Performance Improvement in Public Health

Los Angeles County
Department of Public Health
Division of Quality Improvement

Presentation Objectives

- Review the DPH approach to Quality Improvement (QI) and Performance Improvement (PI)
- Describe the goals and activities of the department-wide PI Team
- Discuss current DPH PI efforts

DPH Quality Improvement Division

- Includes—
  - **Office of the Medical Director**
    (Quality Improvement) → Quality Improvement Functions
    1. Performance Improvement
    2. Professional Practice
    3. Science Review
    4. Service Quality (deferred)
  - Organizational Development and Training
  - Nursing Administration
  - Health Education Administration
  - Public Health Investigation
  - Physician Administration
  - Oral Health

What is Performance Improvement?

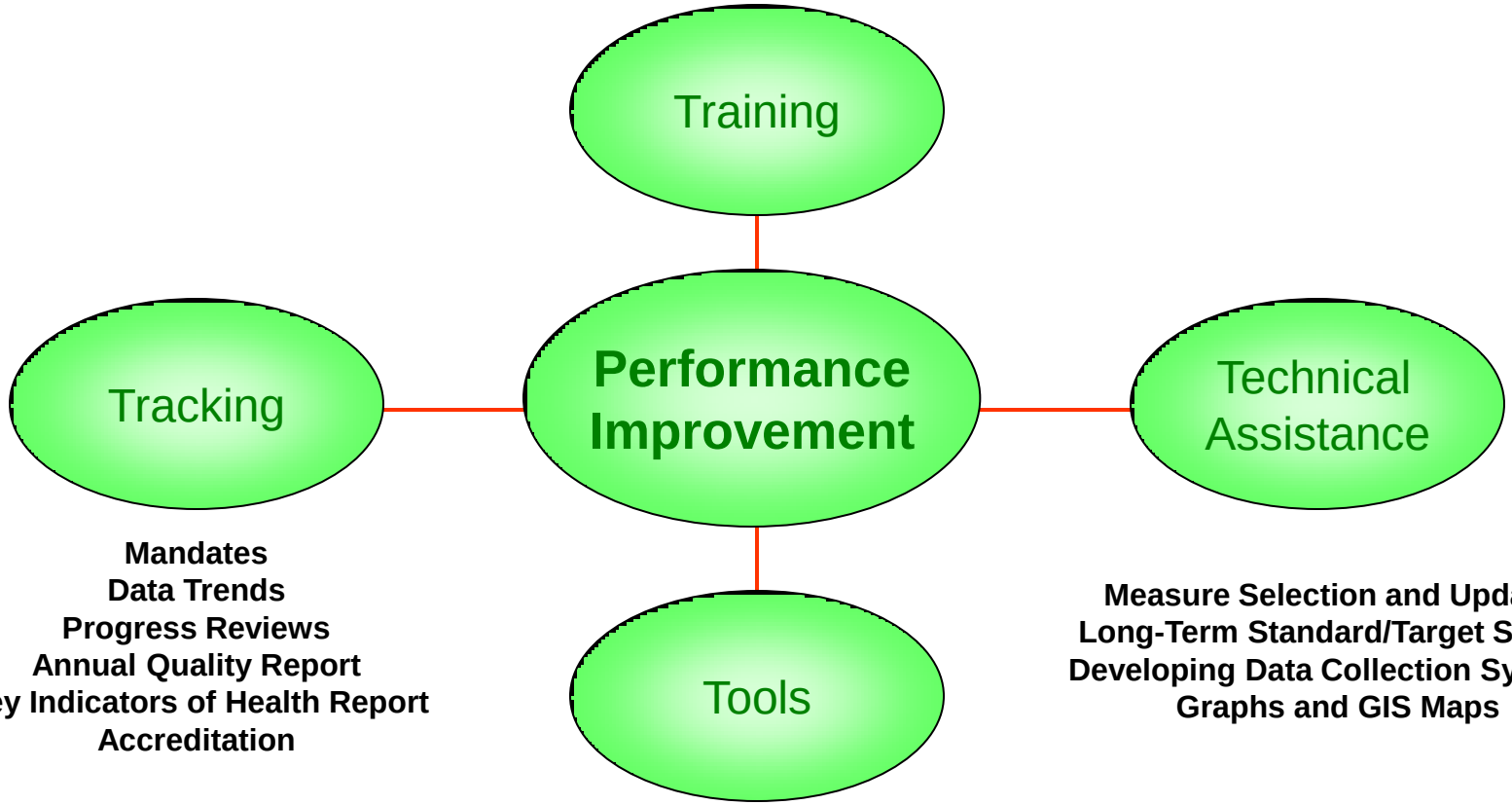
Performance Improvement is a continuous process where information and data from an agreed upon set of performance goals and measures are reviewed to:

1. Inform managers on the effectiveness of current efforts
2. Report on successes in meeting program goals
3. Prioritize department resources

The “4 Ts” of QI/PI

- Training
- Technical Assistance
- Tools
- Tracking

Overview of Performance Improvement (general concepts)
Planning for and Measuring Performance
The 4-Step Model for Improvement
Using Logic Models and Process Maps
Preparing for Public Health Department Accreditation



Mandates
Data Trends
Progress Reviews
Annual Quality Report
Key Indicators of Health Report
Accreditation

Measure Selection and Updates
Long-Term Standard/Target Setting
Developing Data Collection Systems
Graphs and GIS Maps

Plan-Do-Study-Act (PDSA) Model
Results Accountability Principles (modified for Public Health)
Structure-Process-Outcome Approach
Healthy People 2010/2020
Action Plan Development

Performance Improvement Team

Performance Improvement Team: Overall Goal

- Create PI processes and tools that:
  - ↑ awareness of the link between key strategies and related outcomes
  - Improve department management and business decisions
  - ↑ accountability to internal and external partners

Performance Improvement Team: 2010 Goals

- Adopt a department-wide approach to performance improvement that is integrated with the DPH Strategic Plan and track progress
- Assess data sharing capacity between programs and plan for a centralized reporting system
- Create educational workshops for performance improvement training needs across the department

Tool #1
PDSA Model

Tool #2
Results Accountability

POPULATION INDICATORS
(measures of population-level health outcomes)

AND

PERFORMANCE MEASURES
(measures of program effort and output)

