

# The ASQ Healthcare Division Marshall Plan: "Put Me In The Game, Coach!"

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## Introduction

It has long been our belief in the American Society for Quality (ASQ) Health Care Division (HCD) that the science of quality and process improvement, its proven tools and methodologies, and its skilled and experienced practitioners hold an important key to solving many of the problems now plaguing the US health care system. We have been extremely disappointed with the continued reluctance among decision makers in health care to look beyond their own professional boundaries to engage those with proven skills in addressing such issues as waste, inefficiency, run-away costs, poor quality, and extreme variation. These are the very ills that have been successfully treated in other industries (automotive, airlines, government, financial) by such professionals but which health care leaders have systematically kept on the sidelines.

We believe it is high time that these professionals implore the health care leaders to "Put Me In the Game, Coach!" Further, we believe it is also time that the other stakeholders in the US health care system demand the same of those in charge of health care. To emphasize the value of this concept the HCD developed and has nurtured the "Marshall Plan" to show what can and will be done when process improvement and quality management professionals are given the chance to prove themselves and their worth as important members of the health care team.

## Background

Few deny that the US can provide some of the most clinically and technologically advanced health care in the world. That said, it is also well known that health care in the US is the most expensive in the world, and that the quality of the care actually delivered is not commensurate with the cost. As a result the health status of the US population ranks much lower than almost all other "developed" countries despite the high price we pay for health care. A further problem is that the system through which health care is delivered in the US is also very wasteful (ASQ White Paper, 2009). A recent study by former Centers for Medicare and Medicaid Services (CMS) administrator Donald M. Berwick and RAND Corporation analyst Andrew D. Hackbarth estimated that a few categories of waste consumed \$476 billion to \$992 billion, or 18 to 37 percent of the approximately \$2.6 trillion annual total of all US health spending in 2011 (Berwick & Hackbarth, 2012).

These categories of waste include the following:

- Administrative complexity (Morra et al, 2011)
- Pricing failures
- Fraud and abuse

Another enumeration of potential wastes in healthcare reflects the traditional Toyota "eight types of waste" paradigm. See Appendix A (ASQ White Paper, 2009).

Everyone has pet theories of what the root causes of wastes in health care are, and much "scapegoating" goes on to affix blame. Many want to blame doctors. Others see the payers as the bogeymen. Still others seek to vilify and blame the PHARMA companies, hospitals, the Federal Government, and so on.

Also, many believe that while the recent efforts at health reform may indeed improve access to health care (thru expansion of the availability of health insurance) that the health care experience for individuals will not necessarily improve and may—in fact—deteriorate.

In our view, this situation is analogous to what happened in the US Auto industry in the 1960s, 70s, and 80s when it was in free fall and could not build a sellable, sustainable product to compete either in the global marketplace or even in the US. Despite everyone's best efforts and massive expenditures to turn the situation around, it wasn't until the Big Three learned the lesson that Edward Deming tried to teach them in the 1940s (but failed because they did not want to listen) that the quality, durability and sale-ability of their products improved.

What was that lesson? Simply put, it was: "Do it right the first time!" As those words became the credo of the Japanese auto industry, of the airline industry, of the chemical industry, and finally the US auto industry, things turned around. The cultural norm became one of continuous quality improvement and variation reduction through the use of process improvement tools (such as Lean, Six Sigma, DMAIC, FMEA, RCA), culture re-enforcement, and quality management systems such as ISO 9000 and the Toyota Way.

Fast forward to US health care, where the credo has been that most of the ills of the system can and should be cured by improving clinical care, and that this responsibility was (and, in many ways, still is) solely in the hands of clinicians. This is partly because the US health care system recognizes and strives for excellence in one primary domain of quality: the clinical domain. As a result, most hospitals target their quality efforts primarily on clinical quality—not process quality. Few have embarked on Lean journeys. Of course, our government

programs drive some of that thinking where they require healthcare providers to track their clinical quality with such metrics as the “core measures” (Eligible Professional, 2013). So hospitals set up a department to manage clinical measures—not process performance.

Partly this is because the clinical domain is the one they grew up with and the one with which they are most familiar. The flip side of that thought process is that most clinicians and health care leaders lack familiarity with or competence in the skill-sets required to understand and effectively act in some of the other important domains of health care quality: financial, operational, and cultural (Fortuna, 2011).

Why is all of this relevant to a discussion of making meaningful progress in improving US health care and utilizing proven process and quality management tools and methodologies to achieve that? A simple analogy might be helpful. Can anyone in his/her right mind believe that an incidence of wrong site surgery results from a lack of clinical knowledge gap or lack of familiarity with a clinical procedure? Of course not. Almost all such situations result from a breach of operational quality, not a clinical failure. Other examples include:

- Lack of culture of quality and culture of continuous improvement
- Focus on blame, not problem-solving
- Focus on individual, not team
- Excessive variation in structure, process and outcomes of care

It is HCD’s view that the fixes for such quality breaches can be dramatically accelerated and enhanced by effectively using process and cultural re-engineering tools and methods in all of the domains of health care quality, not just the clinical domain. These tools and methods include careful mapping and analysis of the process being addressed, using proven process improvement tools, introducing failsafe procedures such as check-sheets (like those that pilots use), by relentlessly re-acculturating those providing and monitoring health care, and by continuously validating their performance in accord with the new processes.

The moral of this story is one that we believe resonates throughout the health care industry: We must always be striving for excellence in at least four domains of quality to be able to continuously improve healthcare—clinical, operational, financial, and cultural. Further, because this approach will require a sea-change in attitude of massive proportions as well as massive system resources, our best chance for sustainable success lies in recruiting and “putting in the game” those with highly developed skill-sets and experience in process and culture re-engineering, aka “The First Team.” In addition, hospitals are very “silo-ed”; thus those in one department do not want to invade the other’s “sandbox.” Sadly, this means that barriers that cross functional lines tend not to get addressed. This was certainly the case in the facility where our most recent Marshall Plan work was done, as described below.

We believe that we can derive significant benefit from educating clinical personnel about process and quality improvement so that they have an understanding of these tools and how they are used. However, our problems are great enough and the stakes high enough for us to demand the immediate and widespread engagement and deployment of professional-grade experts in these fields, rather than depend on clinical personnel.

