

Case Study of Quality Improvement in Metrocrest Community Clinic Dallas, Texas August 2014

Diabetes Standard of Care Plan

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About the Clinic

Name of Clinic: Metrocrest Community Clinic

Type of Clinic: Charitable

Location: Dallas, TX

Year Founded: 1993 (incorporated as 501(c)(3) in

1996)

Budget: ~\$300,000

<u>Unduplicated patients:</u> 2,164

Patient visits: 4,100

<u>Paid staff:</u> 5 FTEs: Executive Director 1 FTE; Physician 1 FTE; office manager 0.7 FTE, front office technician 1 FTE; certified medical assistant 1 FTE; and medical records technician 0.3 FTE

<u>Volunteers:</u> 15 medical providers (Physicians: 9; Registered Nurses: 4; Ancillary personnel: 2). In addition, the clinic hosts externships for advanced practice nursing students (6 – 8 per year) and undergraduate nursing students from nearby college (up to 20 per year), as well as students from trade

schools training for qualification as certified medical assistants, medical record management, and medical office management.

Hours Open: 8:30 AM to 5:00 PM, Monday – Friday, with one Saturday gynecology clinic per month. Specialty Clinics: Gynecology, 4 – 5 per month, by demand; Dermatology, one clinic per month (8 hours, 1:00 PM to 9:00 PM); Neurology clinic, 4 hour evening clinic once per month.

Services: Internal medicine office visit; specialty clinics for gynecology, dermatology, neurology, and ear, nose, and throat; full laboratory; limited radiology testing; medical social services; patient and family education; language interpretation; health fairs, collaboration and referral to other services.

<u>Leadership:</u> 18-member Board of Directors, Executive Director, and Medical Director

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Summary of Quality Improvement Project

<u>The Problem:</u> The increasing volume of patients with diabetes made it difficult to ensure that each client was being offered appropriate and equal service.

The Approach: The clinic developed a standard, evidence-based plan of care for all diabetic patients. Each client newly enrolled in the diabetes management program is introduced to the plan of care, which sets forth what the client can expect from the program and the requirements for patient self-management.

PDSA in Action:

<u>PLAN:</u> A literature search of diabetes care was undertaken to identify the parameters of care in standard practice in the United States.

<u>DO</u>: A planning committee was established to devise a standard plan of care for all diabetic patients. The written plan was implemented in 2009. Each current diabetic client was introduced to the program, including what the patient could expect from participating in the program and what level of participation was expected of the client.

STUDY: The clinic tracks whether patient visits occur on a standardized schedule (i.e., every 3 months), the completeness of laboratory testing based on the national standard of care, and changes in physical findings. These results are compiled for individual patients and for all participants in the diabetes management program and then trended over time. The results are used to identify strengths and barriers to compliance with the program's parameters and patients' ability to participate.

<u>ACT:</u> The physicians utilize these findings to inform their provision of treatment modalities for each patient.

Q & Aⁱ with Jane Hawkins, Executive Director, Metrocrest Community Clinic

Quality Improvement Efforts at Your Clinic

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

A: I was new to the field of non-profit health care delivery. As I began to learn about this brave new world, I had to have a system by which to measure the demands of operation and delivery of health care in a very low-budget environment.

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

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

A: I utilized information from my past clinical experience; collaboration with the team of amazing volunteer physicians, registered nurses, and community clinics; and literature searches.

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

A: Continuous collection of data on individual patients, trended and utilized by the physician and care team, gives clear goals for future activities directed on the patient's behalf and the patient population in general.

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

A: As Executive/Clinical Director of the Metrocrest Community Clinic, it is my responsibility to devise programs of care and means of evaluation of the activities of our clinic operations, and report to the Medical Director and Board of Directors who oversee the clinic. I have the full support of the Board and Medical Director, who review these activities on a regular, formal basis. In addition, The Day Clinic Physician and the Medical Director participate in regular, informal conversations regarding the clinic operation, the focus of accurate measurement of clinic activity, and suggestions for focus studies.

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

A: Due to the small size of our clinic team of volunteers and employees, I have not been able to develop a consistent team to assist in the QI process. I have utilized college student volunteers to collect data and place information in various collection tools, such as spread sheets. With the time limitations of our volunteers, the quality of data collection has not always been consistent. In 2013, our clinic grew in volume and funding. We now have a 5 FTE staff. This excites me as the clinical leader. The processes for collection of all aspects of our clinic operation have been improved. The downside of the venture is that these employees have had no previous introduction to "performance improvement (PI) through quality management" or the many tools available for the process. The challenge is education and support in the early stages of a novice's experience. We are now at the point where almost everyone has been "bitten" by the "PI Bug".

