

# Quality Improvement and Key Health Outcomes

## MAKING A DIFFERENCE

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Investments by the Centers for Disease Control and Prevention (CDC) and the Robert Wood Johnson Foundation (RWJF) to build capacity and fluency in performance management and quality improvement (PMQI) are earning dividends. Emerging evidence shows that by operating more efficiently and effectively *through the application of PMQI, health departments have achieved improved health outcomes*. Recognizing the value and potential impact of PMQI, CDC is supporting 74 state, tribal, local, and territorial health department grantees to undertake such activities through the National Public Health Improvement Initiative (NPHII). This program, which is supported through the Prevention and Public Health Fund of the Affordable Care Act, includes a critical investment in national partners to assist in these efforts.

NPHII's ultimate goal is to achieve improved health outcomes. The following are examples of PMQI methods and tools employed at the local level that have contributed to success as measured by improved health outcomes, including outcomes in CDC's Winnable Battles. Most of these examples come from two RWJF-funded initiatives: the Multi-State Learning Collaborative (MLC), managed by the National Network of Public Health Institutes (NNPHI), and Building the Evidence for QI in Public Health, led by the University of Minnesota School of Public Health.

## WINNABLE BATTLES

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### GOAL: INCREASE THE NUMBER OF PEOPLE WHO MEET PHYSICAL ACTIVITY GUIDELINES

#### Clay County, FL

34% of elementary school students were overweight or obese and the root cause of this problem was decreased opportunity for physical activity. Clay County elementary schools implemented a run/walk club; within 6 months, students at one school logged more than 14,000 miles. The same school also created a track team and 3 of its students won state championships.<sup>1</sup>

#### Skagit County, WA

Childhood obesity rates were higher than the state average and students reported being physically active for an average of less than 60 minutes per day. The QI team used an affinity diagram to gather and group possible solutions and completed a literature review. The resulting Nutrition and Activity Program led to a 71% increase in physical activity rates over 5 months.<sup>1</sup>

### GOAL: PROVIDE EFFECTIVE TOBACCO USE CESSATION SERVICES

#### Coos County, NH

The percentage of women who reported smoking during pregnancy was the highest in the state. A root cause analysis showed the primary cause was a failure of counselors to refer smokers to Health Educators and document the referral. The improvement team developed the solution to strengthen staff communication skills to increase referrals and to add more prompts into the record management system. In 9 months, the referral rate to Health Educators for known smokers increased from 0% to 100%.<sup>1</sup>

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**ADDITIONAL EXAMPLES ON REVERSE**

## OTHER HEALTH OUTCOMES

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- Orange County, FL**

The rate of new syphilis cases increased 45% between 2004 and 2005. The primary root cause of this problem was high staff turnover, and the associated failure to deploy preventive outreach in the community (average length of stay for new employees was 6 months). The QI team used a multi-voting process to understand why staff were leaving, and recommended a new hiring process and additional training opportunities. In 9 months, the turnover rate was reduced to 0 and the rate of new syphilis cases declined by more than 40%.<sup>2</sup>
- Franklin, Hocking, & Summit Counties, OH**

Immunization rates were below the national goal because of clinic flow problems and a lack of parental education. Franklin County used a process map to detail current clinic flow and then updated intake forms and increased operating hours. Hocking County used the SIPOC+CM tool to gather information about why children were not vaccinated and then created an educational newsletter; Summit County used a fishbone diagram and then instituted a new reminder system. The counties increased the immunization rates by up to 24%.<sup>2</sup>
- Duval County, FL**

Immunization rates for 2-year old children were among the lowest in the state. The QI team used an affinity diagram and Pareto analysis to generate and prioritize solutions. They then granted authority to additional personnel so that more staff members were available to immunize children and instituted a new procedure to ensure children would be immunized as soon as they were eligible. In two years, immunization rates increased from 75% to 89%.<sup>3</sup>
- City of Milwaukee, WI**

Faced with declining resources and low adolescent vaccination rates, officials sought ways to implement school-based immunization clinics. The QI team developed intervention strategies through process mapping, brainstorming, and focus groups. Applying the PDCA cycle, the improvement team then tested potential solutions including client-friendly consent forms, parent instruction letters, auto-dialer reminders, and incentives for children. The updated process led to an increase of up to 42% in the immunization compliance rate and an increase in the number of school clinics held.<sup>3</sup>
- Tacoma-Pierce County, WA**

Chlamydia rates were significantly higher than the state average. The QI team used an affinity diagram to gather and organize data about possible reasons for the high rates. One cause was a lack of treatment for sexual partners of those with chlamydia so the team improved case follow-up and, in 3 years at selected testing sites, the positivity rate for chlamydia decreased 23%.<sup>3</sup>

## REFERENCES

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- <sup>1</sup> Multi-State Learning Collaborative (MLC) Project Storyboards provided by the National Network of Public Health Institutes, [www.nnphi.org/program-areas/accreditation-and-performance-improvement/resources/qi-storyboards](http://www.nnphi.org/program-areas/accreditation-and-performance-improvement/resources/qi-storyboards), accessed 8/30/2011.
- <sup>2</sup> Public Health Foundation (PHF), Quality Improvement Initiatives, [www.phf.org/resourcestools](http://www.phf.org/resourcestools), accessed 9/16/2011.
- <sup>3</sup> Results from *Building the Evidence for QI in Public Health*, provided through personal communication with Dr. William Riley, University of Minnesota School of Public Health, 7/20/2011.