

Quality Improvement Report

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Quality Improvement Case Study: Improving Care for Patients with Diabetes in Shepherd's Hand Free Clinic

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Introduction

This case study highlights the methods and processes for conducting quality improvement (QI) in a clinic for patients with diabetes. QI coordinators are encouraged to consider their own responses to the questions included in this interview regarding their own primary care practice or education program setting. Additionally, the attachments provide examples of adaptable tools that the clinic used.

About the Clinic

- ◆ **Name of Clinic:** Shepherd's Hand Free Clinic (SHFC)
- ◆ **Type of Clinic:** Free Clinic
- ◆ **Year Founded:** 1995 (incorporated as 501(c)(3) in 2010)
- ◆ **Budget:** \$130,000
- ◆ **Unduplicated patients:** 700
- ◆ **Patient visits:** 1,700
- ◆ **Paid staff:** 1.025 FTE (.75 FTE Executive Director/Clinical Director, .25 FTE program assistant, .025 FTE medical director for mid-week follow-up care)
- ◆ **Volunteers:** About 80
- ◆ **Hours Open:** Monday evenings
- ◆ **Services:** medications, laboratory and imaging services, and specialty referrals
- ◆ **Leadership:** 9-member Board of Directors; Quality Assurance and Programs Committee

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Diabetes Care Indicators

Primary Care Practices and Diabetes Education Programs

Figure 1. Diabetes care indicators from primary care practices in Montana participating in the DQCMS, 4th Quarter (Oct—Dec. 2014). N = 18 practices; 9,844 patients.

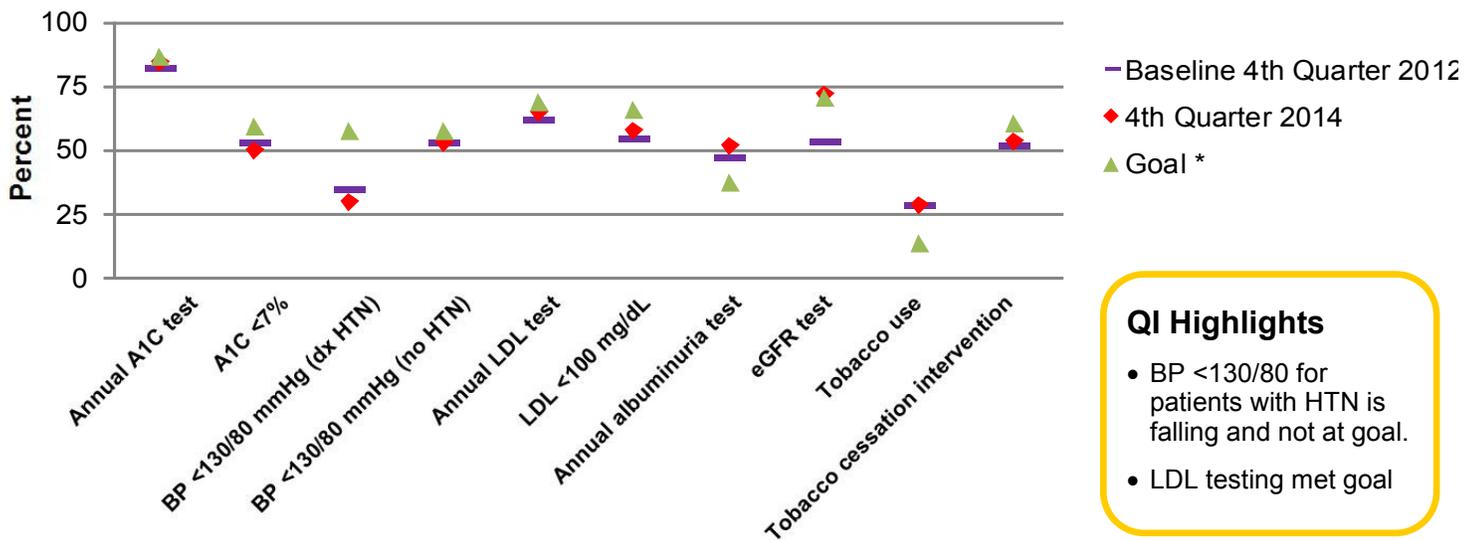
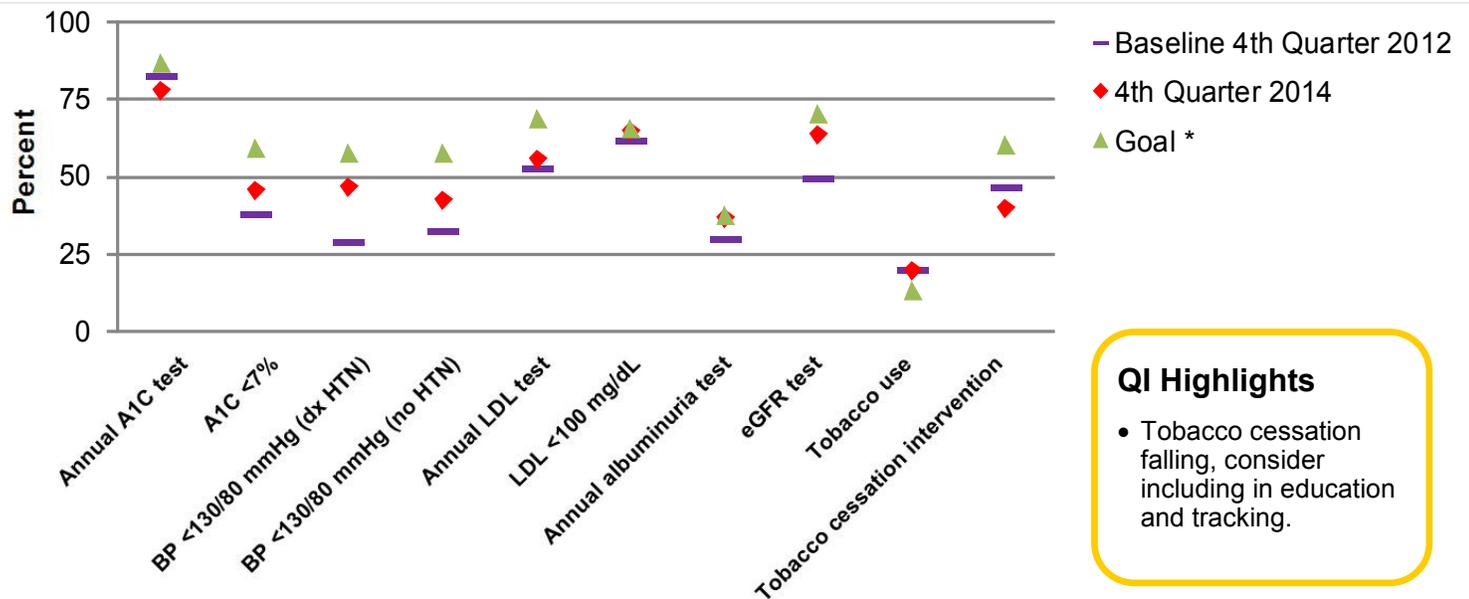


