

Accreditation Beta Test Quality Improvement Project: Final Report

DESCHUTES COUNTY HEALTH SERVICES

IMPROVING TIMELINESS OF IMMUNIZATION DATA ENTRY

This report was completed by:

Laura Spaulding, Accreditation Coordinator/WIC Program Coordinator

Jeff Emrick, Quality Improvement Advisor/Support Services Program Manager

Cherstin Callon, Quality Improvement Coordinator/Administrative Supervisor

EXECUTIVE SUMMARY

The Deschutes County Health Services Department (DCHS) is located in Deschutes County, OR, and serves roughly 170,000 residents in need of public or behavioral health services. DCHS addressed deficiencies identified through the beta test self assessment through a quality improvement effort and has plans to conduct an effective strategic planning process.

BACKGROUND/INTRODUCTION

DCHS chose to apply to become a beta test site in order to promote high performance and continuous quality improvement as an agency, which staff hoped would enhance credibility, funding leverage, and service benefits to the community they serve. This was also an opportunity for DCHS to play a critical role in shaping and defining the accreditation process.

Through participating as a beta test site, DCHS hoped to gain accurate knowledge of how close they were to meeting the standards for actual accreditation and what the process would be like, from self assessment to site visit. DCHS also hoped to be part of shaping the process of accreditation for other health departments because they felt it will be incredibly valuable to all.

BETA TEST SELF ASSESSMENT

DCHS's approach to conducting the self assessment was pragmatic and realistic. Staff wanted to know exactly where they were in comparison to where they needed to be for accreditation. DCHS did not create new programs or new documents to meet any of the measures, but instead took a snapshot of what they had and what they were doing and allowed themselves a very clear look at their findings.

The self assessment was primarily completed by DCHS's site coordinator. She reviewed the assessment with the DCHS's Leadership Team and made a request for any documents that would meet certain measures. Many of the measures had already been met by documents she had gathered from administration, her own department programs, and access to shared files. She did the majority of the legwork on the self assessment with the Leadership Team's input as needed. This method was used primarily due to time constraints on Leadership Team staff and the site coordinator being a doctoral student studying accreditation, as noted in the beta test application, so she wanted full involvement in order to merge this knowledge with her education. It is estimated that it took the coordinator several months to complete the self assessment.

The most difficult part of the self assessment was interpretation of the measures and deciding whether the department met the measure. The Leadership Team was not involved in any sort of a "scoring" process; the site coordinator decided what documents to send to back up the measures. In looking at what measures were "partially demonstrated," DCHS decided to be more clear about outlining procedures and processes around development of documentation versus just submitting

Accreditation Beta Test Quality Improvement Project: Final Report

DESCHUTES COUNTY HEALTH SERVICES

documentation. The most satisfying, and somewhat unexpected part was realizing how many of the measures DCHS were meeting with current activities.

Highlights from Self Assessment Results

Standard/ Measure	Standard and Significance
9.2.1 B	Quality Improvement Plan that includes the following components: purpose and scope of quality improvement activities, etc. <ul style="list-style-type: none">This was DCHS's first area of focus because they did not have an existing QI program. Also, it would be addressed by going through the QI program lead by NACCHO and would provide the foundation for a plan to address other measures that were not/partially demonstrated.
5.2.1 B	Conduct a strategic planning process <ul style="list-style-type: none">While this measure was partially demonstrated, DCHS is looking forward to updating their strategic plan to a more working document that cross-references DCHS's Community Assessment and their Community Health Improvement Plan.
A.1.1B	Policy and procedure manual or individual policies (may be electronic) <ul style="list-style-type: none">DCHS's maintenance of policies and procedures and ease of staff access were appropriate.
7.2.2B	Two examples of active relationships with community providers such as schools, health care providers, etc. <ul style="list-style-type: none">DCHS received validation for all of the community partnerships they have fostered and that continue to benefit their clients.

QUALITY IMPROVEMENT PROCESS (PLAN-DO-CHECK-ACT)

PLAN

DCHS's Leadership Team was involved with the prioritization process and determined that focusing on the immunization program data entry would have the greatest benefit for the organization. DCHS conducted a brainstorming session with the Leadership Team (managers/supervisors) and Community Health Team for possible quality improvement project topics, which resulted in a list of 20 possible issues to address. From this list, DCHS narrowed it down to five topics based on feasibility to accomplish in their 6 month timeframe. DCHS then conducted the Hanlon Model of prioritization for their identified potential problems to address. This method involved prioritizing issues based on feasibility, morbidity/mortality, and financial impacts.

