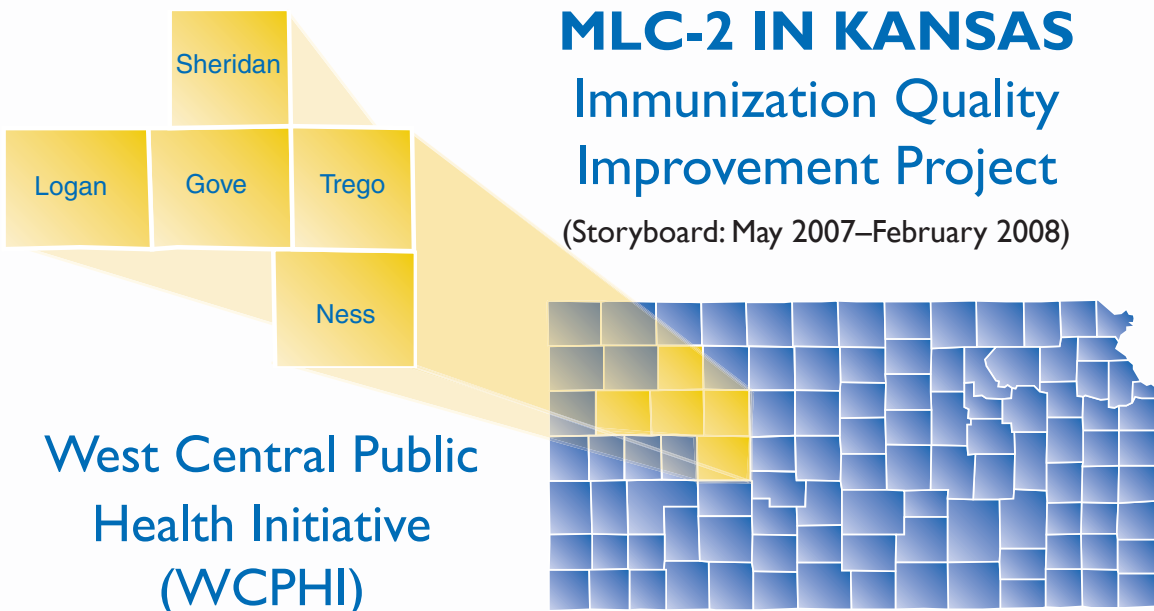


# MLC-2 IN KANSAS

## Immunization Quality Improvement Project

(Storyboard: May 2007–February 2008)



### West Central Public Health Initiative (WCPHI)

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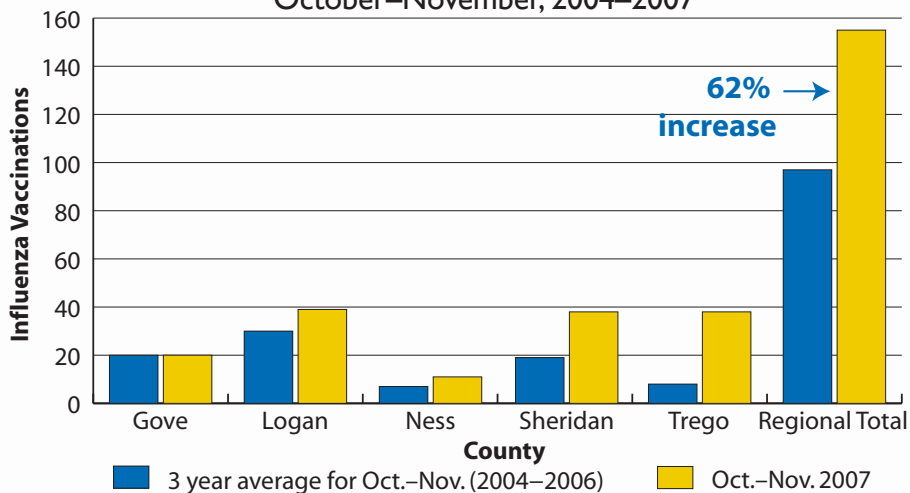
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#### Snapshot Results of this Quality Improvement Project

Influenza Vaccination Counts from West Central Region  
October–November, 2004–2007



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## THE SITUATION

In 2004, the Advisory Committee on Immunization Practices (ACIP) recommended annual influenza vaccination of children ages 6–23 months. Two doses, at least four weeks apart, were recommended to fully vaccinate children aged less than nine years who were receiving influenza vaccination for the first time. According to the 2006 National Immunization Survey (NIS) results, far less than 50 percent of children in the age group of 6 months to 59 months met the ACIP's recommendations.

