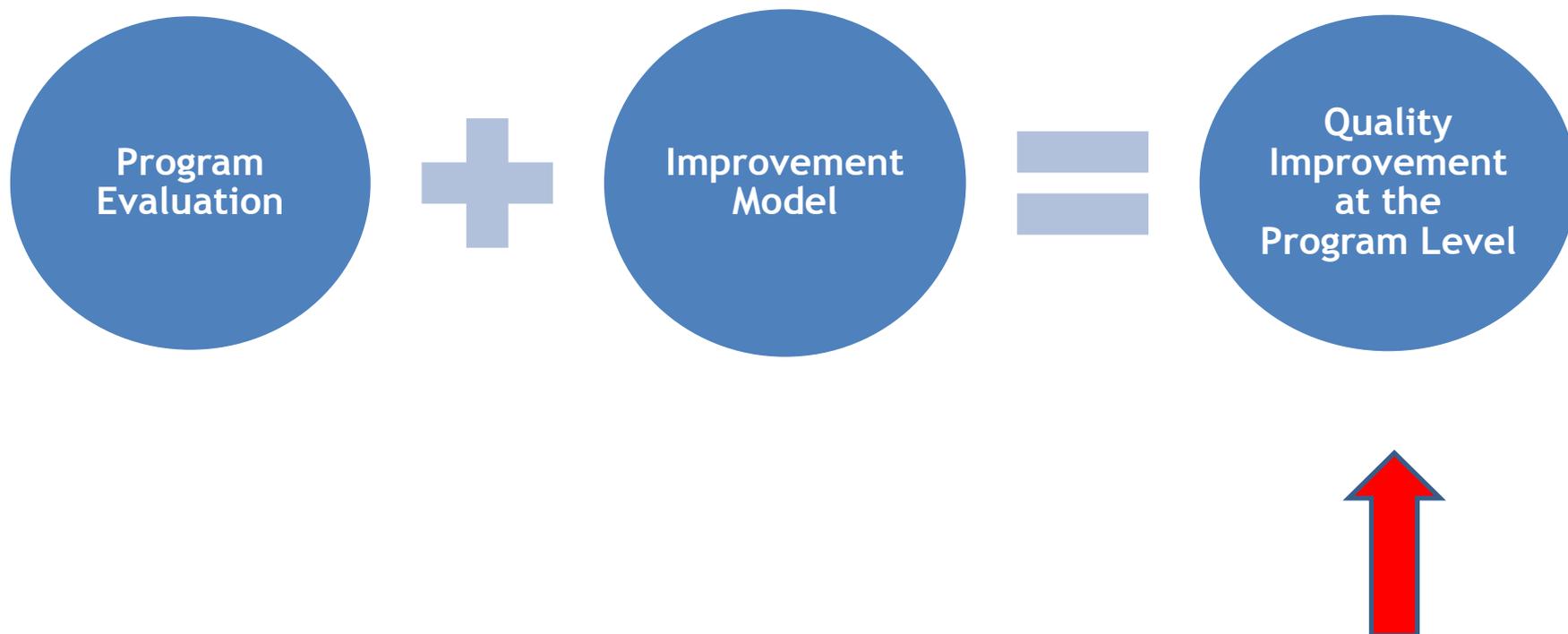


# Improvement Model

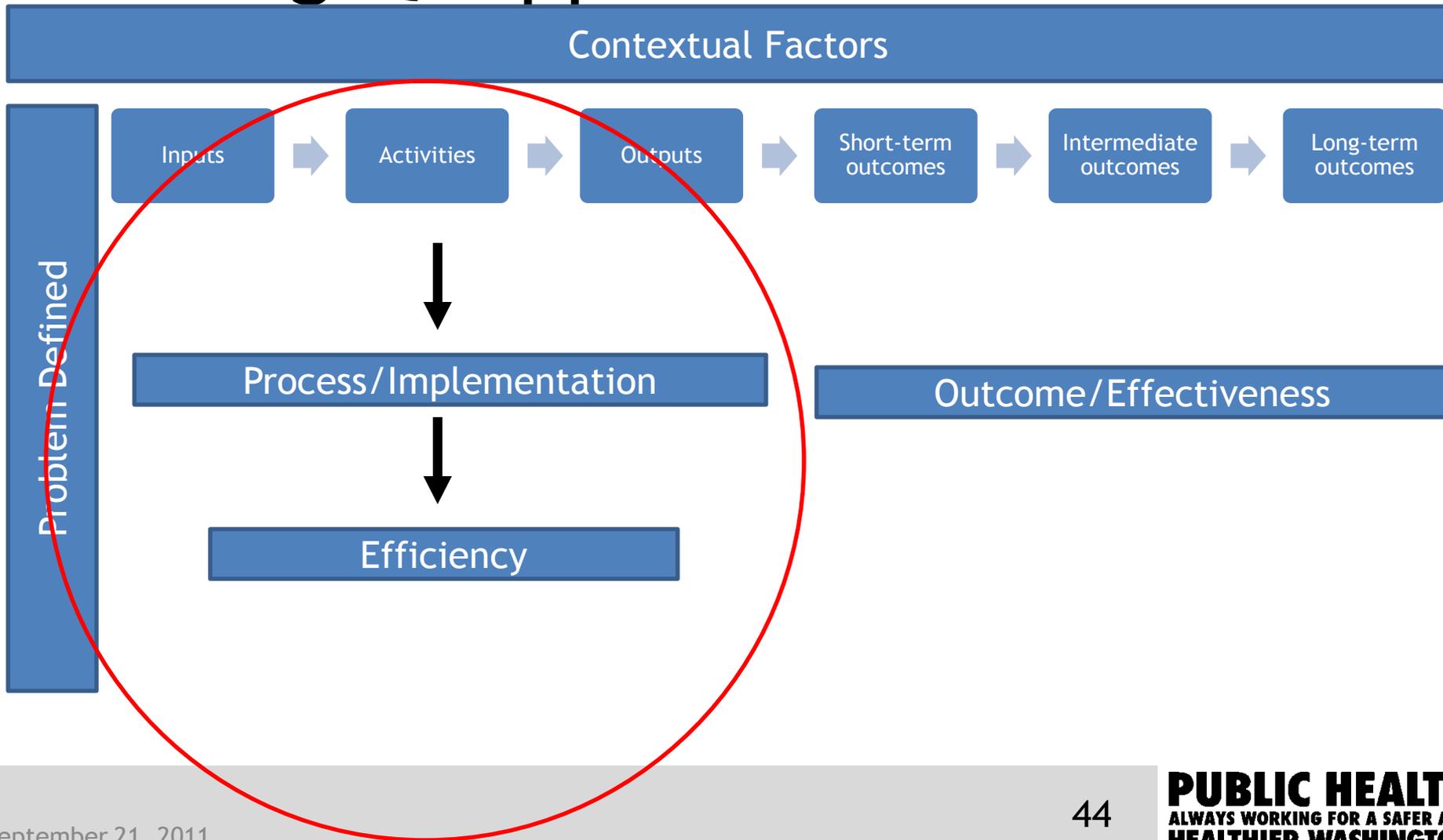




# QI at the Program Level