Figure 2. Diabetes care indicators from diabetes self-management education and support programs in Montana participating in the DQCMS, 4th Quarter (Oct—Dec. 2014). N=5 programs; 1,721 patients.



DQCMS = Diabetes Quality Care Monitoring System. Data presented here are for adult patients with diabetes seen within the last year. Montana's statewide quality improvement goals for diabetes were updated in 2013 based upon Healthy People 2020 targets or a 10% improvement from baseline.

Summary of Quality Improvement Project

The Goal: Improve the level of care to patients with chronic illnesses and encourage their participation in the clinic's wellness program.

The Approach: In 2010 SHFC partnered with the Montana Diabetes Program (MDP) to obtain technical assistance, resources, and free patient registry software for identifying diabetes patients and tracking their outcomes.

PDSA in Action

SHFC implemented the Plan-Do-Study-Act (PDSA) cycle for their quality improvement (QI) model.

PLAN: The clinic wanted to improve the quality of care for their patients with diabetes. In particular, they wanted to see increased compliance among their patients in following through with recommendations and wellness measures.

DO: SHFC requested free patient registry software, the Diabetes Quality Care Monitoring System (DQCMS) from the MDP. The MDP provided DQCMS and also visited the clinic to audit their patient charts and input the medical chart for patients with diabetes into the registry. The MDP trained the SHFC staff to update patient information in the system after each patient visit and send quarterly reports assessing the clinic's efforts back to MDP. Each chart of a patient with diabetes was labeled with a 'diabetes' sticker so the clinic could easily identify patients with diabetes on a clinic night.

DQCMS generates a patient profile, which is added to the chart and updated after each patient visit. The profile tracks health markers and indicates recommendations for ordering labs, eye exams, foot exams, etc. The clinic trained key volunteers to utilize the profile in managing the care of these patients. SHFC also established a new system of having their patients with diabetes see one of two providers to improve the continuity of care.

STUDY: It soon became apparent that the initial

system developed was confusing to volunteers who only work monthly, and the information generated by DQCMS was too cumbersome to evaluate in the regular course of a clinic night.

