



*Carver County, Minnesota  
August 2007 – May 2008*

## ***Streamlining the HAN Testing Process***

### **The Situation**

The Minnesota Department of Health (MDH) requires that each local health department and tribal health service annually test their own health alert network (HAN). During a test, a test health alert is sent to contacts in that jurisdiction. These contacts are asked for an immediate response. The local department logs how quickly those replies come in as a way of measuring how effectively the health alert is getting out. In Carver County, those tests would consume nearly a day and a half of staff time.

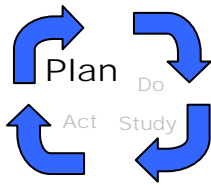
The health alerts in Carver County were sent out by email and one fax machine. The fax machine would take several hours to finish transmitting to its preprogrammed list of contacts. When replies came back, also by fax and by email, a staff person was assigned to make a notation of the actual time that each reply was received. Staff would continuously monitor the fax machine and email for incoming responses and record the responses on a detailed spreadsheet – a cumbersome and time-consuming process.

Everyone knew that this was an inefficient process, but they did not have a systematic way of analyzing what was happening or to figure out how to make it better. Carver County public health personnel had started to think that the only solution to this problem would be to purchase expensive tracking and communications software.

When Carver County Public Health staff heard about the opportunity to do a quality improvement project through the MLC-2 grant, they jumped at the chance to learn some new tools to solve this relatively minor but time-consuming problem.

### **Aim Statement**

By March 1, 2008, to decrease staff time dedicated to a HAN testing event by 50 percent.



Carver County started by developing a **process-flow diagram** (Fig. 1) to detail the steps in conducting a HAN test, with time estimates for each part of the process, from sending the health alerts to logging the responses.

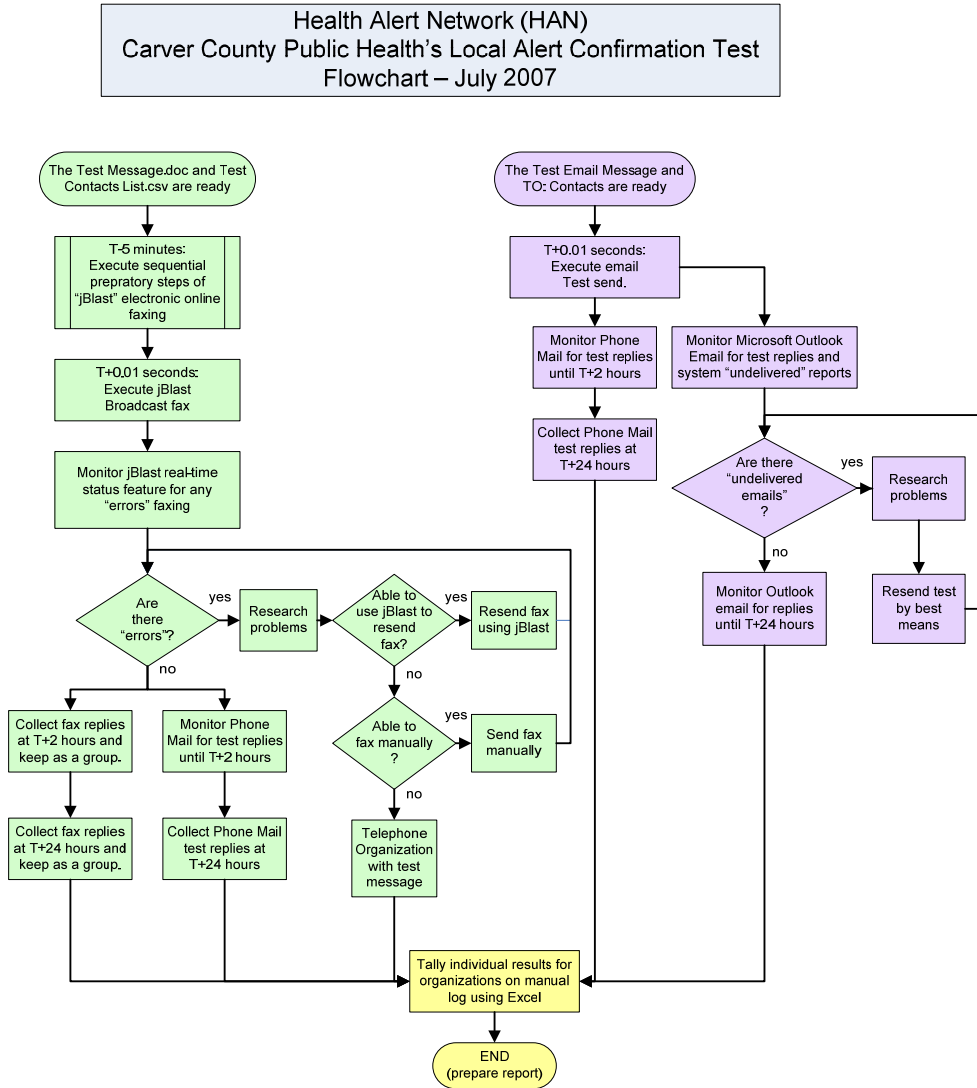


Fig. 1

**Team members:**

- Melanie Countryman, Carver County Public Health
- RaeJean Madsen, Carver County Public Health
- Deb Hammond, Carver County Public Health
- Emily Thompson, Carver County Public Health
- Heidi Innaver, Carver County Public Health
- Josh Carlyle, Carver County Public Health
- LuAnne McNichols, Minnesota Department of Health
- Allison Thrash, Minnesota Department of Health
- Kathleen Thiede-Call, University of Minnesota Faculty Advisor
- N. Pamela Saungweme, University of Minnesota Graduate Student

## PLAN, cont'd

A **fishbone diagram** (Fig. 2) helped them to pinpoint some possible causes of excess staff time. They noted in particular that it took a long time to log test responses. They used **brainstorming** as a way of identifying possible interventions to decrease the amount of time related to logging test responses.

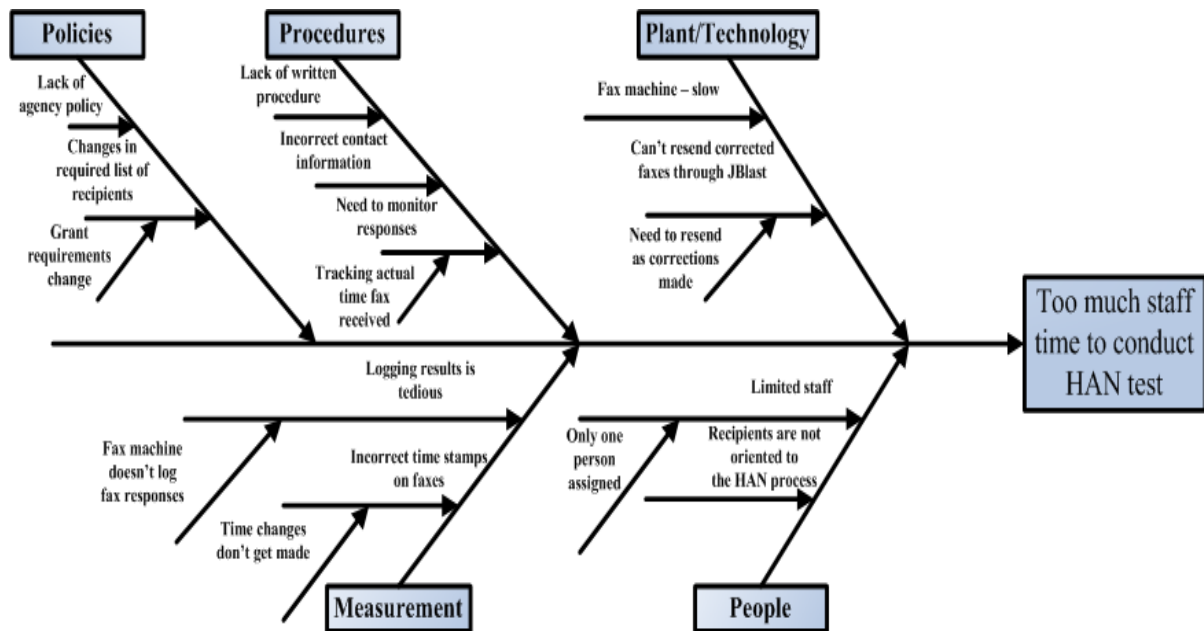
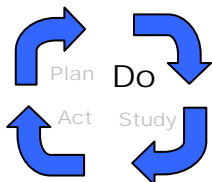


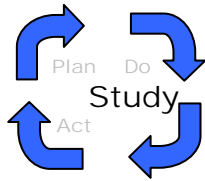
Fig. 2

Another planning step taken was to **survey** other local health departments in Minnesota to see how they conducted HAN tests and what issues they were seeing. Carver County Public Health intended to use the survey results to generate a list of additional interventions to try. The only new intervention that was identified, however, was the purchase of an emergency broadcasting system, which was cost prohibitive. However, the survey did have an added benefit of making connections with other agencies, which can continue into the future.

Carver County Public Health tested several interventions, including:

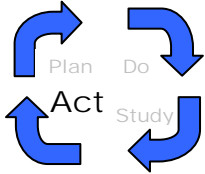


- Two people logging replies coming in by email and fax.
- Making improvements to the Excel spreadsheet to make it easier to fill out.
- Developing a standard response form which allowed less frequent monitoring of the fax machine and more efficient logging of test responses.



Carver analyzed the results of these interventions and discovered that the most significant change came through the revision of the reply form.

Intervention	Result
Two people logging replies	No change in staff time
Streamlined Excel spreadsheet	Decrease of 2 hours
Revised reply form (email and fax) and decreased monitoring of faxes	Decrease of 5 hours
<b>Net decrease in staff time for event:</b>	<b>70 percent</b>



Carver County Public Health modified their HAN testing process to incorporate the standard reply form (Fig. 3), developed a written procedure for the HAN testing process, and disseminated their survey findings to HAN staff statewide so that others can benefit from this information.

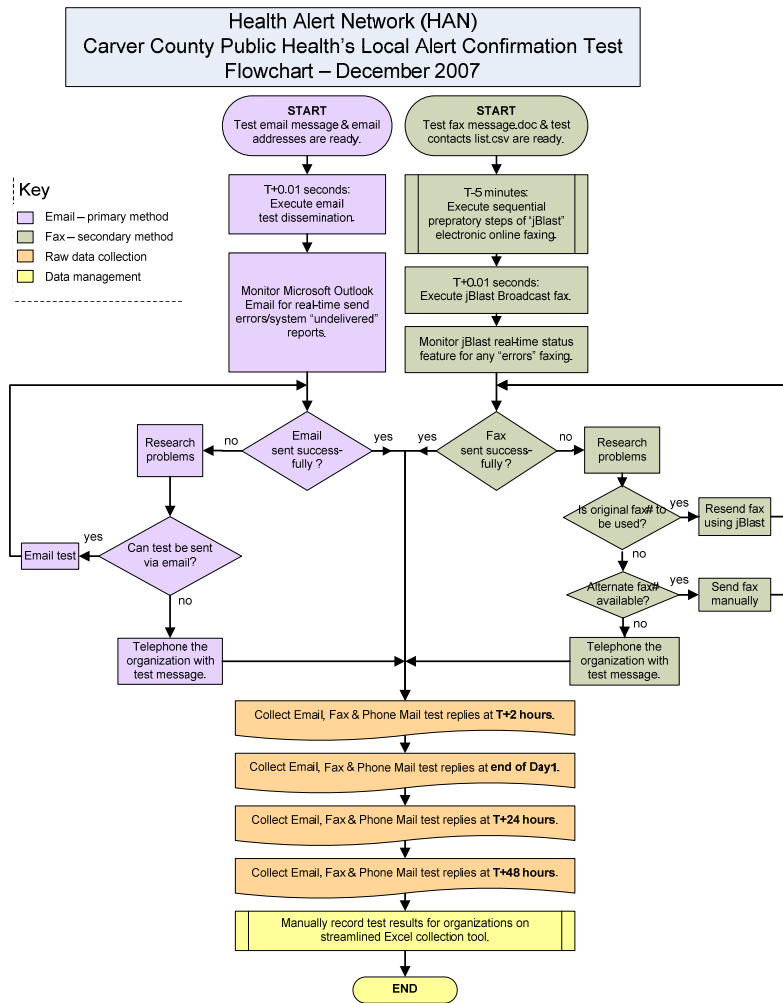


Fig. 3

Future plans include improving their management of the HAN contact information and increasing the percent of contacts who respond to the health alert (currently at 65 percent).