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: Microsoft Word and Excel are the system tools we use to record and evaluate information. We are still in the introductory phase of implementing Practice Fusion. This web-based EMR is useful and affordable. These elements are of equal importance in our budgetary situation. We will be fully operational as a paperless system in the future, but the timeline is subject to resources, both "human" and electronic.

An accurate demographic database has been the most useful metric. Each client is registered in the system at the time of their first contact with our clinic. Any changes in their personal information, including adding a new diagnosis, change in allergy status, or simply a telephone number, are easily completed. This information is then available at each computer terminal. The various aspects of the EMR are populated as this information is available. Laboratory results are downloaded into the system at their point of origin.

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

A: This is a hard question to answer. Each QI process in which I have participated has been both useful and challenging, for various reasons. Over some 20-plus years conducting Performance Improvement, Quality Management, I have learned how to "cut to the chase" when developing a QI study. Years ago, the entire process was quite intimidating. Now, when I see a need, I create a study tool and collect the information I need to make an accurate assessment of any situation. This is very useful when working with employees who have strong personal ideas and a narrow frame of vision. Utilization of the PI process can give structure to the team and minimize the issues that develop when everyone recognizes and problem or issue and tries to "fix it" by themselves.

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

A: Perseverance. What started out as "part of my job" in the healthcare industry quite a few years ago now runs on "autopilot" in the background of my busy clinic, my busy life, and making future plans.

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

A: Sit down together and make a list of problems, ideas and goals. Take a little time to formulate this list before prioritizing the items. Be honest and ask the following questions:

- 1. Is this problem a People Problem?
- 2. Is this problem a Process Problem?
- 3. Is this problem a Resources Problem?
- 4. Is this problem a Permanent Concern?
- 5. Is this problem an Intermittent Problem?
- 6. Is this problem causing Harm?
- 7. Is this a problem that is a Need or just a Nuisance?
- 8. Is the problem one of time management, cost, or lack of proper training of the individuals performing the process?
- 9. How can the individuals participating in the QI/ PI/QM activity be inspired to properly participate in the activities required to conduct the study and activate the various steps of the measurement and improvement desired?

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:

- 1. Start by answering the questions above, or similar concerns.
- 2. Create a simple tool for solving a simple problem with a quick turnaround to engage the team in finding an equitable and timely solution.
- 3. Implement the full Plan Do Study Act and continue to monitor the Act to evaluate the accuracy of the outcome study.

Remember that the organized process of QI/PI/QM is quite intimidating to the novice. One must find value in the activity to usefully participate in and value the process.

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

A: The benefits of engaging in a QI process are many. The studies can be true indicators of outcome of effort. Outcomes measurement can be used to present an accurate picture of a problem, an accomplishment, or to promote a future goal. The drawbacks are the expense of time and personnel, especially when these commodities are in short supply.

Quality Improvement Initiative: Diabetes Standard of Care Plan

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

A: Our care team was continually frustrated by our inability to meet our client's needs and to meet the client's perception of their illness without valid plan of care or funding for the provision of expensive supplies and medication. The barriers facing patients are many. Medical understanding of the condition may be influenced by:

- Time since the onset of the condition;
- Previous diabetic education provided to the patient at the time of the diagnosis and the intervening time;
- Language barrier;
- Cultural barriers related to dietary needs; and
- Patient's ability to pay for the supplies (medication, blood glucose testing strips, funds for office visits) required to treat their condition

Care of the diabetic is a significant challenge, requiring time, resources and significant patient participation and commitment. While these barriers are common knowledge, a true evaluation must include trending over time for the individual and the program as a whole.

We now routinely collect and monitor HgbA1c levels, and these data are used to create and modify an individualized plan of care. Grants for the diabetes management program were secured so that all laboratory tests are offered at no cost to the patient.

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

A: The "gold standard" for the measurement of the management of the blood sugar of a diabetic is the laboratory test HemoglobinA1C. This measurement is collected every three months. The laboratory standard for the diagnosis of diabetes is less than 6.5 for "tight control" of the patient's condition. Another point of measure is the BMI (body mass index) over time. While the initial HemoglobinA1C is important, the second test is the true marker of the challenges facing the client. The physician creates a plan of care with the first visit (modified by the first HgbA1c testing) but really uses the next three months' activity by the patient to firm up a treatment plan. Some clients respond quickly to their medication regimen, and compliance with a meal plan, exercise, and regular blood glucose monitoring. Others require significant "drilling down" into their daily habits including: medications administered, time of medications, episodes of blood glucose monitoring,

exercise, rest, and other activities of daily living. Written flow records and graphs are very useful in demonstrating to the client the impact of their daily health practices.

Q: What did you need to change?

