

Quality Improvement Workshop: Tools to Identify Root Causes of Public Health Problems

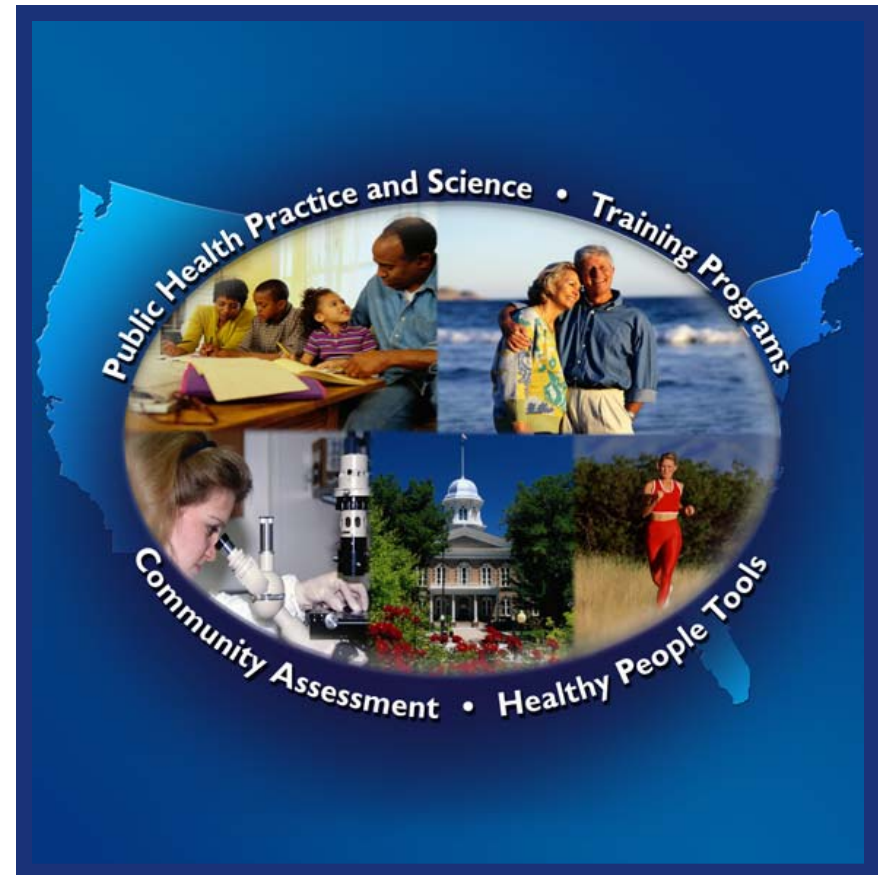
***APHA Session 4008.0
Tuesday, November 06, 2007
8:30 AM-10:00 AM
Renaissance, Meeting Room 15***

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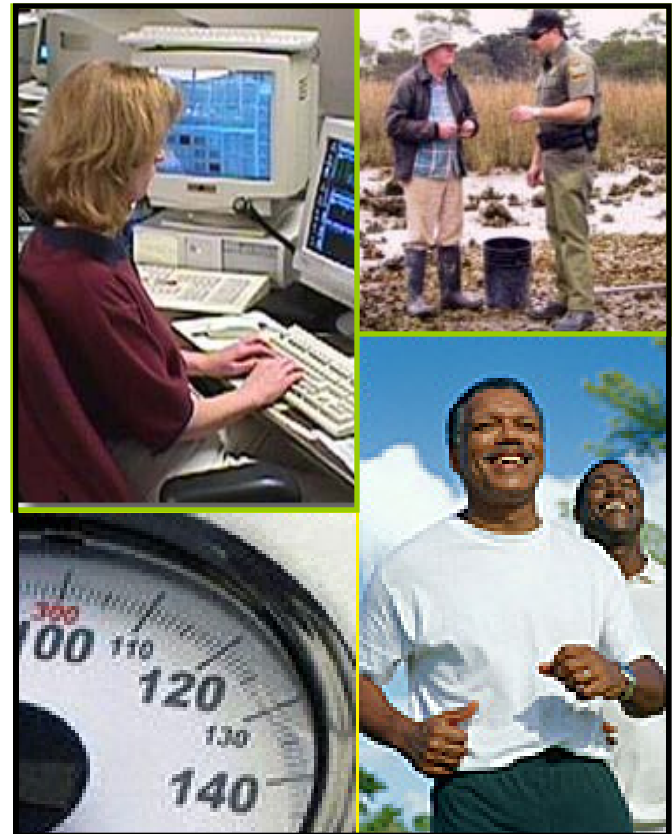
PHF Mission:

Improving public health infrastructure and performance through innovative solutions and measurable results.



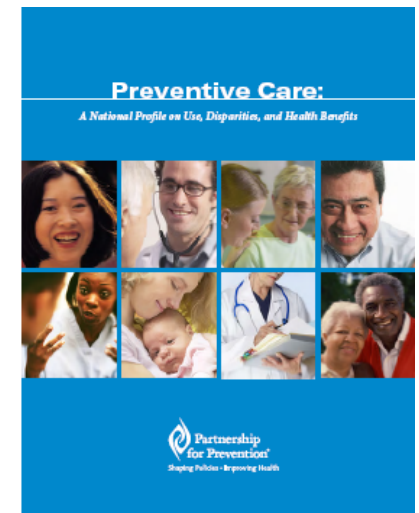
Why Quality Improvement? Why Now?

- New ways to solve complex problems
- Getting the most value from accreditation
- Show measurable results for what we do



Why Quality Improvement? Why Now?

- Successes in healthcare and other industries
- Bold prevention and health goals for Americans
- Opportunities to save lives & deliver better results



What basic model has helped thousands of teams and organizations solve health problems?