Like the rest of the country, Kansas influenza vaccination rates for children ages 6 months to 59 months lagged behind. As part of a pilot project of the Kansas Multi-State Learning Collaborative II (MLC-2), the West Central Public Health Initiative (WCPHI) decided to address low regional influenza immunization rates in children ages 6 months to 59 months old. In addition, the team aimed to learn and utilize Continuous Quality Improvement (CQI) techniques to increase the influenza vaccination rate in the target group by 25 percent in each county by the end of the flu season, strengthen local health departments and expand regional collaboration.

At the first Quality Improvement (QI) training in March 2007, the West Central region, along with the 15 other Kansas public health regions, was introduced to QI tools such as the Fishbone Diagram, Brainstorming, Know/Don't Know Chart, Tree Diagram and Affinity Diagram. After conducting an initial root cause analysis using a Fishbone Diagram and exploring possible reasons for the low influenza vaccination rate in the West Central region, the team found out that an overlapping issue in various categories was lack of parent knowledge and education regarding influenza vaccination. Through data collected from PHClinic, the public health clinic management system, and KSWebIZ, the Kansas immunization registry, the team identified low influenza vaccination rates (less than 50 percent in each county) in the selected target group in the West Central region.



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## STEP 1: DESCRIBE THE PROBLEM

### Problem Statement:

Influenza vaccination rates for children ages 6 months to 59 months in the West Central public health region are too low.

### Reason Selected:

The regional vaccination rate data is lower than the CDC's recommendation that all children ages 6 months to 59 months will receive an annual influenza vaccine. Through data collected from clinic management software, PHClinic, and the Kansas immunization registry, KSWebIZ, the team identified low influenza vaccination rates (less than 50 percent in each county) in children ages 6 months through 59 months in the West Central region. Historically, the region's counties have focused on influenza vaccination of the elderly and high risk with no direct campaigning to the region's pediatric population.

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*“The Centers for Disease Control and Prevention (CDC) recommends that healthy children ages 6 months and up through 5th birthday should get a flu vaccine.”*

*Source: CDC website*

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### Measures of project success:

1. Increase the influenza vaccination rate of 6- to 59-month-old children by 25 percent in each county by the end of the flu season — March 2008.
2. Increase awareness of the target population and the need to continue educating and promoting influenza vaccination to this population.
3. Increase collaboration between local health departments and day care providers, child care licensing surveyors, preschools, school districts, Kansas Association of Child Care Resource and Referral Agencies, physician offices, Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), and Head Start.

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### Influenza Vaccination QI Team Members:

*Cindy Mullen: Regional Coordinator*

### QI County Leaders:

*Cheryl Goetz & Maxine Litson: Gove County*

*Georgetta Schoenfeld & Rhonda Sperber: Logan County*

*Sharon Anderson & Arlene Langer: Ness County*

*Melanie Cooper & Heather Bracht: Sheridan County*

*Diana Parke & Nicole Mattheyer: Trego County*

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### Milestones:

- Team committed to problem statement
- Identified CDC standards
- Defined measures and targets
- Completed first working/learning session: two-day QI workshop held in March 2007
- Drafted expectation for members on QI team



