How a diabetes disease registry and team care improved quality and created the foundation for a Patient Centered Medical Home-The Florida Experience

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Introduction to the Patient Centered Medical Home

The National Committee for Quality Assurance in 2008 published Standards and Guidelines for the Patient-Centered Medical Home (PCMH). The PCMH was created as a response to decreased interest in primary care as a career choice. Joint principles for the PCMH were created in collaboration with the American College of Physicians (ACP), the American Academy of Family Physicians (AAFP), the American Academy of Pediatrics (AAP), and the American Osteopathic Association (AOA). (1)

There are 10 must-past elements in the NCQA Patient-Centered Medical Home (PCMH). These elements include developing and evaluating practice policies for access and communication, organizing clinical data, identifying three important medical conditions, using evidence-based guidelines for these conditions, creating and evaluating patient self-management tools, empowering and effective use of office staff, follow-up and tracking of ordered tests and referrals, measuring clinician performance, and reporting aggregate and individual performance to physicians and other agencies. (1)

Barriers to implementing the medical home

Practices that aspire to become PCMH homes are required to develop policies that comply with PCMH principles, set self- and evidence-based standards for access, communication and clinical care, create and document team-based strategies for achieving these standards, and document movement toward achieving standards. Most primary care physicians believe they incorporate many of these principles in their practice, but find they lack written policies, team-based strategies, and the means to document achievement. Some level of information technology (IT) is required to facilitate the documentation process. Electronic Health Records (EHR) provide some help, but most lack disease registries and reporting systems that facilitate the needed documentation processes. Family Medicine has several strengths that will aid in meeting the elements of the medical home, but most practices lack the resources to achieve many of the elements. (2) Barriers include a lack of registries, evidence-based measuring tools, and processes to demonstrate quality improvement.

Another barrier to implementing the PCMH is a physician culture that does not value measurement. Physicians seem to reject efforts to measure their performance (3). They either reject efforts to be measured or once measurements are available seek to discredit the process or shift blame. This attitude is a result of reports from managed care companies that labeled physicians as “outliers” and a medical education system that does not incorporate measurement into outpatient care. Measurement or evaluation is viewed

as a grade or an evaluation of worth. This barrier will only change if measurement is viewed as the beginning or initiation point of the improvement process. This attitude and change of culture will depend upon the clinicians who lead the process within an individual practice. Their task is to help all members of the practice understand that the measurements are a reflection of their "system of care," not an evaluation of the care each one of them delivers. Once the shift to "systems as the cause" occurs, the next step is to "create new systems" to change the measurements. The speed of change will be slower for some than others, but with time and effective role modeling, an office can usually make the paradigm shift.

An additional barrier is the inability to work as a team. Physician training occurs mostly in the hospital, and the outpatient training they receive does not stress team care. Delegation tasks to assistants in the outpatient setting is not modeled or encouraged. Team meetings may be held, but they do not model shared problem solving. Inadequate reimbursement has forced primary care practices to hire medical assistants (MA) rather than nurses to assist them in their office. MAs have limited training that decreases their ability to accept delegation. Physicians sometimes are able to train their MA, but being able to effectively train nurses and medical assistants is not a skill that has been taught to physicians.

Office staff can perform several functions to increase the capacity of the clinician. These include functions that could easily be done by others, those that the clinician does not have the skills or time to do, and those that tradition has placed in the hands of the clinician but can be delegated to others. Team care improves health outcomes and reduces healthcare costs by increasing the number and quality of services that are provided. The clinicians are free to perform the tasks they are best suited to perform. The key is the clinician is the head of the team and is involved in the creation and management of the team.

Overcoming Barriers

In 2003, in response to a need to improve chronic disease care, the Florida Academy of Family Physicians Foundation created the Diabetes Master Clinician Program (DMCP). (4, 5) Diabetes was chosen because it is common, and excellent evidence exists that improvement in quality parameters decreases morbidity and mortality. The backbone of the program is the diabetes registry that serves as a means of documenting improved diabetes care. The registry currently contains over 16,000 patients and 50,000 visits. The program and registry is currently used by 80 practices, 200 clinicians, and 300 staff members.

Practices involved in the program first enter all their diabetic patients in an internet-based diabetes registry. Grant funds support data entry by a person independent from the practice. After data entry is complete, each practice participates in a training program. The training includes a discussion of the evidence-based standards of care for diabetes, dyslipidemia, and hypertension (6, 7, 8) followed by a review of data from their practice.

Table one demonstrates a table from an actual practice.

Table 1

Patients Meeting American Diabetes Association Goals

Clinic ID		HbA1c	LDL	B/P	HbA1c, LDL, B/P
84	% That Met Goals	62%	65%	63%	28%
All Clinics	% That Met Goals	56%	57%	56%	22%
Goals		<7.0	<100	<130/80	

	Goals	All Clinics	Clinic 84 Averages
# of Patients		16,051	280
# of Visits		50,457	759
Weight		211	200
BMI		34	32
B/P	130/80	132/77	128/74
Dilated Eye Exam	Once a year	17%	8%
Foot Exam	Once a year	28%	10%
HbA1c	<7	7.3	7.1
Total Cholesterol	<200	180	172
LDL	<100	100	92
HDL	M:>40 F: >50	46	46
Non-HDL	<130	134	126
Triglycerides	<150	174	163
Urine Micro Albumin	Once a year	26%	7%
Pneumovax	Once	28%	20%
Flu Shot	Once a year	19%	31%
Daily ASA	100%	47%	40

Before any data is presented, reaction to being measured is discussed, and physicians and staff are asked to suggest strategies for making system changes. They are encouraged to look for barriers and how to address them. Both physicians and non-physicians are encouraged to answer, and non-physician answers are supported. Many of the staff (MAs) are asked for their opinions, and the meeting moderator encourages supportive staff participation. The NCQA PCMH requires that offices choose clinical conditions that have evidence-based standards, and documentation exists that the standards are being met. This report satisfies this requirement. Other reports that aid improvement in diabetes care and can be used for documenting improvement are demonstrated in Table 2.