Quality Concepts and Tools



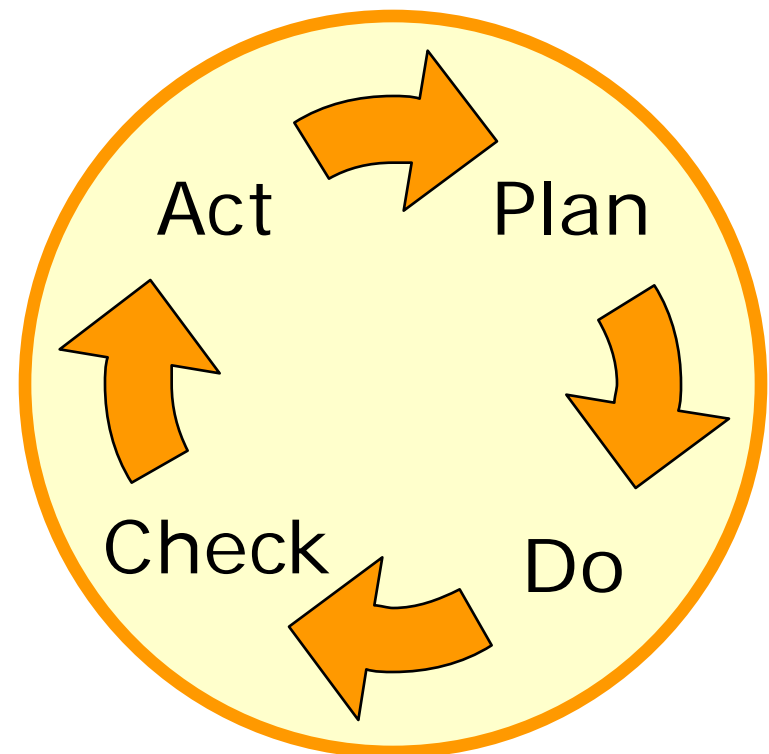
Plan–Do–Check–Act

Plan Plan changes aimed at improvement, matched to **root causes**

Do Carry out changes; try first on small scale

Check See if you get the desired results

Act Make changes based on what you learned; spread success



Also called Plan-Do-Study-Act (PDSA), PDCA, PDCA Cycles, or Shewhart Cycles

Getting to the Heart of Tough Problems



Why pause to examine “root causes” of public health performance or quality issues?

***Quality Improvement Application:
Reducing syphilis in Orange Co., FL***

***The causes of many
public health
problems may not be
what you think.***

***“Could Syphilis Be Linked
to Office Gossip?”***



Orange County Health Department
STD Quality Improvement Project Storyboard
(October 2005 – July 2006)

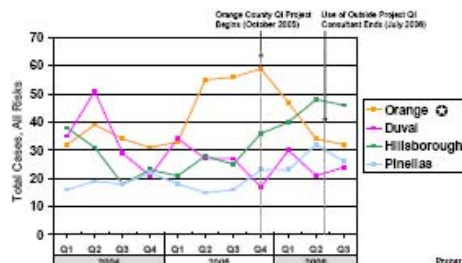
Table of Contents

The Situation

- Step 1: Describe the Problem
- Step 2: Describe the Current Process
- Step 3: Identify the Root Cause(s) of the Problem
- Step 4: Develop Solution and Action Plan
- Step 5: Implement the Solution
- Step 6: Review and Evaluate the Results of the Change
- Step 7: Reflect and Act on Learnings

Snapshot results of this quality improvement project:

Total Reported Early Syphilis Cases by Quarter, 2004-2006:
Orange County Compared to Peer Counties² in Florida



Source: Florida Department of Health, STD/AIDS System. 2005 data for all counties provided as of 10/1/2005. The county comparison is based on County Health Status Indicator (CHSI) Project, 10/04-2005. See our presentation at the 2005 and 2006 events. CHSI data is available at <http://www.flhealth.com/press/and/401/comparisons.htm>

Prepared by
PHF
Public Health Foundation

The storyboard handout shows the STD QI team's methods & results

Also available at:
<http://www.phf.org/infrastructure/OCHDstoryboard.pdf>

What underpinned the team's ability to control syphilis in their community?

- Workforce Turnover
- Process Breakdowns
- Many things they could control or influence



STD Team Results

- **Syphilis declined more than 25% in 2006**
- **Improved and controlled processes underpinning the team's effectiveness**
 - Achieved 100% conformance for field blood draw standards in two consecutive months
 - Increased and maintained a cluster index above the CDC standard (1.0) for four consecutive quarters
- **Stopped DIS staff turnover (a root cause)**
 - Achieved zero employee turnover in the first half of 2006; 6 persons left the STD team in 2005
 - Achieved full staffing for first time in group memory
- **Improved morale and teamwork**

**Two Jurisdictions: Same Performance, Different Reasons
Low Score on “Essential Public Health Service 10”
(Research for New Insights and Solutions to Health Problems)**

	Jurisdiction A	Jurisdiction B
Reasons for Low Score	<ul style="list-style-type: none"> • No university or research institution nearby • Don't know how to link with research institutions, despite leadership interest • Little or no funding in budgets for research 	<ul style="list-style-type: none"> • No leadership support for research with local universities • No incentives for organizations or staff to identify innovations • No feedback from management to recognize staff research

