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Patient-Centered Medical Home: The Power of Data in Designing the future of healthcare

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Your Life Your Health

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(Editor's Note: On May 12-14, Dr. Holly was in New York City participating in a Medical Leadership Conference on Medical Information Technology sponsored by NextGen[®], the producer of the electronic medical record system which SETMA has used for the past twelve years. The following is an edited version of the address which he made to the conference.)

The Reality

The only care which benefits a patient is the care which they can access. Though I know all there is to know about treating a complex medical condition, only the care the patient can afford or can obtain improves their health. This reality has major medical, social, political and economic implications.

On February 16, 2009, this writer attended a conference in Houston on Patient-Centered Medical Home. As I drove to the conference, I said to my colleagues, "If I am going to listen to someone read a power-point presentation to me, I am going to be aggravated." I was aggravated. I came away from the lecture knowing no more about what Patient-Centered Medical Home really is than I did before.

The next morning, while making rounds, I met the incarnation of "medical home." That incarnation was in the form of an angry, frustrated, hostile, and belligerent patient. Nothing I could say dissuaded this person from their anger. As a result, I asked the patient to see me personally in follow-up. Keeping the office appointment, he was no different, but in the visit I discovered the following:

1. The patient was disabled and could not pursue his job.
2. The patient was taking only four of his nine medications as he could not afford all of them.
3. The patient was losing his eyesight due to his underlying illness.
4. The patient could not afford the gas to come to education class which might help him improve his health.
5. The patient could not afford the co-pays for education classes.

After evaluating the conditions for which he was hospitalized, he left with the following:

1. All of his medications, paid for by the SETMA Foundation, a 501-C3 foundation established by the partners of SETMA to help their patients receive the care they need. In 2009 alone, SETMA partners contributed \$500,000 to the Foundation.
2. A gas card from the foundation so that he could afford to come to education classes.
3. The co-pays waived for the education classes.
4. Help in applying for disability income.

5. Referral by SETMA's Ophthalmologist to a research program in Houston which could help preserve his eyesight.

Though we did not yet understand all there was to know about Patient-Centered Medical Home, we recognized that we had just experienced it. Six weeks later, this patient returned with a smile on his face and with his winsome personality apparent. He had something we could not prescribe. He had hope and his illness was treated to goal for the first time in several years.

Address to Graduating Class at School of Medicine

On May 22, 2010, this author will give his last greeting as President of the Alumni association to the graduates of the University of Texas Health Science Center at San Antonio School of Medicine. That greeting incorporates many of the realities of healthcare today. It states:

"As you stand today to receive the symbol of a lifetime of achievement -- your doctor of medicine diploma. -- you stand on one hundred years of progress since Abraham Flexner challenged the nation with the need for a sound scientific foundation to the teaching and practice of medicine. Today crowns "a lifetime of achievement", for your medical education did not begin four years ago, nor will it end today.

"Without doubt you are the smartest and most knowledgeable generation of physicians ever, and you fulfill every hope and expectation of the 1910 Flexner report. Yet, contained in that report was a potential unintended consequence: the possible replacement of a personal, trusting physician/patient relationship with a trust only in technology.

"You face the reality that the only care which will improve the health of your patients, while based on your knowledge, is the care they are able to access and receive. You face the dilemmas created by the success of scientific progress, which are:

- "How do I balance technology with humanity?"
- "How do I overcome the seduction of entrepreneurism which has eaten at the soul of medical professionalism like a cancer?"
- "How do I re-establish patient confidence in my counsel, supported by appropriate technology, rather than my patients simply trusting in more procedures, tests and operations?"
- "How do I balance the tension between more care and more health?"

"As your President, I welcome you to your alumni association. Your school and your colleagues need your participation and support. Welcome to the future of a profession which not only desires to help others to live longer but to help them have a life every day they live.

