

**Beta Blockers at Arrival for AMI –
Achieving the Standard of Care
Tools and Resources for Hospital Performance Measurement
Improvement Activities**

Second in a series of targeted quality improvement articles.

June 04, 2004

Revised and Updated February 20, 2006

Illinois Hospital Association

Beta Blockers at Arrival for AMI – Achieving the Standard of Care Tools and Resources for Hospital Performance Measurement Improvement Activities

Achieving the Highest Standard of Care

Beta Blockers at Arrival (AMI-6) examines the administration of beta blockers at hospital arrival for patients experiencing an Acute Myocardial Infarction (AMI). Illinois Hospital Association (IHA) Comparative Performance Measurement Initiative shows Illinois hospitals in the 2nd quarter of 2005 achieved 90.9% 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 84% compliance with AMI-6 measure for all reporting hospitals in the USA. The goal for all Illinois hospitals is to reach and maintain **100% compliance** with all the National Quality Performance Measurements.

Beta Blockers at Arrival Measurement Description

Evidence-based practice has demonstrated that giving beta blockers to patients during the early stages of an AMI reduces the magnitude of the infarction and associated complications and also reduces the rate of re-infarction. This results in less patient morbidity and mortality. Beta blockers reduce the oxygen demand of the heart or myocardium by “blocking the effect of specific impulses on the heart” that then lead to a decrease in heart rate and force of heart contractions.

Calculating the Measure’s Performance. Beta blocker at arrival is reported as a percent, based on:

- Numerator includes AMI patients who received beta blockers within 24 hours after hospital arrival.
- Denominator includes AMI patients without beta blocker contraindications.
- Eligible patients have the Principle Diagnosis code of 410.1xx, with the exception of a few documented exclusions such as age, admission source, and discharge status.

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*.

Differences in Measures – At Arrival

While AMI has two measurements focused on drug administration at arrival, there are differences in the measurements applied to beta blockers and aspirin at arrival, such as:

1. Measurement time of beta blockers is 24 hours after hospital arrival compared to aspirin that is 24 hours before or after hospital arrival.
2. Administering beta blockers requires a more complex decision-making process than aspirin due to the contraindications of beta blockers and other clinical factors. Therefore, although it maybe considered at arrival in the emergency area, the final decision to treat may be made after the patient arrives on the inpatient unit.

Successful Quality Improvement and Compliance Experiences Shared by Illinois Hospitals

The experiences and successes for achieving compliance with *Beta Blockers at Arrival* 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:

- use of clinical guidelines, development and use of standing orders
- use of admission packets – bundling relevant “care” forms and documents
- staff education – ongoing, involving a wide variety of staff
- physician involvement and support; physician-nurse collaboration
- ongoing monitoring and reporting, area and individual accountability

The FHN Memorial Hospital Experience

FHN Memorial Hospital located in Freeport, Illinois is designated as a “small and rural” hospital. Sandy Hein, Vice President, Performance Excellence relates a process that has led to improvement and sustaining high performance. “FHN staff worked to develop clinical guidelines for patients experiencing a heart attack. When these patients present to the emergency area, the admission packet contains a physician order sheet, based on the guidelines, that includes orders for aspirin and beta-blockers,” states Hein. FHN uses a contracted physician group in the emergency area. “Standardization through guidelines and pre-printed orders allows us to be in better compliance with this group,” Hein states.

Other important components to FHN Memorial Hospital’s continued success is education and continued monitoring. “We have educated the physicians on the guidelines and standing orders,” Hein relates, “and we share the data with the physicians to show them their performance.” Beth Gale, Director Health Management is key in the monitoring effort and reporting the data. “Every indicator gets reported at every physician meeting. Indicator performance is reported back to individual physicians, the Emergency area, and the clinical directors. We keep educating staff... with constant feedback and strokes for those doing a good job,” says Gale. Reporting and feedback is done on a timely basis so physicians and others have data to evaluate and act on.

When asked to comment on why the compliance rate for beta blockers at admission may be less than the compliance rate for aspirin at admission, Gale relates, “sometimes emergency physicians for a variety of clinical reasons may not order beta blockers at the time of admission in the emergency area. It may be up to the physician on the admitting unit to re-evaluate this again”. As compliance for aspirin and beta blockers has a 24 hour window upon admission, this affords staff in different areas to monitor care practices and improve actions and outcomes along the continuum of care.

Contact: Sandy Hein, Vice President, Performance Excellence at shein@fhn.org.