Source: NPHPSP *Users' Guide*, 2006

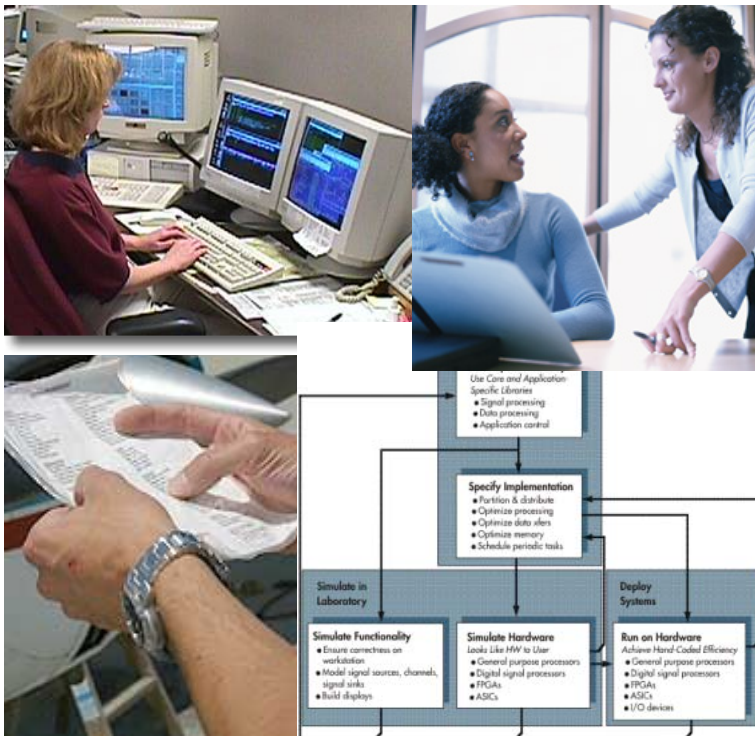
**Two Jurisdictions: Same Performance, Different Reasons
Low Score on “Essential Public Health Service 10”
(Research for New Insights and Solutions to Health Problems)**

	Jurisdiction A	Jurisdiction B
Potential Improvement Actions	<ul style="list-style-type: none"> • Identify out-of-town research partners • Access sample academic-practice linkage agreements • Try building 5% research time into two large programs, plus seek in-kind student/ faculty assistance 	<ul style="list-style-type: none"> • Meet with leaders to show benefits to local priorities • Recognition and grant incentives for innovative solutions • Prompt manager feedback on contributions via employee reviews

Source: NPHPSP *Users' Guide*, 2006

Successful Improvement Efforts Analyze and Address “Root Causes”

Why can't we make progress on _____?

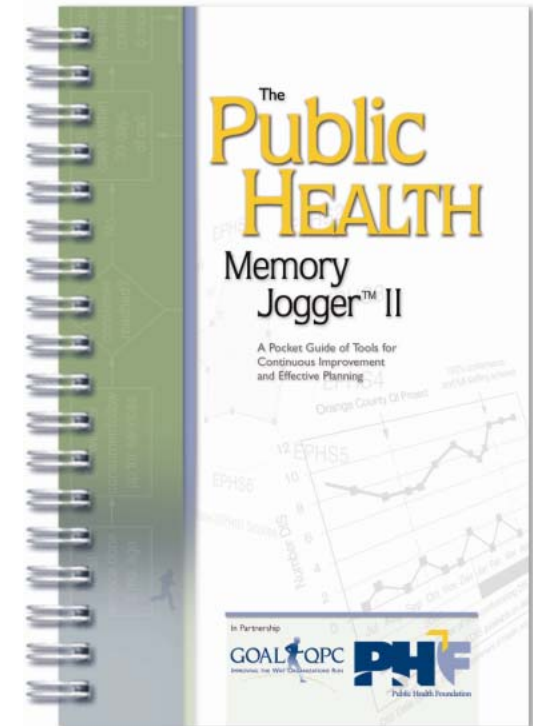


Is it because of:

- **Methods / procedures**
- **Motivation / incentives**
- **Materials / equipment**
- **People (personnel, partners, providers, or patients)**
- **Information / feedback**
- **Environment**
- **Policy**