# Finding QI Opportunities in Your LM



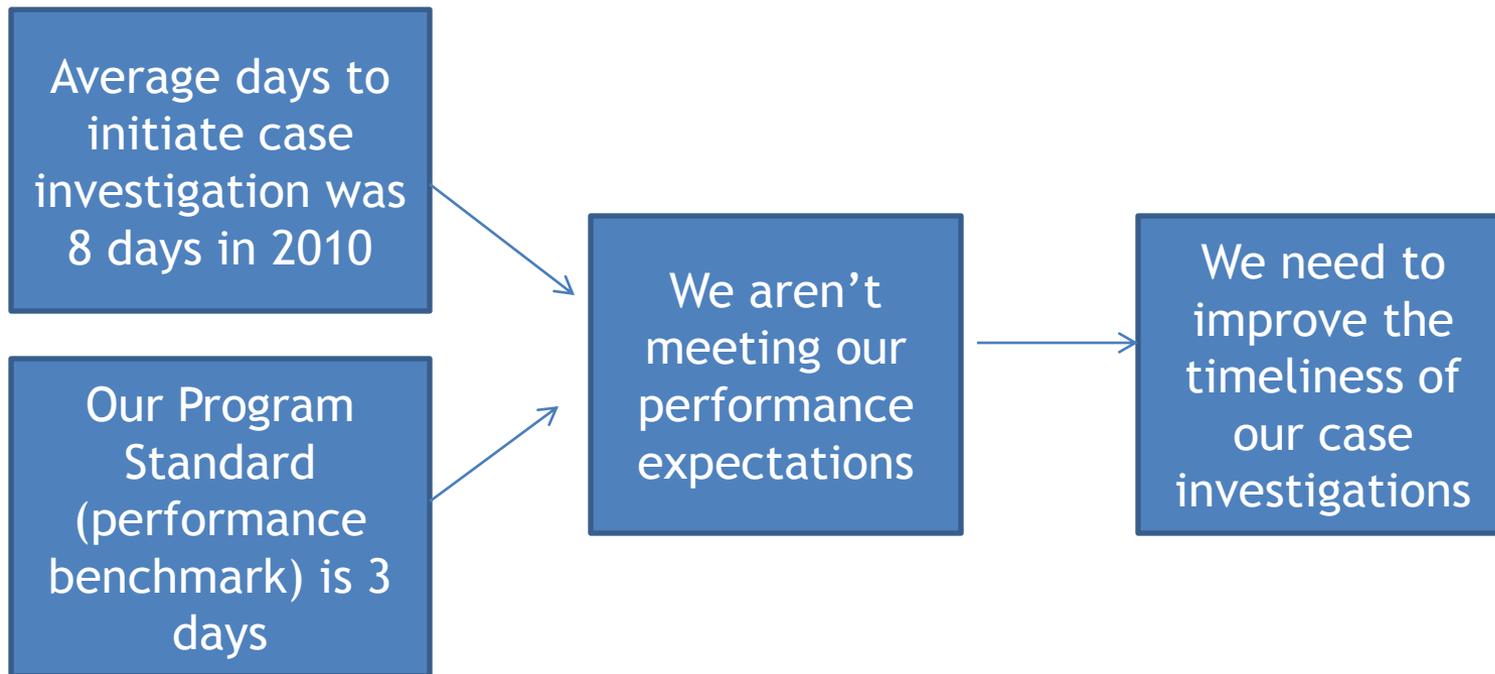
Communicable Disease Prevention: STDs Data Collection

