

**Aspirin Prescribed at Discharge for AMI -
Achieving the Standard of Care
Tools and Resources for Hospital Performance Measurement
Improvement Activities**

Fourth in a series of targeted quality improvement articles

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Illinois Hospital Association

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Achieving the Highest Standard of Care

Aspirin Prescribed at Discharge (AMI-2) examines patients with acute myocardial infarction (AMI) without contradictions to aspirin administration are prescribed aspirin at discharge. Illinois Hospital Association (IHA) Comparative Performance Measurement Initiative shows Illinois hospitals in the 2nd quarter of 2005 achieved 95.4% compliance with this measure. National comparative data for the 1st quarter of 2005, the most currently available data at the CMS Hospital Compare website, shows 89% compliance with AMI-2 measure for all reporting hospitals in the USA. The goal of all Illinois hospitals is 100% compliance with the standard of care.

Aspirin Prescribed at Discharge Measurement Description

Myocardial damage during infarction results from severely impaired blood flow and inadequate oxygenation of heart tissue. Aspirin administration improves blood flow by inhibiting effective platelet function and blood coagulation. Evidence-based practice has demonstrated that giving aspirin to patients prevents subsequent AMI in a small percentage of patients previously treated for AMI.

Calculating the Measure's Performance. Aspirin prescribed at discharge is reported as a percent, based on:

- Numerator includes AMI patients who are prescribed aspirin at hospital discharge.
- Denominator includes AMI patients without aspirin contraindications.
- Eligible patients include discharges:
 - Principle Diagnosis code of 410.1xx, with some exceptions; refer to technical specifications.

Measures Specifications

The measure's *technical specifications* are part of the CART User's Guide. All hospitals using the CART Data Collection Tool should be using the most current version of the tool. The CART tool also provides valuable information in the HELP menu including important and useful data definitions. Individuals must have CART installed to access the HELP however a sign-on ID is not required. CART is available on the QNetExchange website at: <http://qnetexchange.org>, see the left menu bar.

The Specifications Manuals for National Hospital Quality Measures are an additional resource. Five versions of the manual are provided for the different reporting periods starting with January 1, 2005 discharges. The manuals can be viewed or downloaded from: <http://qnetexchange.org>, locate left menu bar the title Hospital Data Collection (HDC) and select *Technical Specifications*.

Successful Quality Improvement and Compliance Experiences Shared by Illinois Hospitals

The experiences and successes for achieving compliance with aspirin prescribed at hospital discharge are presented below from hospitals representing a variety of characteristics and locations throughout Illinois. The Illinois Hospital Association appreciates the efforts of these hospitals in sharing their experiences with others and also the sharing of contact names at each hospital for additional follow up questions or discussions.

Some common and unique success factors or strategies include:

- Active physician involvement and leadership
- Strong executive leadership and involvement
- The expertise and impact of cardiologists on care of heart patients
- Data-driven change, sharing and reporting of performance data
- Effective use of clinical pathways, care maps and standing orders
- Adaptive use of medication administration record

Memorial Hospital - Belleville

Located in Belleville, Illinois, Memorial Hospital provides comprehensive services to residents of southwest Illinois. Kerry Wrigley, Coordinator Quality Improvement states, “Memorial Hospital was active in Core Measures in 2002 and implemented order sets that have resulted in high levels of compliance with the standards. In addition, Memorial also participates in CRUSADE, a national quality improvement initiative sponsored by Duke University Clinical Research for compliance with adherence to the American College of Cardiology and American Heart Association treatment guidelines for acute coronary syndrome.”

Sustaining high standards is a challenge for many hospitals. Wrigley relates getting physician involvement has been important to Memorial Hospital’s continued success. “Our physicians are well informed about the Core Measures. We share the quarterly reports with each of the medical staff groups. Physicians are reminded of what is being measured, that the core measures incorporate guidelines and best practices, and that the quality measures will soon be publicly reported.”

Wrigley also recognizes the importance that cardiologist add to the quality of care. “Our cardiologists are knowledgeable about the standards and they are prescribing aspirin for our heart attack patients.”

The involvement of key executive and medical staff is recognized. Wrigley shares, “Our Medical Director, William Sutherland, MD is a *real advocate* for the core measures; he is a believer and supports our quality measurement activities.” Quality reports are shared monthly with the Medical Executive Committee. Nancy Weston, Vice President Nursing Service routinely shares the core measures and clinical data with key nursing administrative and management staff. Wrigley concludes, “Our CEO, Harry Maier, is also interested in the quality performance measurements and ensures that the governing

body is informed of Memorial's compliance and that the data will be made public soon on the CMS web site." Contact: Kerry Wrigley, Coordinator Quality Assurance at kwrigley@memhosp.com.