## Lessons Learned

Carver County's QI project was well-defined and discrete, focused on a process that was completely within their control. That focus helped both with identifying the problem and in implementing a successful solution.

Through the use of QI tools, Carver County Public Health was able to pinpoint the real problem with the testing system – a time-consuming response logging process. As a result of having the problem accurately identified, they were able to implement a successful “low tech” and low cost solution.

For more information on the Carver County QI Project, contact Heidi Innvaer, Carver County Public Health, [hinnvaer@co.carver.mn.us](mailto:hinnvaer@co.carver.mn.us), 952-361-1329.

*Support for this project was provided by a grant from the Robert Wood Johnson Foundation®.*



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*Central and Northwestern Minnesota Counties  
August 2007 – May 2008*

## ***Life happens: helping clients keep WIC appointments***

### **The Situation**

When a mother misses a WIC appointment, it can leave a gap in a whole range of preventive health services that she and her children receive. They miss out on not only food vouchers, but nutrition education as well. Opportunities for parenting education, referrals for home visits, immunizations, dental varnishing, and information regarding other community resources are also lost or delayed by missed appointments. Missed appointments create scheduling issues for local health departments by leaving holes in the appointment schedule, especially at off-site clinics where staff do not have access to other work duties. On the other hand, missed appointments create appointment “crunches” when rescheduled appointments are squeezed into already full WIC clinic dates.

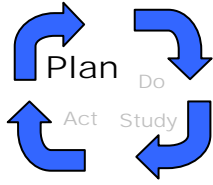
The central Minnesota local public health directors group had often discussed these challenges, yet none of them had tried a systematic approach to improving WIC “kept appointment” rates. When the MLC-2 quality improvement grant was announced, they agreed that this would be a good opportunity to see if something could be done to improve the situation for everyone.

Becker County, in northwestern Minnesota, also recognized the problems with missed WIC appointments. They had already begun making some changes to ensure that clients would not miss out on services, but saw that the MLC-2 grant could provide more structure to their effort and a chance to learn from other counties. Becker and the counties in central Minnesota combined their similar proposals to form a single QI project with the hope of learning from each other.

### **Aim Statement**

By February 29, 2008, increase the rate that clients keep their appointments at Women, Infants, and Children (WIC) clinics.

*The Minnesota Public Health Collaborative for Quality Improvement is a partnership of the Minnesota Department of Health, the University of Minnesota, and the Local Public Health Association.*



The counties started with **surveys** of those who missed their WIC appointments as a way to identify and categorize the barriers clients faced. They agreed upon a common definition of “missed appointment” so the data could be compared. A **fishbone diagram** (Fig. 1) was created to group the causes of missed appointments (People, Machinery, Equipment, Methods, and Materials), and it revealed a number of issues related to missed appointments, including:

- Transportation issues, location of WIC clinic
- Forgetting appointments, having a conflict with work times
- Finding the WIC process too difficult

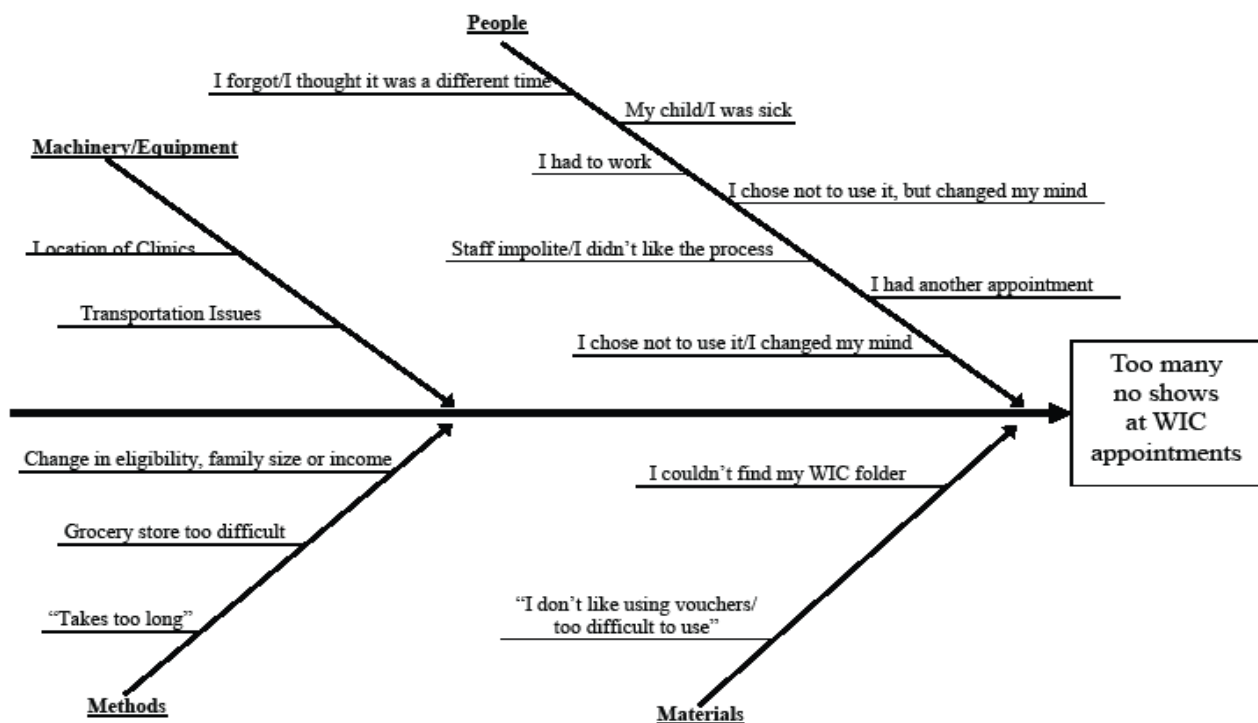


Fig. 1

**Team Members:**

Joyce Mueller, Crow Wing County Public Health  
 Ronda Stock, Becker County Public Health  
 Marlene Hufford, Isanti County Public Health  
 Janelle Schroeder, Kanabec County Public Health  
 Sylvia Cook, Mille Lacs County Public Health

Bonnie Paulsen, Morrison County Public Health  
 Sherry O'Brien, Stearns County Human Services  
 Heidi Brings, Todd County Public Health  
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 Sandra Potthoff, UMN Faculty Advisor  
 Abiola Fashanu, UMN Graduate Student

Each participating county collected survey data for one month and then compared responses. The group then **brainstormed** a range of potential interventions.

Each county also created a **process flow diagram** (Fig. 2) of their scheduling and reminder process.

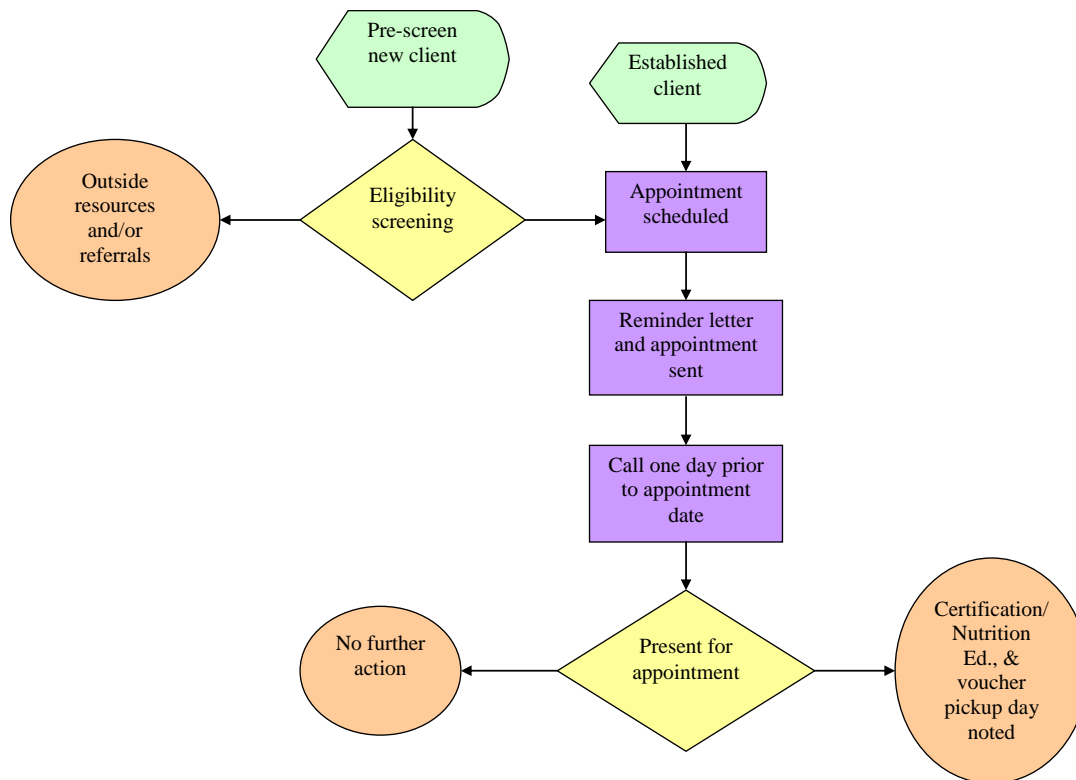
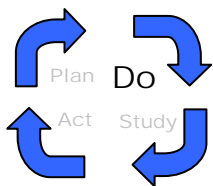
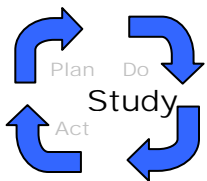


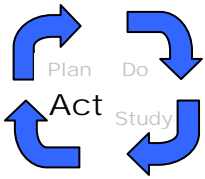
Fig. 2



Although defined as a single project for the purposes of the grant, the group agreed that it would be more meaningful if each county chose and implemented the interventions most appropriate to their settings. Each county tried one or more strategies, including reminder phone calls, postcards, transportation vouchers, calendars, and stickers. These interventions were implemented for six months.



Some counties had already implemented a reminder protocol and maintained a fairly high rate of kept appointments. Other counties experienced an initial increase in kept appointment rates, but those increases have not been maintained. One reason identified in this phase of the project was that although reminder phone calls can be helpful, and cell phone numbers have been requested, clients may change their cell phones frequently for a variety of reasons, including cost.