2010  
Annual

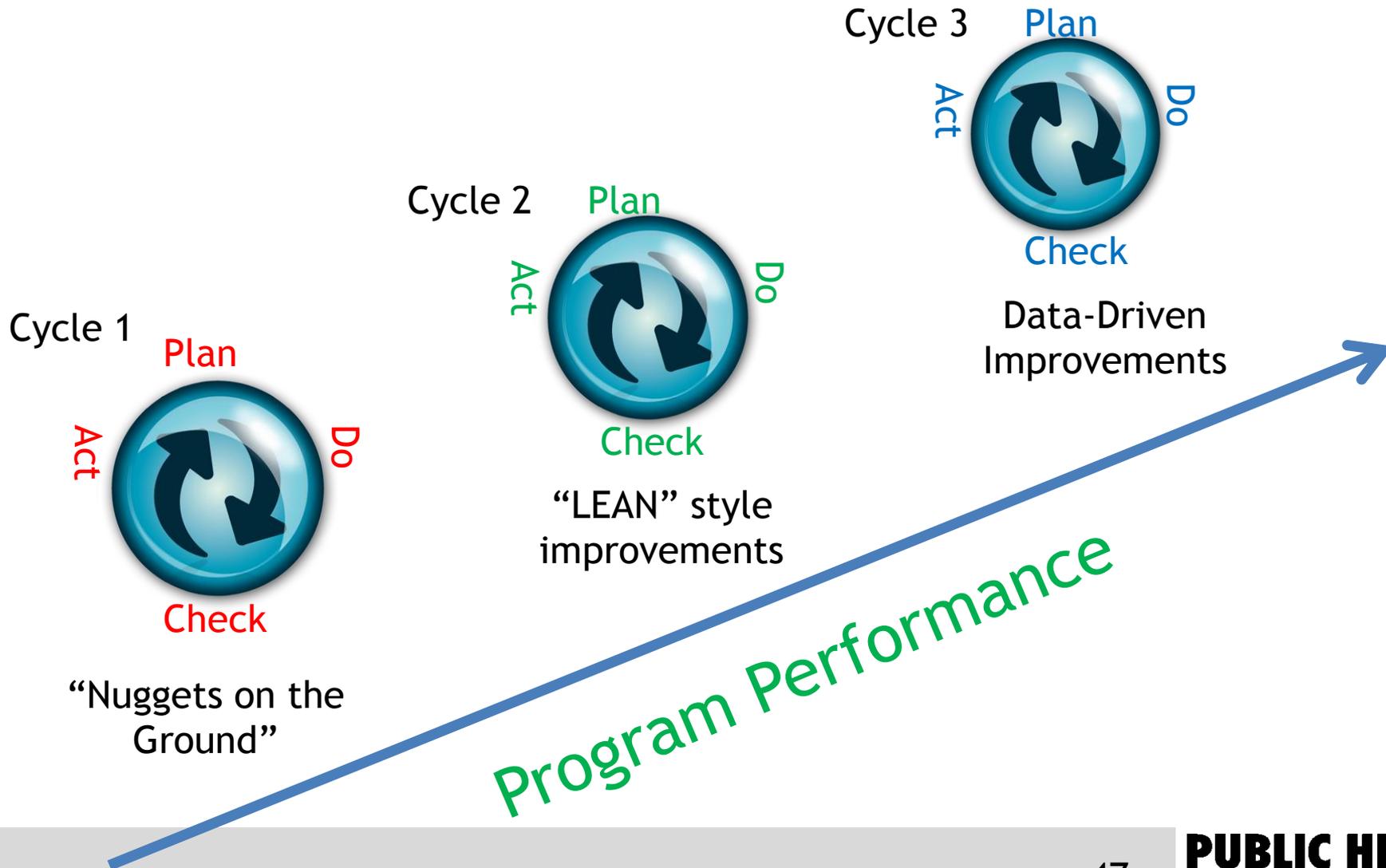
Activity	Outputs and Process Outcomes	Data Source	
<b>INDIVIDUAL</b>			
P1, A2	# cases initiated for interview	DOH Quarterly Worker Reports	1041
<b>Investigate selected communicable conditions reported to SRHD and provide back-up (as needed) to DOH on STDs.</b>	# partners elicited	DOH Quarterly Worker Reports	1018
	# DIS initiated contact/partners notified (DIS or OP)	DOH Quarterly Worker Reports	143
	#/% partners treated (via index patient guarantee or DIS verification)	DOH Quarterly Worker Reports	653/64.1%
	# DIS verified partner treatment	DOH Quarterly Worker Reports	643
	Average days to initiate contact attempt	PHIMS-STD	8
	Average days to complete case interview	PHIMS-STD	11
	Average days to close a case	PHIMS-STD	14
	<b>Determine if percentage of cases investigated increased.</b>	DOH Final Report	

**Findings:** A total of 1617 CT cases were received in Spokane County. DIS initiated 1041 interviews (64% of entered cases) and interviewed and closed 839/1041(81%) of CT cases; DOH staff interviewed 87/134 (65%) of GC cases. The percentage of cases investigated decreased from 2009. The established benchmark for initiation of case investigation is 4 days. Our average in 2010 was 8 days which falls short of our benchmark. This is an opportunity for QI.

