Quality Improvement Story Board

MLC-2 in Kansas
Wildcat Public Health Region

Three counties:
Geary, Pottawatomie and Riley
Serving a population of nearly 106,540

QI Team Members:
Barbara Berry – Regional Coordinator

QI County Leaders:
Patricia Hunter – Geary
Leslie Campbell – Pottawatomie
Charles Murphy – Riley

Plan

1. Understand the system and select the team

How did we know there was an opportunity?

- Team brainstorming
  Considered problems previously identified in:
  - 2004 study conducted by the Kansas Health Institute and the Kansas Department of Health and Environment – The study found that 52% of school children in the Northeast region have or have had tooth decay
  - Data from Census 2000 – According to the data, the Northeast region has about 378,455 school children; about 196,797 of these children have or have had tooth decay

Initiative participants:

- One regional coordinator and one staff member from each of the three participating counties

2. Define the opportunity

Problem statement:
The number of children who receive preventive dental screening in the Wildcat region is too low.

Target population:
Children from birth through adolescence who are residents of the Wildcat region

Primary clients/stakeholders and their needs:

- Residents of the Wildcat region, specifically parents of children in the target population, need public health information regarding dental care.
- Local health department (LHD) staff and managers need Quality Improvement (QI) training and technical assistance.
- Local health departments, day care providers, child care licensing surveyors, preschools, school districts, Kansas Association of Child Care Resource and Referral Agencies, physician offices, WIC, and Head Start need educational materials for patients and professionals.

3. Study the current situation

The following data collection tools were used to gather baseline data for the project:

- PHClinic (public health clinic management software)
- QS Insight electronic data system
- Client Visit Records (CVR) system

Goals:

- Increase the number of oral health assessments by 20 percent above the 2006 baseline
- Develop a regional oral health screening protocol
- Develop a regional oral health screening consent form
- Increase awareness of the target population and the need to continue educating and promoting preventive dental screening to this population
- Increase collaboration between local health departments and private providers
- Learn and utilize QI techniques to strengthen the regional capacity for providing certain public health service functions that could not be easily provided by each individual local health department

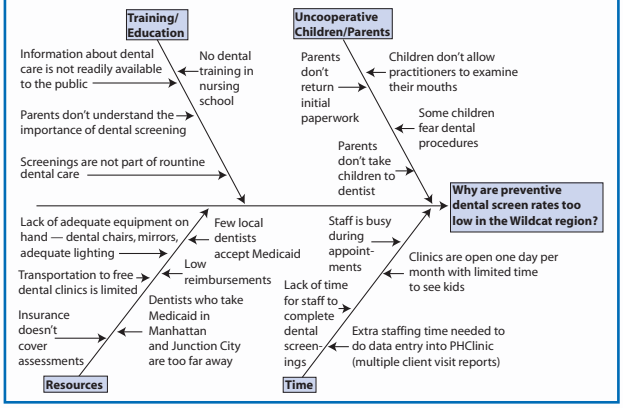
4. Analyze the causes

After conducting the initial root cause analysis (Fishbone Diagram) of the possible reasons for the low preventive dental screening rates in the region, the team found that staffing shortages were a major concern for the region.

Root causes of low preventive dental screening rates in the Wildcat region:

- Information about dental care is not readily available for the public.
- LHD staff doesn't have sufficient time to complete dental assessments.
- LHD staff lacks sufficient level of training to perform dental assessments.
- LHD staff doesn't have adequate dental equipment and supplies to conduct dental procedures.
- LHDs have not previously directed efforts to educate the public regarding the importance of preventive dental screening.
- The region does not have printed materials about dental care.
- LHD electronic data systems need revisions to capture oral health assessment data.

Fishbone Diagram: Root causes for low preventive dental screening rates in the Wildcat region



Do

Select and implement a theory for improvement

Activities:

- Pull up information and statistics regarding tooth decay in the region
- Conduct regional training:
  - Establish team purpose, guidelines and expectations
  - Discuss roles and contribution of project manager and team members
  - Identify issues using QI tools (Affinity Diagram, Brainstorming, Fishbone Diagram, Tree Diagram)
  - Develop goals, timeline, protocols, interventions, solution and action plan
- Review evidence and recommendations for decreasing cavity and tooth decay rates in the region
- Develop a regional oral health screening protocol
- Develop a regional oral health screening consent form
- Adopt a regional oral health examination form
- Design and print regional promotional brochure of dental screening
- Identify locations suitable for outreach activities
- Print and distribute campaign materials
- Conduct public information campaign

Check

Project results:

- By the end of the project period, there was an increase of 200 percent over the previous year's (2006) average in oral health assessments (see chart below)
- Developed a regional oral health screening protocol
- Developed a regional oral health screening consent form
- Increased collaboration between local health departments and private providers
- Learned and utilized QI techniques to strengthen the regional capacity for providing certain public health service functions that could not be easily provided by each individual local health department

Act

1. Standardize the improvement

- Continue to promote the importance of preventive dental screening to the target population
- Continue to utilize QI tools in day-to-day activities

2. Reflect and establish future plans

- Examine the long-term effects of QI methods and oral health assessments/education on the reoccurrence of dental cavities in the same population of children. Compare the average number of caries for children in the region in the categories below:
  1. Category A: Number of reoccurring or new caries in population sample of children examined by health department medical staff using QI to improve outcomes
  2. Category B: Number of reoccurring or new caries in population sample of children examined by school nurses who do not use QI
- Conduct a study to see if race, gender and socio-economic status are significant for recurring or new caries in categories A and B

Oral Health Assessments from the Wildcat Region, before and after intervention