The participating counties sense a need to return to the planning phase of this cycle to consider other possible root causes of missed appointments and to consider alternative interventions. Some plan to continue surveying clients about missed appointments.

The testing of new reminder protocols in general is seen as having enriched the WIC clinic process and has been experienced as positive by many of the counties, which plan to continue various interventions where possible (depending on expense).

## Lessons Learned

The QI process led to positive actions on the part of the local health departments involved in the project, changes they believe have improved the WIC clinic experience and relationships with clients and the general public. Many of the counties had experimented with different reminder interventions, but had not developed a systematic method of testing and sharing those strategies with other local health departments in the region. None of the local health departments had tried creating a flow chart to understand the WIC clinic process. The QI project facilitated communication and increased understanding among these counties of both quality improvement and WIC clinic issues.

The aim of the project was to improve WIC kept appointment rates. Although this goal was not reached, the use of QI tools was found to be helpful and the knowledge gained can be applied as needed to improve quality in all public health programs.

For more information about the Central/Northeast Minnesota QI project, contact Joyce Mueller, Crow Wing County Public Health, [joyce.mueller@co.crow-wing.mn.us](mailto:joyce.mueller@co.crow-wing.mn.us), 218-824-1087.

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*Douglas County, Minnesota  
August 2007 – May 2008*

**Minnesota Public  
Health Collaborative  
for Quality  
Improvement**



## ***Beautiful Minds: Early Identification of Child Mental Health Needs***

### **The Situation**

In rural Minnesota, the children's mental health service delivery system perhaps can be best described as fragile. Consistently at risk due to the absence of a universal early identification process, inadequate coordination among providers, and a persistent lack of child-adolescent psychiatric services, the system has struggled to meet ever-increasing demands.

The Douglas County Children's Mental Health Collaborative, well aware of the fragility and complexity of the current system, has been challenged in recent years to explore options to both enhance and stabilize the service delivery system. In 2007, facing a significant reduction in funding, the Collaborative partners strategized about how to use their limited funds to redesign the current system, placing a greater emphasis on prevention and early intervention. "Shared care" surfaced repeatedly in local conversations as a model that had proven successful in other communities, including a community served by one of the child-adolescent psychiatrists who also serves Douglas County children.

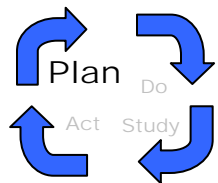
In the fall of 2007, the desire to find a better system became a necessity when Douglas County experienced a significant decline in the already scarce landscape of child/adolescent psychiatric services due to the departure of one of the only three contracted providers in the area. Now the question of where funds could leverage the most "bang for the buck" to improve the mental health of children and adolescents was far more than theoretical...it had become urgent.

The shared care model emphasizes partnerships among professionals and with families to ensure children and adolescents get timely and appropriate screening, triage, and as indicated, treatment by the most appropriate level of practitioner. Armed with this knowledge and with the support of both the child/adolescent psychiatrists and the primary care providers, the collaborative members developed an ambitious vision for implementing the shared care model as a demonstration project. The timing of the MLC-2 quality improvement grants presented the team with a valuable opportunity to access the tools needed to bring their vision into focus.

*The Minnesota Public Health Collaborative for Quality Improvement is a partnership of the Minnesota Department of Health, the University of Minnesota, and the Local Public Health Association.*

## Aim Statement

By March 2008, 30 children (0-18) in the PrimeWest Health System who are seen by [one of three doctors] in the clinic and diagnosed with a mental health disorder will be involved in an evidence-based shared care model.



One of the first applications of quality improvement (QI) the Douglas County project team made was to scale down their focus to a manageable level. A **fishbone diagram** (Fig. 1) helped to identify specific issues contributing to a lack of standardized social-emotional screening of children in the primary care setting.

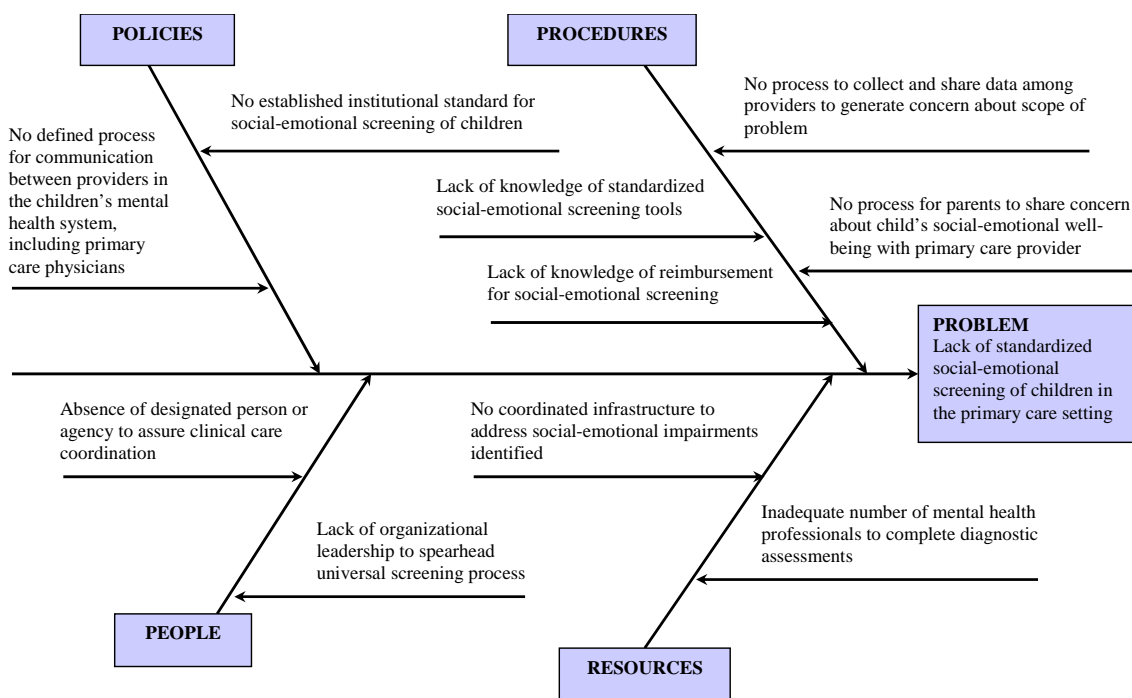


Fig. 1

### Team members:

Sandy Tubbs, Douglas County Public Health  
 Dave Stern, Douglas County Children's Mental Health Collaborative  
 Jeanne Barlage, PrimeWest Health  
 Mike Woods, Douglas County Social Services  
 Joyce Crowe, Alexandria Clinic  
 Sue Ewy, Minnesota Department of Health  
 Brenda Menier, Minnesota Department of Health  
 Donna Anderson, University of Minnesota Faculty Advisor  
 Helen Parsons, University of Minnesota Graduate Student

As a result of this analysis, the team chose to apply QI methods to the process for identifying children and adolescents with mental health needs, focusing on social-emotional screening at the child's point of entry into the primary care system.

The current screening process was then documented through a **process flow diagram** (Fig. 2). Gaps in the process were identified and a modified screening process created for one of the Alexandria area clinics. Before implementation, the process flow chart was checked and rechecked and developed in great detail to make sure no part of the process would get lost or omitted.

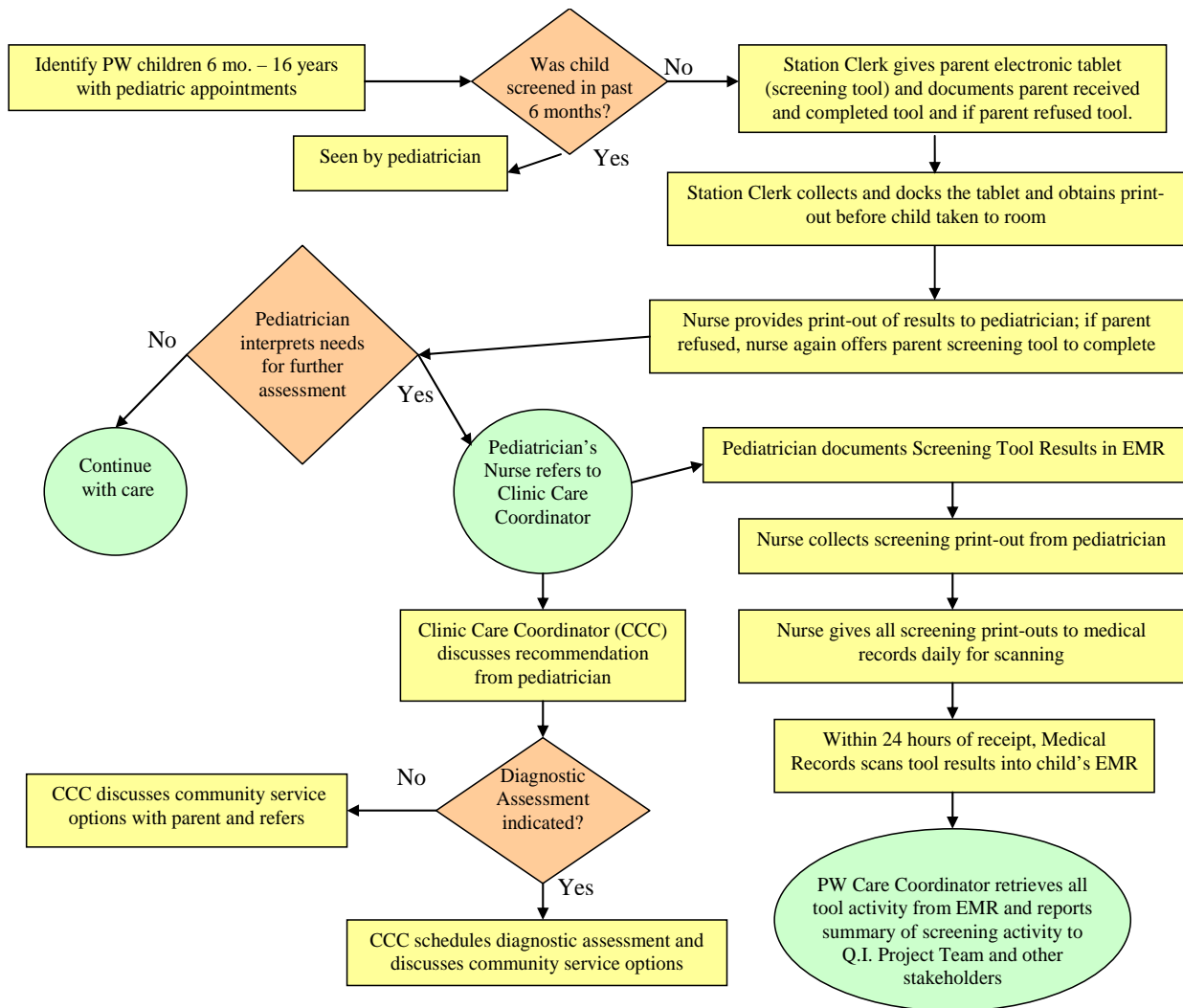
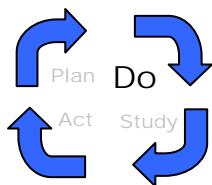
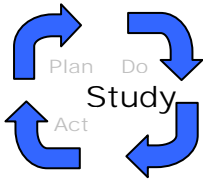


Fig. 2

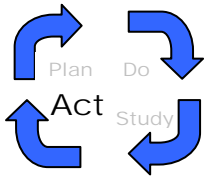


During a two-week trial of the screening process, parents of a specific population of low-income children and adolescents were given the screening tool at check-in for a pediatrician visit. The results were then compared to a set of standardized indicators. The pediatrician discussed the results of the screening with the parents during the visit.