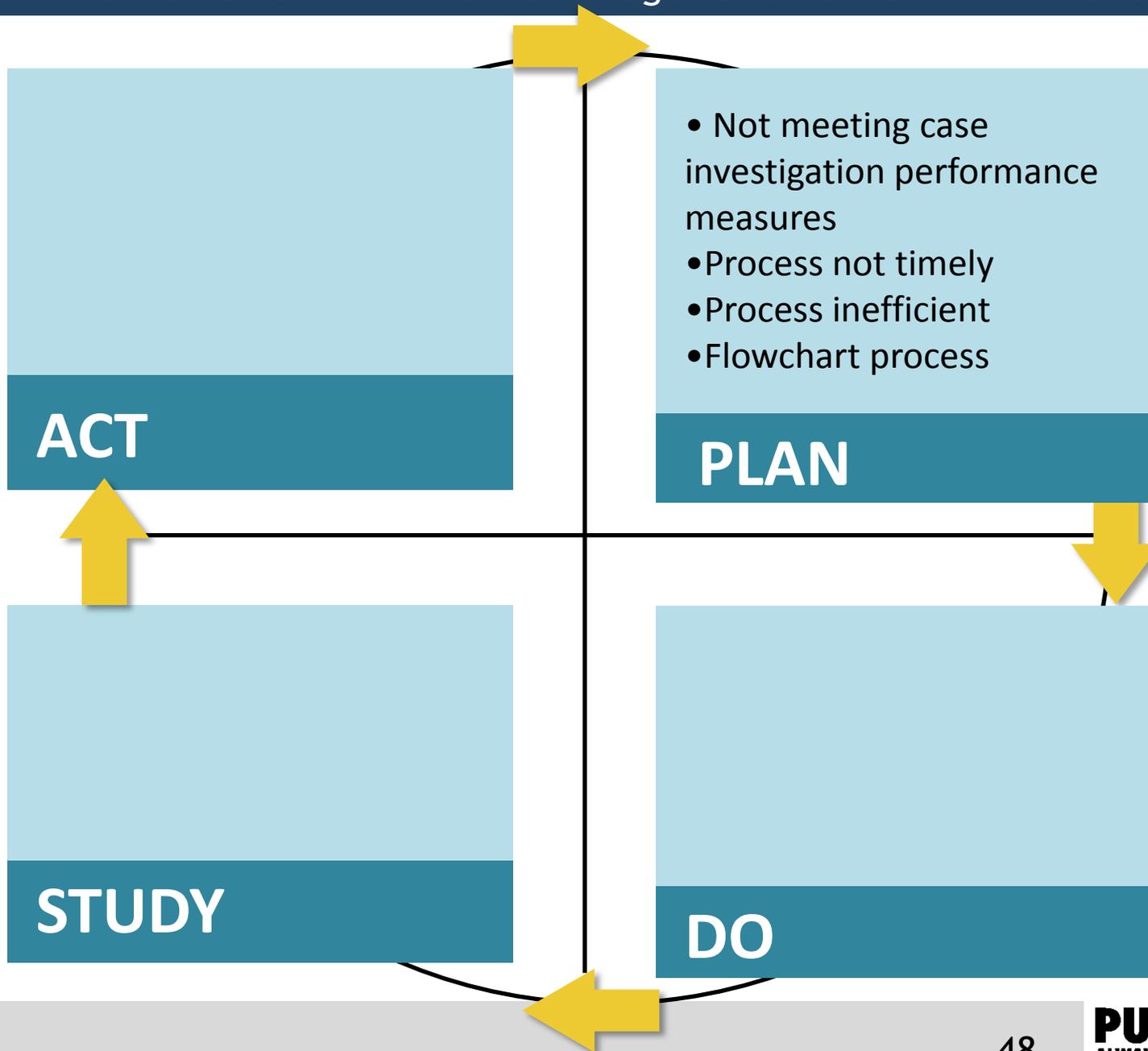
# Refer Back to Program Evaluation Step 5