DCHS's immunization data entry was a finding on their Oregon State Immunization Program Triennial Review in May 2010. The review found that their immunization data entry did not meet the necessary benchmark of 80 percent of data being entered into the State Instant Response Information Service (IRIS) Alert database within 14 days of vaccine administration. Along with this, DCHS also determined that by undertaking this issue as a quality improvement project would satisfy measure 9.2.2B: two examples of implementing quality improvement.

Accreditation Beta Test Quality Improvement Project: Final Report

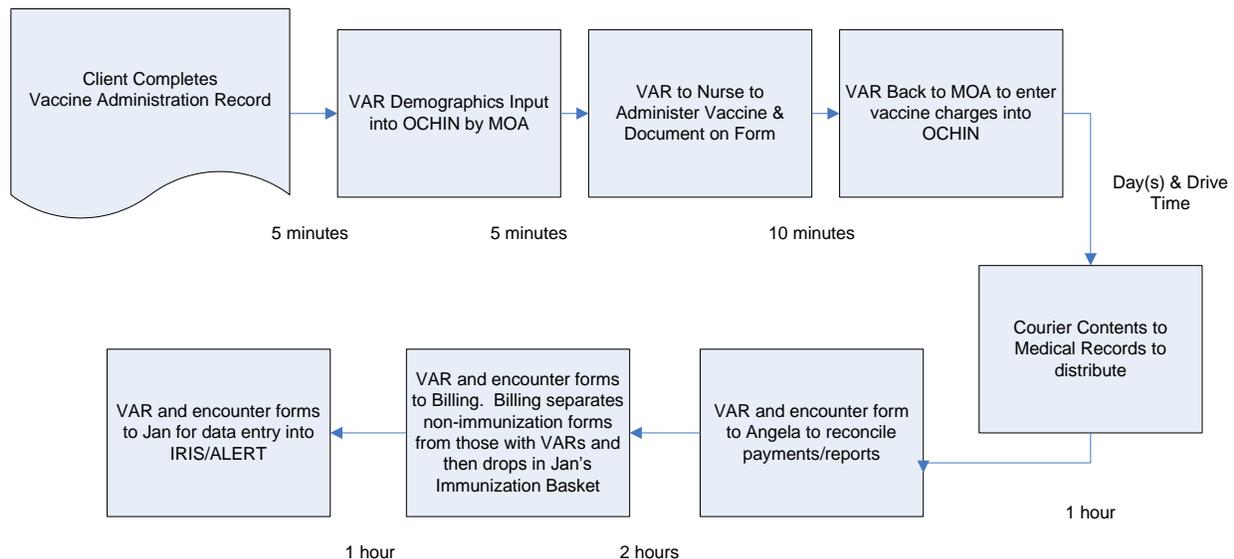
DESCHUTES COUNTY HEALTH SERVICES

Team members were identified based on expertise and involvement with immunization and associated workflows. DCHS has many outlying clinics with other staff involved in the immunization workflow process. DCHS made sure to include support staff, clinicians, and management. The composition of their team remained consistent during the course of the project.

For staff involved, DCHS requested prior approval from management for their participation. The largest barriers to participation were ensuring that those involved participate in as many meetings and discussions as possible, pulling staff away from direct service, and staff not understanding the benefit of the process. To counteract these barriers, at their first meeting DCHS discussed the importance of participation throughout the entire process, received management and leadership buy-in, and gave everyone involved a voice in the process as solutions came from the bottom up.

The final aim statement is the same as their initial one, adopted Sept. 2, 2010: 95 percent of all immunization administration data from all Deschutes County Public Health clinics will be entered into IRIS/ALERT within 14 days of administration.