A: We needed to first establish a study sample (list of appropriate clients), create a data collection tool, and collect data points from the study sample group over time. The tool was created in Microsoft Excel.

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

A: The clinical team (Medical Director, Day Clinic Director and Clinic Director) was directly involved. Leadership was important, as the tools used had to be an accurate measure of the patient management/participation of the clients, utilizing a standardized set of measures.

Actual grants were written to assist in funding our diabetic management program. Total grant funding dedicated to the diabetes management program exceeds \$12,000 per year.

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

A: Collection and trending of the laboratory test, HgbA1C, guides our efforts. Improvement is measured and trended by patient and across the diabetic patient population. This information is a great teaching tool for the clinician/patient when discussing the treatment regimen and success of the treatment.

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

A: We created a standard of care plan as a way to inspire and educate the individual patient about the importance of their role in the treatment of diabetes.

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

A: Evaluation of the clients' health records, including documentation of educational processes, compliance with medication administration, utilization of their daily blood glucose testing records, as well as continued serial monitoring of the laboratory tests, especially the HemoglobinA1C.

Q: What were the results of your intervention?

A: The patient trending over time yields a bell curve, with a large majority of clients making significant progress in reducing HbgA1c levels. Within a six-month period, many patients' HgbA1c levels were less than 7.0. Unfortunately, fewer than 50% of clients were able to sustain their improvement over time. All patients who are faithful in clinic attendance and behaviors (such as taking prescribed medications, meal planning and exercise regimens) are included in the study sample.

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

A: The "change" was spread over our clientele by having the patients meet with the diabetic educator on a regular basis about addressing their personal challenges. It also became very apparent that the entire family of a client with diabetes has an impact on their ability to achieve success in self-management. The educational process involves other family members and communication in the patient's primary language, whenever possible.