Following the two-week trial, gaps in the screening process were identified during a meeting of all the persons involved in the development and implementation of the screening process, and it was modified to address the identified gaps. This process (**plan-do-check-act**) was repeated until no further problems in the screening process were identified.

From November 28, 2007 to February 23, 2008, 254 parents of children ages six months to 16 years were offered the screening tool; 169 completed the screening, and 46 children and adolescents were identified as having potential emotional/ behavioral problems and referred to the clinic care coordinator for follow-up.



The clinic will continue to implement the screening tool, potentially expanding its use to 100 percent of the children seen at the clinic. The team will continue to gather data and follow longer-term outcomes for children who are screened to determine the effect of the early screening process on mental health outcomes.

## Lessons Learned

Douglas County had a strong mental health collaborative partnership in place before beginning the QI project, which was a key strength in being able to move forward with implementation.

The development of an aim statement was instrumental in narrowing the focus of the project and assuring a clear definition of the desired outcome. The QI tool of process mapping allowed the collaborative partners to break the screening process down into small, very specific steps. The cycle of testing (using plan-do-check-act) reinforced for all involved the importance of assuring that each step of the process is clear and detailed, that all participants are engaged in the process and that everyone understands their critical role in assuring success of the process as a whole.

For more information about the Douglas County QI project, contact Sandy Tubbs, Douglas County Public Health, [sandy.tubbs@mail.co.douglas.mn.us](mailto:sandy.tubbs@mail.co.douglas.mn.us) , 320-763-6018.

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*Minnesota Counties Computer Cooperative  
August 2007 – May 2008*

## ***Taking It to Bits: How Developing an Electronic Record Improved Communication in Latent TB Clinics***

### **The Situation**

Latent tuberculosis infection (LTBI)\* remains a concern throughout Minnesota, due primarily to the increase in immigration from countries where TB is endemic. While many counties in Minnesota have few if any LTBI cases in a given year, larger rural and urban counties have consistently large caseloads. The paperwork for these cases is cumbersome, involving multiple paper reports required by the federal government and the state health department, which ask for much of the same information.

The Minnesota Counties Computer Cooperative (MCCC), a group of counties in southwest, south central, and west central Minnesota developed and shares a software system for tracking public health data. Additions and refinements to the system are made regularly, as members identify areas that would benefit from electronic record-keeping.

When the MLC-2 quality improvement grants were announced, the group considered several possible projects but decided that creating an electronic means of tracking LTBI cases would benefit the most MCCC members *and* potentially improve public health. What they did not expect to get out of the QI process was a new way of structuring TB clinics and communicating with clients.

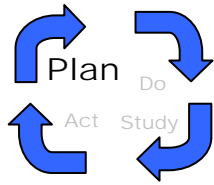
### **Aim Statement**

Decrease the time spent documenting treatment of patients with latent tuberculosis by 10 percent.

*The Minnesota Public Health Collaborative for Quality Improvement is a partnership of the Minnesota Department of Health, the University of Minnesota, and the Local Public Health Association.*

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\* Persons with LTBI do not spread the disease, but they are susceptible to developing active TB, which would then pose a public health risk. Keeping track of persons with LTBI and making sure that they receive any needed health services, therefore, is an important public health responsibility.



The first challenge in turning this idea into a QI project was to develop an aim statement that was meaningful and measurable. The group decided to focus on reducing staff time to fill out the TB-related paperwork, expecting that creating an electronic record would have this effect.

A **fishbone diagram** (Fig. 1) identified many of the problems with the paperwork process, including redundancies, multiple terms for the same condition, and staff time. The MCCC also hoped that once the paper trail was changed to an electronic record it would decrease the variation in documentation across all the counties.

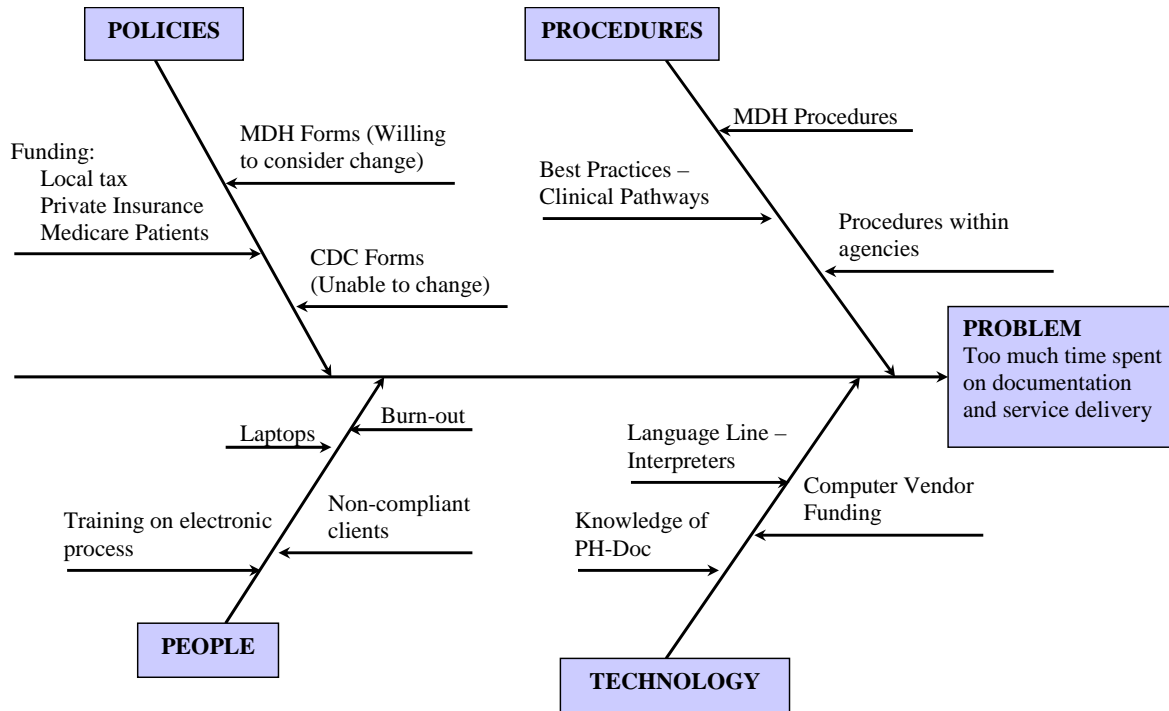


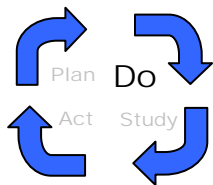
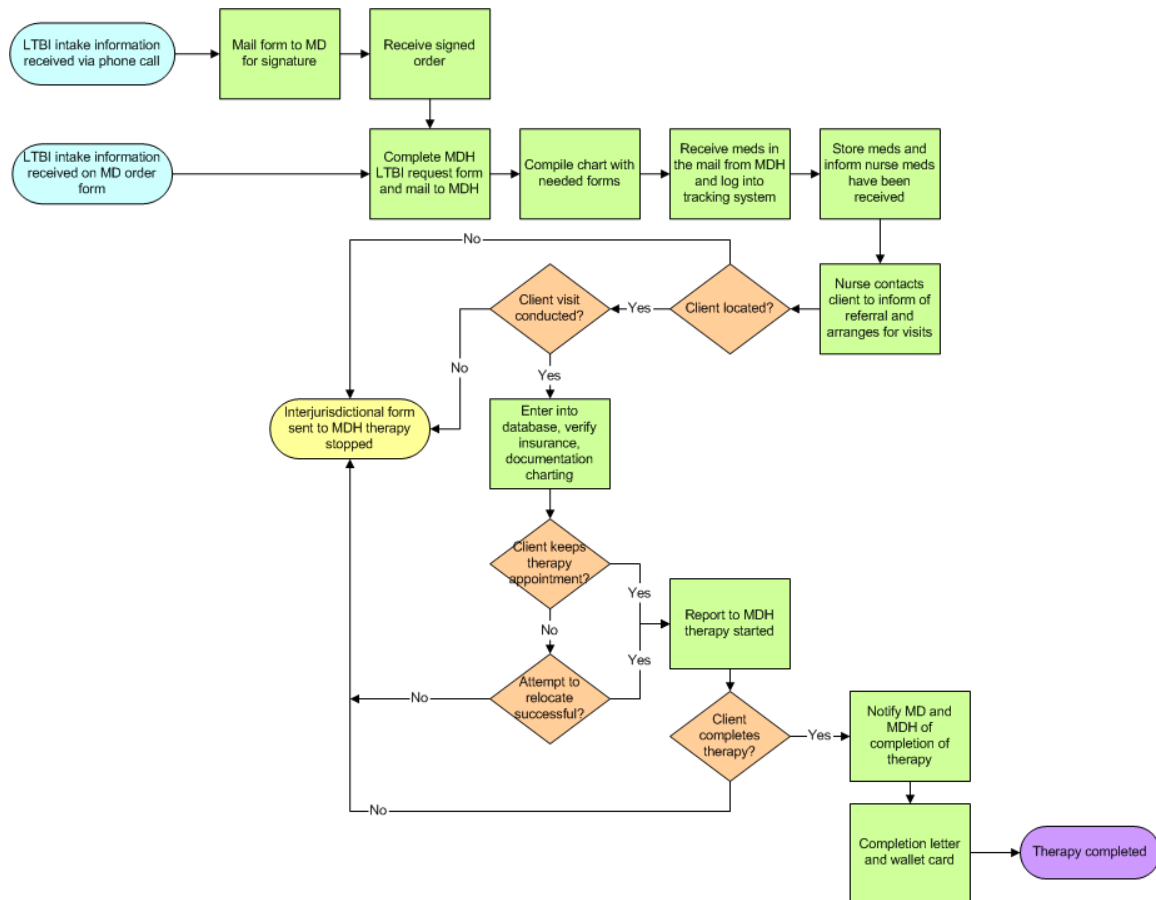
Fig. 1

**Team members:**

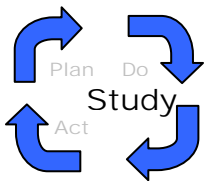
- Diane Thorson, Otter Tail County Public Health
- Kathy McKay, Clay County Public Health
- Kathy Anderson, Clay County Public Health
- Karen Nelson, Wadena County Public Health
- Local county financial manager, TB nurse, support staff, billing staff, and computer vendor
- Luanne McNichols, Minnesota Department of Health
- DeeAnn Finley, Minnesota Department of Health
- Ayse Gurses, University of Minnesota Faculty Advisor
- Schelomo Marmor, University of Minnesota Graduate Student

To identify all the data elements that would be needed for an electronic record, the MCCC developed a **process flow chart** (Fig. 2) to show all the steps taken from intake to discharge.

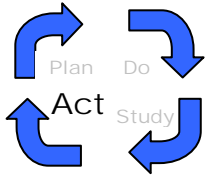
Fig. 2



As Otter Tail County, the lead county in the QI project for the MCCC, developed the electronic record, they identified new data elements that would help with data entry and consistency among records. The draft electronic record sample is now in place and being used as of April 1.



