

# Pioneers in Quality™ eCQM Proven Practices Collection: Recognizing Success 2017-2018



# The Pioneers in Quality™: Proven Practices Collection is a new resource for Joint Commission-accredited hospitals.

Introduced in spring 2017, the Proven Practices Collection was created to recognize hospitals that have successfully leveraged electronic clinical quality measures (eQMs) and health information technology (IT) to drive quality improvement. The program also provides a platform for organizations to share their work as learning opportunities for other organizations.

This Proven Practices Collection recognizes nine hospitals — four for 2018 and five for 2017 — and details their work to advance the evolution and utilization of eQMs. The successes of these organizations are now available to all hospitals to help inform and guide their efforts to drive quality improvement. All of the initiatives being recognized in the Proven Practices Collection are replicable and freely available for tailoring to your organization's performance measurement and quality improvement work.

The nine hospitals selected as Expert Contributors presented their Proven Practices as part of The Joint Commission's Pioneers in Quality™ webinar series. The [webinar replays](#) are available on the Joint Commission website.

The Joint Commission congratulates these first nine hospitals that truly are pioneers in quality!

## 2018 PIONEERS IN QUALITY™ PROVEN PRACTICES COLLECTION EXPERT CONTRIBUTORS

### HOSPITAL

BJC HEALTHCARE — ST. LOUIS, MISSOURI

MEDSTAR ST. MARY'S HOSPITAL — LEONARDTOWN, MARYLAND

TEXAS HEALTH RESOURCES — ARLINGTON, TEXAS

VAIL HEALTH HOSPITAL — VAIL, COLORADO

## 2017 PIONEERS IN QUALITY™ PROVEN PRACTICES COLLECTION EXPERT CONTRIBUTORS

### HOSPITAL

BAYCARE HEALTH SYSTEM, INC. — CLEARWATER, FLORIDA

MEMORIAL HERMANN HEALTH SYSTEM — HOUSTON, TEXAS

ST. LUKE'S CORNWALL HOSPITAL — NEWBURGH, NEW YORK

ST. MARY MEDICAL CENTER — LANGHORNE, PENNSYLVANIA

VCU HEALTH — RICHMOND, VIRGINIA



## SUMMARY

For the 2018 Proven Practices Collection, 25 organizations across 17 states submitted applications, detailing how eQMs were implemented as part of their organizational quality improvement efforts and summarizing how various components contributed to the successes seen with their initiatives. Submissions were received from organizations of various sizes — from large, academic settings to small community hospitals. Several electronic health records (EHRs) were represented in the submissions, as were various quality reporting vendors.

### **Trends**

The Joint Commission identified several themes that contributed to organizational success with eQMs. Many of these themes were synergistic, or dependent on each other, to be effective.

Overall, more organizations are moving beyond eQm implementation to improving various aspects of performance and then to improvements in the measure rates themselves as a reflection of clinical quality improvement. And that is the ultimate goal of an eQm – to provide detailed clinical data to assess treatment and outcomes, and to identify opportunities for clinical quality improvement while reducing the burden of manual abstraction and reporting.

### ***Ensuring data quality and accuracy***

In 2017, organizations started focusing on ensuring data quality and accuracy, and this was a prominent theme within the 2017 Proven Practices submissions. In 2018, organizations developed more robust processes to support those efforts.

- Data validation tools were created to categorize discrepancies between chart-based and eQm measures. Some of these were variance spreadsheets capturing key contributing factors to those discrepancies, such as whether they were system or process issues.
- Interactive dashboards and data visualizations were developed with intuitive analytic options, giving users the ability to drill down to data specifics and to see high-level summary data. This information was then used to optimize documentation.
- Many organizations launched initiatives to standardize documentation as part of a foundational effort to implement clinical decision support (CDS) within their EHRs. For some, this included robust efforts to map documentation to standard terminologies. This automation within the EHR was then leveraged to satisfy measure requirements through integration with clinical workflow.



## ***Governance and structure***

Almost all submissions noted the need for interdisciplinary teams and improved collaboration between multiple departments within an organization.

- Many of the committees providing oversight for eCQM implementation used some combination of leadership, quality, clinical informatics, IT and clinical stakeholders to lead their efforts.
- Some organizations detailed more focused efforts with their initiatives. One organization sought to improve stroke care with its stroke committee providing oversight of some eCQM activity.
- Some organizations developed specific quality informatics roles. These roles serve as a liaison between the different stakeholders, including quality, IT and clinical informatics. This follows some of the trends seen with the 2017 Proven Practices Collection.
- Other organizations described extensive evolutionary initiatives, phasing their project to focus on various aspects of eCQM implementation — from addressing the accuracy of the patient population, to improving data capture, to continued clinical workflow optimization.

## ***Optimizing clinical workflow and education***

Education was frequently cited as a necessity by organizations to optimally implement eCQMs.

- Education included efforts to increase knowledge of various eCQM components to all stakeholders involved with eCQM implementation. It was important for clinicians, for example, to understand elements of eCQMs such as quality reporting documentation architecture (QRDA) files and eCQM logic so they can make better informed decisions about data flow, particularly as it relates to their clinical documentation. This improved understanding also facilitated better analysis of missing data and subsequent design and implementation of documentation to better align workflow and reporting requirements.
- Education also was provided to care givers once the ideal documentation workflows were identified. This included screenshots depicting documentation within the EHR.
- Continuous assessment of documentation was conducted through use of tracers and chart reviews to help understand ideal documentation workflows as well as to identify fall outs.