Some QI Tools to Help Teams Define Problems & Analyze Root Causes

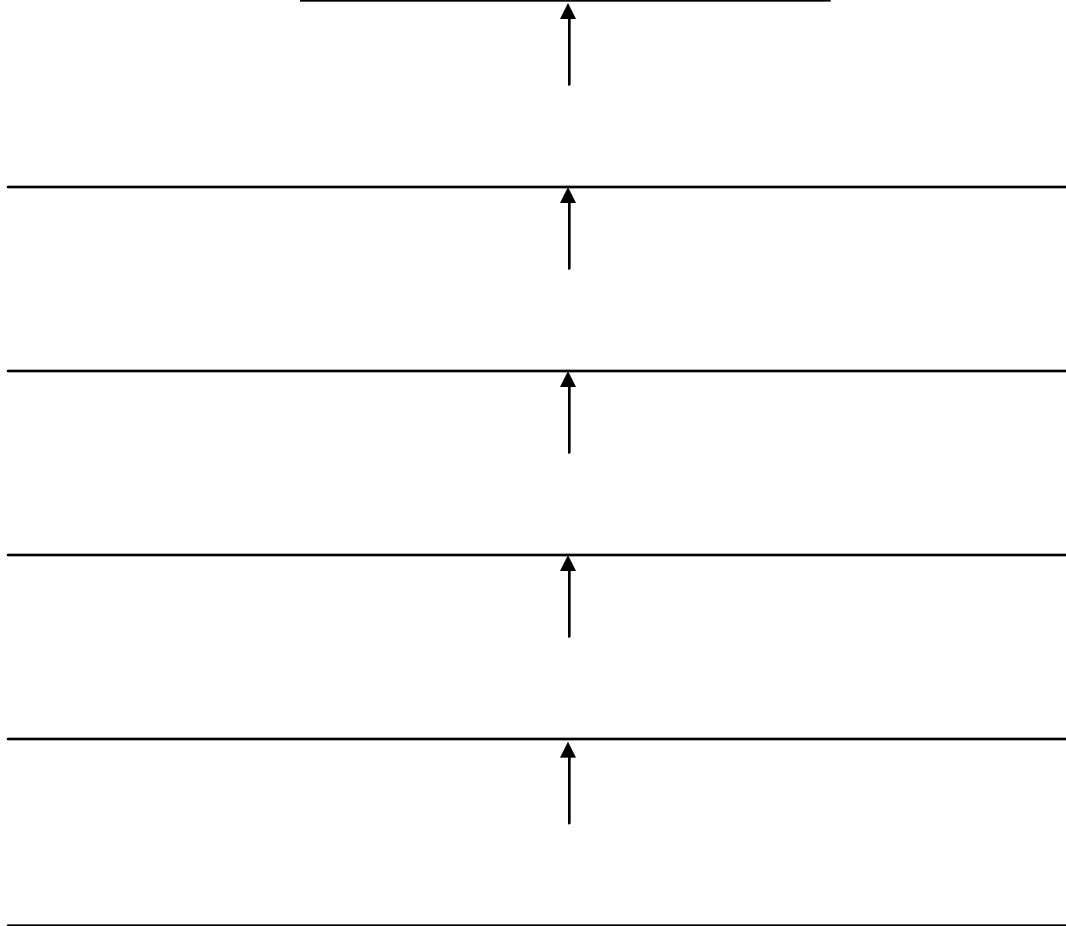
See page numbers in



5 Why's



Problem (Effect)



Why?

Why?

Why?

Why?

Why?

5 Why's

Half of my new shrubs die

Problem (Effect)

I didn't water them

Why?

Too much hassle

Why?

Hose is hard to use

Why?

Too far from new plants

Why?

Only hose at back of house

Why?

5 Why's

Half of my new shrubs die

Problem (Effect)

I didn't water them

Why?

Not home before dark

Why?

Work too late

Why?

Lose track of time

Why?

Watering isn't in my Palm

Why?

5 WHYS – Try it yourself

Use Handout, side 1

Pick a Problem:

A. I usually do not complete everything I want to do each week

Problem (Effect)

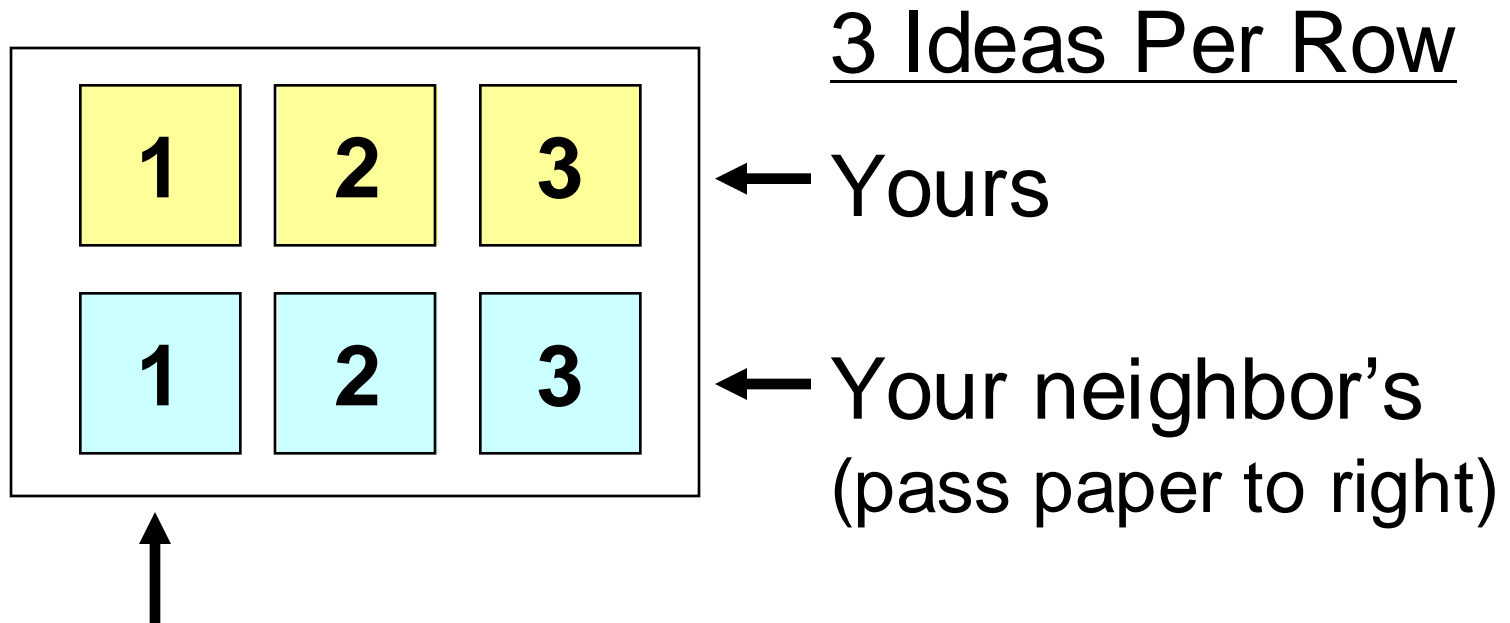
B. Our (team/unit/agency) has a high turnover compared to others

Problem (Effect)