The development of the electronic record revealed inconsistencies and redundancies in the paperwork process. It also revealed some of the difficulty in gathering information from the individuals with latent TB, many of whom are foreign-born (see lessons learned, below). Data collection is occurring at this time to determine if the changes put in place have made an impact on the time spent on documentation.



The testing of the electronic record is not yet complete. The goal is to have the electronic record format as final as possible before implementing throughout the MCCC counties. When ready, they will use web-based training tools to disseminate the new process and train staff.

## Lessons Learned

Using the QI process as a way to look more closely at not just the paperwork but the process of collecting data on latent TB cases and working with clients, Otter Tail County found a number of unexpected benefits and lessons learned.

- As they developed the electronic record, researching best practices related to latent TB, the county stumbled upon a best practice (incentives) and started to use a program they were neither looking for nor aware of: gift cards from MDH for clients who complete TB therapy.
- To help with data collection for the new electronic record, a nursing student from another county developed picture cards for communicating with non-English speaking clients. This new form of communication on TB improved not only the accuracy of information but also the nature of the interaction with clients. It also has helped improve compliance with the required regimen of medication for latent TB.
- In addition to improving communication with clients, staff and the student worker observed that wait times at the drop-in clinic were quite long. The local health department started scheduling specific appointment times and making reminder calls. This has not only improved kept appointment rates but also significantly reduced wait times at the clinics.
- DVD training tools for patient education during visits are now available for use as well.

For more information about the MCCC QI project, contact: Diane Thorson, Otter Tail County Public Health, [dthorson@co.otter-tail.mn.us](mailto:dthorson@co.otter-tail.mn.us) , 218-998-8333.

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**Minnesota Public  
Health Collaborative  
for Quality  
Improvement**



## ***The Mouths of Babes: Increasing Acceptance of Dental Varnishing***

### **The Situation**

While early childhood caries are the single most common chronic disease of childhood, dental disease is not often recognized by the public as a serious health problem. It is 5-8 times more common than asthma and 80 percent of tooth decay is found in 25 percent of children. Many parents do not appreciate or understand the serious negative impact tooth decay can have on the lives of their children. Dental fluoride varnishing (a protective fluoride coating brushed on a child's teeth every three months) is becoming a key tool in the effort to prevent caries and improve the dental health of infants and children, especially in populations most at risk.

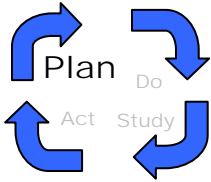
Over 18 local health departments in Minnesota had already implemented dental fluoride varnishing programs at the time the MLC-2 quality improvement grants were announced. However, counties in northeastern Minnesota were just beginning to raise awareness of childhood dental and oral diseases in the community while simultaneously raising awareness among local health professionals of the ease of application, low cost and safety of implementing a dental fluoride varnish program in a public health setting.

The MLC-2 project seemed to create a perfect opportunity to take advantage of a learning opportunity and to bring visibility and credibility to the practice of dental fluoride varnishing in the northeast region. Preliminary efforts revealed that not only was the practice of dental varnishing relatively unknown in the area, but a number of barriers (both internal and external) needed to be overcome to implement the procedure into local public health practice.

### **Aim Statement**

From September 1, 2007 to November 30, 2007, at least 20 children, two months to five years of age and enrolled in the Koochiching County Women, Infants and Children (WIC) Program, will receive a PHN dental fluoride treatment.

*The Minnesota Public Health Collaborative for Quality Improvement is a partnership of the Minnesota Department of Health, the University of Minnesota, and the Local Public Health Association.*



Koochiching County acted as the lead county in this project. A **force-field analysis** (Fig. 1) helped to identify the driving and restraining forces for implementing dental varnishing, such as:

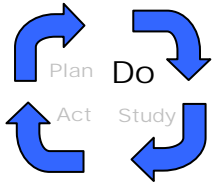
- resistance to the practice by area dentists and among public health professionals
- the need for education and training about dental health
- a lack of parental knowledge
- preschoolers with dental caries and access issues
- insurance problems
- too few dental health providers to accommodate the underserved population
- culture affecting family's dental decisions
- under-funded public dental services

+ Driving Forces	Restraining Forces -
Serious dental problems in at-risk children →	← Parents don't understand importance of dental health
Passionate regional advocacy →	← Overshadowed by other client needs
Easy to administer →	← Unfamiliarity with procedure
Growing "best practice" in U.S. →	← Lack of staff time
Support from dentists →	← Resistance from dentists
	← Billing/reimbursement problems
	← Lack of long-term funding

Fig. 1

**Team members:**

Julie Myhre, Carlton-Cook-Lake-St. Louis Community Health Board  
 Deb Larson, Koochiching County Public Health  
 Cindi Korpela, Aitkin County Public Health  
 Terri Allen, Carlton County Public Health  
 Deb Smith and Bonnie La Fromboise, Fond du Lac Reservation  
 Ruth Pierce, Itasca County  
 Mike Duffy, Lake County Public Health  
 Marie Margitan, Minnesota Department of Health  
 Kari Guida, Minnesota Department of Health  
 Jim Hart, University of Minnesota Faculty Advisor  
 Jan Arleth, University of Minnesota Graduate Student



Koochiching County designed a **process flow chart** (Fig. 2) and implemented a dental varnishing program, intended to reach children 6 months to through age 5, in programs including WIC, Maternal and Child Health (MCH) and Child and Teen Check-up (CTC.)

The other counties in the northeast region have been working to address barriers to beginning a dental varnishing program, including acceptance by county officials, local dentists, and public health staff.

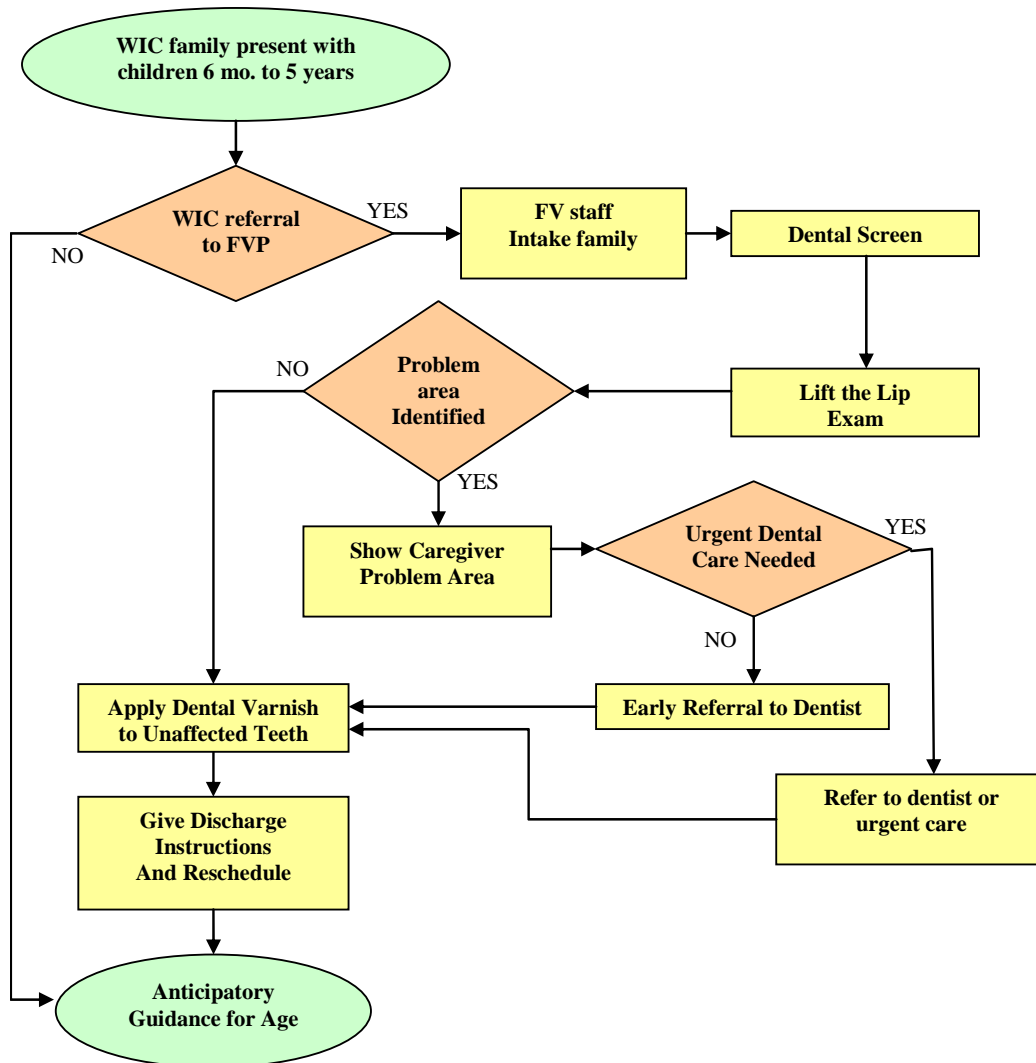
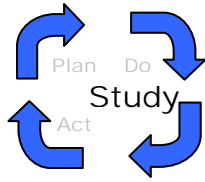
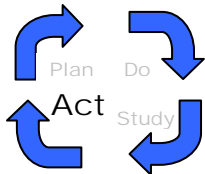


Fig. 2



Koochiching County has found that the work flow of the dental varnish program can be affected by the number of staff available to screen and offer dental varnishing to parents for their children, and by the number of staff available to apply the coating to teeth. As more parents come to accept dental varnishing, this process flow may need to be adapted to prevent long wait times.



This quality improvement project is still underway, as the involved counties continue to work toward developing dental varnishing programs.

## Lessons Learned

The QI project helped team members to learn how to analyze a new program in its developmental stage and also how to identify real and potential barriers that might occur during implementation. Agencies that had not started a dental fluoride program were able to address those barriers and issues upfront as they moved forward in developing and implementing their own programs.

After learning more about QI, the team realized that they had already been using some QI tools but had not named them as such, i.e., brainstorming, surveys and informal force field analysis.

Participants are very interested in learning more about QI and QI tools. The project also exposed members to some helpful web-based tools (e.g., for doing surveys and creating flow charts) that they can continue to use even now.

While it could be challenging at times, the project also learned that it is possible to carry out a QI project effectively on a regional basis. The focus of the project on dental varnishing helped to engage team members in the project because it addressed a significant concern in the region (access to dental care).

For more information about the Northeast Minnesota QI project, contact Julie Myhre, Carlton-Cook-Lake-St. Louis Community Health Services, 218-733-2862, [MyhreJ@communityhealthboard.org](mailto:MyhreJ@communityhealthboard.org).

*Support for this project was provided by a grant from the Robert Wood Johnson Foundation®.*



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*Olmsted County, Minnesota  
August 2007 – May 2008*

## ***Core Strength: Improving the Local Public Health Workforce***

### **The Situation**

A culture of quality improvement is well entrenched in Olmsted County. For many years county government has focused on improving quality in their services. Within this QI culture, the Olmsted County Public Health Services department used a well-developed performance management system that includes a focus on county-wide workforce competencies. However, the system lacked competencies specifically related to the public health workforce. Without a measurable set of skills, knowledge and attitudes necessary for the practice of public health, managers have been limited in their ability to help employees improve their capacity to provide essential public health services.