"Today, we pass the healthcare leadership baton to your generation of physicians. We will carry it with you part of your journey, but if we all are to succeed, our hopes and passions must be incorporated into yours. We pass this baton to you confident of your fidelity to the profession you join and to the vision and mission of your University.

Congratulation and welcome to the task.”

Steps of Designing the Future

The following are the steps of the designing of the future of excellence in the delivery of healthcare; they are:

1. Provider Performance Tracking with the ability for Providers to Evaluate their Own Performance at the Point of Care
2. Auditing of Provider Performance through SETMA’s COGNOS Project
3. Analysis of Provider Performance through Statistics
4. Public Reporting of Provider Performance
5. Quality Assessment and Performance Improvement

Regular readers of this column will recognize these steps. For others, the following discussion will help and references will be given to where more can be found about each of these steps.

Provider Performance Tracking

The Physician Consortium for Performance Improvement (PCPI) is an organization created by the AMA, CMS, Institute of Medicine and others to develop measurement sets for quality assessment. The intent is to allow healthcare providers to evaluate their own performance at the time they are seeing a patient. SETMA is tracking a number of these measurement sets including: Chronic Stable Angina, Congestive Heart Failure, Diabetes, Hypertension, and Chronic Renal Disease Stages IV through ESRD, Adult Weight Management, and Care Transitions. Others will be added overtime. The details of these measurement sets and SETMA’s provider performance on each can be found at www.jameslhollymd.com under ***Public Reporting PCPI***.

In addition to Provider Performance Tracking tools such as those produced by PCPI, the National Quality Foundation (see www.jameslhollymd.com under Public Reporting NQF), and National Committee for Quality Assurance (see www.jameslhollymd.com under Public Reporting HEDIS and/or NCQA), SETMA has designed a pre-visit quality measures screening and preventive care tool. This allows a SETMA provider and a patient to quickly and easily assess whether or not the patient has received all of the appropriate preventive health care and the appropriate screening health care which national standards establish as being needed by this patient.

The following is the Pre-visit Preventive Screening tool. All measures in black apply to the current patient and are fulfilled. All measures in red apply to the current patient and have not been fulfilled and all measures in grey do not apply to the current patient.

If a point of care is missing, it can be fulfilled with the single click of a single button.

Audit Previsit

Pre-Visit/Preventive Screening

General Measures (Patients >18)

Has the patient had a tetanus vaccine within the last 10 years? **Yes**
Date of Last: 01/26/2010 Order Tetanus

Has the patient had a flu vaccine within the last year? **Yes**
Date of Last: 01/26/2010 Order Flu Shot

Has the patient ever had a pneumonia shot? **Yes**
Date of Last: 01/26/2010 Order Pneumovax

Does the patient have an elevated (>100 mg/dL) LDL? **Yes**
Last: 160 09/01/2009 Order Lipid Profile

Elderly Patients (Patients >65)

Has the patient had an occult blood test within the last year? (Patients >50) **No**
Date of Last: / / Order Occult Blood

Has the patient had a fall risk assessment completed within the last year? **Yes**
Date of Last: 01/28/2010 Click to Complete

Has the patient had a functional assessment within the last year? **Yes**
Date of Last: 01/26/2010 Click to Complete

Has the patient had a pain screening within the last year? **Yes**
Date of Last: 01/26/2010 Click to Complete

Has the patient had a glaucoma screen (dilated exam) within the last year? **Yes**
Date of Last: 08/18/2009 Add Referral At Right

Does the patient have advanced directives on file or have they been discussed with the patient? **No**
Discussed? ☐ Yes ☒ No Completed? ☐ Yes ☒ No

Is the patient on one or more medications which are considered high risk in the elderly? **No**
Click To Review

Diabetic Patients

Has the patient had a HgbA1c within the last year?
Date of Last: 05/13/2009 Order HgbA1c

Has the patient had a dilated eye exam within the last year?
Date of Last: / / Add Referral Below