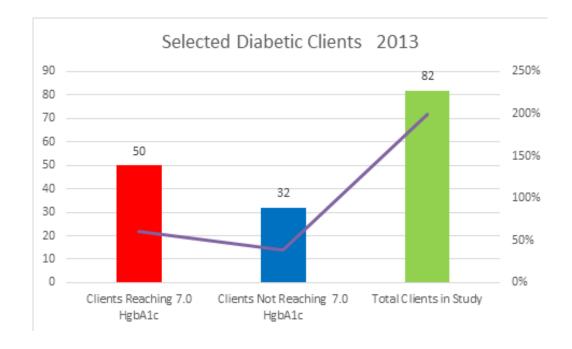
Appendix A. Metrocrest Patient Table

| Patient Count | Age at Report Run | Medical Home | DM | HTN | Lipids | Thyroid | First Date Seen | Last Date Seen | Episodi M | ic Hemoglo easuremen | bin A1c ts |
|---------------|----------------------|--------------|----|-----|--------|---------|-----------------|----------------|--------------|-------------------------|---------------|
| 1 | 61 yrs | Х | Х | | | | 05/19/11 | 01/18/13 | 6.9 | 6.8 | |
| 2 | 22 yrs | Х | Х | | | | 01/02/13 | 01/28/13 | 13.2 | 10.2 | |
| 3 | 37 yrs | Х | Х | Х | | | 01/28/13 | 02/19/13 | 6.8 | 6.9 | 6.7 |
| 4 | 64 yrs | Х | Х | Х | Х | | 09/20/11 | 03/05/13 | 6.1 | 7 | |
| 5 | 48 yrs | Х | Х | | Х | Х | 09/24/12 | 03/22/13 | 6.9 | 7.2 | |
| 6 | 42 yrs | Х | Х | | Х | | 03/02/11 | 04/01/13 | 10.3 | 9.7 | |
| 7 | 57 yrs | Х | Х | | Х | | | 05/07/13 | 6 | 8.3 | |
| 8 | 38 yrs | Х | Х | | Х | | 09/27/12 | 05/12/13 | 9 | 8.5 | |
| 9 | 57 yrs | Х | Х | Х | Х | Х | 07/20/12 | 01/08/00 | 5.7 | 6.0 | |
| 10 | 31 yrs | Х | Х | | Х | | 08/30/11 | 05/23/13 | 8.1 | 6.4 | 5.5 |
| 11 | 51 yrs | Х | Х | Х | Х | | 11/03/11 | 05/24/13 | 6.9 | 6.5 | |
| 12 | 55 yrs | dup | Х | | | | 05/29/13 | 05/29/13 | 7 | 6.9 | |
| 13 | 60 yrs | Х | Х | Х | Х | | 01/22/13 | 06/11/13 | 6.5 | 6.3 | |
| 14 | 62 yrs | Х | Х | Х | Х | Х | 09/28/11 | 06/21/13 | 8.5 | 10.6 | |
| 15 | 39 yrs | Х | Х | | | | 10/25/11 | 06/27/13 | 6.2 | | |
| 16 | 42 yrs | Х | X | X | Х | | | 07/09/13 | 6.7 | 6.3 | |
| 17 | 51 yrs | Х | Х | X | Х | | 10/25/11 | 07/11/13 | 10.5 | 10.8 | |
| 18 | 51 yrs | Х | Х | Х | | | 04/15/11 | 07/23/13 | 9 | | |
| 19 | 36 yrs | Х | X | X | | | 02/16/12 | 08/12/13 | 10.3 | 7.6 | 7.5 |
| 20 | 43 yrs | Х | Х | | | Х | 07/29/09 | 08/13/13 | 6.3 | 6.1 | |
| 21 | 59 yrs | Х | Х | Х | Х | Х | 08/07/12 | 08/19/13 | 6.3 | | |
| 22 | 57 yrs | Х | Х | | Х | | 04/24/12 | 08/26/13 | 5.8 | | |
| 23 | 45 yrs | Х | Х | Х | | | 02/14/12 | 08/30/13 | 7.4 | 6.8 | 6.5 |
| 24 | 54 yrs | Х | Х | | Х | | 03/02/11 | 09/02/13 | 6.1 | | |
| 25 | 48 yrs | X | X | | Х | | 01/25/13 | 09/06/13 | 10.3 | 9.7 | 9.3 |
| 26 | 56 yrs | Х | Х | | | Х | 07/24/13 | 09/16/13 | 6.1 | | |
| 27 | 60 yrs | Х | Х | | | | 05/13/13 | 09/16/13 | 12.5 | | |
| 28 | 61 yrs | Х | Х | Х | Х | | 01/18/11 | 09/20/13 | 6.2 | 7.3 | |
| 29 | 54 yrs | Х | Х | | Х | Х | | 09/25/13 | 6.5 | 7.4 | |
| 30 | 65 yrs | Х | Х | Х | Х | | 03/17/11 | 09/26/13 | 5 | 6.5 | |
| 31 | 65 yrs | Х | Х | | | | 03/14/13 | 09/30/13 | 13.5 | 11.2 | |
| 32 | 58 yrs | Х | Х | Х | | | 02/14/12 | 09/30/13 | 6.6 | 6.7 | |
| 33 | 34 yrs | Х | Х | Х | | | 08/20/12 | 10/01/13 | 9.9 | 10.9 | |
| 34 | 35 yrs | X | Х | Х | | | 09/20/13 | 10/15/13 | 5.6 | | |
| 35 | 35 yrs | X | Х | | | Х | 10/26/11 | 10/15/13 | 15.6 | | |
| 36 | 49 yrs | Х | Х | | | | | | | | |
| 37 | 43 yrs | Х | Х | Х | | | 06/20/13 | 10/15/13 | 5.6 | | |
| 38 | 41 yrs | Х | Х | Х | Х | Х | 09/07/13 | 10/15/13 | 12.2 | | |
| | | | | | | | 03/18/13 | 10/25/13 | 5.1 | | |
| | | | | | | | | | | | |