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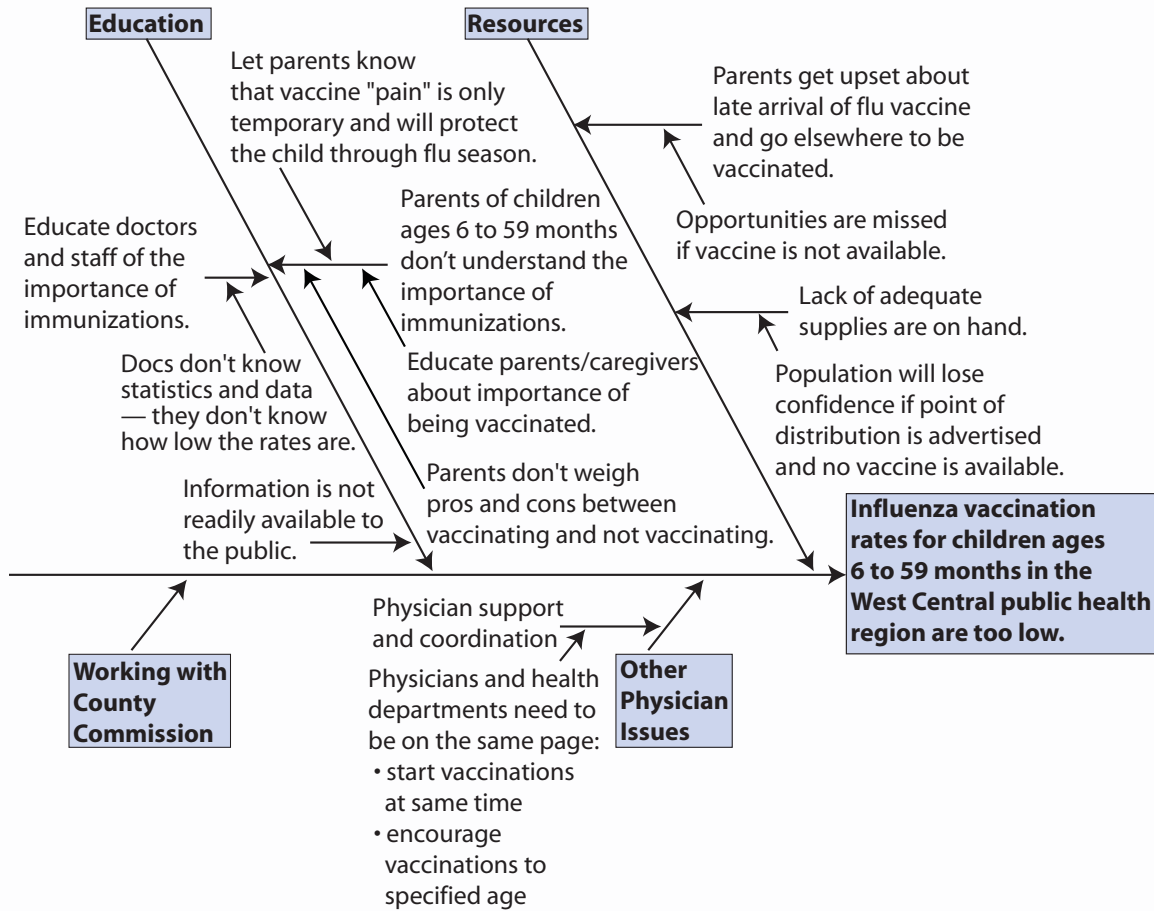
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## STEP 2: IDENTIFY ROOT CAUSE(S) OF THE PROBLEM

### Problem:

Influenza vaccination rates for children ages 6 months to 59 months in the West Central Public Health region are too low.

### Cause and Effect (“Fishbone”) Diagram: Root Causes for Low Influenza Vaccination Rate in the West Central Kansas Public Health Region



1. To determine the causes of low childhood influenza immunization rates, the region initially planned to address the “barriers of inconvenience” such as office wait times, clinic hours and clinic location.
2. After conducting an initial root cause analysis (Fishbone) of the possible reasons for the low pediatric influenza vaccination rate in the region, the team found that an overlapping issue in various categories was the lack of parent knowledge and education regarding influenza vaccinations.