## **2017/2018 Joint Commission electronic clinical quality measures (eCQMs)**

### **Heart attack care**

eAMI-8a: Primary PCI received within 90 minutes

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### **Children's asthma care**

eCAC-3: Home management plan of care

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### **Emergency department**

eED-1: Median time from ED arrival to ED departure for admitted ED patients  
eED-2: Admit decision time to ED departure time for admitted patients

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### **Newborn hearing screening**

eEHDI-1a: Hearing screening prior to discharge

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### **Perinatal care**

ePC-01: Elective delivery  
ePC-05: Exclusive breast milk feeding

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### **Stroke care**

eSTK-2: Discharged on antithrombotic therapy  
eSTK-3: Anticoagulation therapy for atrial fibrillation/flutter  
eSTK-5: Antithrombotic therapy by end of hospital day two  
eSTK-6: Discharged on statin medication

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### **Venous thromboembolism (VTE) care**

eVTE-1: VTE medicine/treatment  
eVTE-2: VTE medicine/treatment in ICU



## About Pioneers in Quality™

Pioneers in Quality™ is a Joint Commission program started in 2016 to assist hospitals on their journey toward eCQM adoption and reporting. Hospitals collect eCQM information through EHRs and transmit the data to The Joint Commission (as part of its ORYX® performance measurement requirements) and to the Centers for Medicare & Medicaid Services (CMS).

The Pioneers in Quality™ program provides resources to aid hospitals in the transition from chart-abstracted measures to eCQMs. Key Pioneers in Quality™ program components include:

- Ongoing educational webinars focused on eCQM adoption, including continuing education units (CEUs) for live webinar participation.
- Expert to Expert series webinars.
- A comprehensive eCQM resource portal.
- Recognition for eCQM pioneers.
- A Pioneers in Quality™ Technical Advisory Panel.
- Outreach through The Joint Commission's Speaker's Bureau.

Pioneers in Quality™ recognizes hospitals in two categories:

- **Expert Contributors:** Hospitals that advance the evolution and utilization of eCQMs through contributions by submitting a Proven Practice selected for inclusion within The Joint Commission's Proven Practices Collection and presenting their solution on a Pioneers in Quality™ webinar or participating in eCQM development.
- **Solution Contributors:** Hospitals that submit a Proven Practice to be considered for inclusion within The Joint Commission's Proven Practices Collection.

For more information, visit the [Pioneers in Quality™](#) web portal.

Expert Contributor

## BJC HealthCare — St. Louis, Missouri



The world's best medicine. Made better.

### “Managing eCQM Reporting and Validation through a System EHR Transition”

As BJC HealthCare has grown through mergers and acquisitions, a complex ecosystem of health care technology emerged. The complexity of information created difficult, if not impossible, interoperability within the organization and presented challenges to managing regulatory reporting across the system. With hospital accreditation standings, as well as payment and compensation tied to successful electronic clinical quality measure (eCQM) reporting, BJC HealthCare required a solution to pull together disparate legacy systems to meet mandated eCQM reporting requirements.

BJC HealthCare was faced with the challenges of reporting eCQMs across 10 hospitals while on two different electronic health records (EHRs), as well as continuing to report eCQMs, as implementation over a 12-month period to a new, single EHR was executed.

#### SOLUTIONS:

BJC HealthCare assessed reporting capabilities for current state and as it related to transition from two legacy EHR systems onto a different single EHR. Initial findings identified eCQM calculations differed between EHR systems, creating inconsistencies in performance across the enterprise. Further current-state eCQM performance analysis found significant variance between eCQMs and chart-abstracted measures. Additional work was required; system measure experts in clinical workflow, EHR systems,

and eCQM reporting provided insight and their findings were categorized. Alternatives for eCQM reporting were identified and assessed, and several solutions were considered. A non-EHR reporting tool was chosen for capabilities to provide standardized eCQM calculations across the organization, flexibility in sourcing data elements, and report customization.

Workflow discovery was the first, and most important step. All facilities identified location of discrete data elements captured in regular workflow across each legacy EHR. Data analysis, value set mapping and pre-production testing were done as an iterative process. Post-production validation ensured accurate eCQM calculation. A similar process followed for the new EHR build, with workflow and gaps identified during legacy implementation helping to guide efforts. Clinical workflows evolved in the new EHR. Discrete field documentation, along with traditional EHR offerings, were captured, and identified workflow gaps resolved.

## RESULTS:

- The implemented solution can calculate eCQM results from a complex build in which data from all EHRs flows into a single engine which crosswalks unmapped fields and matches outdated values to standard terms. The output is a clear and concise scorecard from which internal goals for benchmarking have been established.
- Hospitals on the new EHR platform can feed data while hospitals on old EHRs continue to report.
- The ability to utilize structured data from multiple sources has allowed BJC HealthCare to maintain efficient clinical workflows, leverage data that may reside in multiple locations, and significantly improve accuracy of measure performance.
- Consistent calculation across the system improves confidence in reporting to leadership and regulatory agencies.