Public Health Measures

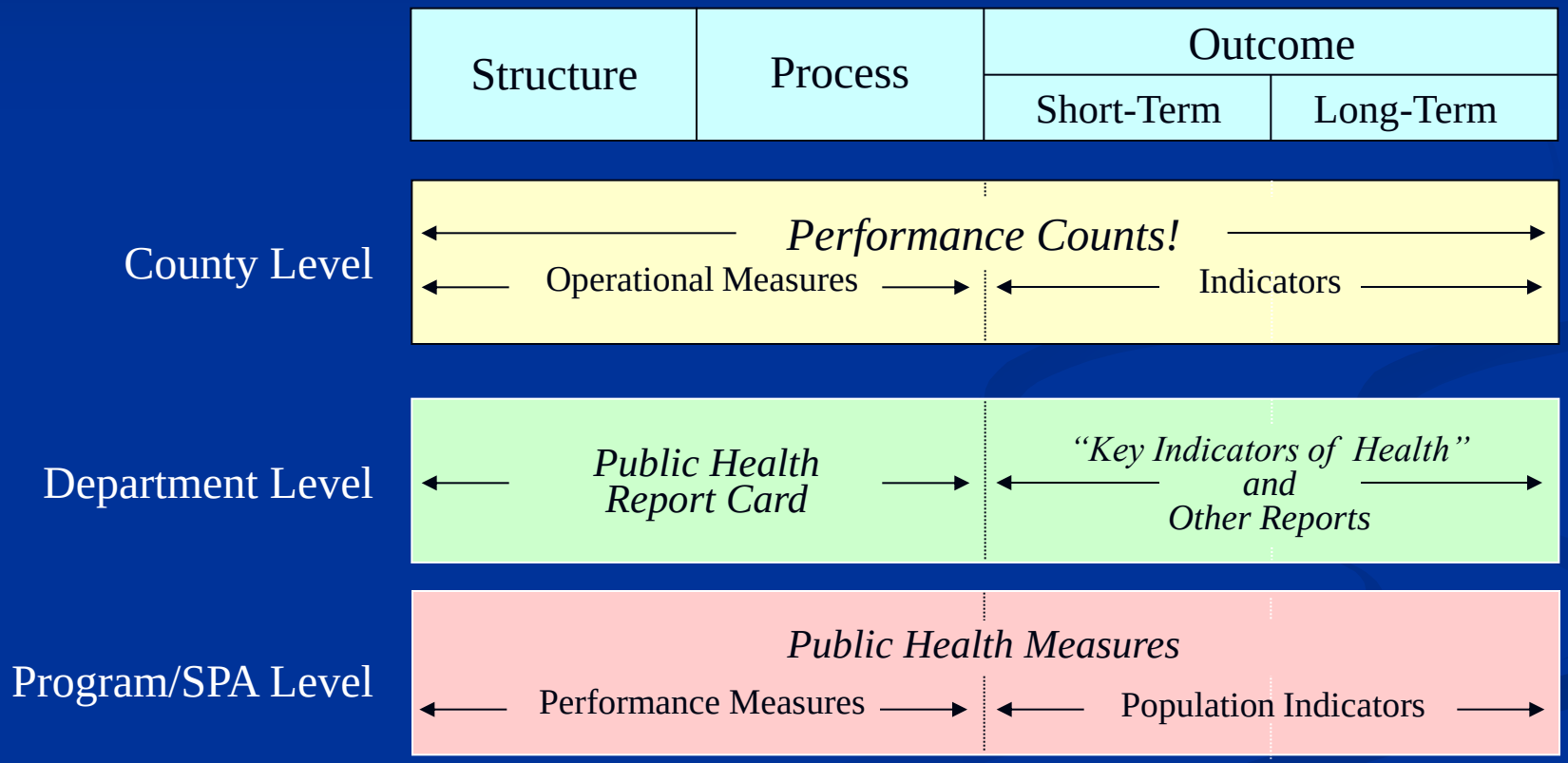
Tool #3
Structure-Process-Outcome

- Structure – "Conditions" under which public health services are provided to include material resources, human resources, and organizational characteristics
- Process – "Activities" that constitute and support the delivery of public health services
- Outcome – "Changes" (desirable or undesirable) in individuals and populations that result from the delivery of public health services

Adapted from: Avedis Donabedian. *An introduction to quality assurance in health care.* Oxford University Press, 2003: pp. 46-47.

DPH Performance Improvement Efforts

Multiple DPH Performance Improvement Efforts



Integration of Efforts

- National Efforts

1. Healthy People 2010/2020
2. Accreditation of LHD
3. CDC Guidelines or Performance Measures

- State Efforts

1. Performance Measures
2. Mandates and Regulations

- County Efforts

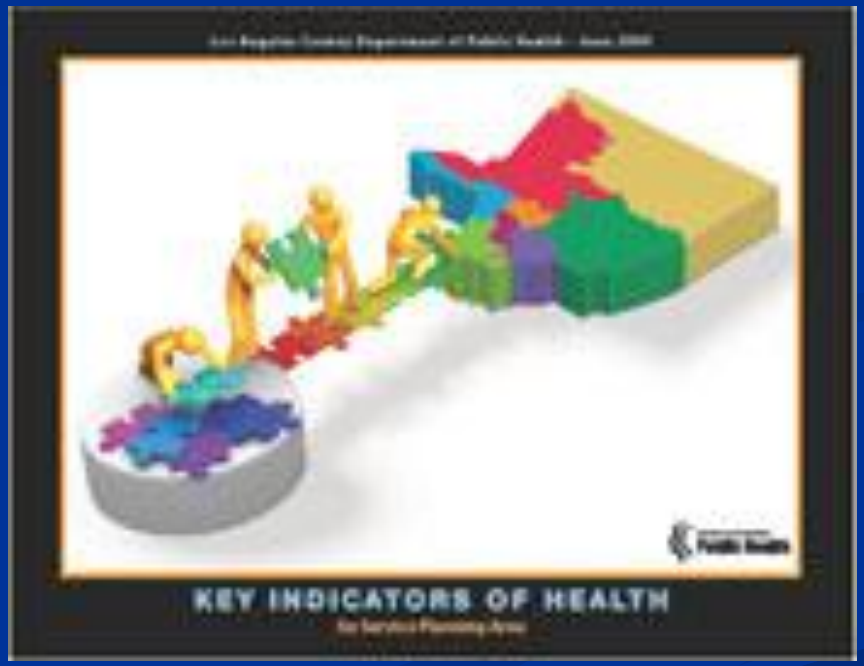
1. Performance Counts!
2. County Progress Report

- Department Efforts

1. Public Health Measures
2. Public Health Report Card

PI—Key Indicators of Health Report

- Report is based on results from several surveys that provide local-level data
- Healthy People 2010 targets are used as the comparison or "Standard" value to achieve
- Shows results by geographic and demographic criteria



	HP 2010	National	LA County	Antelope Valley SPA1	San Fernando SPA2	San Gabriel SPA3	Metro SPA4	West SPA5	South SPA6	East SPA7	South Bay SPA8
Overweight and Obesity											
• Percent of children in grades 5, 7, & 9 who are obese (BMI above the 95th Percentile) [10]	5.0	N/A	22.9	21.1	20.4	20.9	26.0	16.6	28.9	26.0	21.3
• Percent of adults who are overweight (25.0 ≤ BMI < 30.0) [2]	N/A	35.3[NA]	35.9	35.8	38.8	32.4	31.6	32.8	38.0	39.4	36.8
• Percent of adults who are obese (BMI ≥ 30.0) [2]	N/A	26.2[NA]	22.2	28.0	17.1	22.2	20.4	10.0	35.4	26.6	24.4
Diabetes											
• Percent of adults ever diagnosed with diabetes [2]	2.5	7.8[NA]	8.7	8.7	7.0	8.2	9.5	4.8	12.3	11.0	8.8
• Diabetes death rate (age-adjusted per 100,000 population) [11]	N/A	24.6	24.7	43.5	20.0	22.5	22.7	12.8	37.9	32.8	24.6
Cardiovascular Disease											
• Percent of adults ever diagnosed with hypertension [2]	N/A	23.7[NA]	24.7	28.5	23.7	24.2	24.8	19.3	29.0	25.3	25.0
• Percent of adults ever diagnosed with high cholesterol [2]	N/A	37.6[B]	29.1	25.6	29.1	31.5	26.0	30.6	25.5	30.5	29.6
• Percent of adults ever diagnosed with a heart problem (i.e., coronary heart disease, angina, or had a heart attack) [2]	N/A	4.1[B]	7.7	10.1	7.4	7.9	7.5	5.8	7.6	7.5	9.0
• Coronary heart disease death rate (age-adjusted per 100,000 population) [11]	162.0	153.9	167.6	205.2	172.3	152.6	153.4	132.6	217.6	164.0	172.5
• Stroke death rate (age-adjusted per 100,000 population) [11]	50.0	46.6	41.0	56.4	40.2	39.2	37.1	34.4	51.9	37.5	43.7
• Stroke death rate for African Americans (age-adjusted per 100,000 population) [11]	50.0	65.2	60.5	152.7	**	64.8	59.7	79.6	57.7	**	62.7
Reproductive Health											
• Rate of births (per 1,000 live births) to teens ages 15-19 years [6]	N/A	41.9[B2]	40.0	53.0	28.9	32.5	44.1	9.4	74.1	42.7	35.3
• Percent of low weight (<2,500 grams) births (per 100 live births) [6]	5.0	8.3[B2]	7.4	8.0	6.9	7.1	7.1	7.7	8.5	6.9	7.5
• Percent of low weight (<2,500 grams) African American births (per 100 live births) [6]	5.0	14.0[B2]	12.7	13.3	10.1	12.0	11.6	7.9	14.4	12.0	11.7
• Infant death rate (per 1,000 live births) [6]	4.5	6.9[B3]	4.9	7.5	4.1	4.7	4.7	3.9	5.4	4.7	5.0

