

James L. Holly, M.D.

Letter to Maureen Bisagnano, CEO of IHI, about SETMA's The Automated Team and Maureen's Response to SETMA's Work

From: James L. Holly [<mailto:Jholly@jameslhollymd.com>]
Sent: Sunday, September 15, 2013 7:24 AM
To: Maureen Bisognano
Subject: HIMSS Innovation Committee presentation in October and an introduction to SETMA's Automated Team

Maureen:

The announcement was made at our HIMSS Innovation Committee's Community meeting Friday that you will be speaking at our October Community meeting. I am looking forward to your presentation. I have been greatly benefited as has my practice by your "Conversation Ready" work. The article attached above is my reporting of your work and others from the February, 2013 *Health Affairs*.

The following is a tutorial and an introduction to SETMA's Automated Team which we deployed in July, 2013 and which we believe is going to move us forward in our quest to fulfill The Triple Aim.

<http://www.jameslhollymd.com/epm-tools/Automated-Team-Tutorial-for-the-EMR-Automated-Team-Function>

Genesis of an Idea, May, 2013 - The Automated Team

In 1993, John Patrick set IBM on another course and changed the company's future. Reading his story made me wonder, is it possible for SETMA to set medicine on another course and to change the future. John did not want people to work "collaterally," side by side, maybe going in the same direction, maybe even having the same goal, but working independently and at best in a cooperative manner; he wanted people to work "collaboratively," synergistically,

leveraging the generative power of a team in creating a new future which they partially envision but which even they could not control.

What can we do today in healthcare which would mirror the changes IBM experienced? How can we change “collateralists” into “collaborativists”? How can we use the power of electronics, analytics, and informatic principles to energize radical change to create a new future in healthcare? Testing and measurement is a science. In most industries, quality is determined by testing performance. But, in healthcare we are involved in a new kind of “testing.” The tests used to measure the performance of healthcare providers are unique. Therefore, if you are going to measure the quality of care given by healthcare providers:

- If we are going to give a test to healthcare providers, and
- if we are going to give them the test questions before hand, and
- if the test is open-book, and
- if there is no time limit for taking the test;

Why not “cheat?” Look up the answers before the test so providers can know their performance before they get the test results. Don’t wait until an insurer, an ACO, or an agency measures your HEDIS performance. Know your performance by measuring your performance yourself. In fact, know your performance at the time you see a patient. The ultimate “game changer” in healthcare is when the provider knows how he/she is doing in the care of an individual patient, or in the care of a panel or population of patients and then when the provider turns around and shares this information with patients and with the public at large. The game is changed because the motivation to improve is maximized.

There is no cheating!

Of course, ethically there is no “cheating” in this context. Unlike traditional medical-education tests, this test is not measuring what you know; it is measuring what you have access to and it is measuring to what you pay attention. It is measuring how efficiently and excellently you are applying what you know. The test is not measuring what you remember; it is measuring what you are reminded of. If you have Clinical Decision Support (CDS) which remind you of what needs to be done and if you have CDS tools which allow you to measure your own performance at the point of care, you can consistently improve your performance.

Go Around Barriers - Maginot Line

In April, 2013, after a three and a half hours presentation of SETMA’s system to eight Medicare Advantage executives, they asked how they could get other providers to perform as well as SETMA. They were told to develop leaders who will help improve the processes and outcomes of care, but that they must recognize also that some times physician leaders use their positions to resist, or to obstruct change rather than to facilitate it. This is not unlike the French Government after World War I.

Determined never to be invaded by Germany again, in the 1930s the French constructed a fixed, defensive fortification between France and Germany called the Maginot Line. The French did not know what General George Patton intuitively knew. In an era of mechanized warfare, fixed fortifications could be and were easily ignored. The enemy went around the Maginot Line. Similarly, when the barrier to healthcare improvement is created by the refusal of healthcare providers to accept new realities and new standards of care, health systems will simply go around them. The intent is to make the obstructing providers irrelevant to the process. The reality is if healthcare providers become fixed fortifications against the future, the process and the system will go around them.

In addition to healthcare providers obstructing the process, there is also the fact that excellent healthcare makes much greater demands of healthcare providers now than ever before. The reality is that many of those demands can be met without active participation by the provider. For instance, one of the most complicated processes healthcare providers are asked to do is to report to the local and state Departments of Health the diagnoses of certain illnesses. In Texas there are seventy eight such illnesses. Just remembering all these conditions is daunting; add to that the need to stop in the middle of a long day to fulfill the reporting requirement is another and perhaps even bigger problem. (For an a complete explanation of SETMA's solution to infectious disease reporting see [Texas State Reportable Infectious Diseases Tutorial](#).)