**QI tools used in this step:** Fishbone Diagram

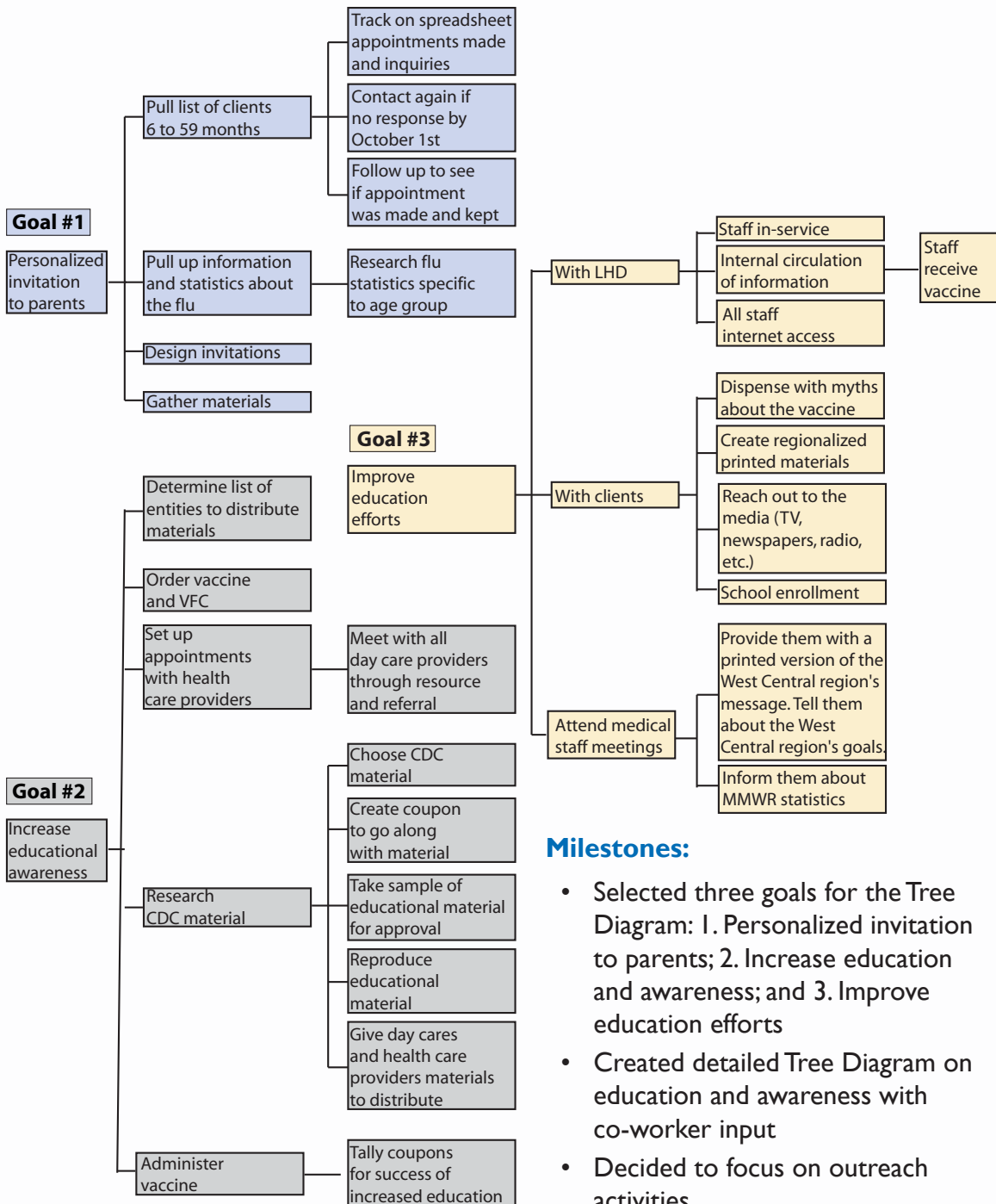


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## STEP 2: CONTINUED

### Tree Diagram: Select Goals and Identify Strategies



#### Milestones:

- Selected three goals for the Tree Diagram: 1. Personalized invitation to parents; 2. Increase education and awareness; and 3. Improve education efforts
- Created detailed Tree Diagram on education and awareness with co-worker input
- Decided to focus on outreach activities

QI tools used in this step: Brainstorming, Tree Diagram



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## STEP 2: CONTINUED

### QI Findings: Issues Related to the Problem

Parents are not aware that LHDs provide the influenza vaccine for children ages 6 months–59 months.

Physicians are not aware that the LHDs provide the influenza vaccine for children ages 6 months–59 months.

Clients have myths and misconceptions about the vaccine.

First time shot recipients need booster shots.