## REPLICABILITY:

- Evaluate your organization's current EHR landscape and future planned transition to determine what options will work for eCQM calculation and reporting for your institution. The number of EHRs across an organization, satisfaction with current eCQM EHR reporting, and the future EHR platform transition plans are all factors that should be considered. In some cases, implementation of a non-EHR solution such as ours may be an option.
- Gain support from leadership, clinical and IT expert partners, and get vendor commitment to the project.





Expert Contributor

# MedStar St. Mary's Hospital – Leonardtown, Maryland



MedStar St. Mary's  
Hospital

## “Continuing to Improve Discharge Stroke Measures Through Clinician Education and EHR Refinement”

MedStar St. Mary's Hospital (MSMH) is an accredited Maryland Institute for Emergency Medical Services Primary Stroke Center. Ongoing review of MSMH's stroke quality metrics identified discharge process issues for stroke patients. Three metrics were underperforming in calendar year (CY) 2016:

- Atrial fibrillation anticoagulation therapy at discharge
- Cholesterol-reducing drugs at discharge
- Modified Rankin Scale documentation at discharge

Through additional chart reviews and discussions with nursing and physician leadership, it was discovered that various practices existed for these discharge processes. The Stroke Care Committee reviewed clinical practice and documentation associated with each outlier. After a thorough data review process, it was identified that standardization of stroke discharge documentation would improve clinical quality metrics.

a prompt that triggers after the discharge order is placed. This prompt included a workflow in the Cerner EHR to assure completion of atrial fibrillation anticoagulation therapy at discharge, cholesterol-reducing drugs at discharge, and modified Rankin Scale documentation at discharge. Diagnosis triggers additional documentation from the provider as to the rationale for not prescribing a medication upon discharge.

Discharge triggers were included in discharge workflows for both physicians and nurses. Information completed during these workflows translates to the Quality Measures Dashboard for each nursing unit in real time. The Quality Measures Dashboard allows for the “big picture” view of all patients in a unit to make sure practice guidelines are being followed during the inpatient stay and that discharge instructions to be followed are displayed as “not completed at this time,” “in progress,” or “have been completed prior to discharge.” Clinicians further identified a greater need to view all stroke specific assessments together in their workflow. As a result, the new interactive view called “Stroke/TIA” was developed, tested and implemented.

### SOLUTIONS:

The Stroke Care Committee reviewed the CY 2016 outliers and front-line clinician documentation process. The committee identified that the best solution was to institute





An internal change management process called FADE (i.e. Focus, Analyze, Develop, and Execute/Evaluate) was utilized for associate and physician education. This process included screenshots and a new workflow outline for clinical leadership to discuss and share with associates through daily huddles and department meetings. Discussion at departmental and various hospital committees includes reviewing pre- and post-electronic clinical quality measure (eCQM) metrics to show effectiveness of change projects. Hands-on simulation training was incorporated, as well.

#### RESULTS:

- Atrial fibrillation anticoagulation therapy at discharge metric improved from 83.33 percent in CY 2016 to 91.91 percent in CY 2017 (only one outlier).
- Cholesterol-reducing drugs at discharge improved from 95.92 percent in CY 2016 to 98.63 percent in CY 2017.
- Modified Rankin Scale documentation at discharge improved from 60.38 percent in CY 2016 to 84.62 percent in CY 2017.

#### REPLICABILITY:

- A comprehensive process/workflow review with a multidisciplinary group along with the ability to modify the electronic health record is important to implementing successful improvements to identified quality metrics.
- An education plan that includes ongoing monitoring and annual follow up allows for sustained success.

**Expert Contributor**

# Texas Health Resources — Arlington, Texas



## “eCQM Proven Practices”

The Texas Health Resources’ electronic clinical quality measure (eCQM) journey to direct data submission began from the ground up with a multidisciplinary team approach to identify planning, mapping, documentation opportunities, a review process, and ongoing education to enhance clinical outcomes. Challenges included overcoming barriers such as lack of discrete documentation, mapping accuracy, and limited tools. The meaningful use (MU)/eCQM team expanded in 2017 to allow necessary additional resources to support accurate data, education, and performance improvement.

followed through to completion by collaborating with the EHR clinical documentation team and quality. Texas Health Resources utilized EHR eCQM tools, developed tip sheets, and ongoing education. The eCQM subject matter experts and EHR clinical documentation team collaborated to troubleshoot mapping and documentation opportunities.

## SOLUTION(S):

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Our process continuously improved and evolved due to new tools developed in the electronic health record (EHR) to support eCQMs. Mapping and data accuracy improvements, ongoing education for documentation opportunities, successful Centers for Medicare & Medicaid Services (CMS) and Joint Commission self-submissions, and data-driven performance improvement are leading to improved outcomes and eCQM success.