Value equals Quality divided by cost

The lessons of the industrial revolution give us guidance here. Rather than handmade tools and machines made by artisans who were creative geniuses, machines were made by other machines and they were reproduced in mass. Costs went down and quality went up. so the value escalated geometrically. Apply these lessons of standardization, automation and reproducibility to healthcare, we can get to our goals much faster. Henry Ford made a new machine on an assembly line which was nothing more than a standardized, automated method for producing a product which also required human input. If healthcare providers look at every process and outcome in healthcare as a sum of that which can be automated and standardized, and of that which still requires human input, healthcare quality can improve predictably. The cost can be reduced consistently, and provider and patient satisfaction can improve. Some things in healthcare cannot yet be standardized and automated but the satisfaction of receiving the care that can be, will be increased by determining what can be automated and standardized and then by doing so.

Complexity demands systemic solutions

The Texas State Health Department's Reportable Conditions illustrates the standardization and the automation of parts of healthcare processes. Remember, "The more complex a problem is, the more systemic the solution must be." Today, SETMA providers make a diagnosis, and when that diagnoses is one of the seventy-eight reportable conditions, automatically, the condition is reported to the state with the provider doing nothing more than making the

diagnosis. If an important task is not being done either because the provider is resistant to doing it, or because the provider has “too much” to do, automate it.

How Many Tasks can you get a provider to do?

That question was asked at a conference in Boston in May, 2012. There were many answers, but the question was answered by asking three other questions:

1. How important is the task?
2. How much time does it take?
3. How much energy does it take?

If you were to create a formulae to represent this process, there would be a direct correlation between how many tasks a provider can or will do and how important the tasks are; the more important the tasks, the more tasks a provider will do. There would be an inverse relationship between how much time it takes and how many tasks will be done; the more time it takes, the fewer tasks will be done. There would also be an inverse relationship between how much energy it takes and how many tasks will be done; the more energy it takes, the fewer tasks will be done. The key to getting more done is to determine what is important and only to do that, and then to make the completion of the important tasks require less energy and less time.

How can we change the future?

Make it easier to do it right than not do it at all! Imitate Henry Ford who automated the manufacturing of automobiles with assembly lines and in so doing made it possible for those who made cars to afford to drive them. There are many aspects of patient care which can be automated. Classically, SETMA has used clinical decision support as reminders to providers, but now we are realizing that many of the tasks which were the object of CDS, actually could and should be automated, requiring no input from the provider. For instance, the value of the flu immunization is not enhanced by it being ordered by a healthcare provider, or by it being given by a registered nurse. And, the process of a flu immunization can be automated.

1. When a patient is given an appointment and the system determines that the patient has not had a current flu immunization and the appointment time is in the appropriate time frame to receive the vaccine, the system should order the flu immunization, and send the order to the nurse, to the chart and to charge posting. The provider is not involved which increases the probability that it will be done.
2. Additionally, the system should be programmed so that every patient who has not made an appointment in the time frame for a flu immunization should be notified electronically at the beginning of the flu-immunization season that they need to have a flu shot and toward the end of the immunization season, the system should check again to see who has not had the shot.

This principle can be expanded to all chronic conditions for which the patient is being treated and/or for all screening and preventive care the patient requires. In the future, all healthcare process will be evaluated for:

1. That which can and should be automated, all based on evidence-based medicine
2. That which requires human input based on patient-centered care

This will give the healthcare provider more time to focus on the patient while fulfilling the processes (care) which we believe will improve the health (outcomes) and which will decrease the cost of excellent care. Automation of care can help healthcare providers fulfill the “triple aim.”

The Idea of Automation Grows

In June, 2013, the *American Medical News* published an article entitled, “Serious work put into making primary care fun again.” With an anticipated serious shortage of primary care physicians over the next twenty years, the article addressed how to improve the lot of primary care providers, stating in part: “Amid alarming rates of physician burnout, hundreds of clinics nationwide are redesigning their practices with a goal in mind beyond improving the quality of care. They are aiming to make life as a primary care doctor enjoyable once more. Twenty-three of these clinics...describe practice innovations that can ease the chaos, administrative overload, miscommunication and computerized busy work that too often characterize primary care. These clinics found that:

- Planning visits ahead of time,
- Delegating more tasks to nurses and medical assistants,
- Holding daily meetings and
- Using standing orders for recurring items

not only improves patient satisfaction but also creates happier doctors.” The study also found, “Physician satisfaction is an essential ingredient in transforming the delivery of medical care...” All medical care, and especially primary care, is incredibly complex, creative work that requires willing, engaged participants and strong support to be successful. The study said, “...We use silly words like ‘joy’ and ‘love’ and ‘hope’ because that's what we need. We don't need more rules or checklists or regulations.”