# QI at the Program Level



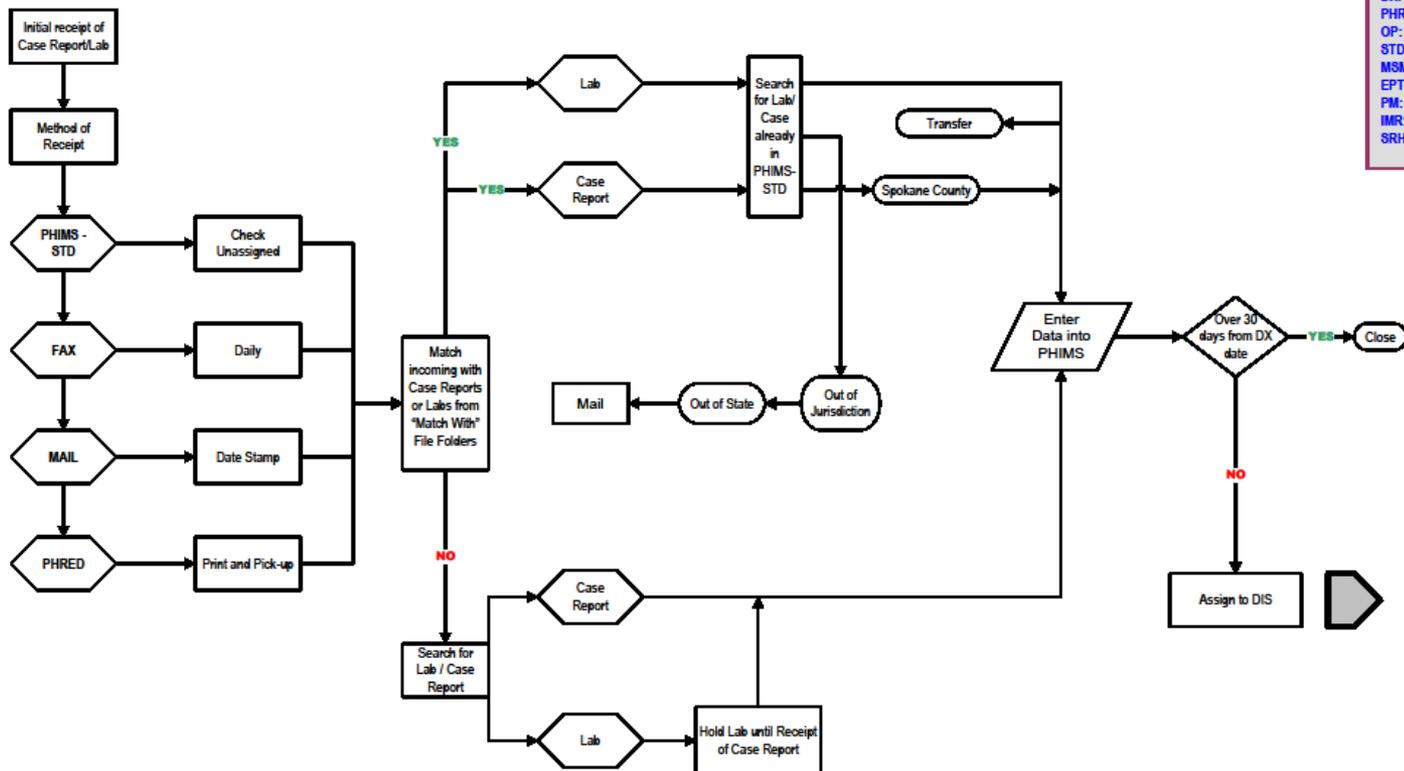
# QI at the Program Level



### CASE INVESTIGATION PROCESS FLOWCHART TOOL

**ACRONYM LIST**

- DIS: Disease Intervention Specialist
- PHIMS: Public Health Issues Management System
- DX: Diagnosis
- PHRED: Public Health Record Electronic Database
- OP: Original Patient
- STD: Sexually Transmitted Disease
- MSM: Men Who Have Sex With Men
- EPT: Expedited Partner Treatment
- PM: Project Manager
- IMR: Internal Medicine Residency
- SRHD: Spokane Regional Health District