An eCQM subject matter expert performed a quarterly review of data for documentation opportunities and mapping accuracy. Issue resolution and education was



## RESULTS:

- Texas Health Resources' evolving process and dedication to accurate data facilitated an increased focus on education and performance improvement to enhance workflow efficiency.
- An eQIM dashboard is available to all end users within the EHR that provides accurate performance data updated weekly. The dashboard includes a function where the end user can further drill down concurrently or retrospectively to identify documentation opportunities.
- Texas Health Resources performed direct data submission to CMS and The Joint Commission for 16 entities.
- Performance improved from 2016 to 2017 on the following electronic venous thromboembolism (eVTE) and electronic stroke (eSTK) measures:
  - o eVTE-1 2016 87.48 percent and 2017 95.91 percent
  - o eVTE-2 2016 94.59 percent and 2017 98.61 percent
  - o eSTK-2 2016 93.71 percent and 2017 96.07 percent
  - o eSTK-6 2016 88.72 percent and 2017 91.19 percent

## REPLICABILITY:

- An intuitive EHR with innovative tools is key.
- Collaboration is needed among EHR vendor support, quality, nursing informatics, clinical decision support, the EHR clinical documentation team, and subject matter experts in eQIMs.
- Resource availability to perform review of mapping and documentation opportunities is needed, as well as strong communication skills to clearly convey findings.
- Project management and tracking tools are vital to achieving major milestones and successful collaboration among multiple teams.



**Expert Contributor**

# Vail Health Hospital – Vail, Colorado



**VAIL HEALTH**

## “Vail Health’s Journey with eQMs”

Clinical staff in the Family Birth Center (FBC) have been passionate about exclusive breast milk feeding for a few years. However, quality improvement in this area had limped along until early 2017, when the quality team, along with the FBC nursing staff and clinical information technology (IT) representatives at Vail Health, chose to submit this perinatal care (ePC) measure, ePC-05, as an electronic clinical quality measure (eCQM). Challenges included:

- Ensuring accurate and consistent data abstraction.
- Dedicating resources to abstract data on a timely basis.
- Having the ability to build in additional data points that would provide valuable information.
- Taking the time to analyze the data to drive effective performance improvement (PI) efforts.

### **SOLUTION(S):**

For exclusive breast milk feeding, the team at Vail Health Hospital needed to understand how age and ethnicity played into the mother’s choice to exclusively feed breast milk or not. This information — which would allow the team to know where to focus education efforts prenatally — was included in its eCQM reports. In addition, the reports could be used to abstract the misses and perform case reviews, again, to better understand any patterns and opportunities. Through this process, it was identified that

most misses were special care nursery newborns. These newborns are not excluded from the measure. Prior to using this metric for eCQM submission, clinical staff had excluded these newborns and had not focused on this population. By including them, there was great opportunity to improve provider and nursing practice.

The quality team partnered with clinical staff to provide the necessary data and further analysis monthly. This freed up clinical staff to focus on the PI opportunities. Education was provided by the lactation team regarding evidence-based reasons for formula supplementation, specifically for the special care nursery population. These, of course, are rare. Nurses and providers began to look at how they could better avoid formula use in this population. This prompted improved support to mothers of special care nursery babies via pumping, and launched an initiative to bring donor breast milk to Vail Health. These two approaches to improve exclusive breast milk feeding truly made a difference to the rate.



## RESULTS:

Standardized documentation was implemented, mapping for accurate data abstraction was completed, and data accuracy was proven through extensive validation efforts. Now, Vail Health Hospital had the data it needed to better understand its misses and know where to focus improvement efforts. And these efforts proved to have significant impact. For third quarter 2017, Vail Health Hospital submitted data for ePC-05 with a performance rate of 84.09 percent. For prior years, the rate had averaged 76 percent (with questionable accuracy). The ePC-05 eCQM process:

- Created a model of collaboration between quality, clinical, and IT that allows for varied expertise and resources to improve eCQM performance.
- Allowed for accurate, validated data to be pulled regularly and used to drive improvement.
- Facilitated performance improvement in Vail Health Hospital's exclusive breast milk feeding rates.

## REPLICABILITY:

- Create a collaborative model between quality, clinical, and IT in the eCQM process and performance improvement (PI) efforts.

- If possible, resource your electronic health record (EHR) vendor to consult and support.
- Take the time to do detailed data validation to improve confidence in its accuracy.
- Get buy-in from front-line staff on data accuracy importance and the need for standardized and discrete documentation. Involve them in any documentation decisions.
- Showcase the data regularly (ideally monthly or more frequently) to the team and the front-line staff and providers. Engage them in reviewing the data, recognizing opportunities, and driving or sharing in the PI efforts.
- Don't get lost in the process or treat your eCQMs like a "box to be checked." Make it valuable. Keep the purpose, the "end" in mind – improving patient care and clinical outcomes.

**Expert Contributor****BayCare Health System – Clearwater, Florida****“Improving eQMs at BayCare Health System”**

BayCare Health System faced many obstacles to successfully submit four electronic clinical quality measures (eQMs) for 2016 to both The Joint Commission and the Centers for Medicare & Medicaid Services (CMS). This included difficulties with the eQM specifications and value sets, limitations in the electronic health record (EHR), knowledge gaps for clinicians, and information dissemination problems across its 14 hospitals.

BayCare’s EHR did not have the latest update and was not ready. Its EHR system needed to be rebuilt to accommodate eQMs. Leadership at BayCare searched out proposed and final inpatient prospective payment system (IPPS) rules and realized the importance of implementing eQMs and how they could help improve quality care.