Good Samaritan Regional Health Center

Good Samaritan Regional Health Center, located in Mount Vernon, is designated as a small and rural hospital serving southern Illinois. Good Samaritan is part of the larger SSM health care system. Tina Garrison, Director Quality Appraisal Services, spoke about improvement actions at Good Samaritan. "We implemented AMI CARE PATHWAYS ® and order sets that reflect the standards of care for these patients. These are important tools that act as cues and reminders for our physicians."

Good Samaritan has taken existing systems and used them in new ways to ensure performance with the standards of care. Garrison relates, "Prior to the patient's discharge, staff print a blank copy of the patient's MAR (Medicine Administration Record) and make this available to the treating physician at the time the discharge medications are written. This puts in place another cue for physicians about the patient's medications and prescribing aspirin at discharge."

Consulting Cardiologists are key members of the treatment team. To enhance consultations, the AMI CARE PATHWAYS ® order sets have prompts for cardiology consults. "As a result, a large portion of our AMI patients have cardiology consults," states Garrison. Cardiologists bring expert knowledge and experience in the care of AMI patients.

Additionally, Garrison reports, "physician-specific data is routinely distributed to all physicians who treat AMI patients. The data is shared confidentially and shows the physician his/her performance compared to the national average and best performers."

Contact: Tina Garrison, Director Quality Appraisal Services at tina_garrison@ssmhc.com.

Katherine Shaw Bethea Hospital

Katherine Shaw Bethea Hospital, located in Dixon, Illinois, is a small and rural hospital providing healthcare services in northwest Illinois. Pam Ruffin, Quality Technician Reviewer identifies physician involvement as a significant factor in their improvement efforts with Core Measures. "We have a very active physician, Rafaqat Kahn, MD, who has done research on the CART tool and the Core Measures." Dr. Kahn is Past-President of the Medical Staff and "is respected by the staff."

Standing orders are key factor for success at Katherine Shaw Bethea Hospital. Ruffin relates, "We have always had standing orders for AMI... and the physicians know to give aspirin on admission and to prescribe it at discharge." Katherine Shaw Bethea Hospital staff has worked to develop new standing orders that encompass the standards of care in the Core Measures. Ruffin states, "Dr. Kahn has worked with task forces comprised of physicians and staff on all the Core Measures. These groups developed and recently

implemented standing orders for the three Core Measure sets, AMI, Heart Failure and Pneumonia.”

Barbara Stockton, Director Quality and Medical Staff Services relates, “Mr. Darryl Vandervort, Katherine Shaw Bethea Hospital’s CEO continually has supported the efforts of this project by keeping the Board of Directors, other senior leaders and the Medical Staff and it’s leaders apprised of the importance of these projects and continually improving the care provided to the community that KSB Hospital, it’s staff and physicians provide to the surrounding community.”

Stockton added these final comments about Core Measurement activities, “The real goal here is the patient... and that all patients receive the best care. That is what we are continually working on at Katherine Shaw Bethea Hospital.” Contact: Barbara Stockton, Director Quality and Medical Staff Services at bstockton@ksbhospital.com.

BroMenn Regional Medical Center

BroMenn Regional Medical Center, located in Normal, provides a wide range of services to patients in central Illinois. Ann Frederick, Director Quality Resource Management and Beverly Glendon, Case Manager speaks to how BroMenn Regional Medical Center achieves a high level of compliance with prescribing aspirin at discharge for AMI patients. They note, “The success with *Aspirin at Discharge* starts with *Aspirin on Admission*, as review of the inpatient medication record is part of the process for ordering discharge medications.”

The following are the key interventions used to increase the number of orders for aspirin on admission and at discharge:

- Utilizing care maps with standing orders that include an automatic aspirin order. Maps have been developed for patients admitted with Chest Pain, to rule out MI, and for ACS/MI.
- "Back-up systems" have been developed for patients that may for some reason not be placed on one of the maps noted above. For example, an order for Ascriptin or aspirin is included on the Open Heart care map and in the Post-Cardiac Cath and Percutaneous Intervention orders.
- Case managers assigned to each of the nursing units help to promote use of the care maps and practice consistent with established standards of care.

BroMenn Regional Medical Center has also been successful at sustaining high performance with the standard of care. Frederick relates, “Our physicians are actively involved with performance improvement efforts at BroMenn. One of the ways in which this is seen is through their participation on our collaborative practice teams.”

Collaborative practice teams at Bromenn Regional Medical Center are led by a case manager and administrative representative and include one or more "physician champions". These teams coordinate patient care for a designated patient population along the care continuum, promote the interdisciplinary evaluation and resolution of

practice related issues, provide input into the development of patient care policies and procedures, and track the impact on patient outcomes. Physician representatives to the team are responsible for relaying activities and proposed changes in practice to their colleagues and co-workers.