Quality Tools Help Organize Ideas on Problems and their Causes

**3 steps you can use on any problem—
even complex public health problems**

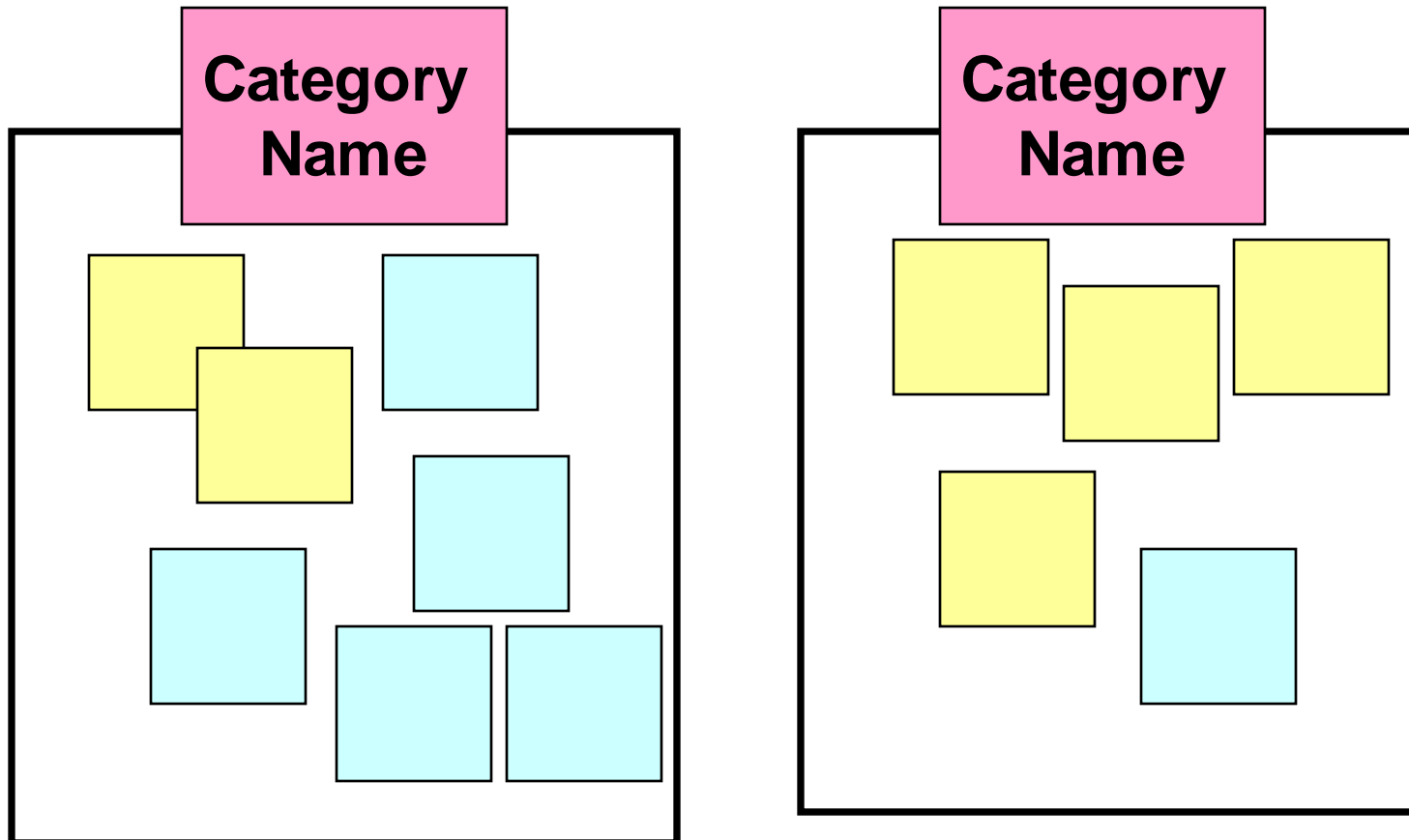
1 *Generate Ideas About Causes (Brainwriting or 6-3-5 Method)*



- Build on their idea (Dig deeper – *What causes that?*)
- Let it trigger a related idea
- Start a new idea

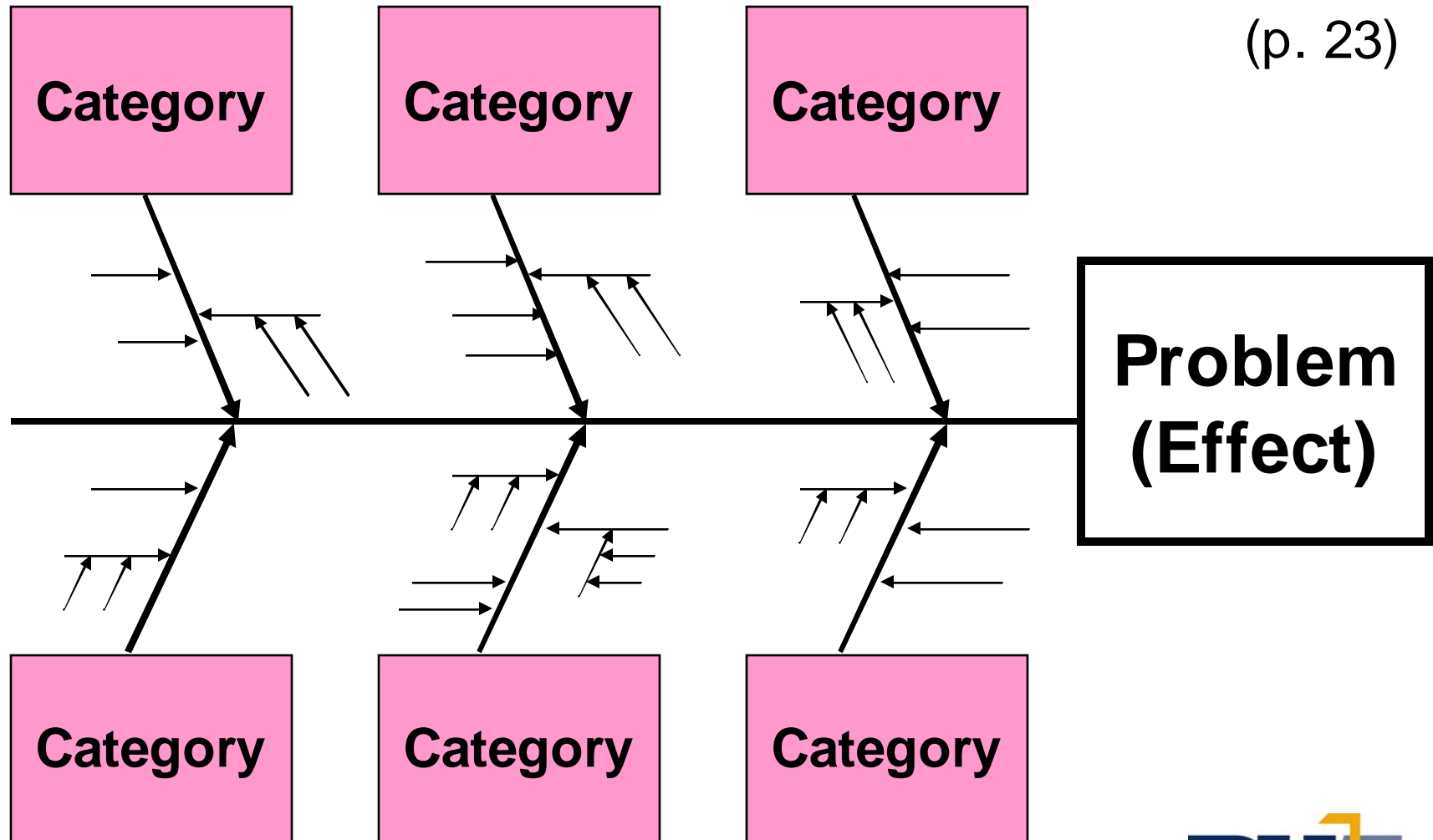
(p. 21)