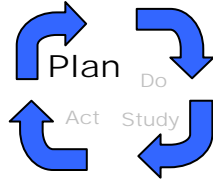
Public health managers also could see national accreditation for public health departments appearing on the horizon, and agreed that becoming accredited would be a high priority. Getting ready for accreditation put even more importance on developing a performance management system that would improve the practice of public health.

The MLC-2 project presented a good opportunity to become more intentional and systematic about incorporating a set of public health core competencies into the performance management system, while at the same time making needed improvements to that system.

### **Aim Statement**

By December 2007, 100 percent of Leadership Council members will rate their understanding of public health competencies at 3 or higher (1-5 scale).

*The Minnesota Public Health Collaborative for Quality Improvement is a partnership of the Minnesota Department of Health, the University of Minnesota, and the Local Public Health Association.*



Olmsted County first created a **logic model** (Fig. 1) that not only identified their ultimate goals (improved public health system performance and improved population health), but also clarified how the QI project fit into their vision and what other elements needed to be addressed. One of those needs was to identify a set of public health core competencies that could be incorporated into the performance management system for public health.

They then had managers self-assess their proficiency in the selected core competency domains.

Target Group	Project Plan			Outcome Plan		
	Activities <i>What we do</i>	Inputs <i>What we invest</i>	Outputs <i>What we deliver</i>	Outcome Statement		
				→ "Learning"	→ "Action"	→ "Conditions"
				Short-Term	Intermediate (Impact)	Long-Term (Impact)
<b>*Phase One</b> <i>Leadership Council</i>	<ul style="list-style-type: none"> <li>Assess LC awareness of PH Competencies</li> <li>Determine which PH competencies to include in OCPHS performance Management system for leadership positions.</li> <li>Assess LC proficiency in selected PH competencies</li> </ul>	<ul style="list-style-type: none"> <li>Steering committee planning, meeting, training development, time</li> <li>Meeting, training time for LC and CI Committee</li> </ul>	<ul style="list-style-type: none"> <li>A set of PH competencies specifically deemed to be important to our work at OCPHS, for use in professional development and performance management for all LC positions</li> <li>A professional development plan for each LC member</li> </ul>	<ul style="list-style-type: none"> <li>Increased LC understanding of PH competencies and their use in professional development and performance management"</li> </ul> <p><b>END OF MLC2 PROJECT</b></p>	<ul style="list-style-type: none"> <li>Adjust process as needed for roll-out to all OCPHS staff</li> </ul>	
<b>Beyond Phase One</b> <i>all OCPHS Staff</i> GOES BEYOND MLC2 PROJECT	<ul style="list-style-type: none"> <li>LC members "work" their development plans</li> <li>Lessons learned from phase one to adjust process as needed for roll out to all staff</li> </ul>	<ul style="list-style-type: none"> <li>LC time for professional development planning</li> </ul>	<ul style="list-style-type: none"> <li>A set of PH competencies specifically deemed to be important to our work at OCPHS, for use in professional development and performance management for all positions at OCPHS</li> </ul>	<ul style="list-style-type: none"> <li>Increased staff understanding of PH competencies</li> </ul>	<ul style="list-style-type: none"> <li>Increase LC ability to effectively develop PH competencies in their staff</li> </ul>	<ul style="list-style-type: none"> <li>Increase staff ability to meet specific PH competencies as shown through increased PH competency ratings in performance appraisals</li> <li>Maximize PH competency within our agency (maintain a competent public health workforce)</li> </ul>
				<b>Public Health Outcome</b>	Improved PH system performance Improved population health	

Fig. 1

**Team members:**

- Dawn Beck, Olmsted County Public Health
- Marilyn Deling, Olmsted County Public Health
- Judy Voss, Olmsted County Public Health
- Marty Aleman, Olmsted County Public Health
- Pete Geisen, Olmsted County Public Health
- Denise Daniels, Olmsted County Public Health
- Kathy Dubbels, Olmsted County Public Health
- Larry Edmonson, Olmsted County Public Health
- Mary Orban, Minnesota Department of Health
- Barb Dalbec, Minnesota Department of Health
- Jim Hart, University of Minnesota Faculty Advisor
- Anthony Mbuthia, University of Minnesota Graduate Student

The next step was to create a **process flowchart** (Fig. 2) of the performance appraisal process to assess it for variation in the process (i.e., how managers were doing it differently) and areas for improvement. The main areas identified were a need for more focus on goal-setting and working on regular, systematic employee development (i.e., not just at the time of the appraisal).

They also **surveyed** managers to gauge their level of awareness of the public health core

competencies and found that only 28 percent were aware of public health core competencies and how to use them in professional development and staff performance appraisal.

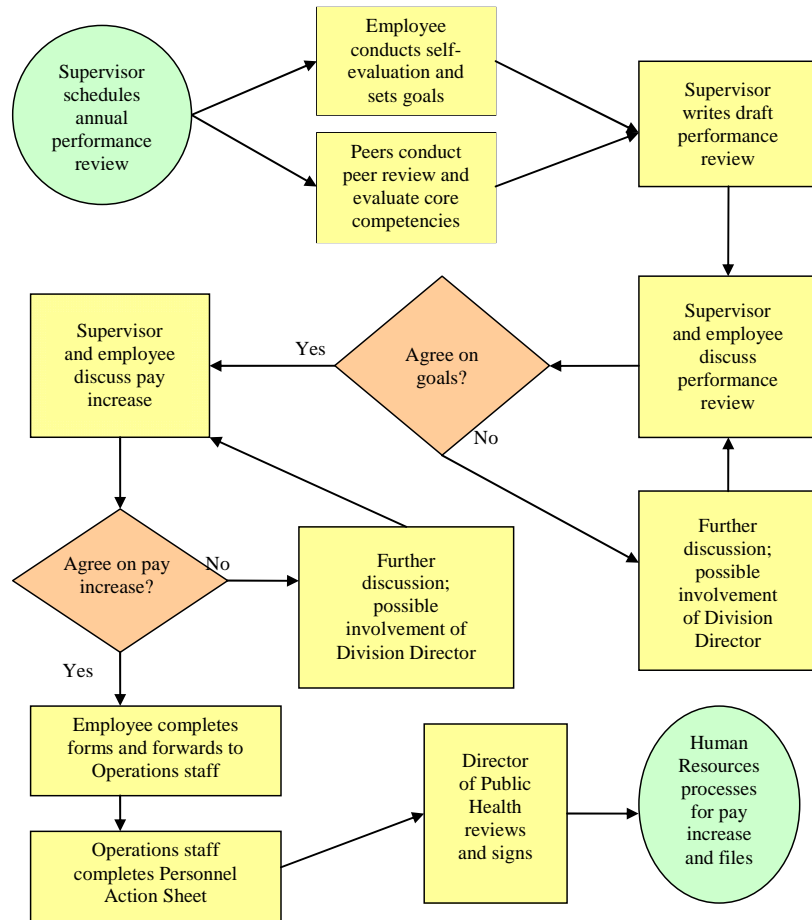
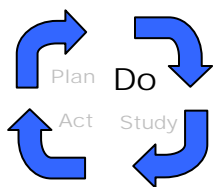
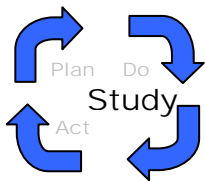


Fig. 2

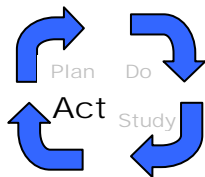


Olmsted County began to implement changes in the performance management process by:

- 1) Training supervisory staff in the public health core competencies;
- 2) Improving the performance management system so that it could effectively use the public health core competencies; and
- 3) Incorporating the public health core competencies into the improved performance management system.



A **follow-up survey** of managers found that awareness of public health core competencies and their use in staff development and appraisals had increased from 28 to 62 percent. Olmsted County plans to use the improved performance management system with managers during 2008 and to continue to evaluate and make changes (if needed), using the **plan-do-study-act** cycle. In 2009 they plan to use the improved performance management system with all public health department staff.



After the improved performance management system is in place, the public health core competencies will be added into the process. Training will be extended to all public health staff, to help them do their jobs in a way that reflects the core public health competencies. Plans also include continuing the self-assessments (e.g., on an annual basis) to determine training and budget needs.

## Lessons Learned

Olmsted County discovered that the QI process requires a time commitment, as well as a commitment to being open to learning from the process and a readiness to apply the information learned. It also requires group commitment and collaboration – all the players need to be given a chance to participate so that the process becomes a form of group problem-solving.

Olmsted County found many different QI tools to be effective for assessing problems, and discovered that it was helpful to learn how to apply the different tools in different situations.

Olmsted County also struggled with the complexity of their project. It has a long time frame, of which the MLC-2 grant was just a part. Their project also has a lot of specific terminology which frequently made it difficult to explain, but they ultimately found the QI effort helpful for learning to “tell the story” of their performance management improvement efforts.

For more information about the Olmsted County QI project, contact Marilyn Deling, [deling.marilyn@co.olmsted.mn.us](mailto:deling.marilyn@co.olmsted.mn.us); Dawn Beck, [beck.dawn@co.olmsted.mn.us](mailto:beck.dawn@co.olmsted.mn.us); or Judy Voss, [voss.judy@co.olmsted.mn.us](mailto:voss.judy@co.olmsted.mn.us), Olmsted County Public Health Services (507) 328-7500.

*Support for this project was provided by a grant from the Robert Wood Johnson Foundation®.*



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*Sherburne County, Minnesota  
August 2007 – May 2008*

**Minnesota Public  
Health Collaborative  
for Quality  
Improvement**



## ***On Time: Preventing Gaps in PCA Services***

### **The Situation**

Minnesota's Personal Care Assistance (PCA) program is designed to support people of all ages with disabilities to live independently in the community. Clients must meet four basic requirements: 1) be eligible for Medical Assistance or Minnesota Care Expanded Benefits or be eligible for the Alternative Care program; 2) be assessed by the county as having a need for PCA services; 3) have a doctor's statement of need for PCA services; and 4) be able to make decisions about their care or have a responsible party who can make those decisions.

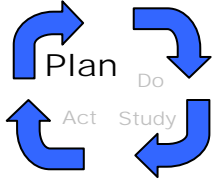
It was a great surprise to Sherburne County Public Health, which conducts the PCA assessments in their county, when the Minnesota Department of Human Services (DHS) came out with a report in 2007 that said only 32 percent of PCA assessments statewide were entered into the Medicaid Management Information System (MMIS) on time. Delays in assessment meant delays in recertification, which in turn meant delays in needed services.

Upon further inquiry, Sherburne County Public Health discovered their rate, at 61 percent, was significantly better than the statewide average. But that still left over a third of this vulnerable population with a potential gap in needed services. And Sherburne County was not the only entity concerned about the well-being of their community. Advocates for the physically and mentally disabled had succeeded in getting legislation approved that now requires all counties to increase their rate of on-time PCA reassessments (entered into MMIS) to 100 percent. Counties that do not meet this goal will be assessed a fiscal penalty.

### **Aim Statement**

By February 29, 2008, increase the percentage of Personal Care Assistant Reassessments that are completed on time (i.e., entered into the data system before the beginning date of the new service agreement) from 62 to 80 percent.

*The Minnesota Public Health Collaborative for Quality Improvement is a partnership of the Minnesota Department of Health, the University of Minnesota, and the Local Public Health Association.*



Sherburne County took immediate advantage of the tools presented at the QI trainings to examine their process for potential changes. They created a map of the current process with a process flow diagram that had more steps and persons involved than they had originally thought.