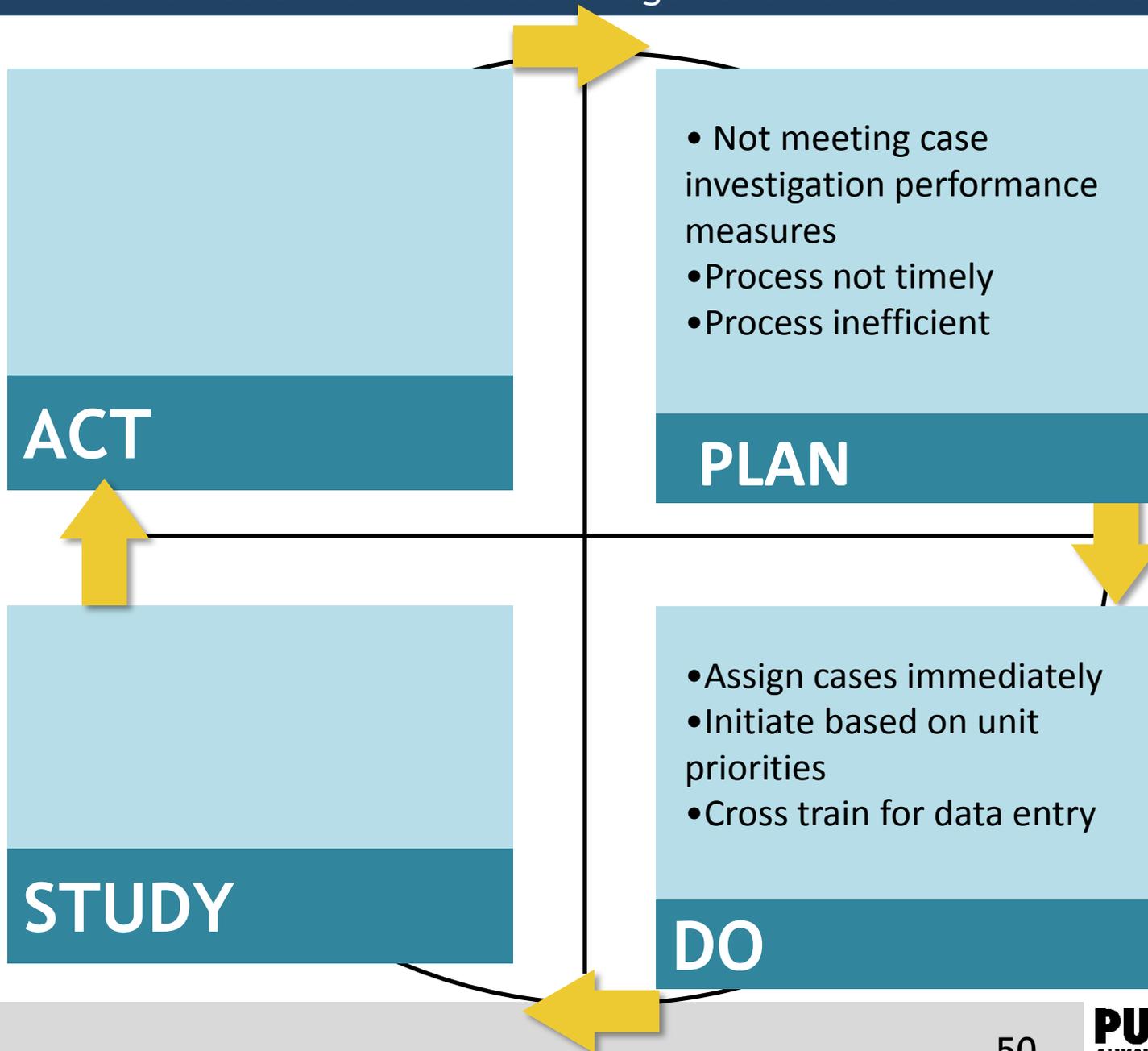


**LEGEND**

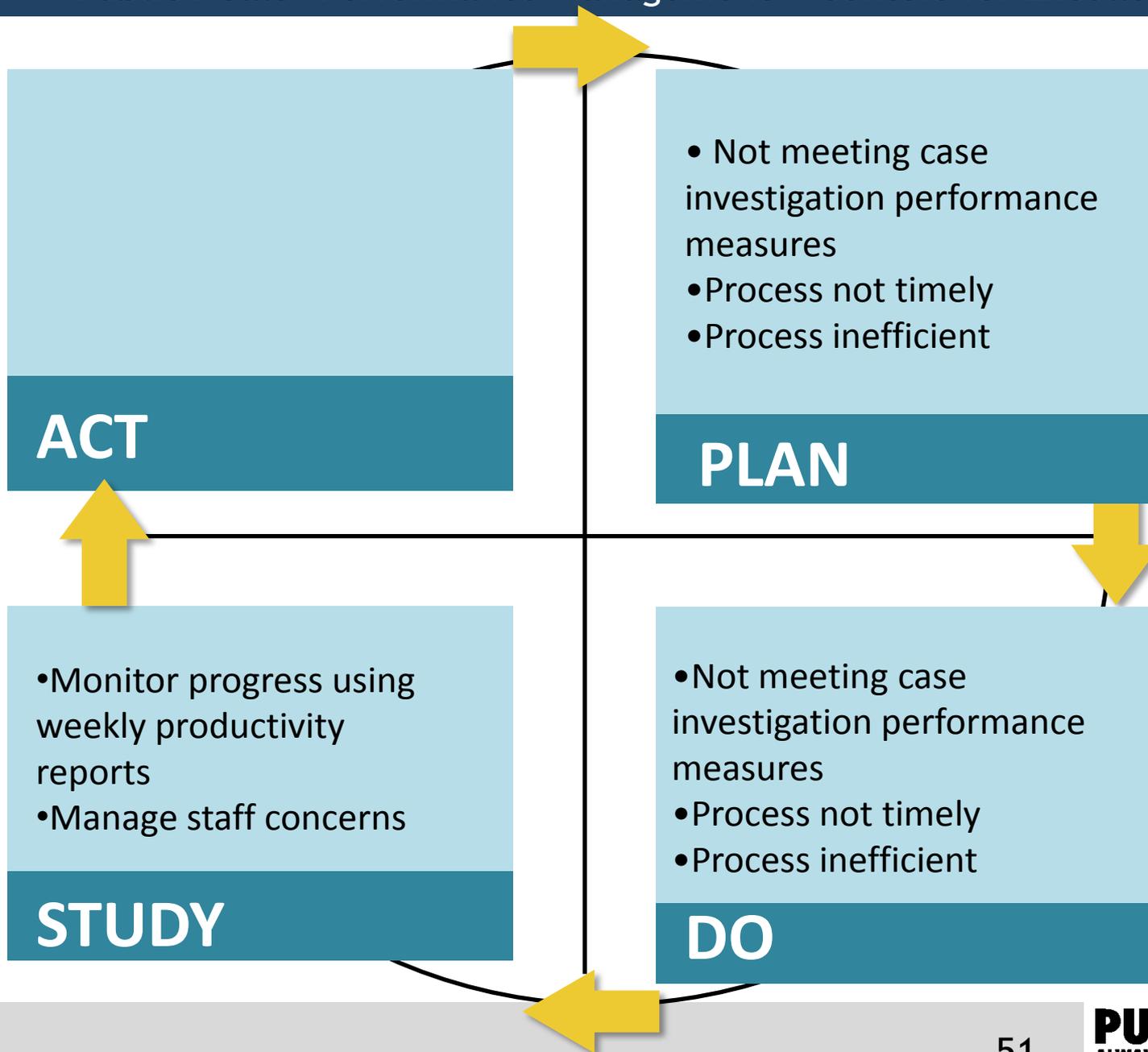
CASE INVESTIGATION PROCESS DETAILS  
 April 18th, 2011  
 Communicable Disease Prevention  
 FINAL

					i.e., enter notes, update notes, mark disposition verified		i.e., 3 <sup>rd</sup> Priority, Close case		Off page reference
--	--	--	--	--	--	--	--	--	--------------------