Leadership pushed for eQM adoption to be a priority at BayCare before it was required from CMS.

**SOLUTION:**

BayCare began by creating a multidisciplinary team, including members from information services (IS), quality, clinical outcomes, project managers, physicians, and nurses, and partnering with its EHR vendor. Abstractors reviewed the reports once they were available and compared them with the chart. Manually abstracted data

was compared with eQM data in a single spreadsheet. Although manually abstracted data and eQMs do not match perfectly, it was an excellent resource to pinpoint data variations. Once validation uncovered issues, they were discussed during weekly eQM meetings.

**Issues were resolved various ways:**

- Utilizing systems analysts to fix filters in the EHR’s bedrock.
- Working with the EHR vendor to address how the measure was built in the EHR.
- Submitting JIRA tickets if there was an issue with the way a measure was written. (JIRA is an online collaboration platform hosted by the Office of the National Coordinator for Health Information Technology [ONC], an entity within the U.S. Department of Health and Human Services (HHS), which supports health information technology implementation).
- Teaching clinicians to document in a discrete field instead of free text if there is an issue with clinician documentation.
- Involving physicians — from the medical director of physician informatics, to the CMIO, to practicing physicians — to get input related to clinician workflow. It also was their responsibility to disseminate information and changes to documentation to the other physicians in the health care system via electronic medical record (EMR) governance, the Clinical Decision Council, and the Medical Executive Committee.



- Partnering with the EHR vendor for a formal project to prepare the EHR for the specifications for 2016 submission. BayCare provided the EHR vendor with data collection worksheets (DCW) that mapped the current workflow into the fields needed to complete the measures' requirements. The EHR vendor built these filters out into the EHR. Upon completion, BayCare validated the work. Any problems were discussed with the wider team of physicians, nurses, IS, quality, and the EHR vendor team.
- Acquiring a clinical decision support tool called VTE Advisor to help in reducing hospital-acquired venous thromboembolism (VTE) — a goal for BayCare for 2016 and 2017. This tool puts the patient's electronic record and clinical elements through 2,868 possible scenarios and suggests VTE prophylaxis based on the patient's risk score. If the patient is found to be at low risk, this is mapped to eVTE-1 and eVTE-2 eCQMs as reason for no VTE prophylaxis, which satisfies the measure. If sequential compression devices (SCDs) or a pharmacological VTE prophylaxis is recommended, administering those will also satisfy the measure.

## RESULTS:

Initially, there were wide variations when comparing results of manually abstracted emergency department (ED) measures ED-1 and ED-2 with eCQM eED-1 and eED-2, including pulling inappropriate non-ED encounters, and not capturing the correct arrival and discharge times. Currently, the median times of eED-1 for BayCare is 332 minutes compared with manually abstracted data which is 323 minutes. There is only a 6-minute variation. Outcomes include:

- Completed eCQM submission.
- Increased number of charts appropriately pulling into the denominator for the measures.
- Accomplished more accurate ED median times.
- Acquired greater awareness of eCQMs and how they fit into clinical workflow.

## REPLICABILITY:

- Assemble a team dedicated to eCQMs; include abstractors and IS. The abstractors are the experts in manual abstractions and quality measures and the IS team has the skills to implement this knowledge.
- Enlist physician champions to promote buy-in from the medical staff.
- Validate, validate, validate. Many issues came to light during the validation process at BayCare. After each package load, validate again. This step is still the eCQM group's focus at BayCare.
- Know the specifications inside and out.
- Attend The Joint Commission's Pioneers in Quality™ webinars.
- Be able to find all the pieces to the puzzle with the value sets.
- Work with the EHR vendor, but don't be afraid to question if you find something that does not seem right. Get on your EHR vendor's eCQM group site if possible.
- Get familiar with the JIRA online collaboration platform.

**Expert Contributor**

# Memorial Hermann Health System – Houston, Texas



## “Memorial Hermann Health System Journey to Electronic Clinical Quality Reporting”

In 2013, Memorial Hermann Health System embarked on the journey to meet meaningful use stage 2, and the system quality department took ownership to meet the requirements. In the process to achieve successful capture and electronic clinical quality measure (eCQM) transmission, many unforeseen challenges arose. There were challenges and barriers in the back-end build and front-end interface, including the quality measure specifications, coded algorithms and data value sets. Also, there were barriers and successes when building for data capture in the physicians’ and nurses’ workflow.

With the exponential increase in the number of cases anticipated to electronically report 100 percent of the population, the challenge in capturing the data through the electronic health record (EHR) posed many challenges:

- Finding staff with the knowledge, skills and ability to make the transition from manually abstracted quality measures to electronically abstracted measures posed a challenge. Staff needed to have in-depth quality measurement knowledge, understand change management, have technology experience and applied informatics skill.
- Another significant challenge was changing a culture of “core measures” owned by nursing staff to a physician ownership of eCQMs. Memorial Hermann realized that over 90 percent of the eCQM data relied on the

physician taking an action either by documentation or ordering. It was no longer feasible to have a quality improvement specialist track 100 percent of the patients to assure physicians completed their actions; standard processes would have to be relied on for consistent data capture.