Reviewing the recommendations from these clinics, SETMA is already doing all of the things they recommend but SETMA believes the processes of care can be improved even more. And, It is obvious that the improvements we discussed will also improve the professional satisfaction of primary healthcare providers and that those improvements will decrease the stress upon primary care providers.

The Automated Team: Automating the care of patients with diabetes

Over the next two years, SETMA will examine the care given in our ambulatory clinics. In creating The Automated Team, the first step will be to automate the care of diabetes as much as is possible. The effort to improve the care of patients with diabetes involves the fulfillment of “process measures,” which are tasks, such as:

1. Has the patient had a hemoglobin A1c within the past three months?
2. Has the patient has a urinalysis in the past year?
3. Has the patient had a dilated eye examination in the past year? The complexity of this question is that if a referral is automatically created for a dilated eye examination, and the patient is seen again before that examination has been completed, can the system know that and not create a redundant referral? The answer is, “Yes,” Secondly, if the automated referral is completed and the patient is seen after the examination has been done but the report is not found in the record, can the system create instructions for the report to be obtained? The answer again is, “Yes,” Any process can be analyzed beyond a first or second or third step to make the automation reliable and beneficial for patient care.
4. Has the patient had an examination of the feet in the past year including a test of feeling in the feet?
5. Has the patient had a test for protein in the urine in the past year?
6. Has the patient had a flu immunization in the past year?
7. Has the patient had a cholesterol test in the past year?
8. Is the patient on a statin drug?
9. Is the patient on aspirin?
10. If the patient has protein in the urine, is the patient on an ACE Inhibitor or an ARB (blood pressure medicines that prevents protein in the urine or helps reduce it if it has already occurred)?

This effort also involves “outcomes measures,” which means to evaluate whether diabetes care meets established goals, such as:

1. Is the patient’s hemoglobin A1c below 7.0%?
2. Is the patient’s “bad cholesterol,” the LDL, below 70?
3. Is the patient’s blood pressure controlled below 130/90?
4. If the patient is overweight or obese, is he/she losing weight?
5. Is the patient devoid of complications and if he or she is not, has the worsening of the complication been arrested?

This effort also involves patient “lifestyle measures,” such as:

1. Is the patient exercising regularly and has the patient been given an exercise prescription in the past 90 days?
2. Has the patient been asked about smoking or exposure to tobacco smoke and if either is true has the patient been given help in stopping smoking?
3. Has the patient been given instructions on how to lose weight, how to read processed food labels and is the patient following a diet?

4. Has the patient been to diabetes education classes in the past twelve months?
5. Is the patient monitoring their own blood sugar at home?
6. Does the patient keep a blood sugar and a blood pressure log?

Improving patient and provider satisfaction and avoiding burnout by both

Most of these tasks can be “automated, “which means that they can be ordered before the patient comes to the clinic. In the design of The Automated Team functions, when the patient makes an appointment, the EMR automatically searches the patient’s record and creates orders for referrals, procedures and tests. At the time of the visit, in The Automated Team functions, the following documents are also created:

1. A summary of the patient’s needed care for the nurse who will see the patient.
2. A summary of patient needs for improvement of care and for removing as much stress as possible from the provider, such as alerting the provider that the blood pressure, or the blood sugar, or the cholesterol, or other outcomes measures are not to goal.
3. A summary of tests, procedures or referrals which have been initiated for the patient. This summary will explain what has been ordered, where and when the care will be completed and an explanation of why the care has been ordered and the benefit of the care to the patient.

These steps will improve the quality of care for the patient and the quality of life for the provider. A great deal of stress will be taken off the provider who will have more time to spend with the patient giving attention to the patient’s interests rather than spending time fulfilling important but easily automated tasks. It is possible that this process will reduce the work load of the healthcare provider by 30% or more. If it does, it will be transformative to primary care by giving the provider the capacity to fulfill quality metrics while spending more time and attention on the patient.