| Patient Count | Age at Report Run | Medical Home | DM | HTN | Lipids | Thyroid | First Date Seen | Last Date Seen | Episodi M | ic Hemoglo easuremen | bin A1c ts |
|---------------|----------------------|--------------|----|-----|--------|---------|-----------------|----------------|--------------|-------------------------|---------------|
| 39 | 52 yrs | Х | Х | | | | 01/10/13 | 10/28/13 | 9.8 | 8.2 | |
| 40 | 52 yrs | X | Х | X | Х | | 10/02/13 | 10/30/13 | 6.9 | | |
| 41 | 43 yrs | X | Х | Х | Х | Х | 05/17/13 | 11/14/13 | 6.6 | | |
| 42 | 52 yrs | X | X | X | | | 02/28/12 | 11/15/13 | 8.1 | 9 | |
| 43 | 58 yrs | X | X | X | Х | | 06/24/09 | 11/20/13 | 6.5 | | |
| 44 | 49 yrs | Х | Х | Х | Х | | 01/04/13 | 11/25/13 | 8.5 | 8 | 7.2 |
| 45 | 50 yrs | Х | Х | Х | Х | | 01/02/13 | 11/26/13 | 15.5 | 7.3 | 6.5 |
| 46 | 55 yrs | Х | Х | Х | Х | Х | 08/01/13 | 11/26/13 | 6.4 | | |
| 47 | 48 yrs | Х | Х | Х | Х | | 04/23/12 | 11/26/13 | 7.4 | 7.9 | 1 |
| 48 | 56 yrs | Х | Х | | Х | | 09/13/12 | 11/26/13 | 7.5 | 7.4 | |
| 49 | 57 yrs | Х | Х | | Х | | 05/30/13 | 12/02/13 | 7.3 | 7.3 | |
| 50 | 50 yrs | Х | Х | | Х | | 05/09/13 | 12/02/13 | 6.9 | 6.5 | |
| 51 | 58 yrs | Х | Х | Х | Х | | 03/24/11 | 12/03/13 | 7 | | |
| 52 | 35 yrs | Х | Х | | | | 03/27/10 | 12/03/13 | 9 | 9.5 | 8.7 |
| 53 | 47 yrs | Х | Х | Х | Х | | 05/08/13 | 12/04/13 | 7.6 | 6.6 | |
| 54 | 67 yrs | Х | Х | Х | Х | Х | 05/02/13 | 12/04/13 | 6 | | |
| 55 | 45 yrs | Х | Х | | Х | Х | 11/07/13 | 12/05/13 | 7 | | |
| 56 | 63 yrs | Х | Х | Х | Х | | 05/24/12 | 12/10/13 | 6.3 | 6.4 | 6.2 |
| 57 | 70 yrs | Х | Х | | Х | | 05/05/11 | 12/10/13 | 7.1 | 7 | |
| 58 | 56 yrs | Х | Х | Х | Х | | 12/15/11 | 12/10/13 | 6.1 | 6.3 | 6.9 |
| 58 | 43 yrs | Х | Х | Х | Х | | 06/13/11 | 12/11/13 | 6.1 | 5.6 | 5.7 |
| 60 | 64 yrs | Х | Х | Х | Х | | 06/09/10 | 12/11/13 | 7.4 | 7.8 | 7.6 |
| 61 | 38 yrs | Х | Х | | | Х | 02/06/13 | 12/11/13 | 8.6 | 6.2 | 6.1 |
| 62 | 63 yrs | Х | Х | Х | Х | | 09/28/11 | 12/11/13 | 6.6 | 7 | |
| 63 | 64 yrs | Х | Х | Х | Х | | 11/12/13 | 12/12/13 | 6.4 | | |
| 64 | 50 yrs | Х | Х | Х | Х | | 06/29/11 | 12/12/13 | 6.3 | 7 | 7 |
| 65 | 60 yrs | Х | Х | Х | Х | | 06/29/11 | 12/12/13 | 7.9 | 8.6 | 8.5 |
| 66 | 50 yrs | Х | Х | Х | Х | | 09/27/12 | 12/13/13 | 8.7 | 10.1 | |
| 67 | 45 yrs | Х | Х | | Х | | 01/25/12 | 12/13/13 | 6.2 | 6.7 | |
| 68 | 62 yrs | Х | Х | Х | Х | | 09/11/13 | 12/13/13 | 7 | 7.9 | |
| 69 | 51 yrs | Х | Х | Х | Х | | 05/01/13 | 12/13/13 | 9.2 | 8.1 | 7.1 |
| 70 | 55 yrs | Х | Х | Х | Х | Х | 04/05/12 | 12/13/13 | 7.3 | | |
| 71 | 61 yrs | Х | Х | Х | | | 09/16/09 | 12/13/13 | 6.5 | | |
| 72 | 54 yrs | Х | Х | Х | Х | | 09/25/12 | 12/16/13 | 6.5 | | |
| 73 | 57 yrs | Х | Х | Х | Х | | 09/10/12 | 12/16/13 | 5.6 | 5.6 | |
| 74 | 53 yrs | Х | Х | Х | Х | | 09/08/09 | 12/17/13 | 7.7 | 6.9 | 7.4 |
| 75 | 62 yrs | Х | Х | Х | Х | | 03/07/11 | 12/17/13 | 10.6 | 8 | 8 |
| 76 | 57 yrs | Х | Х | х | х | | 03/02/12 | 12/18/13 | 6.5 | 6.6 | |
| | | | | | | | 03/18/13 | 10/25/13 | 5.1 | | |

| Patient Count | Age at Report Run | Medical Home | WO | NTH | Lipids | Thyroid | First Date Seen | Last Date Seen | Episodi M | c Hemoglo easuremer | bin A1c its |
|---------------|----------------------|--------------|----|-----|--------|---------|-----------------|----------------|--------------|------------------------|----------------|
| 77 | 55 yrs | х | x | x | | | 09/28/11 | 12/19/13 | 5.9 | 6.3 | |
| 78 | 29 yrs | х | x | x | | | 09/12/13 | 12/19/13 | 11 | | |
| 79 | 39 yrs | х | x | | х | | 07/05/12 | 12/19/13 | 6 | 6.5 | |
| 80 | 37 yrs | х | x | x | х | | 04/02/09 | 12/20/13 | 8.1 | | |
| 81 | 53 yrs | х | х | | х | | 09/27/12 | 12/20/13 | 7.1 | | |
| 82 | 27 yrs | х | х | | х | х | 08/23/12 | 12/30/13 | 7.2 | 7.1 | 7.5 |

| Clients reaching <7> HgbA1c | 50/61% |
|---------------------------------|---------|
| Clients not reaching <7> HgbA1c | 32/39% |
| Total Patients Completing Study | 82/100% |