Just as we do not expect all physicians to do and/or read MRIs or CT scans, and just as we do not expect clinicians to install and set up electronic information systems (the job of health IT personnel), we should no longer expect clinical personnel to be fluent in the language of quality and process improvement and/or to be facile with process improvement tools used by experts in this field. Unfortunately, however, that is exactly what most hospitals and health systems are doing. In a recent survey of advertisements for quality professionals in health care settings, the overwhelming percentage of them required a clinical degree (RN, MD), and only “familiarity” with process and quality improvement tools and methodology. We believe that it is now time for this country to abandon the amateur approach to quality and process improvement in health care and to bring in real pros—the ones who have transformed so many other industries in the past few years and who are eager and ready to enter the game. The days of thinking that “replacement refs” in the NFL are just as good as the real pros should be behind us. It didn’t work in the NFL and it is most certainly not working in health care.

One of the first steps we must take is to eliminate the prejudice in health care that only those with clinical credentials can improve the processes and quality in health care. Why should someone with a PhD in industrial engineering and documented success in the use of process improvement methodologies in multiple work settings and environments (manufacturing, finance, marketing) be told that he/she needs to have a nursing degree to be able to do a value-stream analysis of a clinical, financial, or other process in a health care facility? We like to call this the “NIH [Not Invented Here] Syndrome” in health care. Adhering to this bias effectively eliminates the best and the brightest from being able to help to solve the problems in healthcare that they—not clinicians—are best equipped to solve: the ones in the operational, cultural, and financial domains. These are the problems that are crippling our health care system and driving our country into bankruptcy. We can no longer afford to put up with the NIH Syndrome.

These beliefs have formed the foundation of the Marshall Plan concept that has been initiated by the ASQ HCD.

### **What to Do About It: In General**

In commenting on the health reform now underway, the Healthcare Division (HCD) of the American Society for Quality (ASQ) is in agreement with the observation made in the 2005

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Joint Report of the National Academy of Engineering and the Institute of Medicine entitled "Building a Better Delivery System: A New Engineering/Health Care Partnership" that

...relatively little technical talent or material resources have been devoted to improving or optimizing the operations or measuring the quality and productivity of the overall U.S. health care system. The costs of this collective inattention and the failure to take advantage of the tools, knowledge, and infrastructure that have yielded quality and productivity revolutions in many other sectors of the American economy have been enormous (National Research Council, 2005).

We also believe that there are many "root causes" for our nation's current health care crisis, and in keeping with a hallmark tenet of the continuous process improvement philosophy, we need to be about the business of

- identifying those root causes (with the emphasis on problem identification, not assigning blame),
- prioritizing their impacts on our society, and then
- relentlessly and sustainably identifying and implementing cost-effective solutions that will ensure maximum access to the highest quality health care

The HCD further subscribes to the observation made by the Institute of Medicine (IOM) in its landmark report *Crossing the Quality Chasm* (Institute of Medicine, 2003) that there is "chain of effect" that links health systems at four different levels as the interrelated determinants of health care quality that must be aligned for reform to yield the desired results:

1. The first level is aims, i.e. the so-called triple aim: better experience of care (safe, effective, patient-centered, timely, efficient, and equitable), better health for the population, and lower total per capita cost.
2. The second level is the design of the care processes that affect the patient—clinical "microsystems." Health care microsystems are famously unreliable, variable in costs, and often unsafe.
3. The third level described by the IOM is the health care organizations that house almost all clinical microsystems and can ensure coordination among them.
4. The IOM's fourth level is the environment, which includes the payment, regulatory, legal, and educational systems (Fisher, Berwick & Davis, 2009).

The HCD is not an organization of health care providers, health insurers, or vendors in the health care space. We do not purport to know about the best methods for preventing, diagnosing, treating, or managing disease. Our expertise is in the science of process improvement and in systems for quality management.

Our members are experts at developing, maintaining, connecting, and—when necessary—repairing the process infrastructure of a business or enterprise.

In that regard, among the items we find most troubling in health care, and which we feel are most in need of serious attention, are the following:

#### Waste

There are countless examples of waste in health care in the US that cannot and should not be tolerated. For years other industries have employed process improvement tools such as Lean and Six Sigma to successfully attack waste. Toyota defines quality as the absence of *muda* (waste).

#### Incentive Alignment

ASQ agrees with the oft-quoted words of the Nobel Prize-winning economist, Milton Friedman: "You get what you incent." We need to rapidly align incentives and accountability at all levels of health care with what we want and need as quality outcomes.

#### Information Technology Implementation

Health care is now on a fast track to embrace, deploy and spread effective and efficient use of Health IT as quickly and completely as possible. Unfortunately, many see HIT deployment as the solution for many if not most of the nation's health care woes. Nothing could be further from the truth (Computational Technology, 2013); in fact if HIT is deployed without substantial attention being paid to improving the function and efficiency of the environments where it is being introduced, the results could be (and in some cases already have been) disastrous.

#### Sustainable Culture Change

We believe that while it may take many years, even generations, to complete this cultural transition, the first step in this direction can and should be taken as part of the health reform process. The HCD believes that the most critical need of all in health reform is for meaningful, lasting changes in the deeply embedded cultures related to health and health care in this country among all stakeholders.

#### Workforce Education and Preparation

Another item that needs to be addressed is the preparation of the health care workforce of the 21st century. Accordingly, the training of most, if not all, providers will have to be overhauled to insure a work force with the right skills, culture, behaviors, and knowledge base to succeed in what will be their "Brave New World."

#### What to Do About It: The ASQ Healthcare Division Marshall Plan

##### The Concept

Make trained, experienced, properly oriented and sensitized, highly-skilled process engineers available to health care facilities and medical practices, in order to

- assist them in sustainably re-engineering their environments to improve quality in all four quality domains,

- increase efficiency and effectiveness, and
- effectively address the problems identified above that are most in need of serious attention.

The idea is modeled after the post-WWII program under which the US (the HCD) made financial and technical aid and other resources available in large quantities to European countries (analogous to health care facilities unfamiliar with and/or skeptical of process re-engineering), thus enabling them to get back on their feet much sooner. Their more rapid recovery in turn benefited the US in many ways.

### The Program

Volunteer (initially) process re-engineering coaches would be placed temporarily in health care facilities and medical practices as mentors, coaches, and teachers, in order to

- assist the entities in improving their operational and financial processes and
- assist in establishing a sustainable culture of continuous improvement.

The coaches will be there to provide a fishing pole, not to supply fish!

Once the concept has been proven to work, the services of qualified process improvement and culture change professionals could be made available at reasonable cost and with attractive terms (including risk sharing).