A **fishbone diagram** (Fig. 1) helped them pinpoint the causes of delays, and identified which ones were within the public health department's control. They saw that many different people and organizations had potential roles in the PCA reassessment and input process, and found that even within the public health department different individuals had different methods for going about the reassessment.

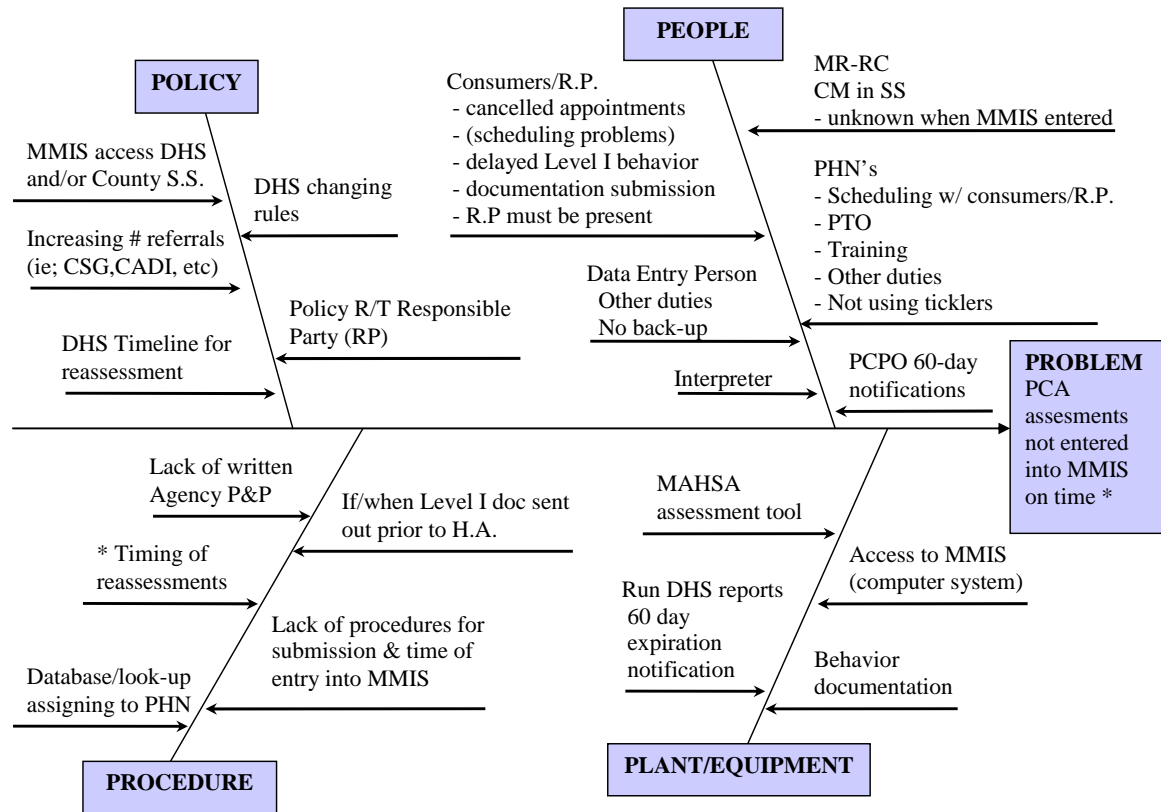
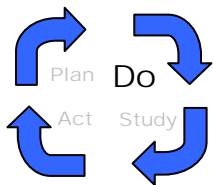


Fig. 1

**Team members:**

- Vonna Henry, Director, Sherburne County Public Health
- Kathy Landwehr, Sherburne County Public Health
- Kristen Sanders, Sherburne County Public Health
- Linda Wolford, MN Department of Human Services
- Sue Strohschein, Minnesota Department of Health
- Gail Gentling, Minnesota Department of Health
- Karen Kuntz, University of Minnesota Faculty Advisor
- Mayanka Singh, University of Minnesota Graduate Student



One of the first changes that Sherburne County implemented was to initiate the PCA reassessment process a month earlier – at 60 days prior, instead of 30. They had also realized that if the process got “stuck” at some point (for example, missing one piece of information), it tended to stay there, so they decided to send the necessary paperwork in immediately, even with missing or incomplete information, since the needed information could be added by amending the paperwork later. They created a new **process flow chart** (Fig. 2) for the PCA assessment so that all staff would be following the same procedures.

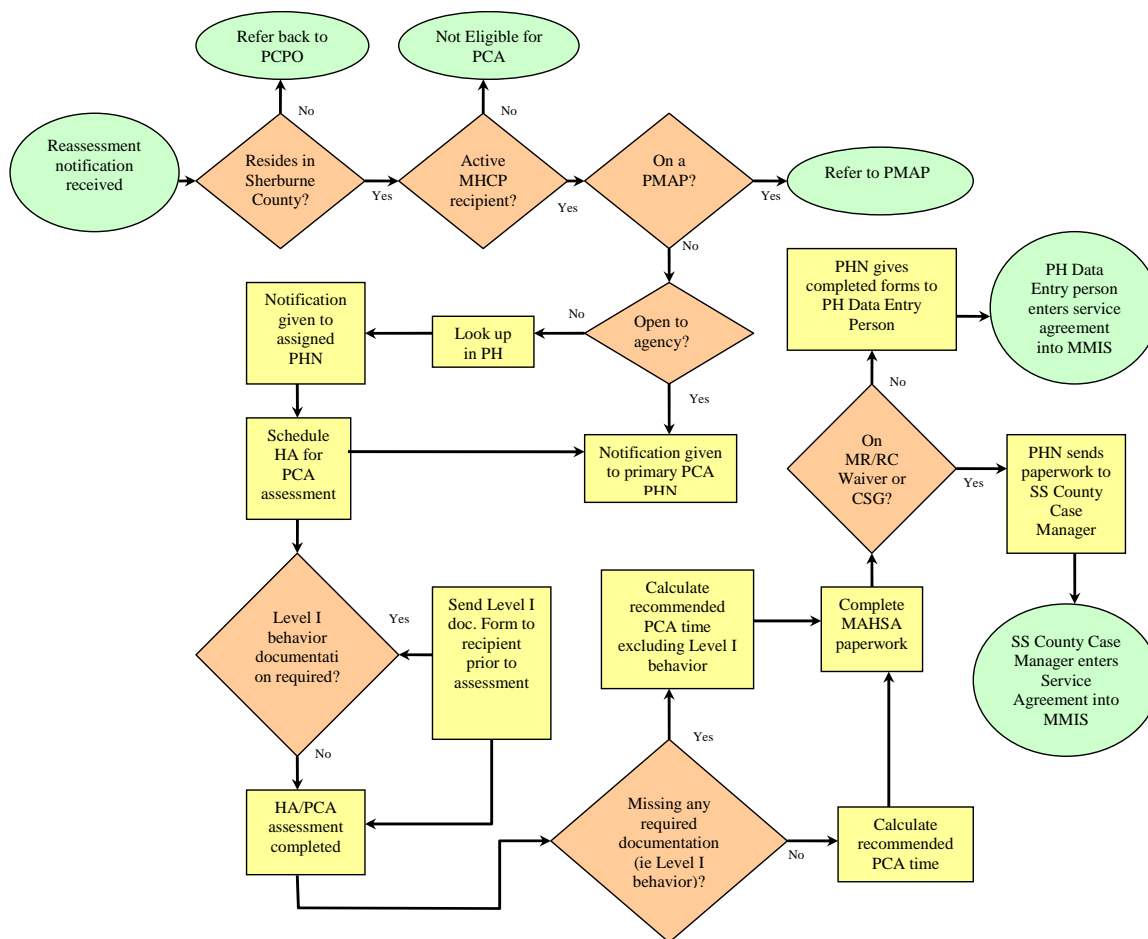
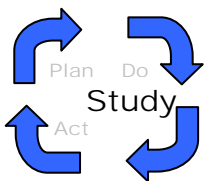


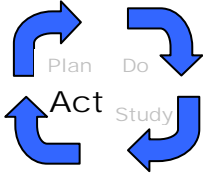
Fig. 2



Sherburne County recently did a manual review of PCA reassessments to determine if they had improved their one-time rate. According to their review, 100 percent of the assessments completed between October 1, 2007 and December 31, 2007 were inputted into MMIS on time.

However, Sherburne County is currently waiting for data from DHS to see if their information agrees with Sherburne’s findings. Sherburne

County wants to make sure they used the same data gathering process that was used in the initial DHS report to assure that the changes in their process did indeed affect the outcome.



Even as Sherburne County waits for their data, they are implementing changes within their public health department. The detailed analysis of the PCA assessment process revealed a number of ways in which public health staff could be of more service to clients and families, such as sending them the behavior documentation form prior to the reassessment visit by public health staff.

## Lessons Learned

Sherburne County found the QI tools extremely helpful in locating concrete action steps in the midst of a complex and potentially confusing process involving multiple state and local government agencies, advocates, and clients. The cause and effect analysis, in particular, revealed the areas for change that public health could influence.

The initial concern of Sherburne County public health staff to the QI project was that it meant they were not doing a good job. Once they understood that the focus is on the process, and caught the vision for making improvements to the process, they became more enthusiastic. One of the principal concerns now is being held accountable for “fixing” something that has many parts which are not within their control.

Sherburne County also learned that taking a detailed look at one process (albeit a complex one) can yield more than expected. The QI project revealed a variety of (sometimes unrelated) ways that they could adjust what they were doing to better serve the people of their community.

For more information about the Sherburne County Public Health QI project, contact Vonna Henry, Sherburne County Public Health Department, [vonna.henry@co.sherburne.mn.us](mailto:vonna.henry@co.sherburne.mn.us) , 763/241-2750.

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*Southwest Minnesota Counties  
August 2007 – May 2008*

**Minnesota Public  
Health Collaborative  
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## ***All Together Now: Merging Data to Improve Immunization Rates***

### **The Situation**

Information “silos” are frequently acknowledged in government, but rarely addressed. Countryside Public Health – a five-county local health department in rural western Minnesota – recognized that these data silos were not merely an annoyance, but presented a barrier to improving immunization rates in their counties. Public health nurses working in various programs could not confidently make referrals for immunizations because they did not have current information at their fingertips, and parents often did not accurately recollect the immunization status of their children.

The data silos involved include data collected through the federal Women, Infants, and Children (WIC) program, the regional immunization registry (MIIC), and the state’s Child and Teen Checkup (C&TC) program. These are all maintained in completely separate systems. The public health nurse would have to look up information from three data sources at the time of a clinic appointment. Experience had shown that kind of effort to be cumbersome and simply not feasible on a regular basis.

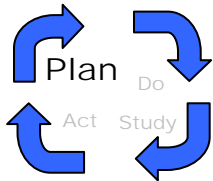
About a year before the MLC-2 quality improvement grants became available the system manager for the Southwest Minnesota Immunization Information Connection (SW-MIIC, a 29-county consortium) developed a software application that temporarily merges those three data sets for an accurate, up-to-date report on child immunization status at the time of a client appointment. This innovative application has been in use at Countryside Public Health since the spring of 2006, resulting in increases in immunization rates for four of the five counties.