QI at the Program Level



QI at the Program Level



# Public Health Performance Management • Centers for Excellence

## Weekly Productively Report

NUMBER OF DAYS TO REPORT

14.8

DerivedDXDate, CaseEnteredDate

NUMBER OF DAYS TO INPUT DATA

0.3

CaseEnteredDate, CreatedDate

CASE REPORT MISSING INFO (CRMI)

9

25%

CASE REPORT NEEDED (CRN)

18

50%

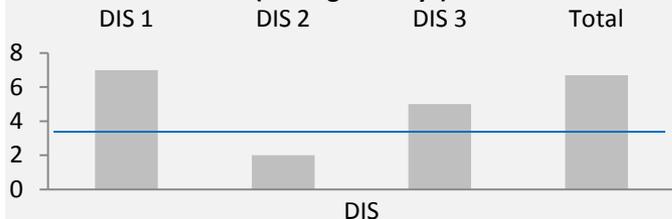
CompletedBy

PERCENT OF INCOMPLETE REPORTING

75%

### First Contact Attempt

(Average In Days)



NUMBER OF DAYS TO INITIATE IX

6.7

CreatedDate, FirstContactAttemptDate

AVERAGE BY DIS

DIS 1

7

DIS 2

2

DIS 3

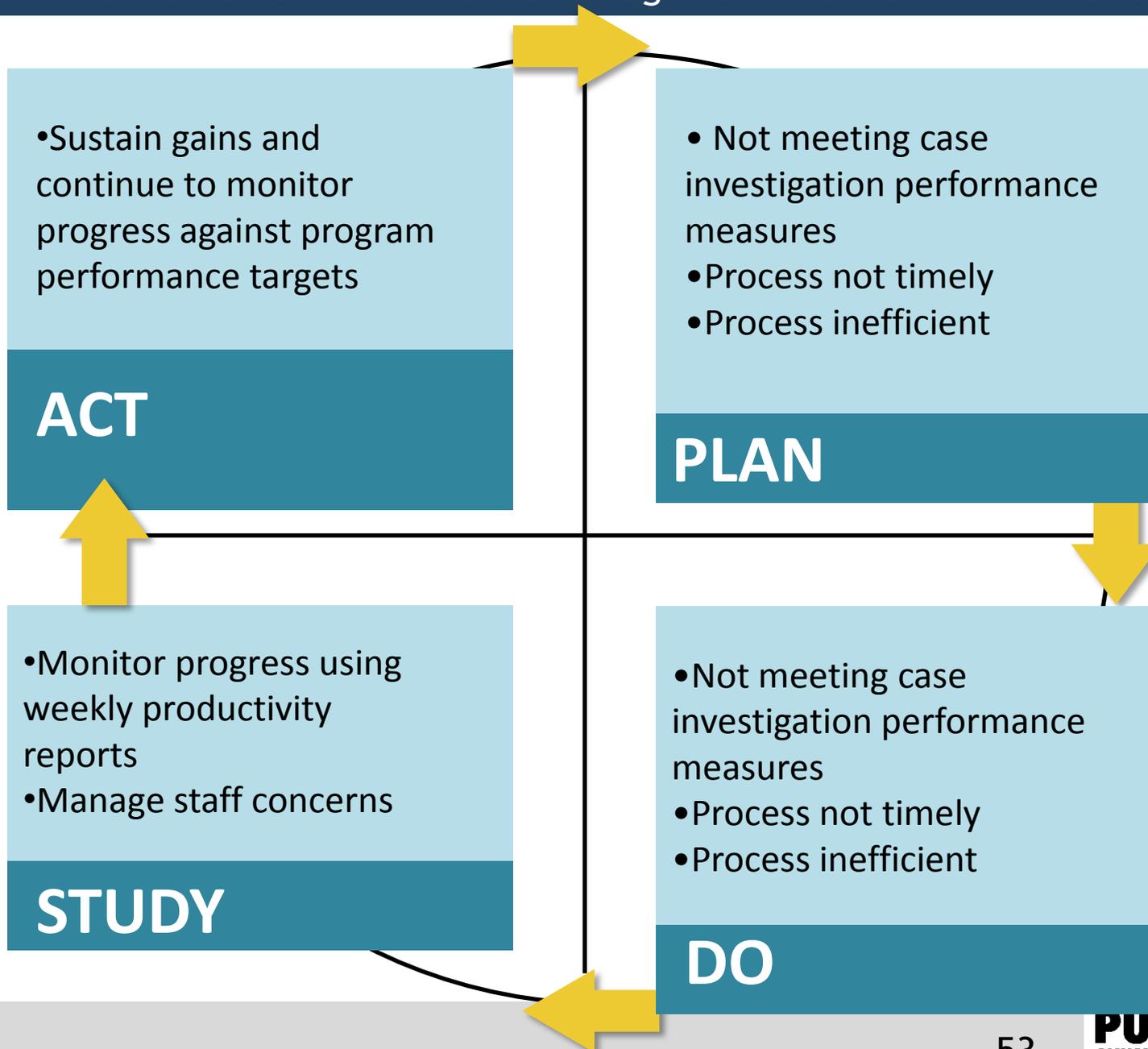
5

Total

7

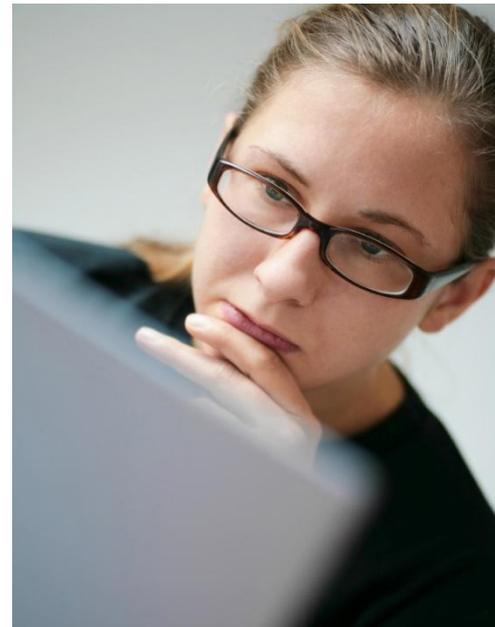
CASE INVESTIGATION (CT/GC Only)	# ASSIGNED	% OF ASSIGNED	# INTERVIEW		# ATTEMPTS
			S	% OF TOTAL IX	
WorkerName	CreatedDate		Interview Date		FirstContactAttemptDate
DIS 1	12	55%	19	41%	25
DIS 2	4	18%	1	2%	1
DIS 3	6	27%	3	7%	2
TOTAL	0	0%	23	50%	0
UNASSIGNED		14			
TOTAL		22	46	100%	28
PERCENTAGE OF CASES		61%			

QI at the Program Level



# Don't Have a Logic Model?

- Assess for QI
  - Organizational goals
  - Customer needs
  - Current performance



# Organizational Goals

- Direction from senior management
- Regulatory



# Customer Needs

- Customer Needs - why?
  - Delighted vs. Neutral vs. Negative experiences
  - Let's strive for the “WOW” factor, to increase:
    - Positive word of mouth
    - Support for tax allocations
    - Toleration of fees
    - Extension of grants
- Customer Needs Assessment

# Current Performance

- Which indicators “drive” other indicators?
- Which of your program measures/indicators are most important to unit/agency strategic directions?
- Are some program measures/indicators more important than others?

# Analysis Tools

- **Flow Chart:** Helps document current process flow and I.D. potential gaps, flaws, delays, uncertainties
- **Cause & Effect Diagram:** Helps conceptualize and sort possible contributors/causes
- **Pareto Diagram:** Data tool used to determine major contributors to a “defect” problem (pie charts can work, too)
- **Histogram:** Data tool useful for identifying variation in “cycle time” or other continuous variables (rates, volume, etc.)