PI—Public Health Report Card

County of Los Angeles **Public Health**

Report Card 2006-2007

Objective Area 1: Use of Data and Evidence to Improve Quality	2005-06 Result	2006-07 Result	2006-07 Benchmark	Long-Term Goal
1-1. Percent of programs that use population-based data to guide planning and monitoring activities.	98%	100%	100%	100%
1-2. Percent of programs with approved Public Health Measures				
a. Mission and Vision statements	100%	100%	100%	100%
b. Population goals and indicators	76%	100%	100%	100%
c. Performance goals and performance measures	74%	100%	100%	100%
1-3. Percent of programs using evidence-based interventions				
a. Program directors/management staff who have **ever** participated in evidence-based Public Health training	87%	76%	100%	100%
b. Programs with documentation of a systematic review of literature and prioritized effective interventions	87%	100%	100%	100%
c. Programs with documentation that current interventions and practices are based upon the best available evidence	82%	100%	100%	100%
1-4. Proportion of targeted programs participating in VCMR (electronic disease reporting)				
a. Targeted* programs that are **connected** to the VCMR	70%	70 %	100%	100%
b. Targeted programs that are **using** data from the VCMR	60%	60 %	100%	100%

Objective Area 2: Communication, Planning, and Technology				
2-1. Percent of programs with effective collaboration within Public Health or Health Services:				
a. Programs that have developed a written action plan	61%	32%	95%	100%
b. Action plans proceeding on schedule for those with plans	91%	77%	95%	100%
2-2. Percent of programs that have a publicly accessible website through www.lapublichealth.org	82%	88%	100%	100%
2-3. Percent of programs whose directors have verified that their website is current	74%	86%	100%	100%

Objective Area 3: Resource Utilization	2005-06 Result	2006-07 Result	2006-07 Benchmark	Long-Term Goal
3-1. Percent of Program Directors who have **ever** completed leadership training	87%	89 %	90%	90%
3-2. Percent of programs whose employees' Performance Evaluations were completed on-time	66%	97%	90%	100%
3-3. Percent of employees who have **ever** completed "Core Functions of Public Health" training	29%	43 %	35%	100%
3-4. Percent of programs that have had one or more staff **ever** complete "Core Functions of Public Health" training	95%	100%	100%	100%
3-5. Percent of employees who participated in at least one emergency preparedness training, drill, or exercise during 2006-07.				
a. All Employees	78%	63%	25%	25%
b. Employees in targeted PH programs	91%	89%	50%	50%
c. Physicians	84%	74%	50%	50%
d. Nurses	94%	62%	50%	50%
e. Epidemiologists	96%	84%	50%	50%
f. Others	72%	62%	25%	25%

PI—Public Health Report Card

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PI-Public Health Measures

- Los Angeles County Public Health approach named the *Public Health Measures*
- Based on the *Results Accountability* Framework*
- Emphasis on program-level performance linked to "shared" population-level health outcomes
- Integrated with Healthy People 2010, NACCHO/Accreditation Standards, the Community and Clinical Guides, grant metrics and guidelines

**Friedman, Mark. "Trying Hard is not Good Enough: How to Produce Measurable Improvements for Customers and Communities." 2005. Trafford Publishing. Victoria, BC, Canada. www.raguide.org*

Public Health Measures

- Championed as a QI effort in 2002
- 40 Public Health units identified "population health indicators" linked to program performance measures to follow over time
- Healthy People 2010 objectives often identified and used as the "Standard" to achieve over time

Public Health Measures

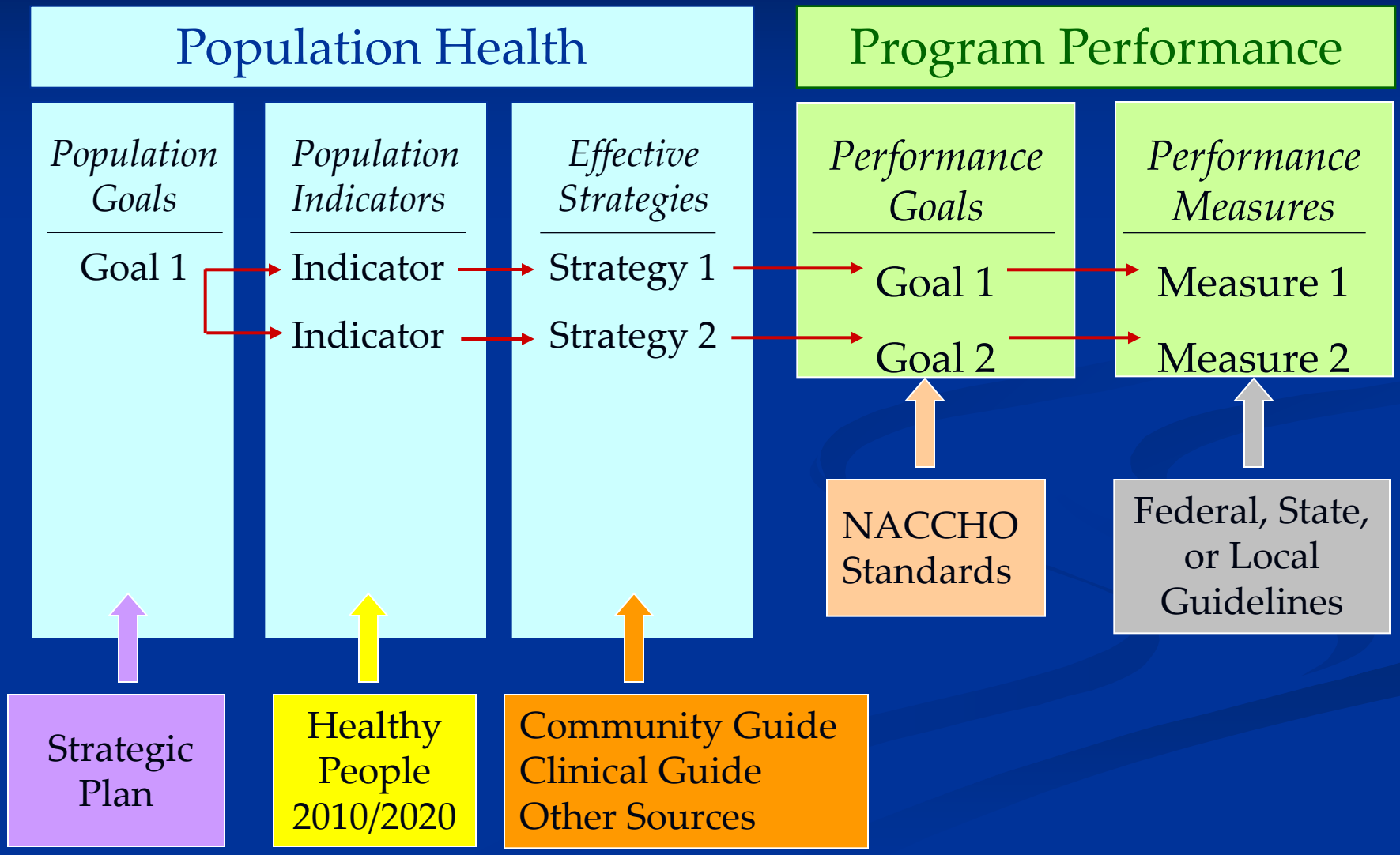
POPULATION INDICATORS
(measures of population-level health outcomes)

AND

PERFORMANCE MEASURES
(measures of program effort and output)

Public Health Measures

Public Health Measures



Example: Immunization Program

Population Goal To reduce morbidity and mortality from vaccine-preventable diseases by improving immunization levels

Population Indicator

Percentage of children, ages 19-35 months, who are fully immunized with one of the series of the Advisory Committee on Immunization Practices (ACIP) recommended vaccines

Effective, Evidence-Based Strategies (selected subset)

1. Change provider behavior through systems change—Provider recall/reminder systems in clinics
2. Change provider behavior through education—multi-component interventions with education
3. Increase demand and access to immunizations—reduce out-of-pocket costs

Program Performance Goal (NACCHO Standard 9)

Performance Measure

Percent of Immunization Program public and nonprofit clinic partners who routinely meet the Standards for Pediatric Immunization Practices for provider and client recall/reminder systems

Summary

- The Quality Improvement Division has 4 functional areas in which it focuses its efforts
- Performance Improvement is the area that links strategic planning and outcome measurement to ensure program success
- Tools include PDSA, "Results Accountability", and Structure-Process-Outcome
- The Performance Improvement Team assists the department in developing new tools and processes to integrate performance improvement efforts across National, State, County, and Department levels