DCHS developed a process map to examine the current approach:

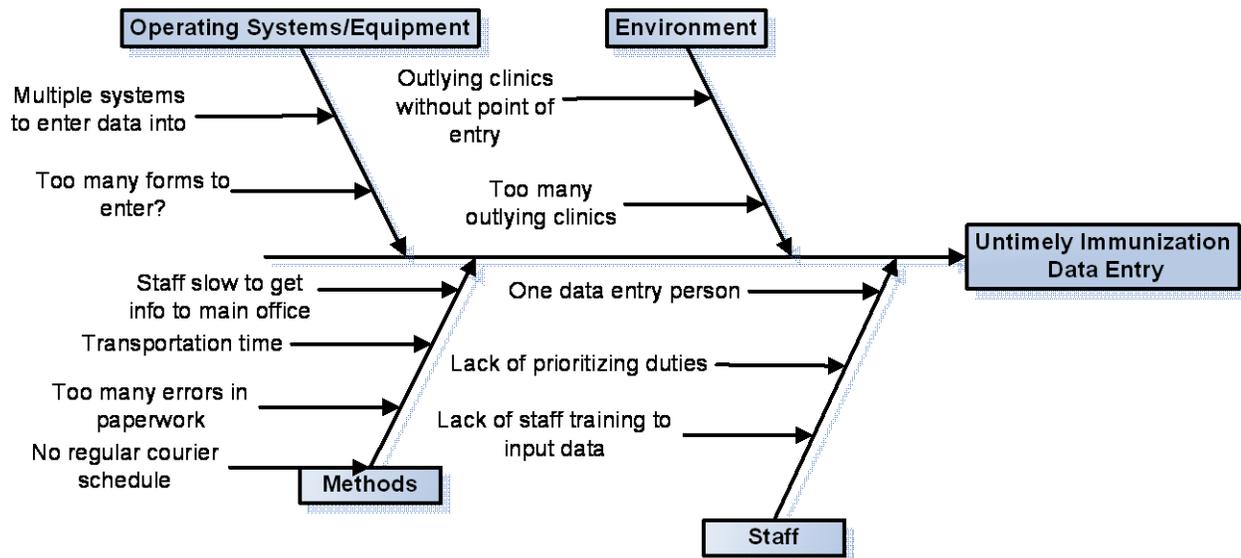


To determine consistency at each clinic site, DCHS elected to perform an analysis of data entry work flows for each site (*Appendix 4: Clinic and SBHC Workflows*). DCHS used the narrative portion of the workflows to identify themes. The themes were then placed on a fishbone diagram.

Accreditation Beta Test Quality Improvement Project: Final Report

DESCHUTES COUNTY HEALTH SERVICES

A fishbone cause and effect diagram achieved the following results:



The above cause and effect diagram resulted in identifying the following themes for potential improvements:

- Data entry at the point of service;
- Adding an on-call employee to assist with the data entry process;
- Improving the inconsistency in courier services of paperwork between the outlying clinics and the main clinic;
- Eliminating unnecessary rework and quality checking; and
- Use existing staff to assist the data entry clerk by completing data entry for the main clinic four hours per week so that the data entry clerk can focus on data entry for outlying clinics only.

DCHS selected three themes in which they could implement immediate interventions. DCHS constructed the interventions to target each of the themes. The following possible improvements were selected based on feasibility and available resources:

1. Improving the inconsistency in courier services of paperwork between the outlying clinics and the main clinic;
2. Eliminating unnecessary rework and quality checking; and
3. Using existing staff to assist the data entry clerk by completing data entry for the main clinic four hours per week so that the data entry clerk can focus on data entry for outlying clinics only.

Their measurable improvement goal was that for all six immunization clinics, DCHS would achieve a 95 percent rate of immunization data entry being entered into the state system within 14 days of administration.

The improvement theory was that if a regular courier schedule could be established, additional staff could assist with data entry, and DCHS could reduce the number of errors on paperwork (which results in rework), then immunization data entry timeliness will be improved across clinics.

Accreditation Beta Test Quality Improvement Project: Final Report

DESCHUTES COUNTY HEALTH SERVICES

Immunization data entry rates were collected for each clinic on a monthly basis and compared to the baseline data collected. There were two re-measurement periods: Nov. 30 and Dec. 31, 2010. DCHS broke out the aggregate baseline data and compared November 2010 to November 2009 and November 2008. Since DCHS started their QI process late, they continued to re-measure using the same procedures and comparison methodology as described for six months. DCHS studied results and took action based on their data analysis. The project will continue until their aim is met.