ACT: SHFC determined that they wanted to continue to utilize DQCMS, but realized that they needed to adapt their approach. They decided to train a couple of diabetes managers who could review (on Tuesday morning) all the charts of the patients with diabetes who were seen during clinic the night before (Monday evening). In the course of their review, the diabetes managers determine what additional measures needed to be taken to optimize the patient's health. The diabetes managers utilize a form letter that includes a checklist of areas the patient needs to address. This is mailed to the patient along with any lab orders or referral paperwork he will need to follow through on the requested items (e.g., dietitian referral, blood work). A copy of this form is put in the chart so the next time the patient comes to the clinic it is easy to see the patient's needs and the type of follow-up that is needed.

The Diabetes Provider Annual Visit form was also developed in order to consistently gather the information needed to maximize follow up of the patient. The information from the annual visit and the checklist are entered into DQCMS, which then provides an updated patient profile that is included in the patient's chart. The chart is also marked with the month of the year that all preventive services for diabetes are due so that when the patient comes to the clinic for another complaint, then time is not spent reviewing diabetes follow-up.

Q&A with the Clinic Director¹

Overall QI Efforts at The Clinic

Q: What was the impetus for deciding to initiate QI at your clinic?

A: The operational systems of SHFC have always evolved based on the desire to provide the

¹Questions were taken or adapted from Houck, S. (2004). *What Works: Effective Tools and Case Studies to Improve Clinical Office Practice*. Boulder, CO: HealthPress Publishing.

best possible patient care. Only with our application to the Federal Tort Claims Act (FTCA) and the development of our Risk Management Plan was a written Quality Assurance (QA) policy and plan put into place.

Q: When did you first start focusing on QI?

A: Our FTCA application was made in 2010.

Q: How were you able to achieve staff/provider/volunteer/organizational buy-in to your QI initiative?

A: Quality care is one of our core values and the specific systems generated from QA are part of our orientation and ongoing training process.

Q: What activities have been especially important to sustaining QI?

A: The activities that were most important were the development of our QA and Programs Committee and the development of annual goals related to patient care.

Q: Was leadership important to your QI efforts? How so?

A: Yes, leadership is very important in providing the impetus to effect needed change. Our paid staff (i.e., Executive Director/Clinic Director) assesses and communicates the need to our QA committee members. The committee then collaborates with others as needed to develop a QI plan.

Q: Do you have an ongoing team that leads QI in your organization? If so, please describe who is on it, how often they meet, and the structure for initiating improvements.

A: We have a five-member QA and Programs Committee. Our co-medical directors, clinic director/ executive director and pharmacy director are on the committee as well as one of our board members who is the chief operations officer at one of our local

hospitals. The QA Committee meets twice annually with additional project-directed meetings throughout the year, with some members of the committee and additional relevant program volunteers. We try to conserve people's energy and bring them in only when something is pertinent to their skill set.

Q: Have there been specific processes or ways of using resources that you have focused on?

A: Once a goal is developed or a problem identified, we research available resources online and also use our local network in the medical community. We then adapt the resource/process to meet our clinical situation, implement the new process, and evaluate its effectiveness over a period of time. Often there is some additional fine-tuning necessary.

Q: How do you track and post results or outcomes? (These include operational, clinical, satisfaction, and financial.) How do you select which metrics to use? Have you found it important to limit the number of metrics used? What metrics do you use?

A: The primary clinical area we track is diabetes. We receive quarterly and annual reports on outcomes and intervention markers from the MDP.

We track satisfaction (among patients and volunteers) through the use of surveys. Results are shared and evaluated by the QA Committee for any problem areas that need to be studied further. We have used a scale approach with the surveys, relying heavily on the following three scales:

- never – sometimes – usually – almost always – always
- strongly disagree – disagree – neutral – agree – strongly agree
- very satisfied – somewhat satisfied – neutral – somewhat dissatisfied – very dissatisfied

With patient surveys it is important to keep the language simple due to some literacy issues.

Q: What lessons have you learned during the QI process? If you were starting your QI work now, what would you do differently? What would you do the same way?

A: I have learned that a team approach to the QI process is very helpful. Before we had a QA Committee in place our system adjustments felt more like trial and error. The QA Committee allows for a greater depth of discussion and articulation of desired outcomes, which leads to a better initial plan.

Q: To what do you attribute your success in your QI efforts?

A: We attribute our success to development of our QA and Programs Committee and also networking with existing organizations that can help us operationalize our goals (i.e., MDP).

Q: What advice do you have for other clinics that are new to QI?