### Expected Return on Investment (ROI) of Program

- *To health care facility/practice:* improved care, improved financials, improved work environment, improved staff participation, improved patient satisfaction, improved access to payer quality and performance incentives
- *To health care system or ACO:* more productive, higher quality and more efficient services to patients
- *To patients:* better health management, satisfaction, higher compliance, better coordination of care, more empowerment
- *To employers:* better quality of services, better health status, lower costs (direct and indirect)
- *To community:* better health status, lower costs

### Trial Run For the Marshall Plan: The Improving Performance in Practice (IPIP) Program in Michigan

Operating under a grant from the RWJ Foundation, from 2006 to 2009 volunteer industrial engineers and process improvement professionals from industry (primarily the auto industry, which laid off thousands in this time frame) were deployed in 35+ primary care practices. Using a standardized work plan, they assisted practices and their staffs in interested communities to analyze and improve practice process flows, eliminate waste, enhance communications, reduce costs, and seamlessly introduce new functionalities such as HIT, Patient Centered Care, and patient safety. As a result many practices experienced significant improvement in their practice chronic care performance metrics. Lack of continued grant funding brought this program to an untimely and premature end.

### Formation of Non-Profit Entity as Successor to IPIP

In 2009 a non-profit entity, PRISM, was formed in Michigan to extend and expand on the gains realized through the IPIP program and continued the practice of using fully trained process engineers from industry with proven track records to mentor and work in medical practices and health care facilities. In this model, the process improvement professionals were paid for their time and the services were provided on a “pay-for-performance” basis with risk sharing based on savings realized, additional revenue generated, or performance metrics improvements achieved. If the expected outcomes (improved chronic care, achieving PCMH status) were not reached, there was no payment expected. Surprisingly few practices signed on to this opportunity. Primary among the reasons were:

- the availability of free Lean services being provided through a major payer in Michigan with the addition of out-of-pocket reimbursement.
- the “deer in the headlights” status of most practices during this time of major upheaval in primary care (PCMH, pay-for-performance, income truncation) Practices were afraid to take a chance.
- the lack of familiarity with the methodologies being used by PRISM, which had their foundation in industry. There was a “not invented here” attitude: “We are not widgets. We are a medical practice!”

Despite the difficulties, there were several PRISM successes. Two of them are described in case studies on the HCD website at [http://asqhcd.org/?page\\_id=6598](http://asqhcd.org/?page_id=6598).

In addition, when PRISM coaches worked with one practice (<http://asqhcd.org/wp-content/uploads/2012/12/cocq-in-family-medicine-practice.pdf>) they helped the practice realize a \$90,000 annual savings from re-engineering just one of their office processes. This improvement was achieved by the staff themselves in two short days after a brief orientation to the process improvement tool that was used: value-stream mapping (VSM), which is familiar to every process engineer in industry.

In another practice, patients were not being properly prepared by medical assistants for common medical procedures. This resulted in wasted time and missed opportunities to see additional patients. The practice launched a project to successfully decrease by 75% the time lost due to inadequate or incorrect patient preparation (<http://asqhcd.org/wp-content/uploads/2012/12/cocq-in-family-medicine-practice.pdf>).

### Phase One of HCD Marshall Plan: Southern California Hospitals and Primary Practices

In 2011 PRISM, the HCD, and PalmettoGBA (then the Medicare Administrative Contractor [MAC] for California and other western states) partnered in Southern California to address

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- the excessive and costly incidence of Medicare Part B claim denials in medical practices in the region and
- the excessive and costly incidence of Medicare Part A claim denials in hospitals for DRG 313 (short stays for chest pain)

The Project was named "The Organizational Process Improvement Coaching Project" (OPICP) by CMS officials, who provided funding for the project

With the help of Elias Monreal, the ASQ Regional Director in Southern California, several volunteer process improvement coaches were recruited from ASQ sections in Southern California. Each coach committed to providing at least four hours of coaching service for a period of up to six months on a pro bono basis.

After a thorough orientation of the prospective coaches by the PalmettoGBA Medical Director, Harry Feliciano, MD, and two senior process improvement PRISM leaders, Kathy Merrill and Mary Hones Burr, the coaches were assigned in pairs to either a primary medical practice or to a hospital facility that had experienced significant claims denials.

In the primary practice environment, the coaches assisted the practice staffs to identify and eliminate the root causes of Medicare claim denials they were experiencing for evaluation and management (E&M) services. Some of the practices were experiencing losses in the tens of thousands of dollars annually. Many times the reason was simply the lack of an acceptable physician signature!

In the hospital environment, the coaches were to assist the facilities in the task of identifying and eliminating the root causes of Medicare claim denials they were experiencing for short-stays for chest pain. These denials were very serious and expensive propositions.

In both the hospitals and in the practices, relevant staff also took the validated web-based QWC Environmental and Cultural Assessment Survey (Arnetz, Lucas & Arnetz, 2013) before the coaching intervention. In a couple of the practices this survey revealed significant attitudinal issues within those in certain job categories that had been previously unrecognized and which could conceivably affect the success of the coach deployment and/or which could have been contributory to the claims defects themselves.

During 2011 and 2012 several coach deployments were made in each of these environments. In two of the medical practices the staff made significant progress, and the practices were grateful for the assistance. One actually partially succeeded in its quest for a change in culture to one of continuous process improvement.

The medical practice coaching, though it was helpful in a couple of practices, was difficult to expand beyond two or three venues. We concluded that we had made a few miscalculations that had contributed to this relative lack of acceptance. These miscalculations included:

- Underestimating the negative effect of having a Medicare Administrative Contractor (MAC) as a partner in the process. Many of the practices saw them as "Big Brother" and did not trust them.
- Not recognizing the need to hone in on only one technical reason for claim denials as opposed to asking the coaches to do value-stream analyses on multiple causes. Toward the end in the two practices that subjectively derived some benefit, we focused on denials that resulted from failure to provide an adequate provider signature.
- The negative effect of having yet another "intruder" in the practices at a time when they were having to deal with PCMH conversion, and EMR installation.

While some of these objections probably applied to the hospital deployments as well, by far the most significant deterrents to accepting a coach were the lack of trust of the MAC involvement and the reluctance to acknowledge the actual impact of these denials. Most had decided to tolerate them as a "cost of doing business," reflecting their decision to remain culturally and operationally stagnant.

### **Phase Two of HCD Marshall Plan: Torrance Memorial Medical Center (Torrance Memorial), South Bay Southern California**

In early 2012 the OPICP program began to focus on assisting the Torrance Memorial Medical Center to address the rather significant annual cost burden of Medicare claim denials for DRG313: Short Stays (acute inpatient hospital admissions) for chest pain.

In contrast to the previous facilities and medical practices, this facility environment had several attributes which made a much more successful deployment possible. Among these attributes were the following:

- A dynamic, open-minded, VP of Clinical Quality & Accreditation, Heather Shay, RN, who understood and believed in the benefits of professional process re-engineering and who was able to successfully enlist the support of her senior management.
- A positive experience in the hospital with Lean transformation and the use of Toyota trained internal lean experts, albeit in clinical and logistic environments as opposed to the financial department.
- A cost burden that had caught the attention of the hospital CFO.
- A trust factor between the hospital and PalmettoGBA, such that cooperation and teamwork was possible. In short, it was not an adversarial atmosphere.