2 *Group Ideas into Categories* *(Affinity Diagram)*

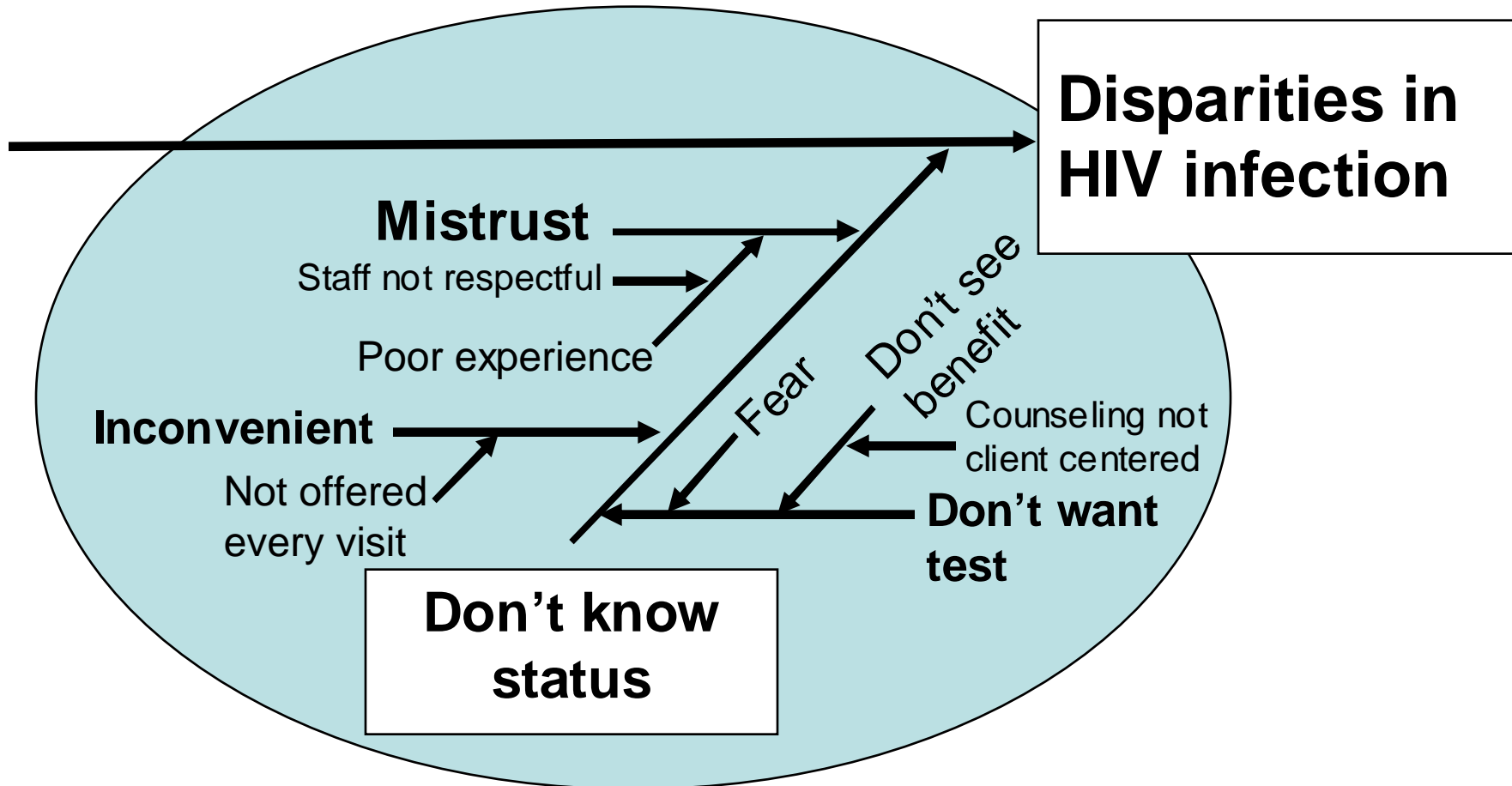


3 *Diagram Relationships* (Cause & Effect or “Fishbone” Diagram)

(p. 23)



Close-up on one “bone”



Tip! Successful improvement efforts involve the right team



Involve people who...

- Understand the issue
- See the problem from different perspectives
- Experience the problem first-hand
- Are skilled in QI methods
- Will influence success

Group Practice Exercise

Choose ONE of these problems:

- 1. WIC clinic clients often do not keep their appointments**
- 2. Too many high school students are overweight**
- 3: Not enough older adults receive their annual influenza vaccination**

Why do we have this problem? Use the tools to drill into potential causes – not solutions!



Results & Tips

- Causes identified?
- Useful?
- Surprises?



Use caution with “causes” that begin:

- “No _____”
- “Lack of _____”

- What would be the next steps?