Has the patient had a 10-gram monofilament exam within the last year?
Date of Last: 12/14/2009 Click to Complete

Has the patient had screening for nephropathy within the last year?
Date of Last: / / Order Micral Strip

Female Patients

Has the patient had a pap smear within the last two years? (Ages 21 to 64)
Date of Last: / / Order Pap Smear

Has the patient had a mammogram within the last two years? (Ages 40 to 69)
Date of Last: / / Add Referral Below

Has the patient had a bone density within the last two years? (Age >50)
Date of Last: 03/27/2009 Add Referral Below

Male Patients

Has the patient had a PSA within the last year? (Age >40)
Date of Last: / / Order PSA

Has the patient had a bone density within the last two years? (Age >65)
Date of Last: / / Add Referral Below

Referrals (Double-Click To Add/Edit)

Referral	Status	Referring

OK Cancel

While healthcare provider performance is important for excellent care of a patient's health, there are 8,760 hours in a year. A patient who receives an enormous amount of care in a year is in a provider's office or direct care less than 60 hours a year. This makes it clear that the patient is responsible for the overwhelming amount of their own care which includes compliance with formal healthcare initiatives and with lifestyle choices which support their health.

If responsibility for a patient's healthcare is symbolized by a baton, the healthcare provider carries the baton for .68% of the time. That is less than 1% of the time. The patient carries the baton 99.22% of the time. The coordination of the patient's care between healthcare providers is important but the coordination of the patient's care between the healthcare providers and the patient is imperative. (For more on this concept see: *Passing the Baton: Effective Transitions in Healthcare Delivery* By James L. Holly, MD Your Life Your Health *The Examiner* March 12, 2010 at www.jameslhollymd.com)

The following is a direct quote from this article. The emphasis and italics appear in the original:

"Often, it is forgotten that the member of the healthcare delivery team who carries the 'baton' for the majority of the time is the patient and/or the family member who is the principal caregiver. If the 'baton' is not effectively transferred to the patient or caregiver, then the patient's care will suffer."

Auditing of Provider Performance – SETMA’s COGNOS Project

The creating of quality measures is a complex process. That is why it is important for agencies such as the Ambulatory Care Quality Alliance (AQA), the NCQA, the NQF, the Physician Quality Reporting Initiative (PQRI) and PCPI, among others, to identify, endorse and publish quality metrics. The provider’s ability to monitor their own performance and the making of those monitoring results available to the patient is important, but it only allows the provider to know how they have performed on one patient. However, the aggregation of provider performance over his/her entire panel of patients through an auditing tool carries the process of designing the future of healthcare delivery a further and a critical step.

Auditing of provider performance allows physicians and nurse practitioners to know how they are doing in the care of all of their patients. It allows them to know how they are doing in relationship to their colleagues in their clinic or organization, and also how they are performing in relationship to similar practices and providers around the country.

As a result, SETMA has designed auditing tools through the adaptation to healthcare of IBM’s business intelligence software, COGNOS. Multiple articles on SETMA’s COGNOS Project can be found at www.jameslhollymd.com under *Your Life Your Health* and the icon **COGNOS**. Those discussions will not be repeated here but auditing is an indispensable tool for the improvement of the quality of healthcare performance and for improvement in the design of healthcare delivery.

Through COGNOS, SETMA is able to display outcomes trending which can show seasonal patterns of care and trending comparing one provider with another. It is also possible to look at differences between the care of patients who are treated to goal and those who are not. Patients can be compared as to socio-economic characteristics, ethnicity, frequency of evaluation by visits and by laboratory analysis, numbers of medication, payer class, cultural, financial and other barriers to care, gender and other differences. This analysis can suggest ways in which to modify care in order to get all patients to goal.