- The availability of a seasoned volunteer HCD coach, Bud Sherman, whose experience and expertise was well suited for the tasks required to make progress. He was consistently able to gently but persistently ask the right questions, and then mentor them in the use of the most appropriate process-improvement tools, while maintaining a supportive demeanor.

One of the original senior HCD/PRISM process engineers who oriented the coaches under Phase One of the HCD Marshall Plan, Kathy Merrill—herself a very successful process re-engineering consultant—worked with the VP of Clinical Quality & Accreditation and her team to utilize Lean/Six Sigma tools and methodologies to conduct a very detailed value stream assessment of the entire process of generating a claim for short stay for chest pain, including what had happened (or not) in the clinical environment. They, of course, targeted the waste in the revenue cycle process for this Diagnosis Related Group

(DRG). Dr. Feliciano, from Palmetto GBA, the MAC, assisted in the initial process assessment and helped to identify potential areas where the payer itself might be contributing to the reasons for denial. This true value stream exercise, utilizing a cross functional, end-to-end team to document and analyze the entire Health Information Supply Chain (HISC) pertaining to this denial problem, produced an eye opening, multi-disciplinary view of quality issues (Feliciano, 2013).

The American College of Cardiology’s Algorithm for Evaluation & Management of Patients Suspected of Having Acute Coronary Syndrome (ACS) (Figure 1) was adopted as the clinical procedural “gold standard” for performance (Wright et al, 2011).

The hospital was experiencing a denial rate of 87 percent in Medicare claims for this DRG. The detailed assessment entailed a value stream walk specific for a patient experiencing chest pain to determine where opportunities might exist to reduce denials

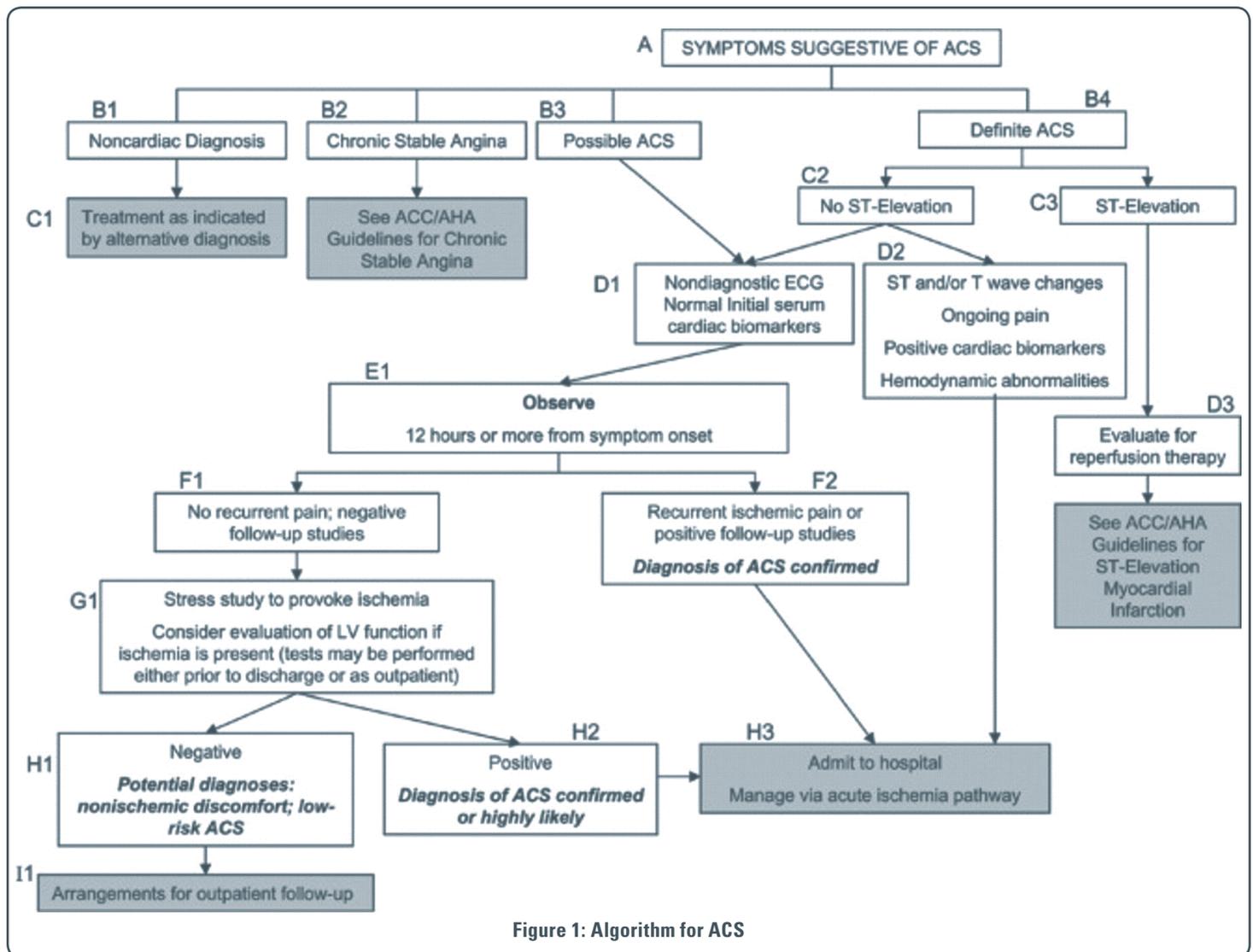


Figure 1: Algorithm for ACS

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and increase payment of first-time submittals. All employees touching the documentation of the claim were interviewed for their protocol in the process.

The team discovered that the hospital had put in place two additional inspections of claims conducted by two outside validation services (OVS1 and OVS2) to reduce the opportunity for denials. The additional labor cost seemed to add little value in this particular case. It was therefore thought advisable to discontinue the services of OVS1. The value stream process was posted visually for all to review in order to define possible root causes for the denials (see Figures 2 and 3).

The team then delved deeper using root cause analysis (RCA) to understand the reasons behind the denial performance.