A: Keep it as simple as possible. We originally tried to develop too many levels of committees and teams. It quickly became apparent that we didn't have enough people to serve in that capacity. For a small volunteer organization it is important to be realistic about the number of people you have that can contribute in specialized areas and build your teams/committees around that. Over time your teams/committees will mature and expand their scope.

It is tempting to develop a strategic plan on paper and then look for the people and resources to operationalize it, but the truth is that in a small organization the majority of your time is spent in managing the day-to-day problems that come up. It can be very difficult to take on formal QA activities. If your goals are too lofty with regard to QA policy and QI plans you feel defeated. We

have found it helpful to address the day-to-day problems within a QA framework. Depending on the problem, this can be an informal or structured process. For example, we didn't have time to do any formal surveying of our patient's for the first 10 years. We did listen to people and ask how they felt things were going in an informal way. Many of the solutions we implemented were developed and discussed within the QA framework.

Keep it simple, practical and realistic and let your QA develop organically from what you are experiencing. With practice it is not too big of a leap to begin setting goals and developing a strategic plan. You will have a sense of what a realistic timeframe your goals will take and also what elements need to be included in your process in order to achieve success.

Q: I've heard clinics say, "I don't have the time" or "I don't have the resources/staff" to do QI. What would you say to a clinic that is reluctant to start using QI?

A: I would imagine most clinics are already engaging in QI in an informal way making changes to their operations based on problems as they arise. Articulating the steps taken to identify problems and resolving those problems is a good first step. Most organizations set goals for themselves annually or more often and it is not terribly time consuming to add some QI goals to the list and then develop a plan to address the area of concern.

Q: What are the benefits and drawbacks of engaging in a QI process?

A: The major benefit is the ability to anticipate challenges and possible solutions so that the clinic is proactive and moving towards excellence.

QI Initiative: Care for Patients with Diabetes

Q: Can you give us a "before" and "after" portrait of the problem you wanted to address?

A: A good example of a before and after is our

desire to provide vouchers to our patients with diabetes for free influenza and pneumococcal disease vaccines. We were able to quickly access a mailing list from the diabetes database, send a letter with the voucher, and then determine who followed through with getting their vaccines by tracking the used vouchers. At the initial chart audit it was found that none of our patients with diabetes had ever had a pneumococcal disease vaccine and only 6.7% of these patients had had the influenza vaccine the prior year. Since implementing our tracking system and having the ability to easily communicate with these patients, as described above, the percentage of patients who have had a pneumococcal vaccine increased to 19.1%, and percentage of patients receiving the influenza vaccine increased to 25.5%. This demonstrates a significant improvement.

We have seen improvement in other markers as well: dilated eye exams have increased from 15.6% to 46.8%; foot exams from 6.7% to 59.6%; and among patients with a foot exam who were categorized as high risk, the percentage who had monofilament foot exam in the last year went from 0% to 87.5%.

Q: What aims did you set to address your problem? Were they measurable?

A: We decided it would be best to focus on one group of patients first to develop a template of care that we could then apply to other groups. We chose our patients with diabetes primarily because we knew we could be doing a better job on preventative health markers and because the MDP would provide us the resources we needed to begin tracking outcomes.

We wanted to improve our level of care for our chronic patients. We aimed to be able to identify and track all of our patients that have diabetes so that we could: 1) control which provider they saw in order to improve continuity of care; 2) encourage an annual diabetes visit where medications are reviewed labs ordered and other recommended

referrals offered; 3) encourage our patients with diabetes to participate in our wellness program.

Q: What was your theory (reasons) why you were experiencing this problem?

A: We didn't have an adequate system in place to identify or track our patient population with diabetes which made it difficult to identify the obstacles they were experiencing in accessing care and in following through on wellness measures.

Q: What did you need to change?

A: We needed to develop an effective system for identifying our patients with diabetes and tracking their outcomes.

Q: Who was involved in the QI process? Who were the key players? Was leadership important? How so?

A: The key players were our co-medical directors, executive director/clinic director, program assistant and the MDP. Leadership is important because it provides the vision, helps set the goals, and keeps the team focused.

Q: What tools/templates/worksheets/diagrams/instruments/charts/data/metrics did you use in your QI efforts (in each of the PDSA stages)?

A: We used the DQCMS developed by the MDP. We receive a quarterly summary from the MDP about how the clinic is doing. Most helpful has been comparing ourselves to ourselves [over time], specifically choosing markers that we hold as a priority and want to get better at. For example, one of the measures that the MDP tracks is how often we interact with patients about smoking. We're hitting tobacco hard. We interact almost 100% (with every smoker). And we've improved on that. We were probably at 50% when we started.