### SOLUTION:

An initial team was formed that included a director with formal clinical informatics education and background in quality improvement; a manager with a strong quality background and previous technical experience; and four additional staff that had strong quality measure and improvement backgrounds, but no informatics knowledge or experience. Memorial Hermann began recruiting employees with either an informatics or technical background to have them learn quality metrics and reporting. Memorial Hermann found that a team with mixed expertise functions more effectively, and the members teach each other their respective area of expertise. This makes for a more dynamic, self-learning environment and enhances the team’s ability to cover the entire eCQM’s development lifecycle. To address the culture change, Memorial Hermann engaged physician leaders at each hospital campus as champions. Numerous presentations at medical staff meetings explained why this project should be physician driven. Additionally, a systemwide committee of physicians, nursing and ancillary leaders made decisions about EHR designs and workflows.



## RESULTS:

- A solid team of clinical quality informatics specialists was built that fulfill a hybrid role that can function in the technical domain of information technology (IT), the quality measurement and improvement domain, as well as the applied clinical informatics domain. They can communicate and easily work with the information systems staff, medical informatics, physician, nursing, and ancillary and health information management staff.
- Established a solid decision-making process around the eCQMs with key stakeholder engagement. Design decisions are driven by the stakeholder impacted the most. Physician ownership is driven from the systemwide physician committee.
- The eCQM data were used to benchmark each facility's emergency department (ED) throughput and drove numerous robust process improvement activities, significantly improving the patient movement through the ED.

## REPLICABILITY:

- Assemble the right team to own the project.
- Invest time and resources to train and educate staff to fill knowledge gaps. An ideal candidate is someone who has experience in clinical quality improvement, in addition to formal education in applied clinical informatics. This skill set is rare, so individuals will likely need to

learn one expertise area to develop the full breadth of knowledge to manage all eCQM reporting lifecycle aspects. Individuals with a technical background are an asset, as clear communication with the IT department staff is needed. The quality informatics specialist must understand how the EHR technical back-end impacts the front-end interface and ultimately the reporting data output.

- Form a committee of physician champions. All decisions impacting physician workflow and data capture should come from this committee.
- The quality eCQM team should present the quality metrics and the requirements of fulfilling the data capture.
- In conjunction with the department that does the build and clinical decision support for the EHR, options for eCQM capture should be presented to the physician committee to allow them to make final decisions.
- Account for localized practices when doing clinical workflow analysis. Each organization has unique workflows and standardizing across a large system is not always feasible.
- EHR customization may be required to capture the data within the normal workflow. An organization cannot rely on its EHR vendor to design a system to fit all the complex workflows.



**Expert Contributor****St. Luke's Cornwall Hospital – Newburgh,  
New York****“Embedding eCQM metrics into Daily Processes as Care is Provided”**

In 2015, St. Luke's Cornwall Hospital established electronic clinical quality measure (eCQM) development as one of its quality and information technology (IT) initiatives. Initially, the hospital selected measures for which it had strong clinical teams to ensure that evidenced-based practices were met. The first focus area was stroke management (St. Luke's Cornwall Hospital had participated in the Get With The Guidelines® program with the American Heart Association/American Stroke Association for several years). The hospital utilized Meditech best practice recommendations to determine the fields needed to accurately collect and report its data. St. Luke's Cornwall Hospital had already developed several required fields but needed changes to align these with the eCQM specifications. Manually abstracted data were compared to the eCQM compliance rates the hospital received from its reports to identify weaknesses and provide ongoing feedback to the clinical teams. The goal is to provide the best quality of care for every patient receiving care in St. Luke's Cornwall Hospital. Developing eCQMs provided incentive for the hospital to develop electronic health record (EHR) tools to do so.

**SOLUTION:**

A small team was formed, including IT analysts, nursing leadership, quality management staff, and clinicians providing care in the focus areas. This multidisciplinary

team met every other week, and subgroups met in between to evaluate workflow, recommend clinical data capture, and provide guidance to the clinical staff as care was being rendered. Key to this process was engaging clinical staff when developing the documentation fields. As the team proceeded with recommended guidelines, the service line directors (nurse manager), as well as physicians, evaluated workflow. When the clinical staff raised concerns, the informatics team conducted additional research. St. Luke's Cornwall Hospital attributes much of its success to being sensitive to the clinical staff's needs. Where possible, evidenced-based practices were implemented in heavily utilized order sets (for example, venous thromboembolism, or VTE, prophylaxis guidelines were placed within the admission order set, utilized for every admission whether observation or inpatient). Additionally, the team considered what fields could be made “mandatory,” but used this sparingly, as it was determined to impede workflow.

Since St. Luke's Cornwall Hospital's EHR does not provide robust clinical decision support, other tools were built, such as computerized physician order entry (CPOE) order sets and templates within progress notes to guide providers. A “condition” list captures hospitalized patients that might meet a diagnosis that will fall into an eCQM measure set.