When the MLC-2 grants came along, the SW-MIIC counties saw an opportunity to use QI methods to test the expansion of this software application into their own local health departments. Since every department runs their programs and clinics a bit differently, and since the consortium includes both small and large departments, the MLC-2 project team wanted to know if the new application would help to increase immunization rates throughout the region.

*The Minnesota Public Health Collaborative for Quality Improvement is a partnership of the Minnesota Department of Health, the University of Minnesota, and the Local Public Health Association.*

## Aim Statement

By March 2008, the WIC children born 11/1/2005 to 2/28/2006 from the participating counties using the merged report will show improvements in DTaP immunization rates and C&TC outreach contacts.



Countryside did some **brainstorming**, studied process flow in the three programs (WIC-MIIC-CTC), and created a **cause and effect diagram** (Fig. 1) that helped them to identify multiple problems with the data silos in their systems, including:

- Different bits of information contained in separate data systems.
- Inaccurate reporting by parents of their children’s immunization status.
- Time-consuming efforts by public health staff to look up information in multiple systems; sometimes the choice was between spending time with families or spending time on the computer.

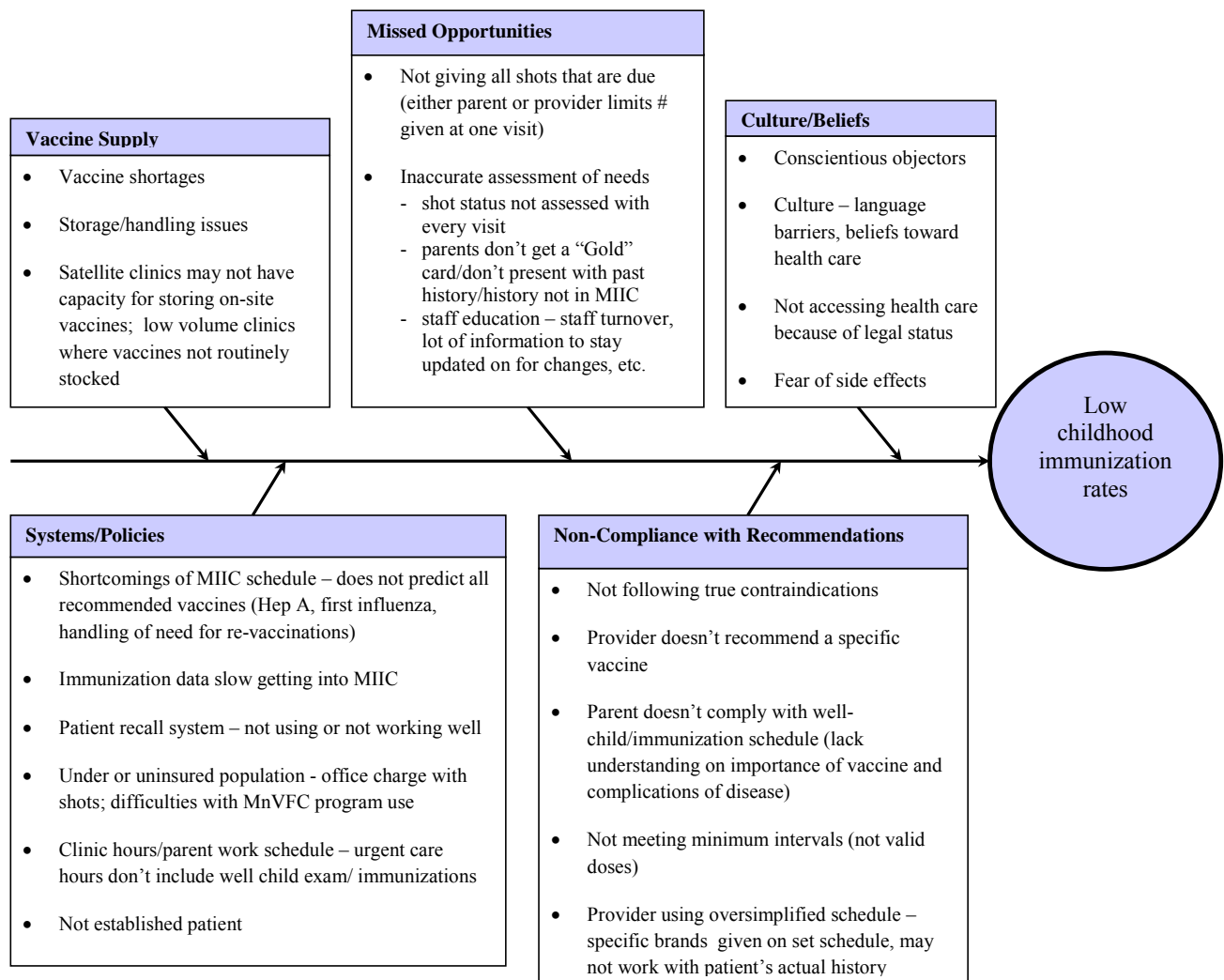
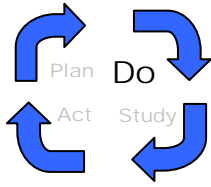


Fig. 1



Countryside then developed a way to temporarily merge three data sets to produce a single report on an “as needed” basis. The merged data is not retained, nor are the original data sets altered in any way. This means that at a client visit, public health staff can accurately check on a child’s immunization status and then make the appropriate recommendation and referral to the parent.

To incorporate this merged data set effectively in each program, however, required all CTC, WIC, and immunization staff to agree to adjust their work flow processes (Fig. 2). Creating this buy-in was an important part of the project.

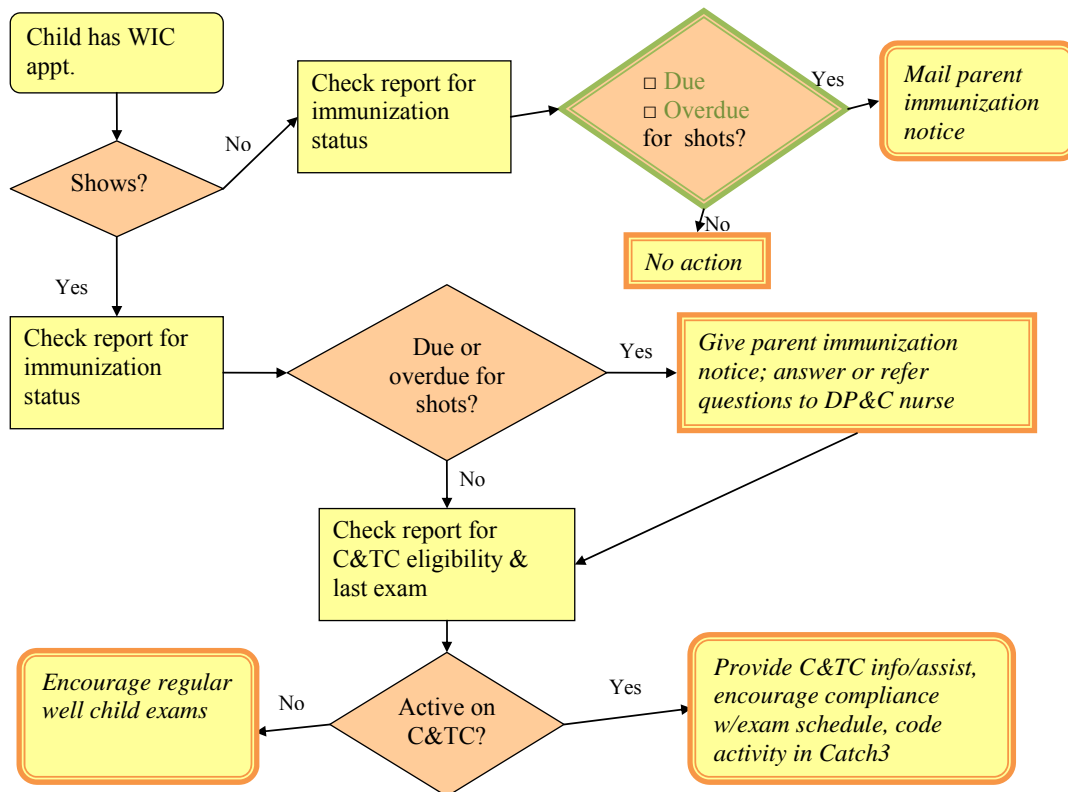
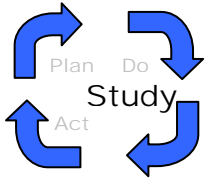


Fig. 2

**Team members:**

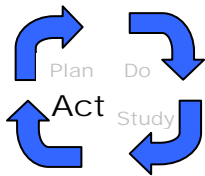
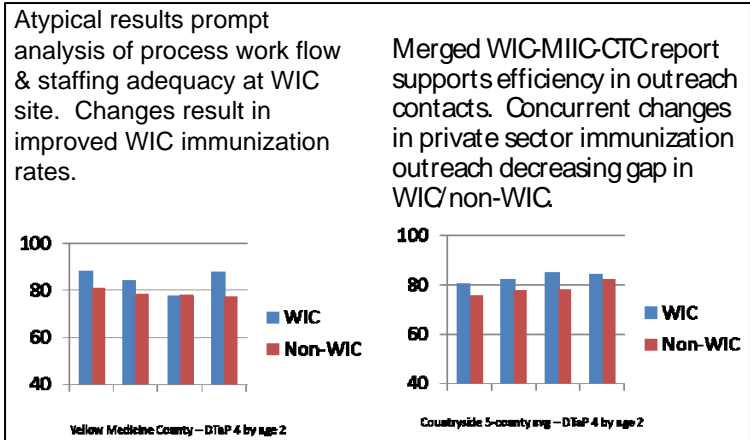
- Liz Auch, Countryside Public Health
- Sandy Macziewski, Countryside Public Health
- Brad Meyer, Nobles-Rock Community Health Board
- Genie Simon and Michelle Saffer, Redwood County Public Health
- Ann Stehn and Dorie Cogelow, Kandiyohi County Public Health
- Mary Ripcke, Minnesota Department of Health
- Mickey Scullard, Minnesota Department of Health
- Donna Anderson, University of Minnesota Faculty Advisor
- Selase Morgan, University of Minnesota Graduate Student

The counties that make up Countryside Public Health have been using the merged data report for 18 months; other counties in the southwest/southeast region are beginning to try this system in their own settings.



Since 2006, immunization rates for four of the five counties have seen some immunization rates increase. Countryside has also seen increases in the number of children getting in for medical exams. More time is needed, however, to make sure these increases are statistically significant.

Sufficient data are not yet available for the other counties to determine if the process flow changes and the merged data set are having an impact on immunization rates.



While Countryside is sharing this system and their expertise with other counties in the southwestern/southeastern region, they do not have sufficient staff time to provide the kind of technical assistance needed to implement it fully. Other counties are, however, continuing to work on making the changes required to utilize the merged immunization data effectively.

## Lessons Learned

The QI tools and techniques have helped Countryside demonstrate the importance of *process* for implementing a technology change. Each program had to recognize where in their process the data was needed or would be helpful, and then be willing to alter the process to allow them to incorporate it (e.g., time to run a report). Although Countryside has received requests to share their software, they are quick to point out that it takes more than software to make this information useful for improving immunization rates – it requires active participation and cooperation by all the staff involved in these programs.

For more information about the Southwest Minnesota QI project, contact Liz Auch, Countryside Public Health Service, [lauch@countyside.co.mn.us](mailto:lauch@countyside.co.mn.us) , 320-843-4546.

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