Applying Performance Improvement to Daily Operations

Presentation Objectives

- Understand how strategic planning goals and objectives can be translated into measurement of population-level outcomes and daily operations
- Describe key components of the PDSA model
- Provide an interactive learning session to help you develop a strong PI effort in your Program or SPA

The PDSA Model

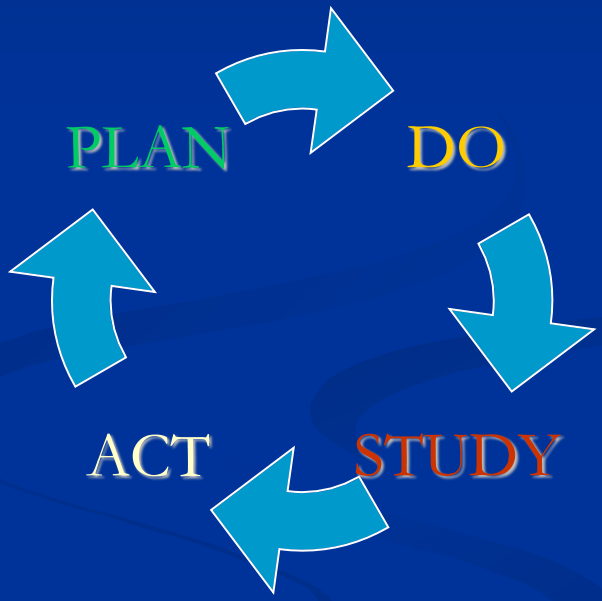
- PLAN

  Connect and link goals to measurable outcomes
- DO

  Implement evidence-based activities tracked with data collection
- STUDY

  Evaluate progress toward standards/long-term targets
- ACT

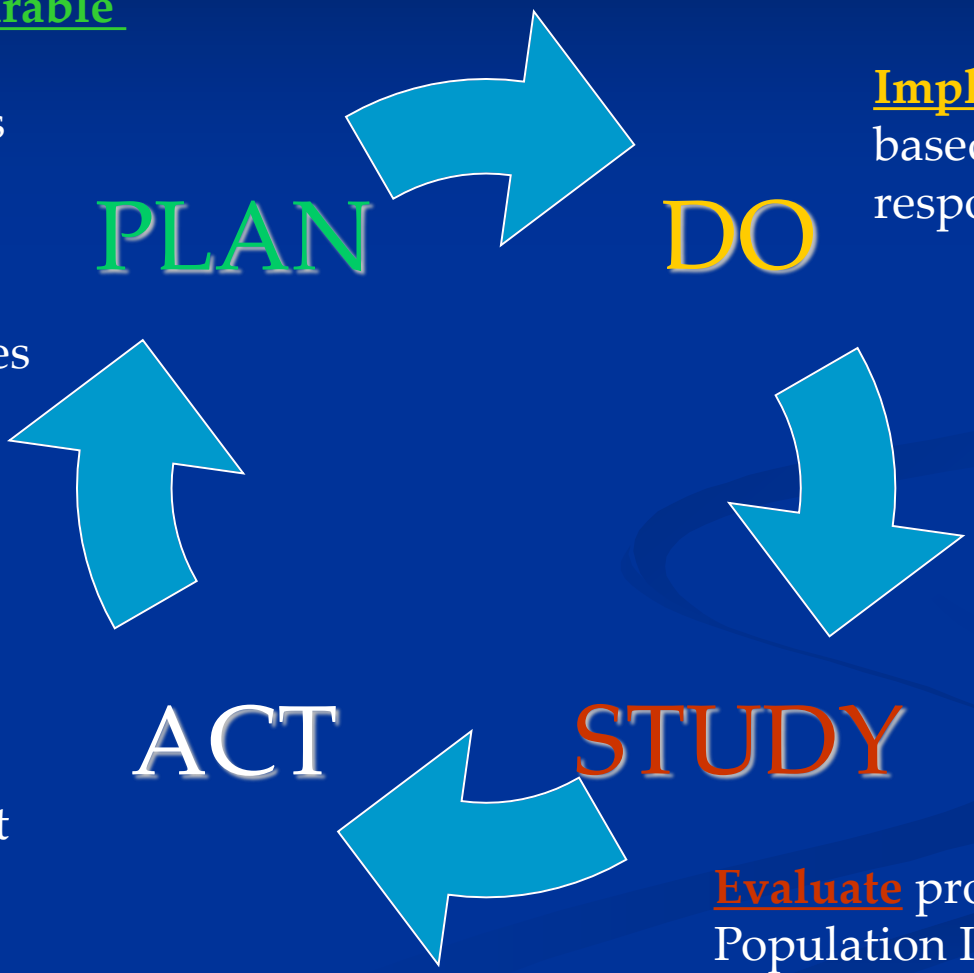
  Respond to what results tell us



PDSA Model

Link Goals to Measurable Outcomes

- Determine priorities and goals
- Select Population Indicators and Performance Measures
- Set standards/ long-term targets



Implement evidence-based interventions and respond to mandates

Evaluate progress toward Population Indicator and Performance Measure standards

Respond to what the results tell us

Determine Priorities and Goals

1. What are the priority public health issues in Los Angeles County?
2. What are the behaviors and outcomes related to these issues that we want for people who live in LA County?

Linking Indicators and Measures

3. How can we measure these conditions?

POPULATION INDICATORS
(measures of population-level health outcomes and behaviors)

AND

PERFORMANCE MEASURES
(measures of program effort and output)

Public Health Measures

Population Indicators

- Longer life span
- Increased quality of life
- Increased health equity
- Less disease
- Less premature death
- Healthier choices
- Safer environment
- Healthier homes

POPULATION-LEVEL HEALTH OUTCOMES & BEHAVIORS

Population Indicators

- Percent of students who had at least one drink of alcohol in the past 30 days
- Rate of foodborne illness hospitalizations each year (per 100,000)
- Percentage of children covered by health insurance
- Death rate from colorectal cancer

Resources

- Healthy People 2010
  http://www.healthypeople.gov/
- DPH *Key Indicators of Health* Report
- Other Indicator Reports
  - Older Americans: Key Indicators of Well-Being
  - American Children: Key Indicators of Well-Being

Performance Measures

1. Who are our clients?
2. Which services do we provide to our clients?
3. What evidence-based strategies will lead to positive change in our clients?
4. How can we measure if our clients are better off?
5. How can we measure if we are delivering services well?

	Quantity	Quality
Input / Effort	How Much Did We Do? (#)	How Well Did We Do It? (%)
Output / Effect	How Much Change? (#)	Quality of Change? (%)

Performance Measures

- Policies Created
- People Informed
- Partners Engaged
- Surveillance Performed
- Investigations Completed
- Increased Access to Services
- Client satisfaction

MEASURES OF PROGRAM EFFORT & OUTPUT

Performance Measures

- Percent of outbreaks (excluding scabies) investigated within standard timeframe
- Percentage of children under 6 years who participate in fully operational population-based [immunization] registries
- Number of cities that adopted a policy that prohibits smoking in outdoor areas