The roles and responsibilities of each team member in the test:

- Heather Kaisner, Immunization Coordinator, has developed a regular courier schedule to deliver immunization paperwork from outlying clinics to the main clinic. Please see Appendix 3: Courier Service Schedule to Bend Clinic.
- Cherstin Callon, QI Coordinator/Front Office Supervisor, allocated a staff member to train with the data entry clerk and completed data entry for the main clinic for four hours on a weekly basis. Cherstin also works with Holly Nyquist to train front office staff to check the immunization forms for completeness at the time of service to eliminate the need for rework later.
- Holly Nyquist (Clinic Coordinator) trained clinicians and held them accountable for immunization data errors on paperwork.
- Jeff Emrick, Program Manager, analyzed monthly data results as compared to baseline data to determine improvement.

DCHS's perception of the issue did not change during the course of the project, as their initial assumptions of potential solutions proved to be effective. DCHS also did not experience any unexpected results during the plan phase.

DO

All of DCHS's improvements were implemented relatively quickly, and an extra staff member was trained to complete immunization data entry for the Bend Clinic. DCHS anticipates that this will contribute to meeting their aim in the near future.

DCHS collected data for immunization data submitted within 14 days based on clinic site for the month of November and compared that data with the same month of the previous two years. Their results were as follows:

Aim: 95 percent of data submitted within 14 days

Site	11/2010	11/2009	11/2008
Clinic Lapine	0%	100%	62%
Clinic Bend	68%	27%	39%
Clinic Redmond	78%	28%	17%
SBHC Lapine	67%	32%	29%
SBHC Ensworth	86%	86%	26%
SBHC Lynch	38%	21%	27%

Accreditation Beta Test Quality Improvement Project: Final Report

DESCHUTES COUNTY HEALTH SERVICES

The only issue that DCHS encountered in their data collection was that they implemented their improvements in early November, so DCHS did not have a full month's worth of data with their new workflow changes to gain a full understanding of the effect that their changes will have on their immunization data entry rates. However, DCHS was able to collect the data identified in their initial plan phase as based on immunization data submitted within 14 days and specific to each clinic site.

As mentioned above, DCHS anticipated a quick implementation of all improvement efforts and plans to collect additional data shortly.

CHECK

The data collected indicated an overall improvement in data as aggregate (31% average improvement across all clinics). Although DCHS had limited time between their improvement implementation and their first data collection, DCHS observed a modest to remarkable improvement in immunization data entry at four of their six clinics. Although DCHS observed improvements, it was not up to their desired aim of 95 percent data entry completed within 14 days of administration (Oregon State benchmark is 80%). This may be due to their most important improvement effort that has not yet been implemented. The reason for variation in improvements across clinics can be attributed to non-standardized workflows for each clinic.

During this phase, DCHS experienced an unexpected result of 0 percent data entry at their Lapine Clinic. This decrease is difficult to explain when compared to the previous year at 100 percent. However, because DCHS did not have data for a full month's worth of changes, DCHS will continue to track for themes.

Since DCHS had limited time to implement changes and gather data, DCHS will continue to gather additional data and will implement their final process change of an additional staff member to complete data for the Bend Clinic.

ACT

DCHS will adapt their plan by extending the study time and continue with the efforts based on the improvements observed thus far. With a longer study period and more data, DCHS should be able to determine if they should adopt or abandon their improvements.

DCHS has not chosen to adopt their improvements at this point, since they have encountered challenges in completing the pilot improvements within the given timeframe. Challenges and obstacles that DCHS encountered in implementing the pilot improvements were staff time constraints, vacations, and holidays that allowed for limited time for training an additional staff member to complete data entry. To address these challenges, DCHS will create a regular training schedule allowing for both staff to set aside time for training prior to their next data collection period. This training began Dec. 2, 2010.

DCHS will continue to monitor and collect data until July 1, 2011 at which time DCHS will evaluate the full effectiveness of the changes. DCHS will monitor data entry rates on a six month basis to ensure the maintenance of their improvements.

RESULTS, NEXT STEPS, AND ACCREDITATION

The QI process helped DCHS to launch a comprehensive organizational quality management program development process that will result will in a formalized accountable system of quality management.