The media has not been fully used to educate clients about the vaccine.

LHDs do not have the time available to educate parents and providers about the vaccine.

The LHDs need CDC educational materials to educate parents and providers.

The special needs and low-income population need education on the influenza vaccine.

Parents do not know that the pain from the vaccination is only temporary and will help the child throughout the flu season.

Parents do not weigh the pros and cons of vaccinating and not vaccinating their children throughout the flu season.

Physicians do not know the statistics and the importance of receiving flu vaccines for children age 6 months–59 months.

Information about the flu vaccine for children ages 6 months–59 months is not readily available for the public.

Commissioners do not support providing the flu vaccine for children ages 6 months–59 months.

The region does not have uniform printed materials about the flu vaccine.

There are language barriers between some LHDs and their clients.

Some LHD staff members lack education on the flu vaccine in the 6 month–59 month old population.

Different physicians have different recommendations for parents.



## STEP 3: DEVELOP A SOLUTION AND ACTION PLAN

To address the low influenza immunization rates, the team found that there were multiple areas members could work on. Because of this, they had to focus on the areas they felt were most important. Through incorporating several QI tools in the project — Fishbone Diagram, Tree Diagram, Brainstorming, Logic Model, and the Know/Don't Know Chart — the team explored the root causes of the problem and identified that the most important area to address was the lack of parent knowledge and education regarding the influenza vaccination.

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*“Demand for immunization requires that the recipient or parent be aware of the threat of vaccine-preventable diseases, and know that vaccine is available, effective, and safe.”*

*- Richard Kent Zimmerman, MD, MPH  
Journal of Family Practice, Jan. 2005*

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### KNOW

- Few children are vaccinated
- How many children should get vaccinated (i.e., target)
- Children are contagious to the whole community
- There may be a shortage of vaccine
- Young children have high rate of complications from flu
- There are two types of vaccines for children
- Vaccines are effective in preventing severe disease
- When the flu epidemic usually appears
- Children need two doses of vaccine

### DON'T KNOW

- Exactly how many children are vaccinated in each county
- How to get integrated data at the regional level
- How many doctors encourage parents to get their children immunized

### Milestones:

- Analyzed maps of current processes to determine areas of improvement
- Participated in the Continuous Quality Improvement (CQI) Workshop for the region on July 18, 2007
- Identified the priority area for an action plan to address root causes for the low influenza vaccination rate: lack of parent education regarding influenza vaccination
- Analyzed each area of Fishbone and determined potential solutions
- Selected initial project activities:
  - Abstracted vaccination rates data from PHClinic and KSWebIZ to determine baseline in each county
  - Contacted KDHE Immunization Program regarding VFC (Vaccines for Children Program) vaccine — they agreed to give 100 doses to the region (20 per county)
  - Ordered vaccine

**QI tools used in this step:** “Know/Don't Know” Chart, Brainstorming



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## STEP 4: IMPLEMENT THE SOLUTION

The team's analysis of root causes led them to conclude that, rather than clinic access, education and awareness about the influenza vaccine was the most important factor in their region. Thus, an outreach strategy was selected as the first step in the process of implementing changes. As part of the outreach strategy, the team designed postcards to send to all targeted families. The postcards were used to track scheduling of appointments, vaccinations given and as an incentive to register for a drawing by September 2007.

### The selected outreach process also included the following steps:

Step 1: Identify the potentially eligible population for the influenza vaccination

Step 2: Increase public awareness that the program exists

Step 3: Increase understanding of eligibility for the program

Step 4: Educate individuals about the program

Step 5: Motivate individuals to take action to participate in the program

### Next, the team implemented several other solutions, such as distributing the following campaign materials:

- Posters — health care clinics, preschools, elementary schools, hospitals, health departments and other community locations
- Fact Sheets — day care providers, school nurses and secretaries, and preschools

In addition, to enhance the public awareness about the influenza vaccine, the team placed two advertisements in each county's newspaper per month beginning September 15, 2007 through March 2008. With support from two local radio stations in Colby and Hays, the team also ran public service announcements targeting the project's audience.