Performance Measures Framework

Public Health Mission

1. Protect Health
2. Prevent Disease
3. Promote Health & Well-Being

3 Core Functions (1988)

- Assessment
- Policy Development
- Assurance

10 Essential Services (1994)

10 Standards for Local Health Departments (NACCHO, 2005)

11 Domains for Local Public Health Accreditation (PHAB, 2009)

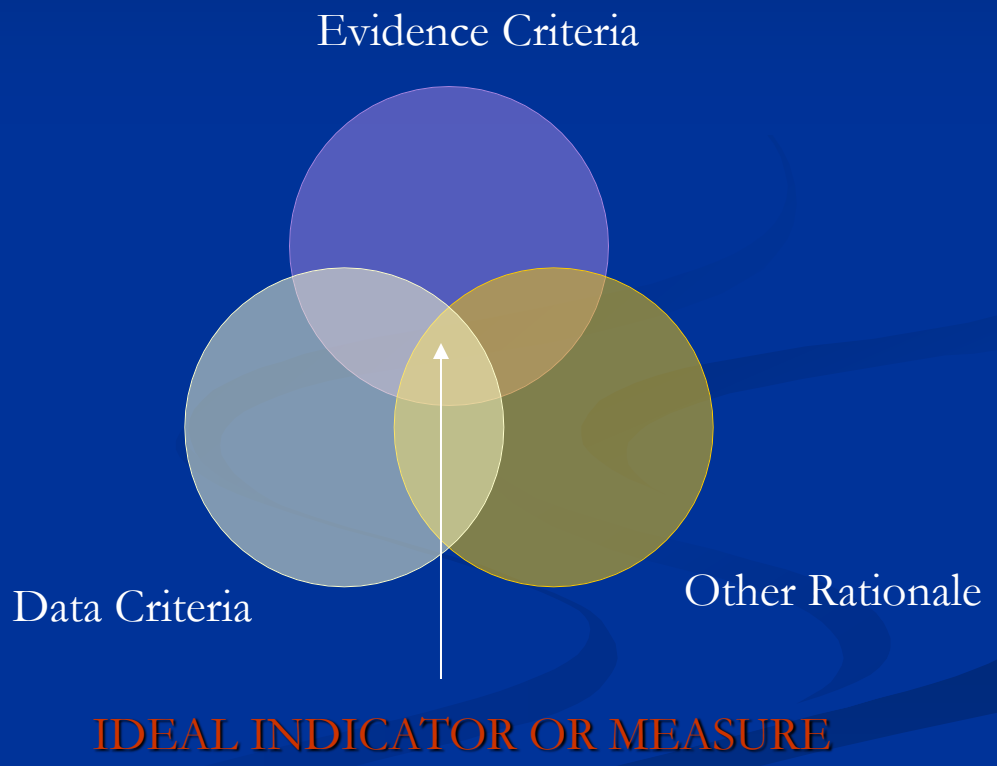
NACCHO Standards

- Monitor health status of the community
- Protect people from health hazards
- Give people information to make healthy choices
- Engage the community to solve health problems
- Develop and advocate for public health policies
- Enforce laws and regulations
- Help people receive health services
- Maintain a competent public health workforce
- Evaluate and improve programs
- Contribute to and apply public health research
- Core Business Functions *(DPH addition)*

http://www.naccho.org/topics/infrastructure/accreditation/opdef.cfm

Ideal PIs/PMs

- Prioritization Criteria
  1) Evidence Criteria
  2) Data Criteria
  3) Other Rationale



Strategic Plan Progress Reporting Template

Strategic Priority 2: Protect the public's health by minimizing the impact of communicable diseases and foodborne and environment-related illnesses.

Goal 2.2: Protect health and prevent disease through assurance of physical environments that minimize exposure to harmful pathogens and other environmental toxins.

Related Population Indicators:

EH-D Percent of routinely inspected apartment buildings with 5 or more units that are free from vermin

EH-E Hospitalization rate for asthma in children ages 0-4 years

EH-F Percent of children under 6 years of age whose blood lead level results were elevated (≥10mcg/dL)

EH-J Percent of pools closed due to unsafe water quality

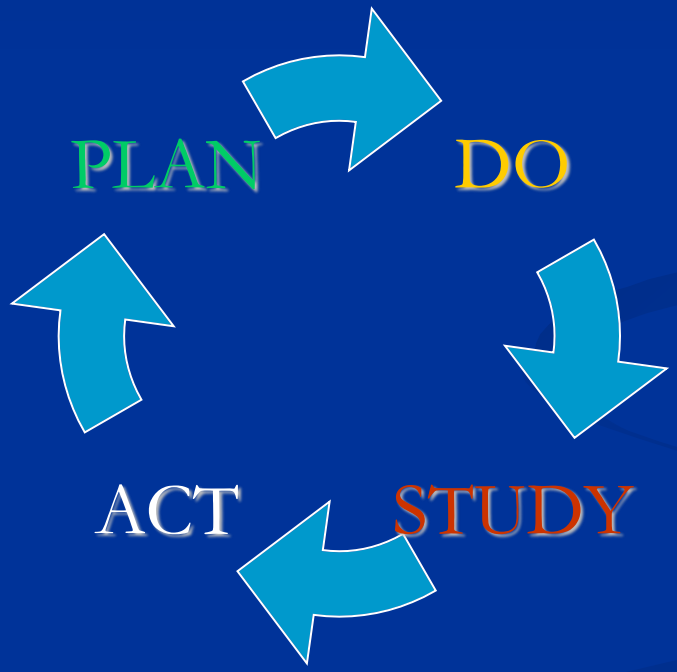
	Objective	Executive Leads	Performance Measures and/or Activity	Status *(Bullet Points)*
2.2.1	Expand the scope of current housing inspections to include "Healthy Housing" elements, and implement the expanded inspections in two of the eight Service Planning Areas.	Angelo Bellomo	EH 2-13 Percent of housing inspections that include a Healthy Homes component EH 2-14 Proportion of Community health services (CHS) Service Planning Areas where a Healthy Homes component is part of the housing inspection **Other Activities (if needed):**	
2.2.2	Develop more effective procedures to reduce response time to ensure that recalled food products are removed from food facilities.	Angelo Bellomo	No current performance indicators	

County of Los Angeles Public Health
Planning, Evaluation, and Development

2010 Annual Performance Report

- Internal report of selected Population Indicators and Performance Measures
- Includes:
  - Traditional Report Card results
  - NEW Program Performance Snapshots
- In-Person Progress Review with Dr. Fielding

Questions?



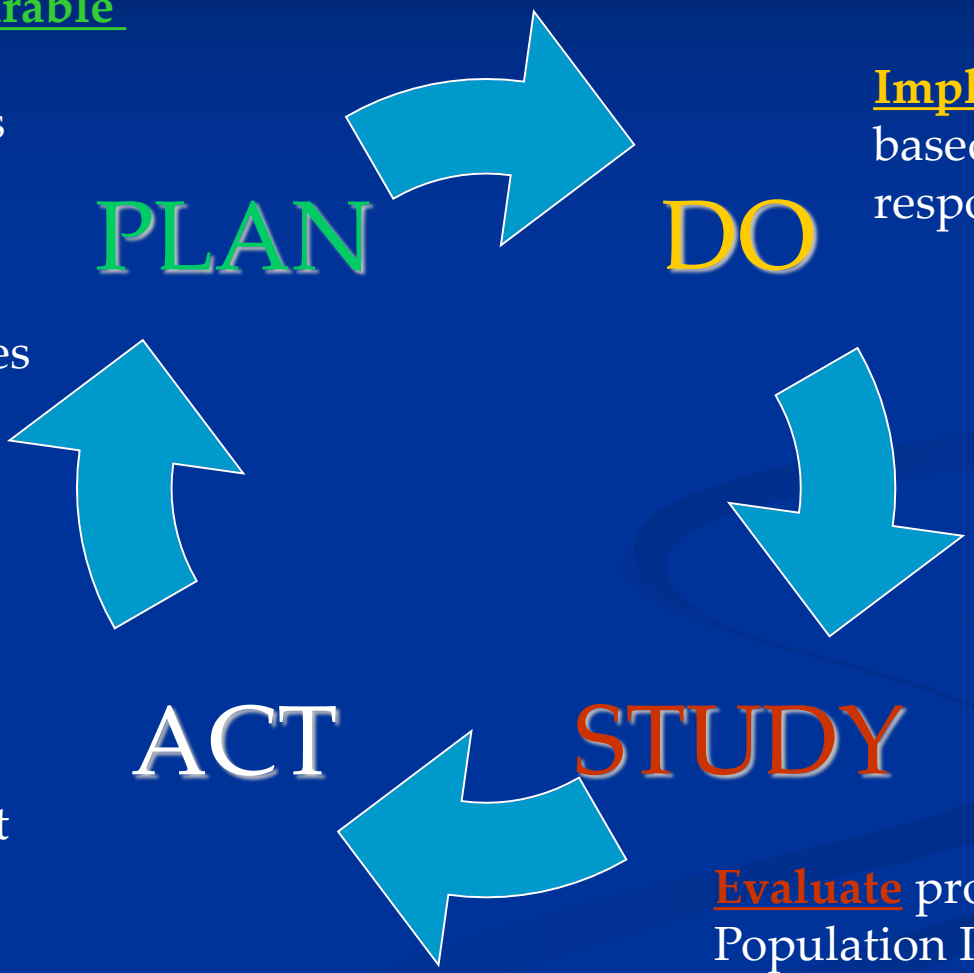
Small Group Exercise

You are the Director of the Chronic Disease Division at your local County Department of Public Health. The Health Officer is championing interventions that will decrease obesity throughout the County. She wants you to create a set of priority objectives and performance metrics based on the best science. Your objectives and metrics will be used to engage stakeholders, pursue funding opportunities, and assess overall effectiveness and efficiency of your prioritized interventions.