I'm not as concerned about another measure, the

percentage of patients with A1c below 7%, because our physicians probably view that as too aggressive for our patient population. I want to know whether the A1C test was done in the past year because it shows us if our patients are being compliant and following through on getting their lab work done.

Q: What did you propose to do (want to change) to address the problem?

A: We believed that if we could identify and track our patients with diabetes we could impact their compliance with established care markers improving their overall health.

Q: How did you go about testing the change(s)?

A: The initial audit from the MDP yielded 65 patients with diabetes in our patient population. We believed that if we knew who our patients with diabetes were and could assess what areas of follow-up each person needed before he presented at the clinic on Monday night then our interventions with each patient would be more productive and hopefully impact outcomes. This required setting up a new process for tracking patient charts and identifying who would manage our patients' follow-up care. We initially thought we could do this all on a Monday night but soon discovered that it was too time intensive. Instead, we had to add a new layer of care that happens mid-week.

Q: What were the results of your intervention?

A: We send a quarterly report to the MDP, who analyzes and reports back our outcomes and intervention levels. We also analyze informally every time we review a diabetic patient's chart. We scrapped the most of the initial system and refined our process in order to meet our objectives. The process testing is ongoing.

Q: How did you spread the change? What are the lessons learned?

A: We developed a specific diabetes annual visit treatment form to increase consistency to our process; identified specific providers to manage the care of our patients with diabetes; increased hours for our Health Information Coordinator to input data; recruited and trained a volunteer to work with the clinic director in managing the diabetes care process; and made some minor changes in patient flow.

We have seen significant improvement on our intervention levels and a gradual improvement in outcomes.

A lesson learned is that QI initiative requires intentionality and the objective must be held as a high priority.

Q: What have been the implications of your QI initiative(s)?

A: We are providing more consistent and better quality care for our patients with diabetes. We have developed a process of identifying and tracking patients that can be expanded to include other high risk patient groups. This has provided the ability to connect patients with wellness opportunities and education that we believe will decrease their risk of morbidity and mortality from chronic disease.

Attachments: Supporting Documents

Appendix A. Diabetes Quality Care Monitoring System (DQCMS) Form

Appendix B. DQCMS Quarterly Summary

Appendix C. Shepherd's Hand Free Clinic Diabetes Provider Annual Visit Form (including Foot Assessment Form)

Appendix D. Shepherd's Hand Free Clinic Diabetes Management Follow-up Letter

Appendix E. DQCMS Quality Improvement Report

Report Highlights

- **Quality Improvement Case Study: Improving Care for Patients with Diabetes in Shepherd's Hand Free Clinic**
- **Diabetes Care Indicators:**
 - **Primary Care Practices**
 - **Diabetes Education Programs**

Upcoming Events

Montana Diabetes Advisory Coalition Meetings

April 17, 2015
Hilton Garden Inn, Bozeman, MT

July 17, 2015
The Finlen Hotel, Butte, MT

Montana Diabetes Professional Conference

October 22-23, 2015
Red Lion Hotel, Kalispell, MT

*For more information on the above events,
please contact Susan Day at (406) 444-6677*

2015 Big Sky Pulmonary Conference

February 26-28, 2015
Fairmont Hot Springs Resort, Anaconda, MT
For more information, please visit
<http://www.umt.edu/sell/cps/bigskypulmonary/>

2015 Worksite Health Promotion and Employer Sponsored Benefits Conference

May 12-13, 2015
Best Western GranTree Inn, Bozeman, MT
For more information, please email Chelsea Pelc at
cpelc@mahcp.org

Diabetes Alert Day

Tuesday, March 24, 2015

Diabetes Alert Day is a one-day wake-up call to inform the American public about the seriousness of diabetes, particularly when diabetes is left undiagnosed or untreated.

1. We encourage you to promote these messages in your practice and your community. Take the Diabetes Risk Test to find out if you are at risk for developing type 2 diabetes. Available online at www.diabetes.org/are-you-at-risk/diabetes-risk-test/
2. Refer people at high risk for developing type 2 diabetes to a Diabetes Prevention Program. Visit www.mtprevention.org for more information.
3. Refer people with diagnosed diabetes to a diabetes educator and a Diabetes Self-Management Education Program. Find an educator at www.diabeteseducator.org/.

Although Alert Day is a one-day event, these tools and tips apply year-round.

Online Resources

www.diabetes.mt.gov

- Montana Diabetes Program State Plan 2009-2014
- Report on the Burden of Diabetes
- Archived Diabetes Quality Improvement Reports and Surveillance Reports
- Resources for clinicians, diabetes educators, and schools

DQCMS Information

www.risprojects.org/dqcms

- User Manual
- Training Videos
- Helpful Hints
- Help Sheets