- **Line/trend chart:** Data tool useful in identifying patterns of variation over time (also your key Evaluation/Control data tool)
- **Scatter Plot:** Data tool useful for finding associations between two continuous variables
- **Box & Whisker Plot:** Data tool useful for identifying variation for continuous variables, especially when sample size is small and/or you want to compare multiple samples side by side

# QI Analysis Tools



A Lot

## When will I use them?



A little

	Assess	Define	Analyze (early)	Analyze (late)	Change	Evaluate
Flow Charting		✓	✓	✓	✓	✓
Stratification	✓		✓	✓		✓
Pareto Diagrams	✓		✓	✓		✓
Histograms	✓		✓	✓		✓
Box Plots			✓	✓		✓
Scatter Plots				✓		
Trend Charts	✓		✓	✓		✓
C.E.D.s			✓	✓		✓

*Of all changes  
observed,  
about 5% were  
improvements.*

*The rest were illusions  
of progress.*

- W. Edwards Deming



# Use Your Chat Box!

We've touched on many topics, which of the following is your most important training need?

- A. Big QI
- B. 6-Step Program Evaluation Framework
- C. Logic Models
- D. QI Principles and Methods
- E. Specific QI tools (flow chart, pareto, fishbone)
- F. Change management
- G. Customer service
- H. Other
- I. I've had enough, you big silly.

# Acknowledgments

- Marni Mason, MarMason Consulting, LLC
- Scott Davis, Tacoma-Pierce County Health Department
- Lyndia Tye, Spokane Regional Health District
- Communicable Disease Prevention (STD) Program, Spokane Regional Health District

# References

- U.S. Department of Health and Human Services. Centers for Disease Control and Prevention. Office of the Director, Office of Strategy and Innovation. Introduction to Program Evaluation for Public Health Programs: A self-study guide. Atlanta, GA: Center for Disease Control and Prevention, 2005.
- Bill Riley and Russell Brewer, Review and Analysis of QI Techniques in Police Departments, JPHMP Mar/April 2009.
- Defining Quality Improvement in Public Health. *Journal of Public Health Management and Practice*, 2010, 16(1), 5-7.
- <http://www.cdc.gov/eval/framework/index.htm>
- <http://www.wkkf.org/knowledge-center/resources/2010/W-K-Kellogg-Foundation-Evaluation-Handbook.aspx>
- <http://www.doh.wa.gov/PHIP/perfmgtcenters/modules/past.htm>