Performance Improvement PDSA Model

Link Goals to Measurable Outcomes

- Determine priorities and goals
- Select Population Indicators and Performance Measures
- Set standards/ long-term targets

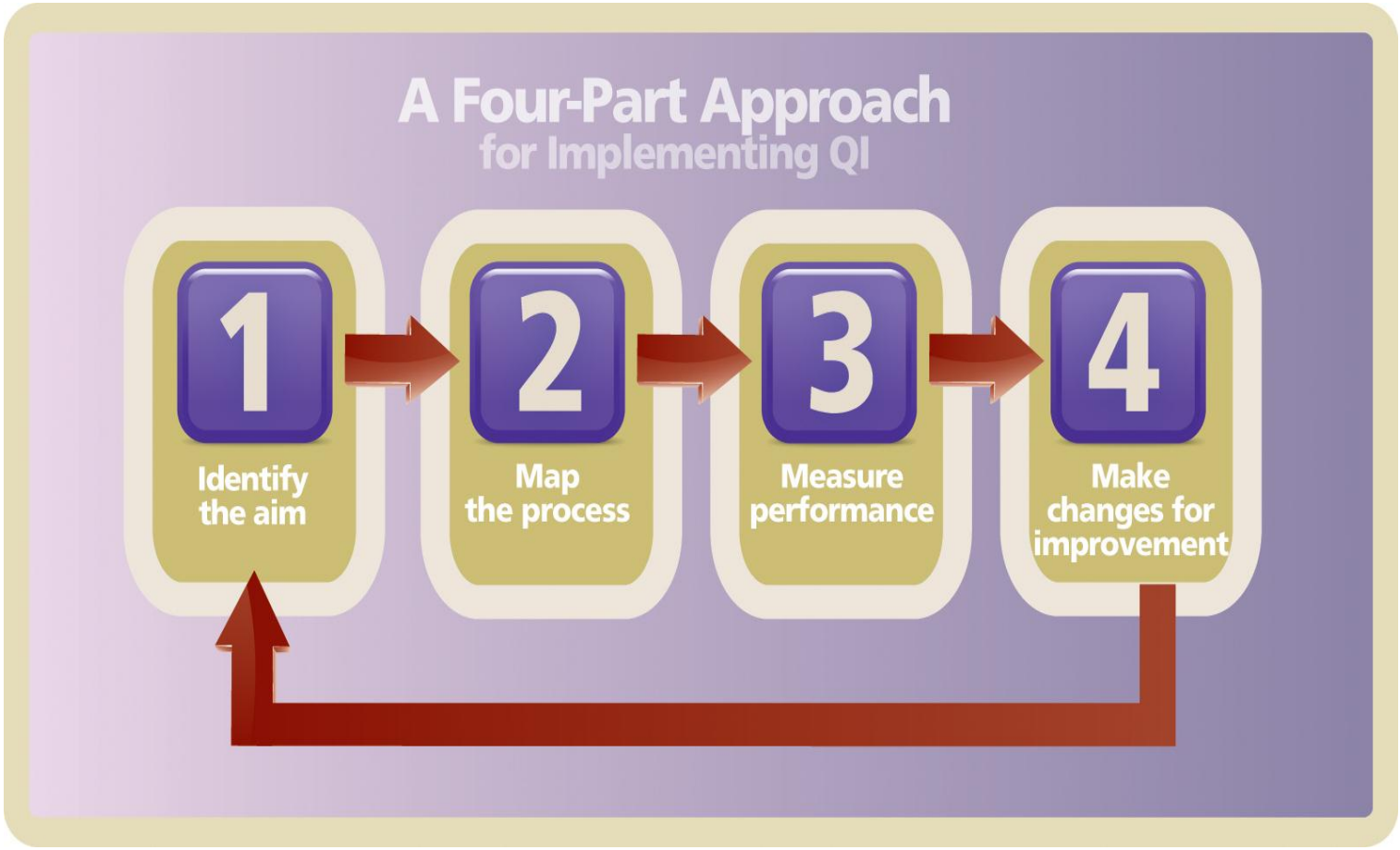


Implement evidence-based interventions and respond to mandates

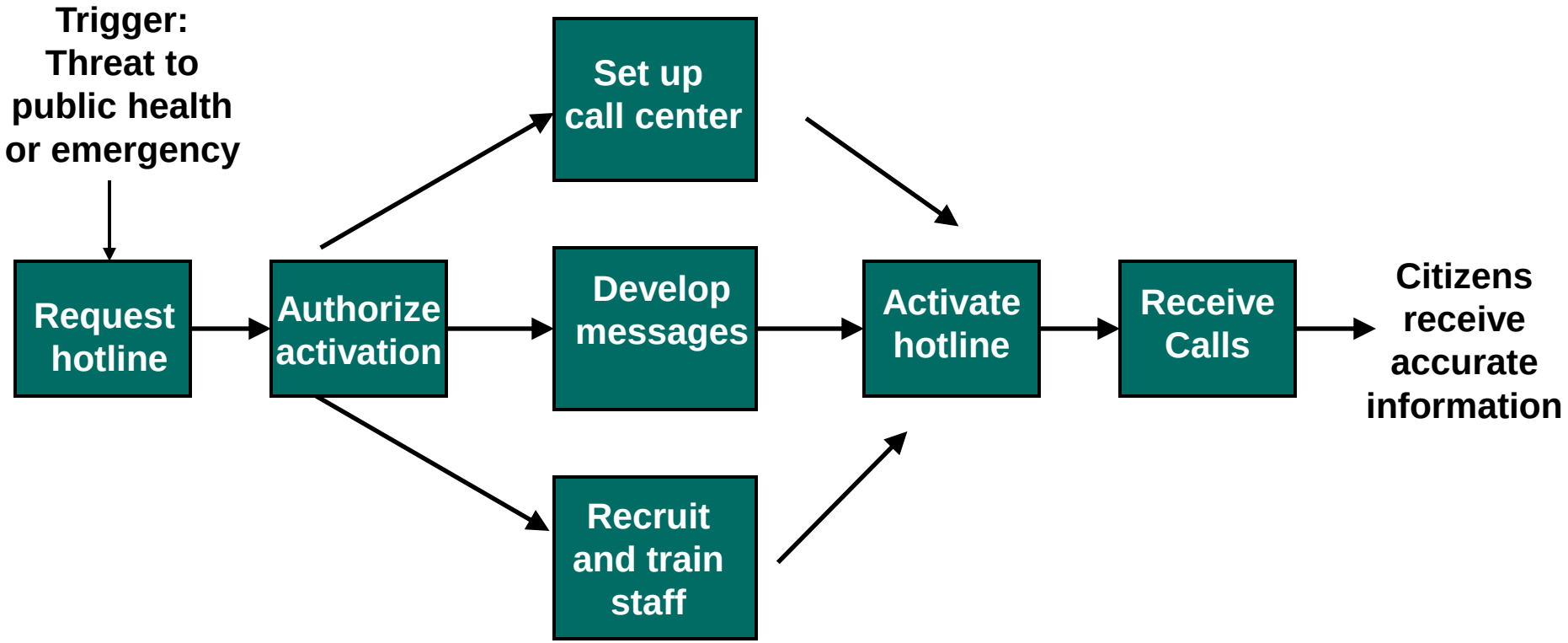
Evaluate progress toward Population Indicator and Performance Measure standards