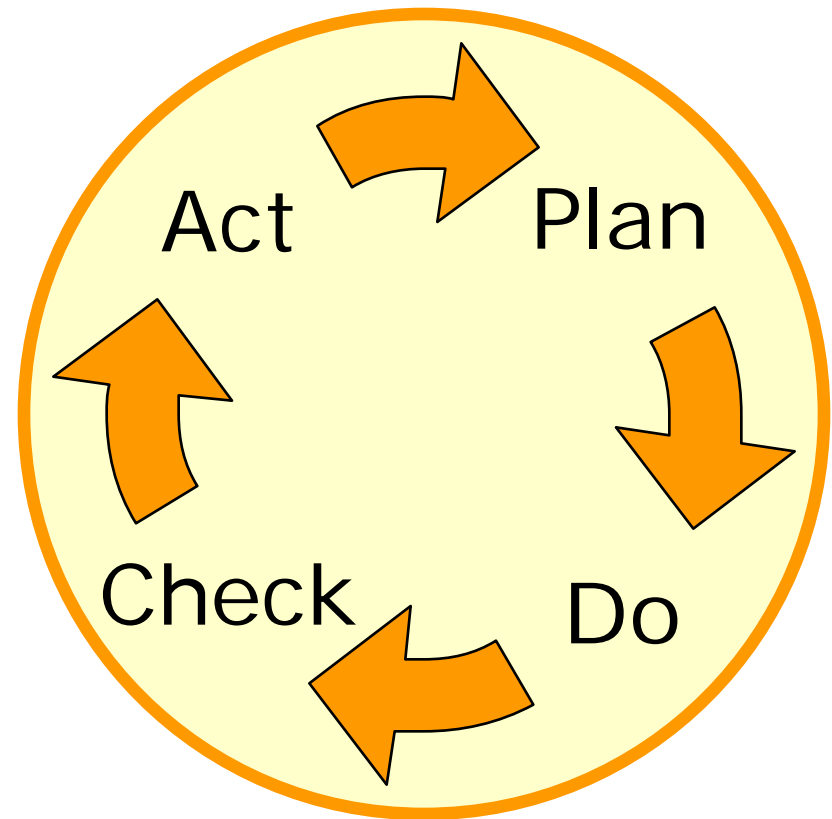
Plan–Do–Check–Act

Plan Plan changes aimed at improvement, matched to root causes

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Next Step (“Plan”): Agree on root cause(s) to address first

Check assumptions about what causes the most—or the most serious—problems

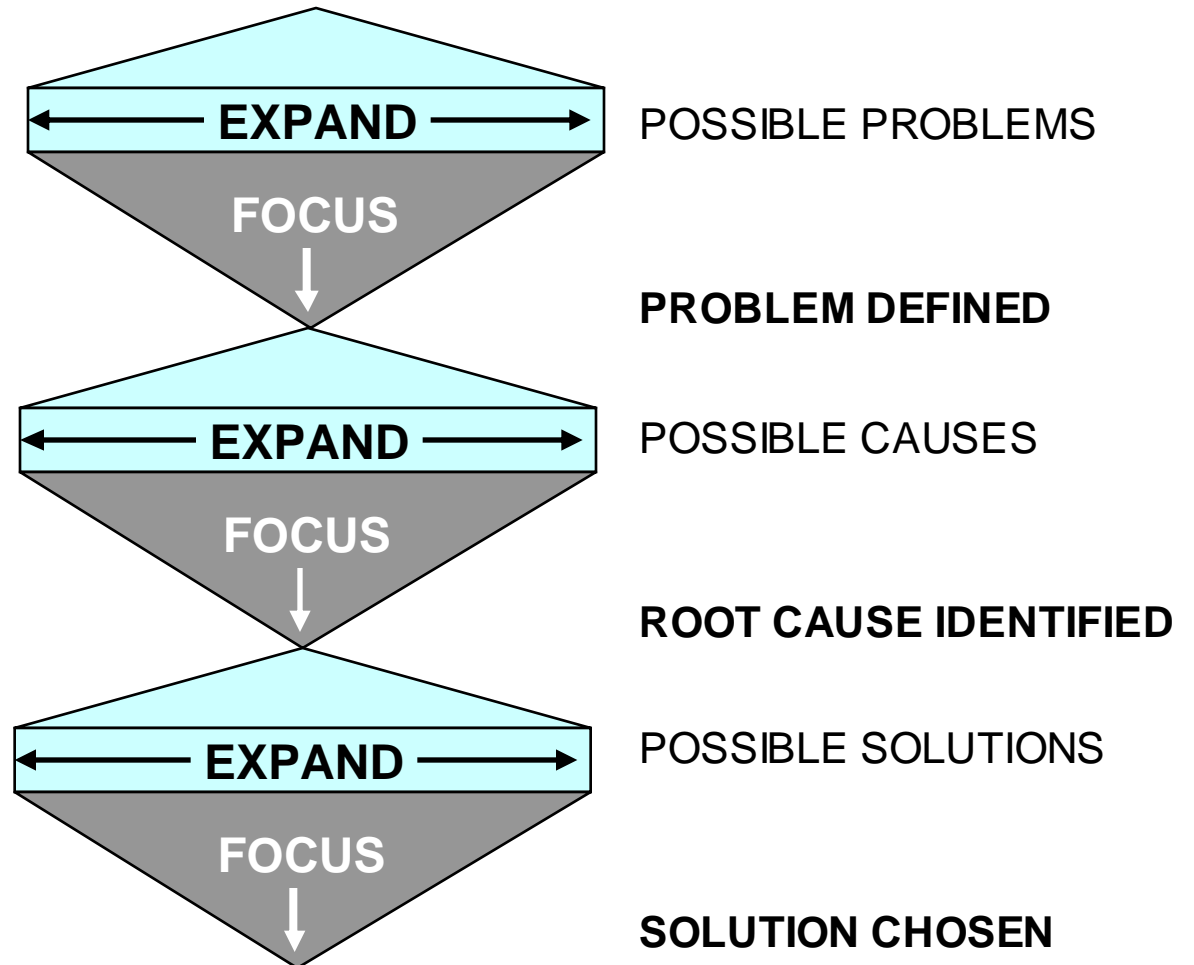
- Ask those who know best to rate
- Use logic to identify the most likely drivers
- Use available data to test hypotheses
- Invest in data collection over a short period

Quality tools address next steps in P-D-C-A.
See “PS/PI Model” p. 149 in Jogger.