### Milestones:

- Abstracted influenza vaccination rates from PHClinic, the public health clinic management system, and KSWebIZ, the Kansas immunization registry
- Conducted the Quality Improvement (QI) training for staff
- Obtained promotional materials
- Conducted public information campaign
- Calculated type and quantity of vaccine necessary
- Ordered vaccine
- Identified locations suitable for outreach activities
- Conducted outreach and other immunization activities
- Calculated coverage rates after the campaign
- Reviewed evidence and recommendations for increasing influenza vaccination rates in the region
- Pulled up information and statistics about the flu

**QI tools used in this step:** Fishbone Diagram, Tree Diagram, Brainstorming, Logic Model

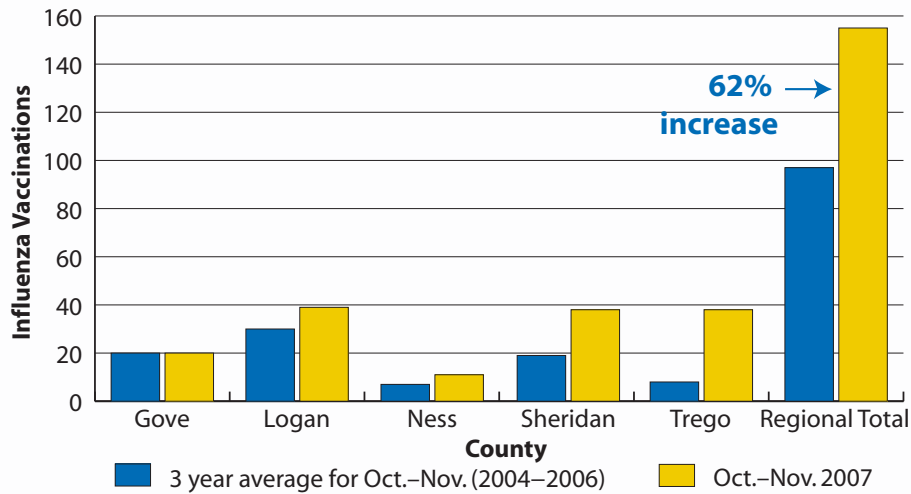


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## STEP 5: REVIEW AND EVALUATE RESULTS OF THE CHANGE

Influenza Vaccination Counts from  
West Central Public Health Region,  
October–November, 2004–2007



### Results:

1. By the end of the project period, there was an increase of 62 percent over the previous three year average for the months of October and November in the number of 6- to 59-month-old children who were vaccinated
2. Increased collaboration between local health departments and 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
3. Started learning how to extract data from multiple sources in the region and the possibilities of extracting data for other purposes

### Milestones:

- Gathered data and charted progress on the indicators
- Reviewed Fishbone Diagram and Tree Diagram on education, and identified that most causes had been addressed by the team

**QI tools used in this step:** Fishbone Diagram, Tree Diagram



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## STEP 6: REFLECT AND ACT ON LEARNINGS

### Some challenges identified by the team:

- Dedicating staff to full attendance at team meetings
- Insufficient time to complete quality improvement initiatives within the project period
- Obtaining, handling and processing data to support QI efforts
- Establishing a QI culture within the everyday work of public health practice

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*“We realized up front that we needed to get baseline data, and that in itself had not been a task our size of counties had been used to requesting on a regular basis. I think we’ve made progress in this endeavor.”*

*— Cindy Mullen, West Central regional coordinator*

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### Lessons Learned:

The project greatly benefited the region as it facilitated an understanding of the existing quality improvement opportunities within the region and helped to learn how to identify the root causes of the problems and successfully overcome the barriers. As part of this project the team learned the following lessons:

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*“What was so helpful for our region was that the administrators committed to bringing their entire staffs to the Quality Improvement (QI) training held for our region. Their commitment contributed to the buy-in of the concept.”*

*— Cindy Mullen, West Central regional coordinator*

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- The importance of Quality Improvement (QI) training for the project staff
- The importance of technical assistance and consultation to the regional project team
- The critical role of the project coordinator
- Benefits to networking or opportunity to share experiences within the project team
- Training and technical assistance may need to be restructured to include more face-to-face opportunities

### Milestones:

- Shared success through agency presentations, newsletters, and staff meetings



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