The hospital's stroke coordinator utilizes this list to identify patients, notify the primary care nurse, clinical nurse manager and clinician, as appropriate, to remind them to order tests, educate patients and document in the respective fields. Since the hospital continues to collect data manually using the Get With The Guidelines software, it can compare its denominator (patient population) to ensure accurate capture, as well as its compliance rates. Cases not meeting the eCQM metrics were analyzed to determine which clinician did not document in the established fields. Monthly reports are provided to the hospital's stroke taskforce to deliver timely feedback to the clinical staff if reeducation or process modifications are required. To further engage hospital-based clinical staff (e.g., hospitalists), eCQM metric compliance and eCQM field completion were included as part of their quality contract metrics.

## RESULTS:

- Successfully submitted four eCQMs to the Centers for Medicare & Medicaid Services (CMS) for the fourth quarter 2016 — stroke education, stroke rehab assessment, primary percutaneous coronary intervention (PCI) <90 minutes, and early newborn hearing screening. Compliance rates were 100 percent for the first three metrics, and 99 percent for newborn screening. These four eCQMs were directly submitted from Meditech to QNET.
- As of spring 2017, 14 of the 15 eCQM metrics available have been programmed. Each metric has demonstrated 90 percent or greater compliance rates in the first quarter of 2017.
- By using existing clinical experts in quality for each existing measure set, IT and nursing, the hospital reduced the time needed to identify where documentation already existed, where order sets could be easily modified, and where additional fields could be added.

## REPLICABILITY:

St. Luke's Cornwall Hospital has duplicated this process in other service lines, including cardiologists for PCI, asthma action plan for pediatric patients, hearing screening in newborns, and emergency medicine for ED patient flow metrics.

## To be successful:

- Have a collaborative multidisciplinary team.
- Conduct weekly meetings with your team. Start by selecting the measures that the team believes can be captured accurately.
- Once your initial measures are selected, involve your clinical departments to evaluate data collection elements and how best to capture them without compromising clinician work flow. Your multidisciplinary team can help test the workflow.
- After each measure implementation, track compliance rates.
- Establish a process to identify fall-outs, and provide direct feedback to the individual staff member, as well as the respective leadership in the area.
- Ensure that eCQM data elements are included in orientation for new staff.

**Expert Contributor**

# St. Mary Medical Center – Langhorne, Pennsylvania



## “Ensuring High Compliance When Moving from Retrospective to Prospective Quality Data”

With the advent of electronic clinical quality measures (eCQMs) as part of hospital quality reporting, there was a fundamental shift of timely and accurate documentation in discrete data elements that no longer necessitates post-discharge querying and/or duplicative entries. To that end, monitoring eCQM compliance affords hospitals the ability to make changes to workflow and clinical informatics more rapidly than retrospective reporting allowed. It requires data analytics as the foundation along with clinical informatics as the enabler to allow nursing and medical staff to drive efficient processes that result in optimal patient outcomes.

### SOLUTION:

Weekly eCQM trend monitoring was undertaken in June 2015 to understand performance and work on improvement solutions related to both clinical workflow and data integrity. St. Mary’s Medical Center wanted to optimize its performance well before the data’s inclusion in pay-for-performance programs. Considering the fundamental shift from retrospective to concurrent monitoring, clinicians were engaged because of the impact they have to the data and to patient outcomes. During the weekly monitoring process, the director of quality generates reports for each

eCQM via Meditech’s Acmeware application. For the applicable eCQM set, the overall performance — along with a drill down to patient-level data — is sent to the appropriate staff based on the eCQM. Each fallout is reviewed to identify what happened.

A dashboard was created that monitors trends over time and makes comparisons, where applicable, to any retrospectively abstracted measure. Sharing data broadly among the team, the scorecard is housed on the intranet site to which key leaders have access. This process was implemented to ensure that all relevant data is accurately captured and, ultimately, to correct clinical workflows, as well as to make intervention compliance and documentation easy.

## RESULTS:

By ensuring data integrity, St. Mary's can identify where its true improvement opportunities are and how patient outcomes are impacted. In most stroke (eSTK) and venous thromboembolism (eVTE) measures, St. Mary's performance has been sustained in the 90-100 percent range. Based on data review and feedback to corporate, St. Mary's has ensured that:

- Altepaste is included appropriately in the measure logic.
- Dictionaries are in sync between Meditech and Acmeaware.
- Hospice patients are appropriately excluded from the measures.
- Maternity patients are appropriately excluded from the eVTE-1 measure.

## REPLICABILITY:

A sister hospital within the St. Mary's health system requested assistance with meeting meaningful use/hospital inpatient quality reporting program eCQM requirements, and the process described was shared in 2016. Key considerations, lessons and suggestions include:

- Grant access to the vendor's reporting tool, so there is at least one person who is running the reports and disseminating the data. For example, it takes roughly 30 minutes each week to run the data, update the scorecard, and disseminate reports.
- Identify the appropriate parties to review the data. This role can differ by eCQM.

- Getting the data to front-line staff is important to see performance, engage them in workflow change discussions and improvements related to patient care/outcomes, and provide support to document care efficiently and appropriately.
- Promote data transparency to engage clinicians. It is essential to engage clinical informatics and information technology (IT) to ensure data accuracy.
- Engage CMO and CMIO for support to further engage physicians in improvement efforts.
- Leverage available resources, not only those from the parent entity, but also attend webinars available from your vendor, The Joint Commission and others to stay on top of best practices.
- Read Centers for Medicare & Medicaid Services' (CMS) proposed and final rules to be aware of what is coming and ultimately approved.