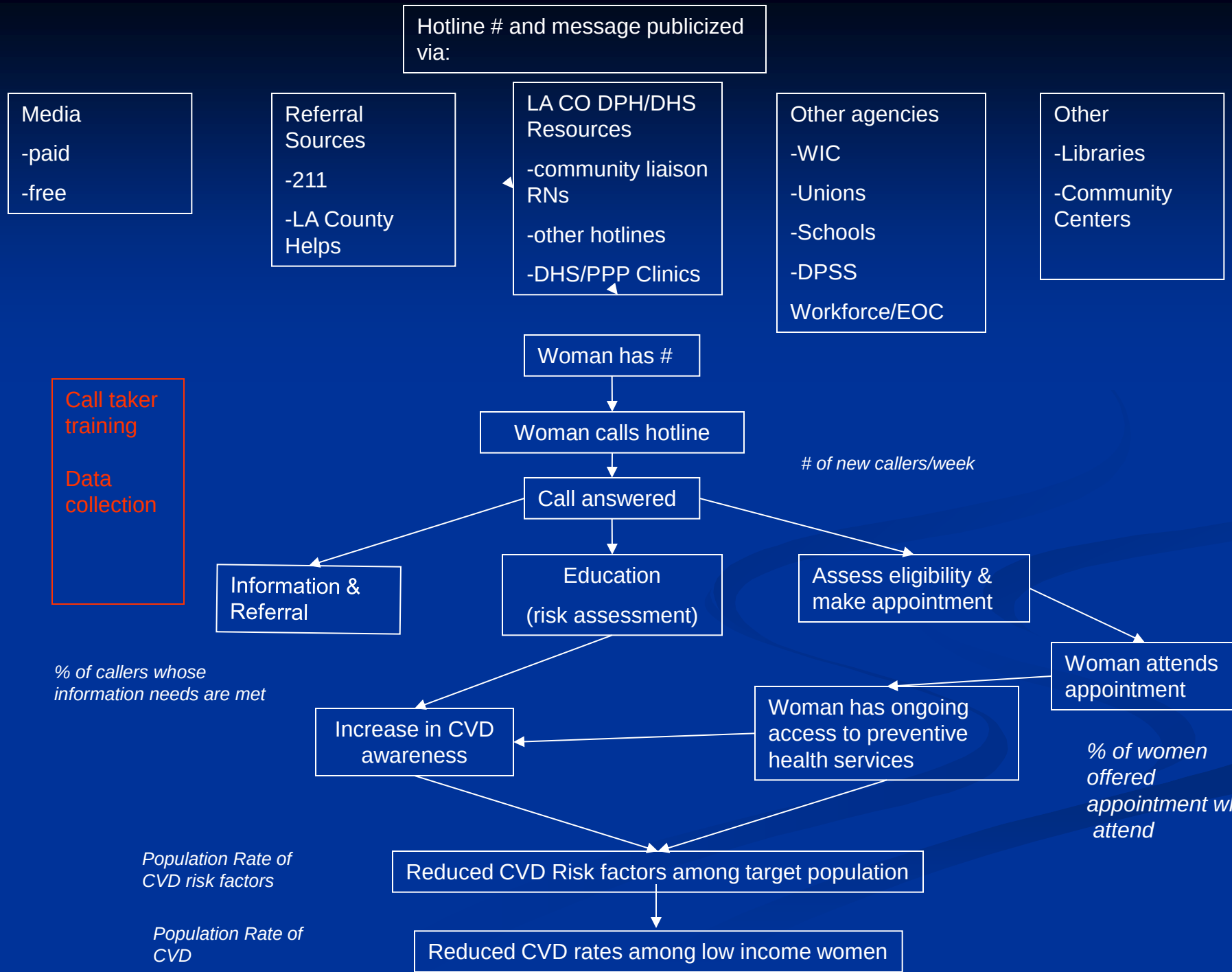
Respond to what the results tell us

Rapid-Cycle PDSA Projects



Example: Telephone Hotline Activation
Virginia Department of Public Health

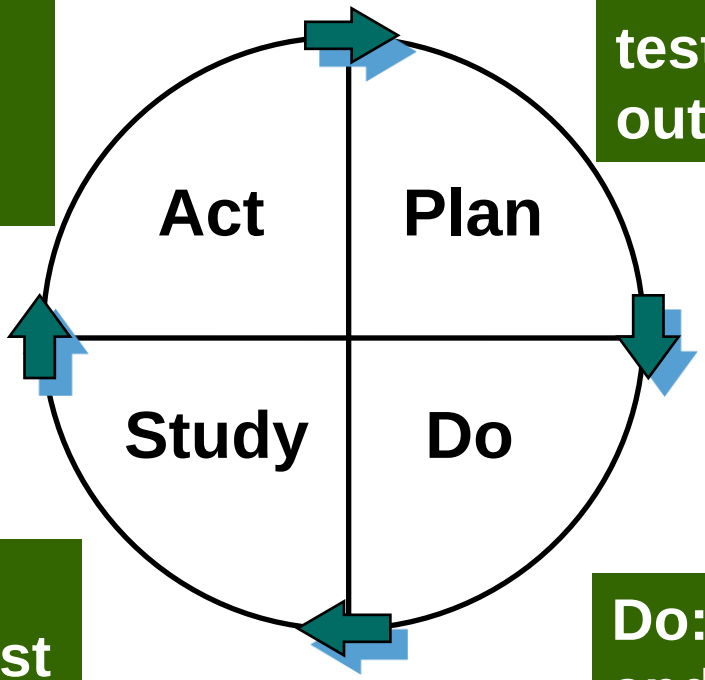



Hotline # and message publicized via:
Media
-paid
-free
Referral Sources
-211
-LA County Helps
LA CO DPH/DHS Resources
-community liaison RNs
-other hotlines
-DHS/PPP Clinics
Other agencies
-WIC
-Unions
-Schools
-DPSS
Workforce/EOC
Other
-Libraries
-Community Centers
Call taker training
Data collection
Woman has #
Woman calls hotline
# of new callers/week
Call answered
Information & Referral
Education
(risk assessment)
Assess eligibility & make appointment
Woman attends appointment
% of callers whose information needs are met
Increase in CVD awareness
Woman has ongoing access to preventive health services
% of women offered appointment who attend
Population Rate of CVD risk factors
Reduced CVD Risk factors among target population
Population Rate of CVD
Reduced CVD rates among low income women

Use PDSA Cycles to Test and Implement Changes

Act: Take action based on the new knowledge

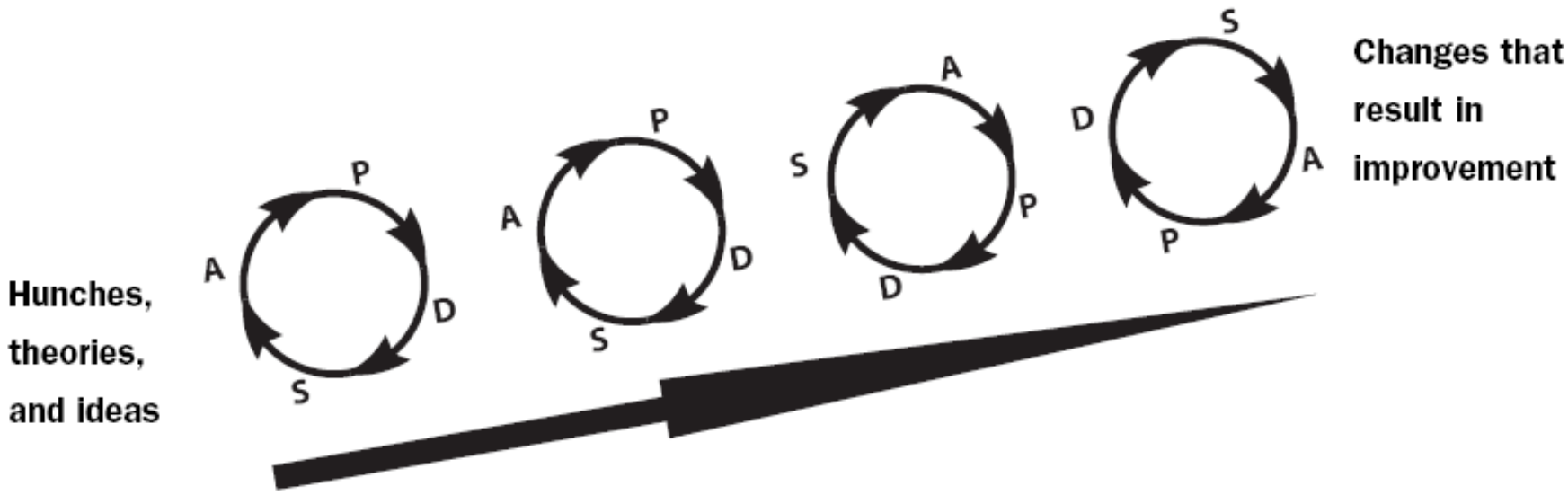
Plan the details of the test and predict the outcome of the test