As often happens in such inquiries, a lot of previously unrecognized data and information came out that stimulated debate and further inquiry. An example was that despite the early assumption that Torrance Memorial was responsible for the all problems leading to claims denials, on closer examination in many cases the denial by the MAC may have been problematic. In any case, the close

collaboration between the provider (Torrance Memorial) and the MAC that existed during this project contributed greatly to better understanding of the "rules" as well as to more in depth awareness of ways of preventing errors in the future. We suspect that the cross-organizational cooperation fostered during our OPICP project will be replicated ten-fold if this type of project becomes more common and this—in turn—could lead to the forging of partnerships that could function effectively to sustainably remove



Figure 2: Post-It Notes Version of Map of the Entire Value Stream

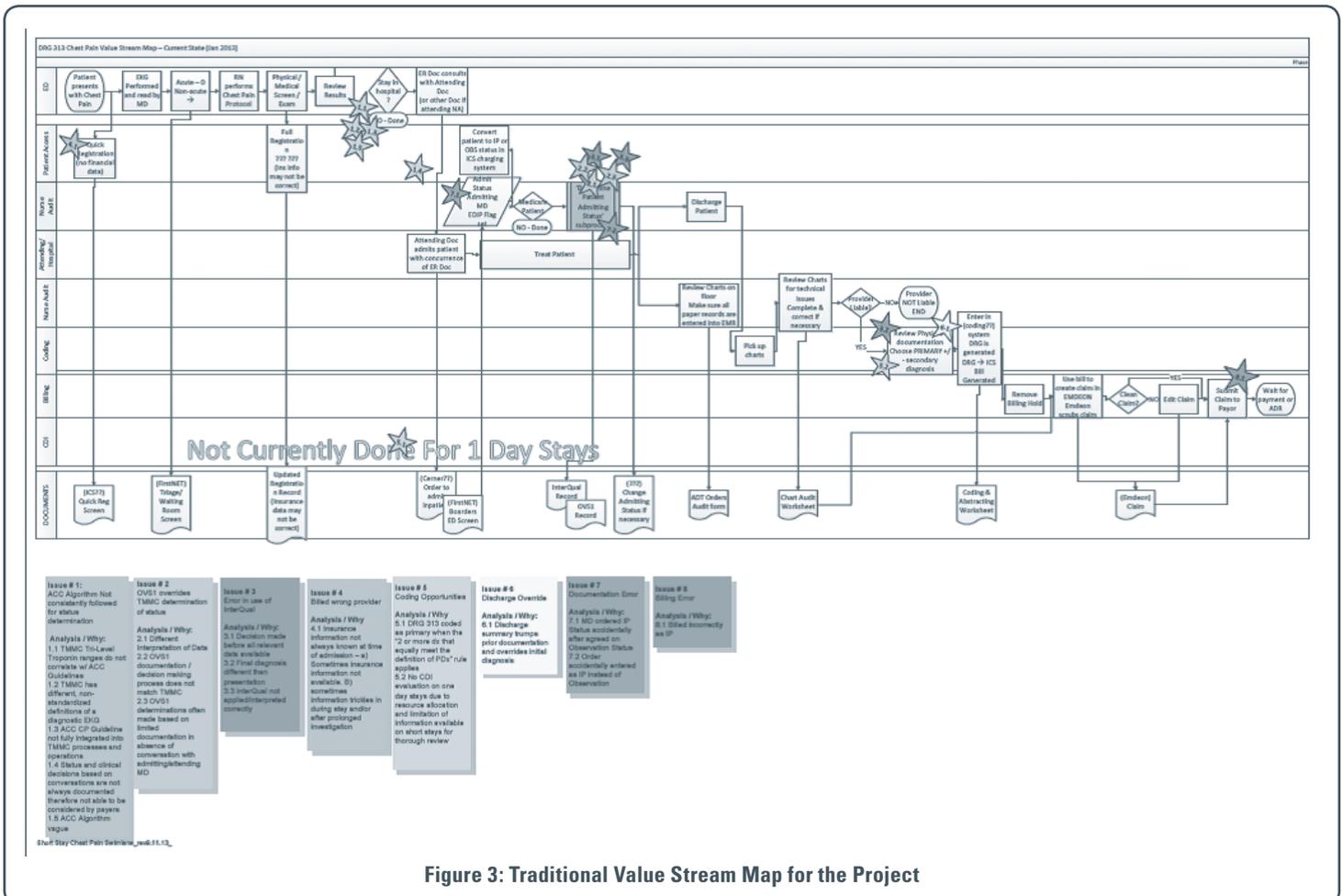


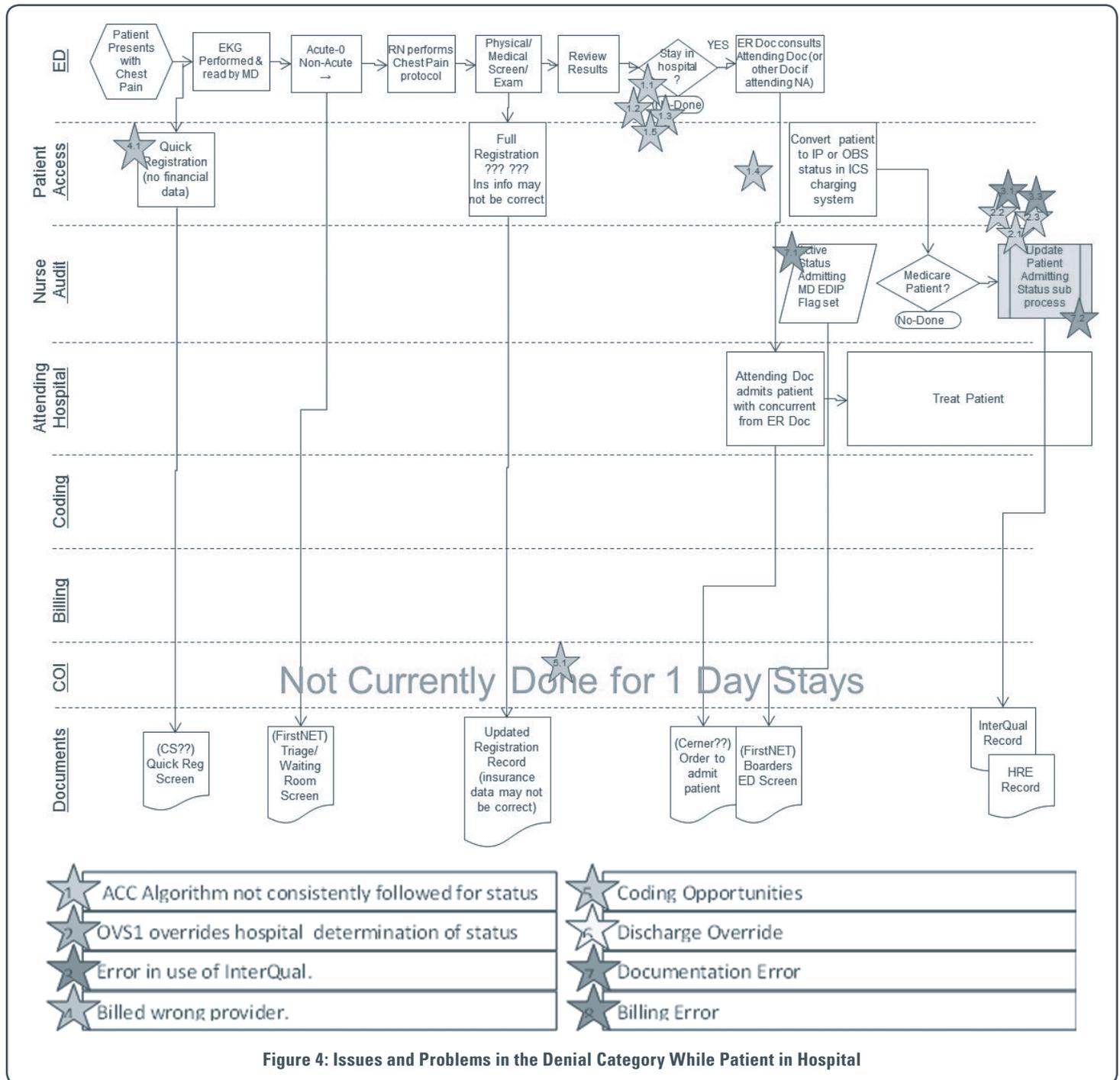
Figure 3: Traditional Value Stream Map for the Project