The Explanation and the Execution of The Automated Team Function

The Vision

As we learn more about how to improve our health and as we are able to change the future of our health more, excellence in healthcare increasingly is dependent upon two things: **a team** approach and **the automation** of those standardized tasks, which while they are critical to excellent care, can be completed without requiring the time and attention of team members. This gives the team more time to interact with one another personally. This standardization and automation of care brings us one step closer to the ultimate promise of electronic patient management which is the ultimate goal of electronic patient records. The Automated Team is the logical extension of clinical decision support.

The Team

The majority of healthcare is delivered and received in the ambulatory setting in a clinician's office. While the healthcare team is much broader, in the ambulatory setting, the principle members of the team are the patient, the nursing staff and the healthcare provider. Ultimately, while the standardization and automation of this team's functions will spread across all areas of care, Southeast Texas Medical Associates' efforts begin with diabetes. Each member of the team - patient, nurse, and provider -- contribute to the excellence of ambulatory care for diabetes.

The Plan

When a patient who has diabetes makes an appointment, based on evidenced-based medicine and national standards of care, the electronic record will immediately search the patient's entire medical record to determine what tests, procedures, consultations or interventions are required and which have not been performed. Each of these interventions will be directed at the prevention of the complications of diabetes and/or at the improvement of the care of the patient with diabetes. Because diabetes is a progressive disease, excellence of care at one point in time may not reflect excellence of care at another time, thus the reason why the "automated team" needs an updated, current and complete plan of care and treatment plan at each visit.

The Automation

When the patient presents for their appointment, three documents will have been prepared:

1. **For the nurse**, a document will have been prepared which lets the nurse know what elements of his/her contribution to the team's effort are not up to date and need to be addressed, such as *The LESS Initiative*, the 10-gram monofilament sensory examination, immunizations, medication reconciliation, etc.
2. **For the patient**, a patient engagement and activation document will have been prepared which tells the patient what tests, procedures or referrals have been scheduled. An explanation will be provided to the patient as to why he/she is being asked to have these tests, procedures, or appointments. As stated above, all interventions will be directed toward the improvement of the patient's care and the avoidance of the complications of diabetes. With this document, the patient will know what his/her responsibility is to support the efforts of the team.
3. **For the provider**, a document will have been prepared which explains the information which has been given to the nurse and the patient. The provider will be alerted to whether or not the patient has been treated to goal for diabetes and if they are not, the provider will be encouraged to change medication, life-styles, education, etc., in order to achieve control.

The Team’s Activation - True Patient-Centered Care

Each team member will have access to the documents given to other members of the team. Each team member will know what is expected of the team and each team member will know the goals are for the entire team. Because the team will be spending less time on the tasks of ordering and scheduling tests, procedures and referrals, there will be more time for the building of relationships and for the engagement and activation of each member of the team.

EMR Deployment of the Automated Team Function for Diabetes

Over time, SETMA will build the Automated Team functions for all chronic diseases, such as hypertension, congestive heart failure, chronic renal disease, cardiometabolic risk syndrome. The Automated Team functions will also be built for the fulfillment of HEDIS measures, ACO quality metrics, Medicare Advantage STARS quality metrics, and for the over 300 quality metrics SETMA currently tracks, audits, analyzes and publicly reports of provider performance by provider name. SETMA hopes to have all of the Automated Team functions for all of the chronic conditions we treat built over the next twelve months.

The Automated Team Process

When a patient makes an appointment, the computer automatically and independently:

- Searches the patient’s record for all chronic conditions for which the patient is being treated.
- Creates orders for procedures and tests and referrals for appointments with other providers
- Creates a patient engagement and activation document, a nurse’s responsibility document and recommendations to healthcare document

This will leave more time for the provider to listen to the patient’s healthcare concerns and desires, to modify the patient’s plan of care and treatment plan to improve outcomes and to make certain that the grasps the “baton” through which the patient will accept responsibility for their care.

James (Larry) Holly, M.D.
C.E.O. SETMA
www.jameslhollymd.com

Adjunct Professor
Family & Community Medicine
University of Texas Health Science Center
San Antonio School of Medicine

Clinical Associate Professor
Department of Internal Medicine
School of Medicine
Texas A&M Health Science Center

From: Maureen Bisognano [mailto:MBisognano@IHI.org]
Sent: Sunday, September 15, 2013 11:53 AM
To: James L. Holly
Subject: RE: HIMSS Innovation Committee presentation in October and an introduction to SETMA's Automated Team

Brilliant, as always!
Thanks for all you are doing!

Maureen

*Maureen Bisognano
President and CEO
Institute for Healthcare Improvement
20 University Rd.
Cambridge, MA 02138*