Choosing the Right Tool

- Do we need to **Expand** or **Focus** our thinking?
- Are we working with ideas or numbers?
- What will be the easiest tool that will do the job?



“Expand-Focus Sequence,” p. 3,
Nancy R. Tague, *The Quality
Toolbox, 2nd Edition. 2005.*
(American Society for Quality,
Quality Press, 2005)



**“When you
come to a
fork in the
road, take it.”**

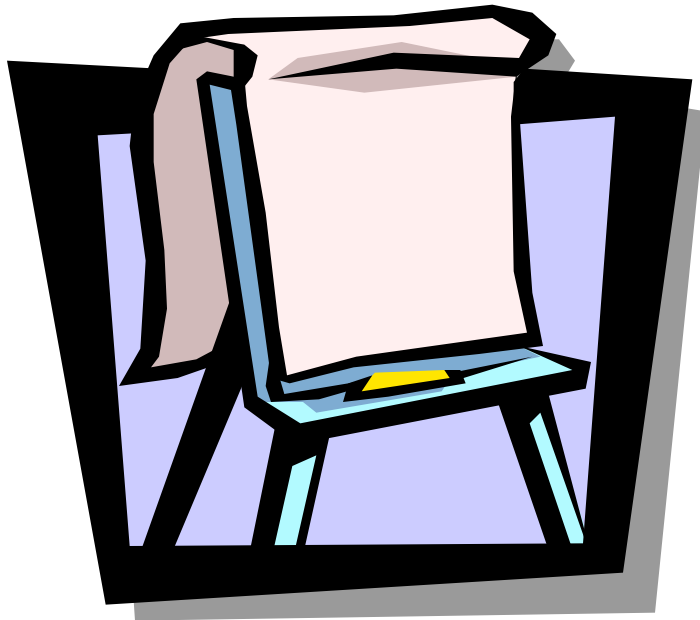
—Yogi Berra

Review

- “Press pause” before attempting to fix
- Define the problem & causes
- Take a system view
- Why? Why? Why?...
- Engage diverse perspectives
- Go for highest impact



Your Thoughts



Did this seem:

- Valuable?
- Doable?
- Any fun?

Public Health Infrastructure Resource Center (PHF)

<http://www.phf.org/infrastructure/performance>

- QI tools and methods from industry, healthcare, and public health
- QI case examples
- Supplements to the *Public Health Memory Jogger II*TM
- Links to evidence
- Getting Started Guide with 5 minute tutorial

The screenshot shows the website's navigation menu with categories like 'General Resources', 'Making the Case', 'Assessments', 'Learning Resources', 'What's New', 'Workforce Capacity', 'Information Systems', 'Systems Capacity', 'Special Topics: Preparedness', and 'Performance Management'. The 'Getting Started' section includes a paragraph about focusing on results, the PHF logo with the tagline 'Innovative Solutions. Measurable Results.', and a list of actions: Learn, Generate, Use, Manage, and Sustain. A table below provides a structured approach to starting performance management.

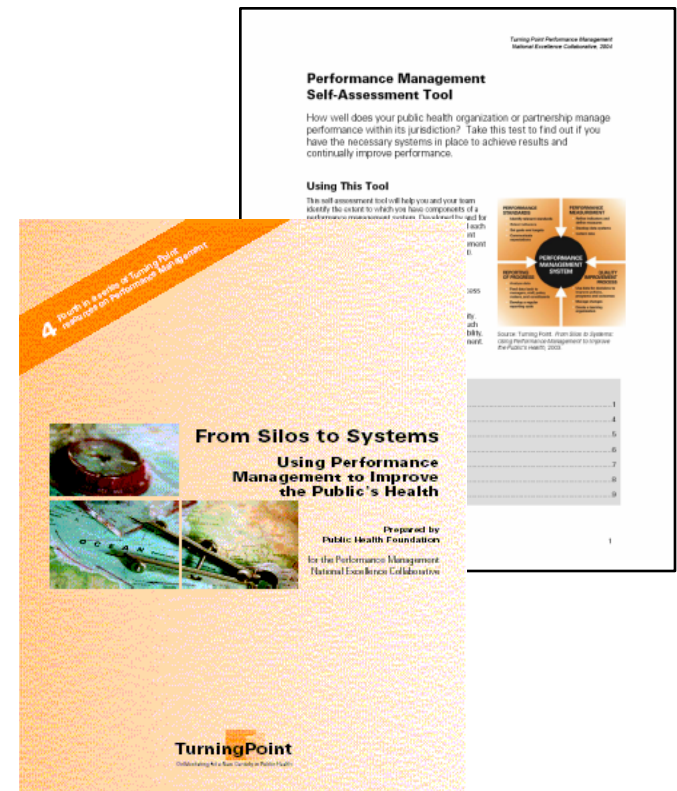
If your goal is to...	To start, you can...	Here's how:
1. Learn more about performance management or QI techniques.	<ul style="list-style-type: none">• Create on-site learning opportunities for you or your staff• Get involved in professional associations and networks devoted to quality, where you can learn from other organizations	<ul style="list-style-type: none">• Convene "lunch and learn" or team meetings to discuss a performance management DVD or a case example• Request a PHF seminar• Attend QI or performance

Performance Management Resources

from Turning Point & the Public Health Foundation

Puts QI in the larger context of managing performance across all public health activities

- Guidebooks for public health
- Self-assessment tool
- 30-min. training DVD
- Performance management case stories, examples, and documents



www.phf.org

THANK YOU

Questions? Comments?

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