Appendix B. Metrocrest Performance Improvement Evaluation

Evaluation of Patient Progress toward Goal: A Hemoglobin A1c sustained at or below 7.0 mg/dL over serial laboratory testing.

Premise: Using the "Gold Standard" of the Hemoglobin A1c Test to evaluate the clients at Metrocrest Community Clinic who have a diagnosis of diabetes, requiring diet, exercise as well as medication to sustain blood sugar levels under 150 through the daily life functioning in a private setting. Our clients are considered to "be their own physician", in that they determine the activities of daily living: Eating, sleeping, exercise, and adjuncts such as taking medication to stabilize their daily blood sugars.

As facilitators: Our clients have access to their internal medicine physician on a regular basis, usually determined to be at least every three months.

- They will receive access to medicine, affordable, and appropriate for their condition. If the patient requires insulin, the clinic will assist the client in the application for pharmacy assistance.
- Low cost testing supplies for blood sugar determination will be available to all diabetic clients. When the client cannot afford the cost for these supplies, they will be provided through medication grant funding.
- The diabetic client will have access to educational resources, in their preferred language, with printed and audio resources.
- During their clinic visits with the physician, an interpreter will facilitate communication between the physician, the patient and their family/meaningful others.
- Laboratory testing is available without cost to the patient on the physician's order and timely evaluation of the results are available for the adjustment of the patient's medicine regime or other needs.
- Barrier to success in the program are fear, denial and inability to understand medical instructions as first presented. The clinic staff invite family members to participate in the support and care of the patient. They are also offered screening for diabetes as this is a familial disease process. Prevention of diabetic complications is predicated on early diagnosis and treatment of the condition.

Evaluation of the efficacy of the diabetic of the diabetic who is successful in the diabetic protocol is both subjective and objective.

Objective: Laboratory testing

Review of blood sugar testing results

Review of food diaries

Return demonstrations of use of diabetic testing supplies, administration and review of medication logs kept by the client, and matching blood sugar results to the log.

Subjective: Interviews with the diabetic patient, their family (food preparation and access to appropriate food, in timely

manner.)

Working with the client to meet their ethnic diversity related to food, life style, exercise pattern. Perception of self-

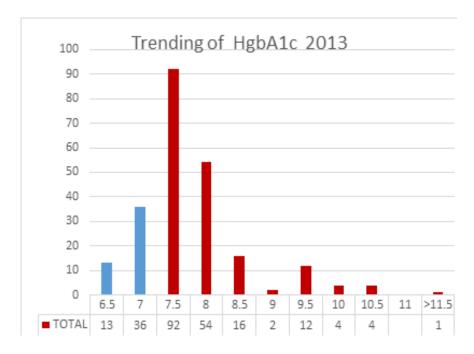
In the time that Metrocrest Community Clinic has actively recognized the diabetic population seeking care in the Day Clinic, the yearly trending of laboratory findings has remained in a similar "bell curve", with a trend toward moderate control of the HgbA1c in our clientele. We have some long-term patients who have remained in a stable, moderate control classification, despite continued efforts to recharge their diabetic self-care. Food selection, life style and a level of access that is better that any they have previously experienced are factors that continually appear in evaluation of the physician/client relationship. When the physician begins to speak of insulin therapy as an adjunct to their care, some will seek a review of their disease self-knowledge. The clinic has always focused on inspiring our clients to follow medical advice, rather than striking fear into their reality. Unfortunately, implementation of insulin into the treatment regime is becoming more common.

The monitoring of the active diabetics who did present for at least two serial HemablobinA1c tests is attached for review. The previous years reflect similar trends, with smaller numbers of clients participating.

Addendum: August, 2014. After a successful monitoring of the control of blood pressures in our clients, a monitor will begin on September 1, 2014, performing a standardized foot exam on all our diabetic clients.

Metrocrest Community Clinic

Final evaluation of all MCC Clients who have been Followed For Diabetes in 2013, but did not met all criteria for enrollment in the Diabetic Clinic. Most of these clients have been satisfactorily enrolled in the program or have been referred elsewhere for future care. This includes the 128 clients who did not complete the program expectations.



Patient with diagnosis of Diabetes, enrolled at Metrocrest Community Clinic.