waste at all levels in the Health Information Supply Chain. This will, of course, ensure considerable benefit to all stakeholders in the US health care system!

In general, revenue cycle waste entails incorrect patient demographic information, imprecise clinical data describing diagnosis and treatment, inaccurate translation of clinical data into code for a billable claim, physician delay submitting the charts, less than adequate skills and resources to code charts, and

the complexity of payer contracts. In addition, the complexity of payer contracts is managed by sophisticated revenue cycle billing programming if available. However, human intervention is necessary to manage the outliers and areas that the software cannot handle.

Figure 4 (the left half of Figure 3) below maps the issues and problems with the patient encounter in the denial category that occur while the patient is at the hospital.



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Figure 5 (the right half of Figure 3) below describes the documentation process after patient discharge, including coding and billing.

Torrance Memorial's cross functional team reviewed all 37 of the DRG 313 denials to categorize reasons for denial:

- 14 cases were in-house clinical decision changed by outsourced validation service
- three were coding errors
- three were training issues

- two were discharge documentation that overrode the initial reason for admission.
- 15 required further evaluation

The team then worked on the root causes to fully understand the implications and develop solutions to minimize or eliminate the propensity for denials.

Below (Figure 6) is the A-3 document developed for the project.

Some of the "low-hanging fruit" benefits of this process:

- The emergency room physicians and hospitalists became engaged in the process and agreed to work together to create doctors' orders in compliance with American College of Cardiology algorithm for chest pain (Wright et al, 2011).