**Expert Contributor**

# VCU Health – Richmond, Virginia



VCU Medical Center

## “VCU Health Overcomes Interoperability Challenges on Way to eCQM Success”

VCU Health experienced uncertainty when preparing for mandatory electronic clinical quality measure (eCQM) submissions. Unlike most, VCU Health entered phase 3 of its eCQM journey in 2016 with the knowledge and experience gained over four years and two eCQM vendors. VCU Health has a robust quality and safety program, built on high-reliability principles and practices and the science of improvement. VCU Health approaches eCQMs as primarily a quality endeavor that relies heavily on collaboration with information technology (IT) partners, rather than as an IT process.

### SOLUTION:

Leadership and quality leader engagement reaffirmed the goal to produce meaningful eCQM data to improve care quality. VCU Health sought a vendor partner with the goal to produce accurate, meaningful, actionable eCQM data. Therefore, a comprehensive vendor assessment process was undertaken resulting in Medisolv becoming VCU Health’s eCQM partner, offering flexibility and shared goals of accurate, useful clinical quality data. Medisolv and VCU Health co-developed a working process and leveraged expertise. VCU Health structured the effort with a steering committee, core project team, data acquisition team and a clinical team. VCU Health identified a strong inter-professional eCQM team representing senior

leadership, enterprise analytics, IT, financial services, laboratory, pharmacy, clinicians and several different health care quality professionals, including experts in clinical informatics, data abstraction, and data science. Extensive data discovery, mapping and extraction efforts are necessary, because VCU Health data comes from several different systems. After extracting electronic health record (EHR) data for accurate eCQM results, the focus shifted to improving performance. The Medisolv solution permitted patient-level drill down and review of clinical data elements used for measure calculations, which built confidence in the results.

VCU Health’s implementation had a systemwide view to meet regulatory eCQM reporting requirements but also enrich data access for all organizational quality reporting and improvement activities. The eCQM team harmonized clinical decision support (CDS) rules, optimized clinical workflows, and managed clinical and administrative data. VCU Health’s EHR health maintenance system uses CDS rules to evaluate current patient documentation and triggers alerts for clinicians to evaluate the patient for health screenings and disease care best practices. The eCQM team aligned exclusion and numerator data capture. Clinical workflows were reviewed and updated to optimize eCQM data capture to ensure enhancements are clinically relevant and support efficient clinical workflows.

VCU Health volunteered for Joint Commission and Centers for Medicare & Medicaid Services (CMS) eCQM feasibility studies for: advance care planning, immunization (IMM) measure IMM-2 influenza, opioid safe use, total hip and total knee (THTK) measure set, perinatal care (PC) measure PC-02, substance use screening and treatment, tobacco treatment, and malnutrition. This was an opportunity to educate internal staff on eCQMs and bring the clinician's voice to eCQM development.

## RESULTS:

- VCU Health submitted its first eCQMs in December 2016 (three months before the deadline), \$30,000 under budget, and most importantly, for the first time, VCU Health produced eCQMs with accurate and validated data to be used for quality improvement activities.
- Of the 15 available hospital eCQMs (for 2016) completed during product implementation, seven measures were accurate and ready for use in improvement activities (at the time of the submission in spring 2017).
- Adding a standard nomenclature code to a single data element within clinician notes resulted in the CMS102 assessed for rehab rate to increase from 35 percent to 99 percent. A CDS/workflow example included enhancing infant hearing screen documentation to include pass/fail results for individual infant ears, instead of an overall pass/fail infant hearing screen result the workflow previously captured. This enhancement involved educating pediatricians, nursing staff and pediatric administrators about eCQMs and the importance of specific data capture for accurate quality reporting. Prior to the workflow improvement, infant hearing screen showed a result of 0 percent. Following the clinical workflow improvement, the result rose to 100 percent, accurately showing the excellent care the team was giving.

## REPLICABILITY:

- Develop a long-term strategy; don't just "check the box," strive for eCQMs to improve patient care and safety.
- Make eCQMs part of organizational strategy, goals and priorities to improve patient care and safety.
- Own eCQMs – know what, why and how.
- Partner with IT.
- Utilize experts who understand each eCQM's specifications and complexities.
- Understand your organization and its technical systems.
- Understand what drives and motivates hospital leadership, as well as clinicians.
- Educate on importance of clinical data having SNOMED, LOINC, CPT, and other codes attached.
- Organize a system process for implementing standard nomenclature codes to administrative and clinical data elements.
- Establish change management and educate on how any change in health IT systems can potentially impact eCQM reporting.
- Make eCQM experts part of health IT change management processes.
- Understand the vendor's role, and partner with your vendor; do not rely on vendor for all eCQM and technical knowledge and expertise.
- Keep your vendor accountable by knowing regulations, your systems and their limitations.
- Give actionable feedback to regulators, policy makers, and measure developers by responding to requests for information (RFIs).
- Volunteer for eCQM feasibility studies.
- Share your organization's struggle, be specific about what would help you succeed.
- Be part of the solution.

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