Accreditation Beta Test Quality Improvement Project: Final Report

DESCHUTES COUNTY HEALTH SERVICES

(Please see Appendix 2: DCHS QMP Development Process.) Work will begin in the next several months to develop a strategic plan and a health improvement plan. Their quality work plan will back up to both the strategic plan and the health improvement plan. Once their quality management program is fully operational, DCHS is confident it will demonstrate and meet the accreditation standard. The plan do check act (PDCA) model provided DCHS with a systematic method of conducting improvement projects as an organization. DCHS have deployed the PDSA model throughout each division and at the departmental level within DCHS. At the department level, DCHS is using the PDCA model to determine staff perception of usefulness of meetings, cost, number of meetings, and strategies to increase effectiveness of meetings throughout the organization.

LESSONS LEARNED

DCHS staff learned that while they have some work ahead of them, they are certainly on their way to becoming accredited.

Because their Board of County Commissioners was so supportive of DCHS becoming a beta test site, and their local Public Health Advisory Board has made national accreditation one of its main priorities, DCHS expect the backing to continue as they move through this process.

The self assessment process will be different as DCHS applies for actual accreditation. DCHS will choose a team, most likely the Public Health Leadership Team, to address all of the measures as a group instead of having the task fall mainly to one individual. Based on the extensive public health experience that is available on their Leadership Team, and having representation of all programs, DCHS feel that the group will better be able to assess what documents will be required to meet the measures. As DCHS moves through the measures, they will use their beta test documents as a guide for what is considered acceptable documentation and what does not qualify. Although DCHS will continue to use the "Guide to Standards and Measures: Interpretation" for the more ambiguous measures, actual examples will be key to showing their team members how to interpret the measures. DCHS highly recommend that every department going through accreditation use a copy of the guide.

This process can feel cumbersome at times and it is easy to become overwhelmed at the enormity of the task when looked at as a whole. Having a team to work on smaller sections at a time makes it more manageable. DCHS should have an easier time seeing results by crossing off measures that have been met and being able to more closely focus on measures that need attention. Focusing on the positive first, that is, how many measures DCHS are meeting, will give DCHS the motivation to move on to the measures DCHS need to address to bring them to completion.

Once documents are decided upon, it is easiest to store them in a shared file (DCHS used SharePoint) for easy access of all involved parties. DCHS realizes the importance of providing exactly what is asked for in the standard; if it asks for two examples, don't submit nine. They learned the evaluation committee does not have time to read that many extra documents and it also leaves the health department responsible for documents included that do not meet the standard. Having documents easily accessible during the site visit is also desirable in case there is need for clarification.

During the site visit, DCHS also learned to use one area rather than expecting the site visitors to relocate to different rooms several times a day. DCHS will also be sure the room is large enough to accommodate as many team members as needed to complete the interviews.

Accreditation Beta Test Quality Improvement Project: Final Report

DESCHUTES COUNTY HEALTH SERVICES

In terms of selecting a quality improvement project team, it was essential for DCHS to ensure that those directly involved in the workflows in question were a part of the improvement process. Based on expertise and position, the roles of those team members fell into place (supervisors were responsible for ensuring that staff had the necessary training involved with new workflows and interventions, etc.).

DCHS would advise that all members of the quality improvement project team are given reasonable training on the PDCA process so that they are aware of the steps necessary to complete the process. This helped in conducting a root cause analysis and determining an improvement theory because the team was aware of essential steps in the process.

With a short timeline, having easy access to needed data was essential and would be necessary for any further quality improvement projects. It would be helpful in the future to have a data analyst as a part of the project team to use and analyze the data most effectively for the best results.

It would have been most effective to have a set plan for implementing the interventions because DCHS ran into difficulties with limited staff time for training on new workflows and completing other interventions during the testing period. More communication with staff involved regarding the necessity of following through with the interventions and an established training/implementation plan or timeline would have been beneficial to the process.

Finally, it is important to remain flexible during the testing period in terms of adapting the improvements if necessary or, as DCHS did, lengthen the testing time to ensure adequate data to determine whether to ultimately adopt or abandon their improvements. DCHS were aware that they were working with limited data during a short timeframe. By extending their time for testing, DCHS feels they will gain a better understanding of the effects of their improvement efforts.

APPENDICES

[Appendix A: Storyboard](#)

[Additional Appendices:](#)

Appendix 2: 2011 Quality Management Program Development Process

Appendix 3: Courier Service Schedule to Bend Clinic

Appendix 4: Immunization Work Flow Diagrams (for various clinics)