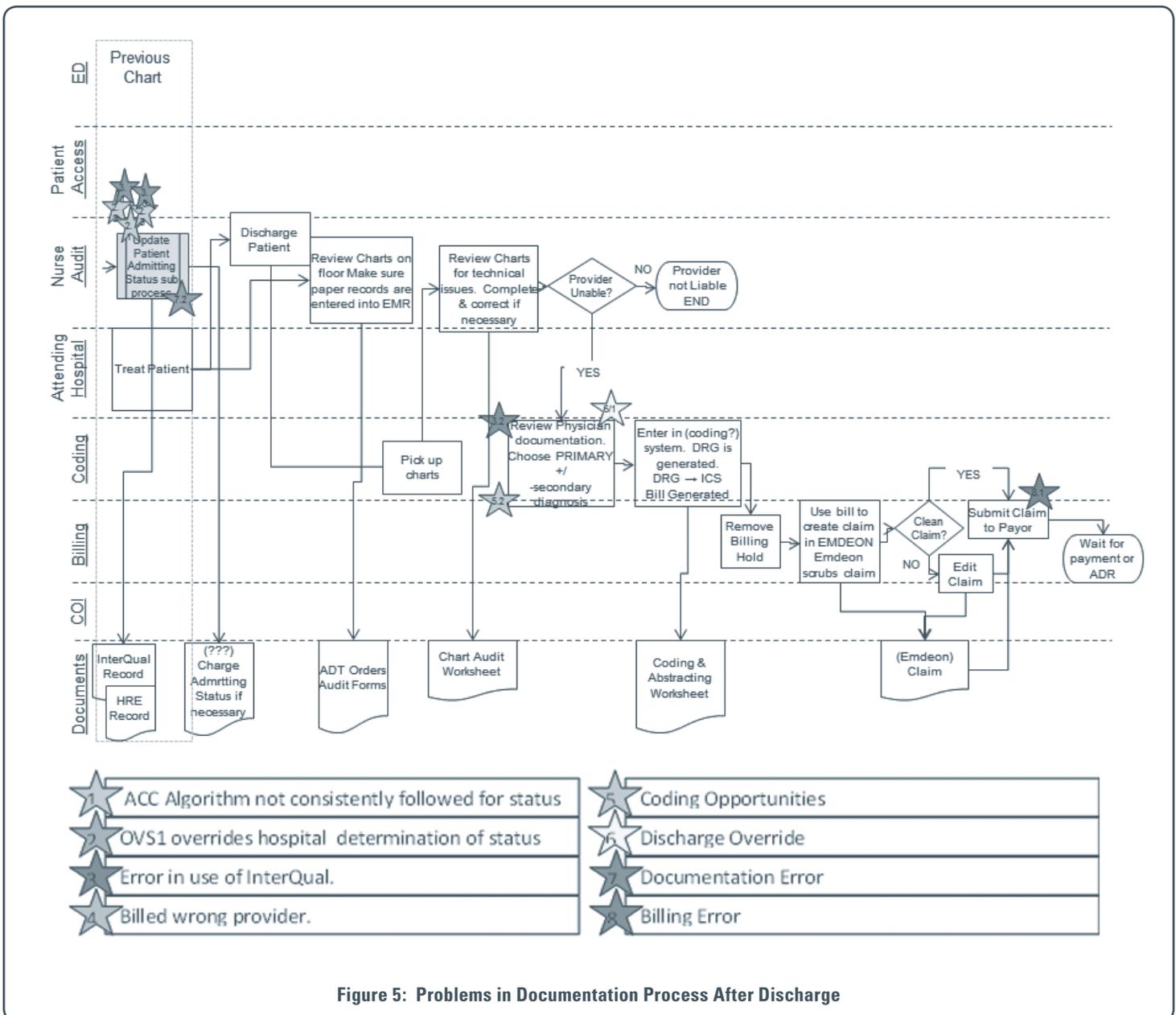


Figure 5: Problems in Documentation Process After Discharge

Project Name: Reduce DRG 313 1-Day Stay Denials  
Date: Jan 2013 – May 2013

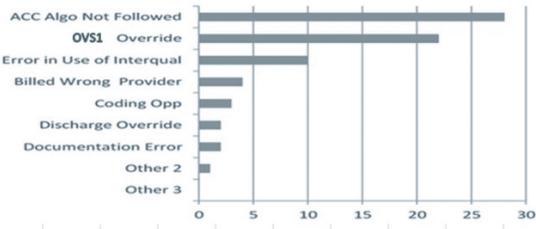
Project Lead: Kathy Schumm / Janette Dawson  
Executive Sponsor(s): Heather Shay  
Facilitator(s): Bud Sherman (ASQ)

Project Team: Kathy Schumm, Ken Kuhn, Janette Dawson, Sheridan Ghaby, Grace Turk, Ike Verano, Dr. Ernest Lee, Dr. Curtis Wong. Palmetto: Dr. Feliciano, ASQ: Bud Sherman

**Problem Statement (Gap) :** 87% of percent of Medicare IP admissions (discharge dates 2011 through 2012) coded as DRG 313 (Chest Pain) with admissions less than 48 hours are denied by MAC resulting in an estimated \$530K lost revenue

**Current State/ Problem Breakdown:**

- SEE Annotated Swim Lane Value Stream
- Pareto of Reasons for Denials for DRG 313 1-Day Stays (2010 – 2012 discharges)



**Targets (SMART):**

- Denials for 1 day stays for DRG 313 less than 20% by Dec 2013
- Denials for 1 day stays for DRG 313 less than 5% by July 2014

**Root Cause Analysis :**

<p><b>Issue # 1:</b> ACC Algorithm not consistently followed for status determination</p> <p><b>Analysis / Why:</b> 1.1 TMAC has not consistently followed ACC Guidelines 1.2 TMAC has different team members of a temporary ERG 1.3 ACC CP program not fully integrated into TMAC processes and procedures 1.4 Review and adjust of data and clinical decisions 1.5 Communications are not through documented methods not able to be considered for future</p>	<p><b>Issue # 2:</b> OVS1 Overrides TMAC interpretation of status</p> <p><b>Analysis / Why:</b> 2.1 Different interpretation of Data 2.2 OVS1 documentation / decision making process does not match TMAC 2.3 OVS1 determinations often made based on limited documentation in absence of conversation with admitting/referring MD</p>	<p><b>Issue # 3:</b> Error in use of InterQual</p> <p><b>Analysis / Why:</b> 3.1 Decision made before all relevant data available 3.2 Final diagnosis different than presentation 3.3 InterQual not applied/interpreted correctly</p>	<p><b>Issue # 4:</b> Billed wrong provider</p> <p><b>Analysis / Why:</b> 4.1 Insurance information not always known at time of admission - a) Sometimes insurance information not available b) Sometimes information updates during stay and/or after prolonged investigation</p>	<p><b>Issue # 5:</b> Coding Opportunities</p> <p><b>Analysis / Why:</b> 5.1 DRG 313 coded as primary when the 2nd or more dx that equally meet the definition of PDX rule applies 5.2 No CDI evaluation on one day stays due to resource allocation and limitation of information available on short stays for thorough review</p>	<p><b>Issue #6:</b> Discharge Override</p> <p><b>Analysis / Why:</b> 6.1 Discharge summary bumps prior documentation and renders final diagnosis</p>	<p><b>Issue #7:</b> Documentation Error</p> <p><b>Analysis / Why:</b> 7.1 MD ordered IP Status accidentally after agreed on Observation Status 7.2 Order accidentally entered as IP instead of Observation</p>
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**Plan Countermeasures:**

Strategy Countermeasure	Who
A. Standard Operating Procedure to integrate Milliman/Interqual Criteria and ACC Guidelines for status Determination for CP patients admitted via ED	Dr Wong, Dr Lee, Janette
B. Eliminate use of OVS1 for Chest Pain Admissions	Janette
C. Internal Physician Advisor Program	Heather
D. Change troponin reference ranges to align w/ current ACC Guidelines and industry standards of practice	??

**Do:**

Action Items	Who	When	Status
<b>A. SOP</b>			
A.1 page visual tool / algorithm integrating admission criteria w/ ACC guidelines	Ernest/Curtis	6/20/13	Complete
A.2. Education Packet (A3, visual tool, SOP)	Ernest/Curtis	6/20/13	Complete
A.3. Educate ED, CM, Cardiology, Obs Unit, Hospitalist	Ernest/Curtis	June	open
<b>B. Eliminate OVS1</b>			
B.1. Written plan to exit OSV1 for 1 day stay for chest pain	Janette	May	Complete
B.2. Educate CM, CDI and MD Advisors (pending)	Janette	May	Complete
<b>C. Internal Physician Advisor</b>			
C.1. Scope of responsibility	Heather	May 2013	Complete
C.2. Determine resource needs to meet scope	Heather	May 2013	Complete
C.3. Operations approval and funding	Heather	May 2013	Complete
C.4. Implement	Heather	Aug 2013	Open
<b>D. Troponins:</b>			
D.1. Meet w/ Lab to determine what level of cTn-I represents the 99th percentile upper reference limit (i.e. value defining AMI) and detection limit of assay	Dr. Wong	6/7/13	Complete
D.2. Meet w/ Cardiology to discuss # 1 and develop plan or change	Heather/Ernest	6/14/13	Complete
D.3. Implement plan for change based on # 2 above	JM Committee	6/25/13	OPEN

**Check:**

Dashboard Measures	Baseline	Target	30D	60D	90D
DRG 313 1 day stay Denial Rate	87%	20%			
Decrease OVS1 Expense by 50%	100k/mo	50k/mo			

**Act: Sustain the Results and Next Steps:**  
Expand to Syncope and TIA once MD Advisor and Milliman in place  
Develop Countermeasures for remaining Issues/Root Causes

**Reflections:**

What went well?	What can be improved?
Quote: "We've been working really hard to get it right. Now we know what "it" is and what to work on." Involvement of Physicians was very powerful	Underestimated amount of time and resources needed to complete project.

Figure 6: A-3 Document Developed for the Project

- Case management stopped using an independent outside contractor in their patient diagnosis process specific to this diagnosis. This action resulted in an immediate cost savings of \$40,000/month.
- Additional quality initiatives are currently being evaluated for further improvements in claim processing.