Analysis of Provider Performance through Statistics

Raw data can be misleading. It can cause you to think you are doing a good job when in fact many of your patients are not receiving optimal care. For instance the tracking of your average performance in the treatment of diabetes may obscure the fact that a large percentage of your patients are not getting the care they need. Provider Performance at the point of service is important for the individual patient. Provider Performance over an entire population of patients is important also. However, until you analyze your performance data statistically, a provider will not know how well he or she is doing or how to change to improve the care they are providing..

Each of the statistical measurements which SETMA tracks, the mean, the median, the mode and the standard deviation, tells us something about our performance. And, each measurement helps

us design quality improvement initiatives for the future. Of particular, and often, of little known importance is the standard deviation.

From 2000 to 2010, SETMA has shown annual improvement in the mean (the average) and the median results for the treatment of diabetes. There has never been a year when we did not improve. Yet, our standard deviations revealed that there were still significant numbers of our patients who are not being treated successfully. Even here, however, we have improved. From 2008 to 2009, SETMA experience a 9.3% improvement in standard deviation. Some individual SETMA providers had an improvement of over 16% in their standard deviations. Our goal for 2010 is to have another annualized improvement in mean and in median, and also to improve our standard deviation. When our standard deviations are below 1 and as they approach .5, we can be increasingly confident that all of our patients with diabetes are being treated well.

An example of a statistical analysis of SETMA's diabetes care in regard to the elimination of ethnic disparities of care is given in the article *Eliminating Ethnic Disparities in Diabetes Care* Your Life Your Health Your Health *The Examiner* May 13, 2010, which is posted on our website at www.jameslhollymd.com.

Public Reporting of Provider Performance

One of the most insidious problems in healthcare delivery is reported in the medical literature as "treatment inertia." This is caused by the natural inclination of human beings to resist change. Often, when patients' care is not to goal, no change in treatment is made. As a result, one of the auditing elements in SETMA's COGNOS Project is the assessment of whether a treatment change was made when a patient was not treated to goal.

Overcoming "treatment inertia" requires the creating of an increased level of discomfort in the healthcare provider and in the patient so that both are more inclined to change their performance. SETMA believes that one of the ways to do this is the public reporting of provider performance. That is why we are publishing provider performance by provider name at www.jameslhollymd.com under **Public Reporting**.

A more complete explanation of SETMA's philosophy and intent in "public reporting" of provider performance can be found in the following articles:

- *Transforming Healthcare Public Reporting of Provider Performance on Quality Measures* Your Life Your Health December 3, 2009;
- *Patient-centered Medical Home SETMA's COGNOS Project Changing Patient and Provider Behavior* Your Life Your Health October 29, 2009.
- *County Health Rankings – Part II Quality of Care – What Will Be Gained by Public Reporting* Your Life Your Health March 4, 2010

QAPI – Quality Assessment and Performance Improvement

Quality Improvement Initiatives based on tracking, auditing, statistical analysis and public reporting of provider performance are critical to the transformation of healthcare both as to quality of care and as to cost of care.

With the above described data in hand and with the analysis of that data, it is possible to design quality initiatives for future improvement in care. Currently SETMA is designing two major quality initiatives. One is for diabetes. It is an attempt to eliminate the last vestiges of ethnic disparity in the care of diabetes. This will require the use of additional internal resources and attention but it is our intent to do so and to permanently and totally eliminate ethnic disparities. The other is in regard to decreasing avoidable readmissions to the hospital.

The details of these two initiatives can be reviewed at www.jameslhollymd.com :

- *Designing a Quality Initiative: How? Hospital Re-admissions* Your Life Your Health April 22, 2010.
- *Eliminating Ethnic Disparities in Diabetes Care* Your Life Your Life Your Health May 13, 2010

Without a systems approach to healthcare, each of these steps are impossible; certainly, the analysis and transformation of healthcare is impossible. With a systems approach, this logical and sequential process is possible and rewarding for provider and patient. This process has set SETMA on a course for successful and excellent healthcare delivery. Our tracking, auditing, analysis, reporting and design will keep us on that course.