Has at least two data points (HgbA1c) lab tests with last 12 months.

Diabetes is a primary diagnosis, with prescription of diabetic medication, oral or parenteral.

Patient has a glucose meter and tests the blood sugar or a regular or intermittent basis.

Documentation of clinic visits are reflected in the medical record with physician notes, laboratory testing.

Client may or may not show a positive trend in HgbA1c laboratory testing, but must reflect an effort to follow the physician's advice

A Hemoglobin A1c of 7.0 mg/dL or below is considered a patient with a controlled blood sugar.

A Hemoglobin A1c of 7.5 mg/dL to 8.0 mg/dL is considered a patient who is marginally controlling their blood sugar.

A Hemoglobin A1c of 8.5mg/dL or greater is considered an uncontrolled blood sugar.

Comprehensive Diabetes Checklist

METROCREST COMMUNITY CLINIC Clínica de Medicina Familiar Metrocrest

Patient Name:
Date of Enrollment:

Nombre del paciente:
Fecha de inscripción:

Type of Diabetes:
Date of Diagnosis:

Tipo de Diabetes:
Fecha de Diagnostico:

Have you had any diabetic education:
When:

Ha recibido algún tipo de educación diabética:
Cuando:

Enrollment in this educational service is a condition of patient care at Metrocrest Community Clinic. Attendance at the clinic at the interval requested by my physician is a condition of participation. I have been advised that I may request additional educational information regarding my medical condition and how to take care of myself.

La inscripción en este servicio educativo es una condición de la atención al paciente en la Clínica de Medicina Familiar Metrocrest. La asistencia a la clínica en el intervalo solicitado por mi médico es una condición para la participación. Me han aconsejado que puedo solicitar información educativa adicional con respecto a mi estado de salud y cómo cuidar de mí mismo.

| TOPIC | Materials | Date | Verbalized Understanding |
|--|------------|-------|--------------------------|
| Тета | Materiales | Fecha | Conocimiento Verbalizado |
| Meal Planning Planificación de alimentos | | | |
| Create your own meal plan Crear propio plan de alimentos | | | |
| Discuss special foods and occasions Hablar sobre comida y ocasiones especiales | | | |
| Portion Control Control de porciónes | | | |
| Low cholesterol, low-fat guidelines Guías para bajo colesterol, baja grasa | | | |
| Fitting sugar into the meal plan Acomodando el azúcar en los alimentos | | | |
| Label reading Leer etiquetas de comida | | | |
| Alcohol | | | |

| TOPIC <i>Tema</i> | Materials Materiales | Date Fecha | Verbalized Understanding Conocimiento Verbalizado |
|--|--------------------------------|----------------------|---|
| Self monitoring of blood glucose Auto supervisión de glucosa en la sangre | | | |
| Blood glucose goals Metas de glucosa en la sangre | | | |
| How to use a meter to guarantee accurate results Como usar el medidor para garantizar resultados precisos | | | |
| Monitoring schedule Monitorear su tiempo | | | |
| How to clean meter Como limpiar su medidor | | | |
| Storing supplies Artículos de almacenamiento | | | |
| Interpreting blood glucose values and making dedisions in diabetes treatment plan Interpretando valores de glucosa en la sangre y hacer decisiones en el tratamiento de diabetes | | | |
| Use of insulin or diabetes pills Uso de insulina o pastillas para la diabetes | | | |
| Action and side effects of medication Acción y efectos secundarios de medicamentos | | | |
| Timing and treatment schedule El tiempo y régimen de tratamiento | | | |
| Insulin injection technique Técnica de inyección de insulina | | | |

| TOPIC <i>Tema</i> | Materials Materiales | Date Fecha | Verbalized Understanding <i>Conocimiento Verbalizado</i> |
|---|--------------------------------|----------------------|---|
| Site rotation and schedule for injection Sitio de rotación y horario para la inyección | | | |
| Proper storage, refrigeration and disposal of supplies Forma adecuada para almacenar, refrigerar y desechar artículos | | | |
| What to do for missed doses Qué hacer con doces olvidadas | | | |
| Exercise Ejercicio | | | |
| Exercise guidelines: how long, how hard, how often and when? Guías de ejercicio: duración, intensidad, frecuencia y cuando? | | | |
| Snacking adjustments Ajustes de bocadillos | | | |
| Preventing high and low blood glucose Prevenir alta y baja glucosa en la sangre | | | |
| Knowledge of high and low blood glucose: Conocimiento de alta y baja glucosa en sangre | | | |
| Factors that cause high and low blood glucose Factores que causan alta y baja glucosa en la sangre | | | |
| Symptoms Síntomas | | | |