Study: Compare predictions to the test results

Do: Conduct the test and collect data

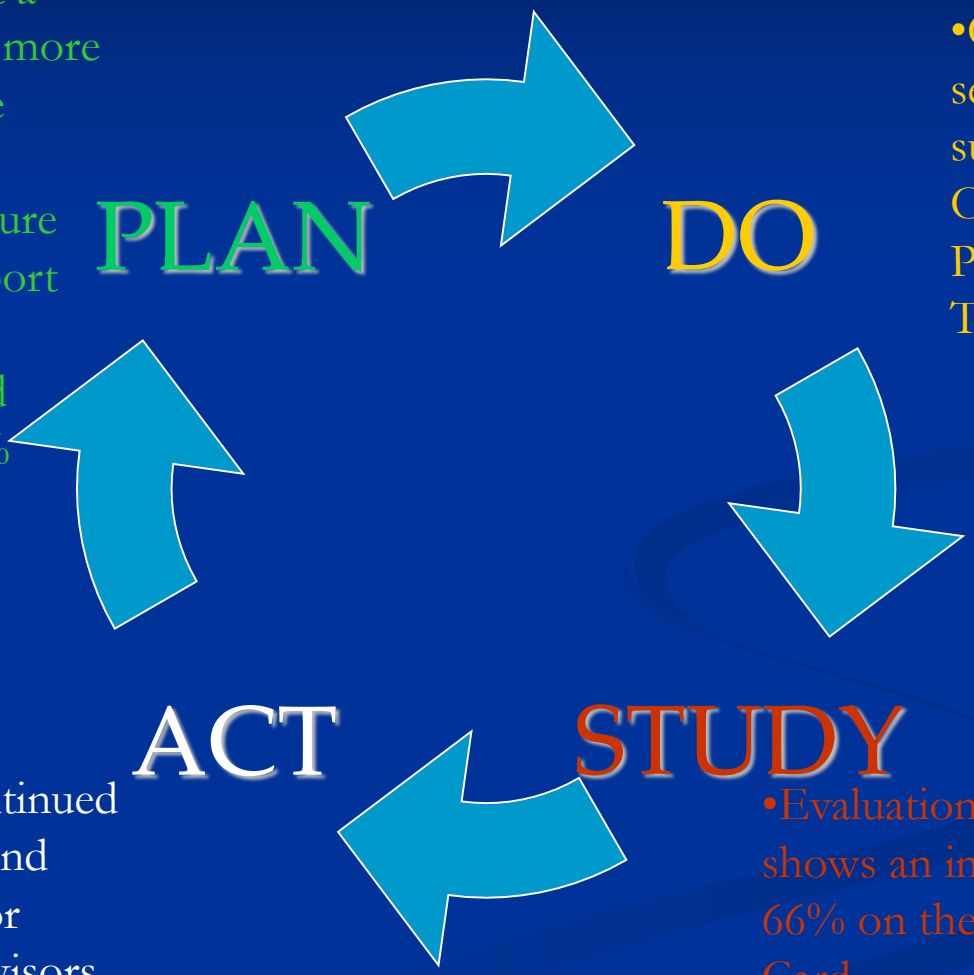
Using Repeated PDSA cycles over time leads to changes that result in improvement



The Breakthrough Series: IHI's Collaborative Model for Achieving Breakthrough Improvement. IHI Innovation Series white paper. Boston: Institute for Healthcare Improvement; 2003

Department-Level Operations

- CEO and DPH set a priority of completing more employee Performance Evaluations on time
- Performance Measure established on PH Report Card in 04-05
- Baseline is 36%and Standard is set at 100%



•CEO and DPH HR send out reminders to supervisors and Health Officer reinforces this Priority with Executive Team

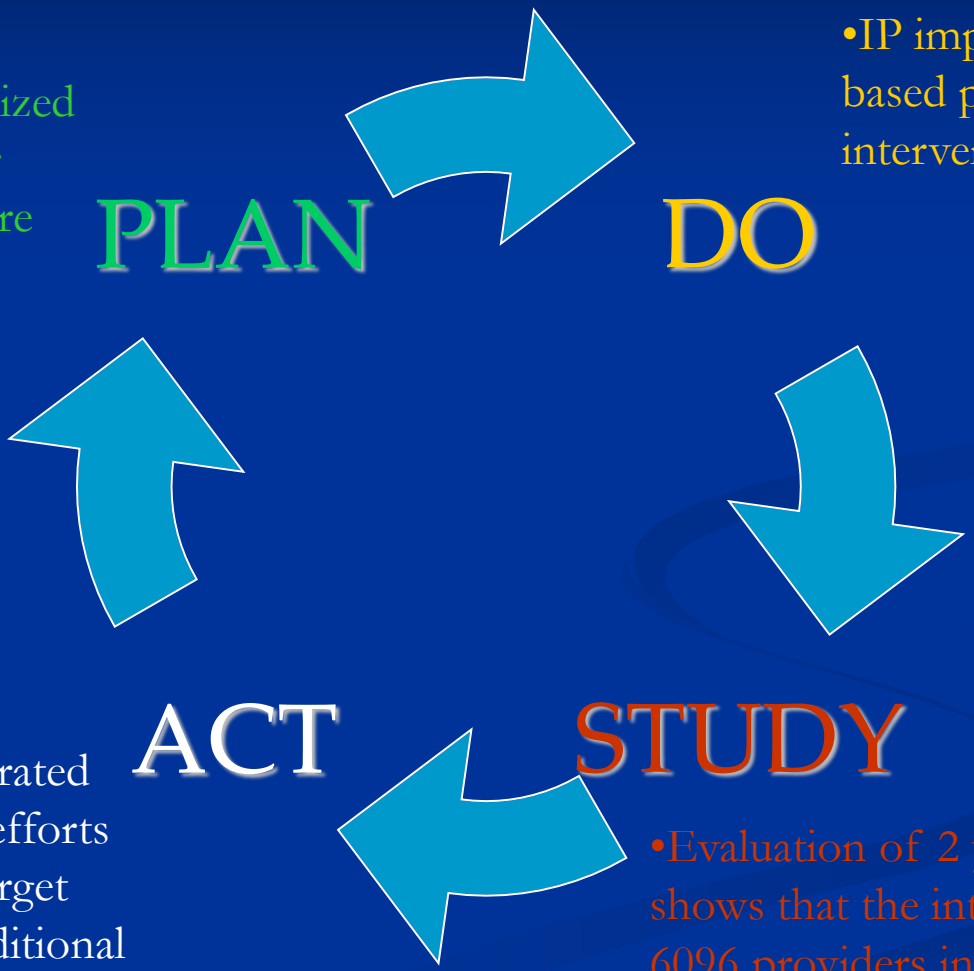
•Current supportive interventions are continued with more frequent and focused reminders for less compliant supervisors

•Evaluation of trend data shows an improvement to 66% on the 05-06 PH Report Card

- Standard of 100% not achieved

Program-Level Operations

- IP set a priority that as many children as possible are fully immunized
- Population Indicator and Performance Measure established in approved Public Health Measures
- Standards chosen (80% fully immunized Reach 4000 providers)



•IP implements an evidence-based provider educational intervention for 2 years

•Evaluation of 2 year trend data shows that the intervention reached 6096 providers in year 1 but only 3673 providers in year 2
• Immunization rates stable at 80%

•Continue with accelerated provider educational efforts
• Set new standard/target
• Consider new or additional interventions

Annual Timeline

Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Add/Modify/Drop *Public Health Measures*			Data Collection	Select FY Priority Indicators and Measures				Proposed Budget Due	Data Collection	Prepare CEO and DPH Performance Reports	

Progress Reviews with Health Officer
(scheduled throughout the year)

Performance Improvement Training
(offered throughout the year)

PDSA Improvement Projects

Summary

- The PDSA Model is central to PI efforts and can be applied to daily operations and long-term success
- Progress toward improved health behaviors and outcomes is captured in Populations Indicators
- Assessing the output of our core daily activities is captured in Performance Measures
- Future Skill building workshops on how to use the PDSA model are being developed