Table 2
Average HbA1c

Clinic Number 84	Very High Avg. >8	High Avg. > 6.5 & <8	Target <6.5
Number of Patients	50	102	111

Patient list of HbA1c from Highest to Lowest

Record Number	Names	Avg. HbA1c	# of tests	# of visits
240		13.4	1	2
243		13.2	1	1
07		13.0	2	2
211		11.8	1	2
227		11.6	2	3
115		11.6	1	1
15		11.5	2	3
05		10.6	1	1
42		10.4	3	3
10		10.3	3	3

This report demonstrates to the practice the number of patients who are various levels of risk and lists their HbA1c values. Similar reports exist for LDL and B/P. Traditionally, medical care focuses on face-to-face care for one patient at a time. Patients who are at risk but not in the office may fall through the cracks if mechanisms do not exist to identify them. The patients identified by this population-based report usually have significant barriers that include cost, transportation, literacy, and lack of understanding of their disease. Strategies for discovering and addressing these barriers are discussed during the training process, and clinicians and staff are encouraged to meet periodically after the training to review these reports and develop solutions. These reports can also be used for NCQA PCMH documentation.

Involving all members of the office staff in the solutions not only fulfills one of the NCQA PCMH criteria, but enhances the chances the solutions will be sustainable. Table 3 demonstrates another report that aids in population management.

This report lists names of patients who have not had annual evaluations like a urine microalbumin or dilated eye exam, documented daily aspirin, and annual flu shots. The patients listed in this report are fictitious. The drop-down list in this report lists those patients who have not had an eye exam in the last 365 days. Clinicians and staff use this report to increase the number of patients who obtain these tests and immunizations and take daily aspirin.

Table 3

Eye Check *
Daily ASA
Foot Check
Flu Shot
Urine Micro Albumin

List of Patients who have not completed an Eye Exam in last 365 days

Name	Date of last exam
Jane Doe	01/15/2008
Mickey Mouse	10/11/2007
Sam Spade	09/15/2007
Santa Clause	07/07/2006
Lotta Dough	05/14/2007
Prince Charming	01/24/2008
James Dean	01/22/2007

This report aids with the coordination requirement for the PCMH by ***noting who has not received an*** eye exam. Diabetic eye exams by an eye care professional require a consultation and communication to and from that professional. This report as well as the report in Table 4 aid with this process. If the exam is not performed or is not documented, a review of these two reports increases the chances the exam will be performed.

A report (Table 4) is also generated for patients (in language they can understand). This report is one of the most effective in the DMCP. It involves patients in their care, facilitates self-management, and informs them of their goals and the reasons for the goals. Patients are given this report by the nurse or medical assistant that places them in the exam room. As part of the DMCP training, clinicians are encouraged to empower their nurse and or medical assistant to obtain needed annual tests, give immunizations, remind patients to take aspirin, and perform the monofilament foot exam. Some physicians are comfortable delegating these tasks, and others are not. Those physicians who believe in team care and delegate have much better numbers than those who do not. Table 5 demonstrates the changes that were made in one practice after the medical assistants were empowered to give the patients their report card and perform the needed tests and other activities. The PCMH requires involvement of patients in their care and provision of patient education materials that consider literacy. This report aids with achieving that requirement.

Table 4

Patient Report Card for Santa Clause

Age 63 Sex Male Non Smoker MR# 7554

	Goal	Aug 2008	May 2008
Weight		235	240
B/P	Less than 130/80 Best 120/80	125/80	148/88
Tests			
HbA1c **(sugar for 3 months)**	Less than 100 Best if 6	6.5	8.5
LDL **(lousy cholesterol)**	Less than 100 Best if 70	170	165
HDL **(happy cholesterol)**	Greater than 40	37	35
Triglycerides **(a bad fatty substance)**	Less than 150	150	250
Medication			
Aspirin **(prevents heart attacks)**	Take daily	Yes	Yes

Important Yearly Activities	Goal	Status	Next Test Due	Most Recent Test
Eye Check **(to prevent blindness)**	1 time a year	Overdue		
Foot Check **(to check for sores and numbness**	1 time a year	Completed	5/22/2009	5/22/2008
Urine Micro Albumin **(to check for kidney failure**	1 time a year	Completed	5/22/2009	5/22/2008
Flu Shot **(to prevent flu)**	1 time a year	Overdue		
Pneumovax **(to prevent special pneumonia)**	Once in lifetime 2 times if first given before age 65			

Table 5

Change in one practice over an 8 month period.

Eye Check	**2%**	**59%**
Foot Check	**10%**	**82%**
Urine Micro Albumin	**6%**	**63%**
Pneumovax	**32%**	**76%**
Flu Shot	**1%**	**66%**
Daily Aspirin	**45%**	**65%**

Cost savings

The DMCP program produces a cost savings by increasing the number of patients who achieve American Diabetes Association (ADA) diabetes quality goals. Bridges to Excellence commissioned an actuarial firm to analyze the cost savings

attained when ADA quality goals are reached. (9) Their analysis demonstrated a yearly cost savings for reaching goal in the following 3 indicators:

HbA1c	***$279***
LDL	***$369***
B/P	***$474***

When these cost savings figures were applied to the 16,000 patients in the DMCP WHO had reached diabetes quality goals for the three indicators the yearly cost savings for the DMCP was over $2.7 million dollars. One third of the cost savings is for the patient (less absenteeism and increased productivity), and the remaining savings is for the direct cost of care.

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