Lastly, changes in practice at BroMenn Regional Medical Center are data-driven. Frederick states, “Data is collected to evaluate both care delivery processes and patient care outcomes. When opportunities for improvement are identified, the data is examined for trends and patterns of care that can be addressed through a targeted improvement effort. Findings from data collection are disseminated to hospital staff quarterly and to the medical staff no less than semi-annually.”

Performance improvement at BroMenn Regional Medical Center is an ongoing process. Frederick noted, “the key to it's sustained success in managing the care of myocardial infarction patients appears to be 1) ongoing multidisciplinary involvement, 2) the use of structured clinical practice guidelines and standing orders, and 3) the use of data to make decisions.” Contact: Ann Frederick, Director Quality Resource Management at afrederick@bromenn.org.

Rush University Medical Center

Rush University Medical Center is a large tertiary teaching hospital located just outside downtown Chicago, Illinois. Catherine Dimou, MD Chair Medical Care Evaluation and Karen Eberhardt, RN, Senior Quality Consultant address Rush University’s efforts with the AMI core measures. Dr. Dimou relates, “Rush embarked on an effort to look at and prepare for the core measures prior to implementation and reporting took effect. We formed multidisciplinary teams comprised of the key players; emergency room physicians and staff, cardiologists and the critical care area physicians and staff. These teams examined the parameters for each core measure, the guidelines and the standard of care and attempted to identify potential barriers that impact effective care delivery.”

“Success with aspirin prescribed at discharge starts with giving aspirin at arrival in the emergency room,” states Eberhardt. Emergency room staff was in serviced on the core measures, the care guidelines and the care requirements outlined in the AMI core measures. In addition, computerized admission order sets in the emergency room reflect the care guidelines reflected in the core measures.

Clinical processes at discharge ensure aspirin is prescribed for eligible AMI patients. Dimou relates, “The physician is required to fill out and complete the cardiac discharge sheet. These discharge sheets cover all the medications included in the practice guidelines and the AMI core measures.”

Reporting is also a key component of Rush University strategy for success. Dimou states, “The cardiology chair, Jim Calvin, MD reviews the AMI core measures reports with the different cardiology groups at quality improvement committee meetings. If cases fall out of compliance, the data are reviewed with individual physicians and we

reinforce the guidelines.” Eberhardt concludes, “We look at the outlier cases and focus on the process of care, and what broke down in our system or care processes. Often it is not a person but something in the care process that needs to be addressed in order to improve compliance.” Contact: Marcia Hargreaves, Director, Quality Improvement and Volunteer Services at Marcia_hargreaves@rush.edu.

Aspirin Prescribed at Discharge for AMI Web Based Resources

See Appendix I. for additional web based resources for aspirin prescribed at discharge.

For additional information about the AMI, HF, Pneumonia or SIP measures, or to comment on this series, please contact Tim Philipp, Director, Quality Improvement at tphilipp@ihastaff.org.

APPENDIX I. Aspirin Prescribed at Discharge for AMI Web Based Resources

This document outlines web resources addressing clinical guidelines, educational materials, evidenced-based materials, and intervention tools specific to AMI. To access these resources, click on or enter the web address and follow the additional steps.

Medqic. The Centers for Medicare & Medicaid Services (CMS) provides a comprehensive online resource of quality improvement information that supports the Hospital Quality Alliance Initiatives. Access at: <http://www.medqic.org/>

Change Strategies. Resources for redesigning processes, transforming organizational culture, and measuring and reporting performance go to: <http://www.medqic.org/>, locate in the center of the screen *What do you want to do* and click on *Browse by Topic*, locate *Hospitals* and then select *AMI*.

Clinical Guidelines. A comprehensive review (59 pages) related to standards and guidelines, the evidence base, the clinical literature and expert opinion, and quality improvement interventions for hospitalized is addressed in Heart Care Annotated Interventions Bibliography. Updated semi-annual basis (last update July 2005). Access at: <http://www.medqic.org/>, locate in the center of the screen *What do you want to do* and click on *Search the Literature*, locate *Restrict Search to* and then select *AMI*, click on *Search* and then scroll to article of interest.

Frequently Asked Questions – (FAQs)

FAQs often reflect the insights and concerns of hospital staff involved in clinical care and data collection. Aside from answering your specific questions, reviewing *FAQs* is an important educational tool for novice & expert.

Periodically, CMS updates the Medqic web site design and layout. Topic choices have now been expanded to include – interventions or measures. Therefore, search using both options.

Access: <http://www.medqic.org/>, on bottom right side menu bar click on *FAQs*, select topic, either *Hospital-AMI Measures or Hospital-AMI Interventions*, enter your *keyword*. Use of different “key words” (aspirin, discharge, contraindications, documentation) will increase your returns (with some duplication).