Some observations from the Torrance Memorial participants in the project:

- The VP of Clinical Quality & Accreditation (H. Shay RN):
  - "This is the first time we've looked across all functions and can see the process from patient presentation to payment."
  - "...the savings potential with this one denial extends into reserves, labor for reworking the claims and time it takes to be reimbursed by the payer. The implications for other DRGs is huge."
  - "The result of this effort is being shared with Centers for & Medicaid Services (CMS) with the objective of incenting the idea of streamlining the bureaucracy of claims processing. While this initiative is being evaluating it has merit within health care providers to reduce their

operating costs relative to getting paid in a timely fashion, reducing rework and avoiding future recovery auditors."

- "It is important to remember when planning for these improvement events that process improvement is hard work and organization must commit the time and energy to and determining the root cause of process failures."
- "Great application of Lean. Allowed us to understand how to restructure the organization to be more effective. We also found we could eliminate some out-sourcing and save costs."
- "Any effort like this needs the active involvement of physicians."
- "This is an important reminder that the "P" in PDCA is critical; we must exhaust all root causes until the true problems are identified.", RN):
- "This showed me the big picture and where we fit into it."
- "This is the first opportunity we've ever had to bring the whole team together and look at the big picture. It

**(THE ASQ HEALTHCARE DIVISION MARSHALL PLAN: "PUT ME IN THE GAME COACH!",**  
continued from page 13)

felt like the various functions were at war. Now we're having peace talks and the barriers are going down."

- "We've been working really hard to get it right. Now we know what "it" is and what to work on."
- The Nurse Manager/Audit Services (K. Schumm, RN):
  - "This process validates that our patient care is very good, we just don't document it well."
- The Emergency Physician (C. Wong, MD):
  - "I am now more familiar with care of the patient after the ER. It makes me aware of how decisions in the ER affect the rest of the team downstream. Process shows us the financial impact of the decisions we make in the ER."
  - "This exposes the logic behind the daily madness."
- The Hospitalist (E. Lee MD):
  - "This process clarified some of the issues we encounter in day-to-day work. Very useful to see entire end-to-end process."

- The Medical Director of PalmettoGBA (Harry Feliciano, MD):
  - "The opportunity to delve into all denials may produce a financial impact benefitting patients, health care providers, avoiding the recovery auditors and ultimately the cost of processing claims by the payers."

At present we are awaiting the final data to demonstrate whether or not and to what degree the rate of claim denials for DRG313 has decreased as a result of the Marshall Plan intervention, which we strongly suspect it will. However, as indicated in the testimonial quotations above, Torrance Memorial believes that the intervention has provided significant benefit in improving revenue cycle management at the facility. As evidence of their conviction, they have contracted with their Marshall Plan coach to assist them with problem solving for other DRG focus areas. We believe that this step on their part validates the Marshall Plan concept both from the customer's (Torrance Memorial) perspective and the coach's (Bud Sherman) perspective. The former because they have derived financial and organizational benefits and the latter because Bud has succeeded in establishing a paid consultative arrangement with a health care facility. We are hopeful that these actions taken by Torrance Memorial will establish a trend in health care of placing significant value in the potential of making first-career process engineers valuable members of health care teams all across the US.

**The Future: What's Next for the ASQ Healthcare Division and Its Marshall Plan?**

We hope that the success of the exemplary Torrance Memorial Marshall Plan engagement will stimulate other health care facilities to employ process improvement coaches in their environments and thus benefit themselves as well as the process engineers with whom they will contract and/or hire. We also hope that this will lead to greater acceptance by health care entities of the value of engaging such professionals despite their lack of clinical credentials, thus validating the importance of the science of process and quality improvement and the contributions of first-career professionals in this field in health care.



**Torrance Memorial Leadership Team**



**A meeting with the Director of Revenue Cycle**



**Palmetto GBA Medical Director (Harry Feliciano) and the Marshall Plan PRISM Coach (Bud Sherman)**

**APPENDIX A—Examples of Waste in Healthcare (ASQ White Paper, 2013)**

Waste	Healthcare Explanation/Example
<b>Rework and Repair</b>	<ul style="list-style-type: none"> <li>• <b>Poor Quality = Excessive variation or process centered off nominal, e.g.</b></li> <li>• <b>Failure to make prescribe the right medication, apply treatment to the right patient or provide care at the right time.</b></li> <li>• <b>Results in reapplication of care and poor clinical outcomes.</b></li> </ul>
<b>Inventory</b>	<ul style="list-style-type: none"> <li>• <b>The excessive level of material at any stage of production which hides any of the other wastes.</b></li> <li>• <b>Excessive and/or inadequate bed assignments, pharmacy stocks, samples, specimens, paperwork and patients in beds.</b></li> <li>• <b>All lead to other wastes resulting in excessive costs and stress on patients, facility and medical staff.</b></li> </ul>
<b>Delays</b>	<ul style="list-style-type: none"> <li>• <b>Unnecessarily waiting for materials, labor or machine time.</b></li> <li>• <b>Often found in waiting for bed assignments and admissions to urgent/emergency care.</b></li> <li>• <b>Also in testing, treatment, laboratory testing results and discharges</b></li> </ul>
<b>Conveyance</b>	<ul style="list-style-type: none"> <li>• <b>Unnecessarily long movement of parts throughout the process stream.</b></li> <li>• <b>Often found in moving samples, specimens, patients for treatment and testing.</b></li> </ul>
<b>Overproduction</b>	<ul style="list-style-type: none"> <li>• <b>Leads to the waste of Inventory. It is making too much of what is not needed at any point in time.</b></li> <li>• <b>Often found when patients are given procedures or medicine prior to the designated time in order to support care giver's timing. Testing ahead of time to support the laboratory's schedule. Treatments performed to balance the hospital's staff or equipment to prevent overload.</b></li> </ul>
<b>Motion</b>	<ul style="list-style-type: none"> <li>• <b>The waste on unnecessary movement in the process.</b></li> <li>• <b>Often found searching for patients, medications, charts, collecting tools, supplies and processing paperwork.</b></li> </ul>
<b>Extra process steps</b>	<ul style="list-style-type: none"> <li>• <b>Any unnecessary process step.</b></li> <li>• <b>Often found in multiple bed moves, retesting, excessive paperwork, unnecessary procedures and multiple testing.</b></li> </ul>
<b>Talent</b>	<ul style="list-style-type: none"> <li>• <b>The worst of all wastes. The waste of not engaging and utilizing the people who work in the organization to run the enterprise as if they owned it.</b></li> </ul>

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