| TOPIC <i>Tema</i> | Materials Materiales | Date Fecha | Verbalized Understanding Conocimiento Verbalizado |
|---|--------------------------------|----------------------|---|
| How to treat Como tratar | | | |
| How to prevent Como prevenir | | | |
| When to call a healthcare provider Cuando llamar a un proveedor de salud | | | |
| Factors that cause high and low blood glucose Factores que causan alta y baja glucosa en la sangre | | | |
| Symptoms Síntomas | | | |
| How to treat Como tratar | | | |
| How to prevent Como prevenir | | | |
| When to call a healthcare provider Cuando llamar a un proveedor de salud | | | |
| Footcare Cuidado de los pies | | | |
| Daily foot care Cuidado diario de los pies | | | |
| Emergency treatment of cuts, sores, abrasions, blisters Tratamiento de emergencia para cortaduras, llagas, abrasiones, ampollas | | | |
| How to do a proper foot exam Como hacer un examen adecuado de los pies | | | |

| TOPIC <i>Tema</i> | Materials Materiales | Date Fecha | Verbalized Understanding Conocimiento Verbalizado |
|---|--------------------------------|----------------------|---|
| Proper footwear and sick day management Calzado adecuado y administración de días de enfermedad | | | |
| Preventing life-threatening problems La prevención de problemas amenazantes | | | |
| What to eat and drink Que comer y tomar | | | |
| Monitoring and medication schedule Horario de medicamento y monitoreo | | | |
| When to call the doctor Cuando llamar al doctor | | | |
| Urine testing for ketones (for insulin users only) Prueba de orina para detectar cetonas(para usuarios de insulina solamente) | | | |
| When and how to check for ketones Cuando y como revisar cetonas | | | |
| What ketones mean Significado de cetonas | | | |
| When to call the doctor Cuando llamar al doctor | | | |
| Special Topics Temas Especiales | | | |
| Meal Plan Plan alimenticio | | | |
| Skills in taking medicine Habilidades para tomar medicamentos | | | |

| TOPIC <i>Tema</i> | Materials Materiales | Date Fecha | Verbalized Understanding Conocimiento Verbalizado |
|--|--------------------------------|----------------------|--|
| Technique <i>Técnica</i> | | | |
| Treatment of high and low blood glucose Tratamiento de alta y baja glucosa en la sangre | | | |
| Sick day management Administración de días de enfermedad | | | |
| Risk factors for health problems Factores de riesgo para problemas de salud | | | |
| Foot Care Treatment Tratamiento de cuidado para los pies | | | |
| Tests you should have at least once a year or more Análisis que debe de tener al menos una vez al año o más | | | |
| A1C (2-4 times per year) A1C (2-4 veces al año) | | | |
| Kidney function Función de riñones | | | |
| Cholesterol, LDL, HDL, and triglycerides (lipids) Colesterol, LDL, HDL, y triglicéridos (lípidos) | | | |
| Urinary microalbumin/creatinine ratio yearly Urinaria de micro albúmina / creatinina ración anual | | | |
| GFR (Kidney function test) GFR (Examen de función renal) | | | |

| TOPIC <i>Tema</i> | Materials Materiales | Date Fecha | Verbalized Understanding Conocimiento Verbalizado |
|---|--------------------------------|----------------------|---|
| Dilated eye exam Examen de dilatación de pupilas | | | |
| Blood Pressure Presión arterial | | | |
| General Health Exam Examen de salud general | | | |
| Women: Pap test Mujeres: Papanicolaou | | | |
| Women: Breast Exam Mujeres: Examen de los senos | | | |
| Women: Mammogram: at age 40 and yearly thereafter Mujeres: Monograma: A los 40años y después cada año | | | |
| Men: Hombres: | | | |
| Foot Exam Examen de los pies | | | |

- I understand that I may receive these services in my community. Yo entiendo que puedo recibir estos servicios en mi comunidad.
- Metrocrest Community Clinic is a resource for diabetic care. La Clínica Medica Metrocrest esta un recursos para cuidado diabético.
- I will attend my medical appointment. Yo asistiré mi cita médica.
- I will follow the advice of my physician Yo voy a seguir los consejos de mi doctor.
- I will bring my meter and my medication to each clinic Yo voy a traer mi medidor y medicamento a cada clínica.
- I will bring my meter to the clinic for downloading at least once per month, or more often. Yo voy a traer mi medidor a la clínica para la descarga al menos una vez al mes o más.
- I will notify my clinic when I cannot afford to purchase my medication or testing strips.

 Yo avisare a mi clínica cuando no tenga los recursos para comprar mi medicamento o tiras de prueba.

| Name: | Date Signed: |
|---------|-------------------|
| Nombre: | Fecha de la firma |