The OSF Saint Francis Medical Center Experience

OSF Saint Francis Medical Center, located in Peoria Illinois, is one of the largest Catholic hospitals in the United States. One strategy for success, relates Karen Saunders, RN, Manager Cardiac Quality Improvement, was the development of “admission packets” appropriate to the patient’s condition. “Each admission packet contains the important resources for that patient’s stay: admission order sheet, a management strategy document, a discharge order sheet, and nursing discharge summary sheet.” These have been designed to reflect all of the core measure process indicators and serve as a reminder of what needs to be accomplished and what is to be expected throughout the continuum of care.

“The management strategy document is a discussion of AMI patients and includes care elements and treatment strategies. It provides information and serves as an educational tool also.” Constant education and communication are essential tools in the OSF Saint Francis Medical Center strategy. “We have all staff members involved from the bed coordinator that places the admission packet in the medical record to the physician managing the patient’s care.”

Another factor contributing to their success is that most of these patients are seen by Cardiologists who are very familiar and have been on board with the evidence-based medicine that is the foundation of the AMI core measure set. OSF Saint Francis Medical Center staff members are focused on success as exemplified by Karen’s declaration, “Our goal is 100% compliance with the core measure process standards and we are not satisfied with anything less than that.” Contact: Karen Saunders, RN, Manager Cardiac Quality Improvement at karen.a.saunders@osfhealthcare.org.

The Advocate Bethany Hospital Experience

Advocate Bethany Hospital is a 150-bed acute care hospital located on Chicago’s Westside. Jacqueline Waldon, Quality Management Specialist speaks to Advocate Bethany Hospital’s success in beta- blocker compliance and to all the core measurements, “Advocate Bethany Hospital believes in a multi-disciplinary approach to improving quality and used this approach to gain consistent improvements in the core measurements.

Education and involvement are important.” Jackie Waldon is a part of the team involved in collection of data, presentation of the data to attending physicians and other health care

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providers and developing systems to insure compliance. Reporting is an essential aspect of being successful. “It is important to let people know what we are monitoring. We summarize the data, display it and share it with staff, nurses, individual physicians and service areas. We want staff to understand how this all ties in with their roles and recognize all those who contribute to the success.” “We provide educational seminars, set up CMEs using physician champions, create ‘peer forums’ for discussion, and bring physicians with nurses together to learn.” Contact: Jacqueline Waldon, Quality Management Analyst at jacqueline.waldon@advocatehealth.com.

The Carle Foundation Hospital Experience

Carle Foundation Hospital located in Urbana Illinois relates a track record of performance with the AMI population. “Participating in the AMI Project National Registry of Myocardial Infarction, we had our focus toward the AMI patients before the Core Measures came about,” states Monica Ray, Manager Foundation Quality.

Carle Foundation Hospital put in place guidelines for the AMI patient based on the American College of Cardiologists (ACC). From the guidelines, printed order sheets address all the initial steps to be taken when patients are admitted. The order sheets are distributed throughout the hospital, to all inpatient units and to the satellite outpatient clinics too.

“Working with a closed group of cardiologists has been key to Carle Foundation Hospital’s success,” states Ray. “These cardiologists practice in similar manner and there is cross-coverage among physicians, everyone is familiar with the practice guidelines. In addition, the Hospitalist group also is able to utilize the guidelines and printed orders which help standardize the care.”

Ray stressed the importance of reporting the data. “We feedback the data to them, data is reported at physician’s monthly quality review meetings. We utilize a peer review process and have an oversight committee that routinely reviews the data and ensures further analysis and interventions are initiated as needed. Core measurement data is graphed out and shared with the staff. It is a lot of repetition, giving the physicians and staff feedback, giving them the tools, and standardizing what needs to be done. Lastly, having a physician champion and a process to follow through with implementing change is key.” Contact: Monica Ray, Manager Foundation Quality at monica.ray@carle.com

The Kewanee Hospital Experience

Kewanee Hospital located in Kewanee Illinois is a small and rural hospital and is also designated as a critical access hospital (CAH), defined as hospital with no more than a combination of 25 acute and swing bed patients. Shellie Adkison-Hilgendorf, Executive Director of Inpatient Services relates, “Our improvement with beta blockers was not the result of anything fancy, but simple continuous interventions, trial and error, we continually improved with the different things we have done.”

Standing orders and a care path were instituted a long time ago. The care path has been revised into management guidelines to increase nursing staff compliance. Also, nurses

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collaborate with physicians to increase the visibility of the AMI standing orders. “When nurses are pulling the orders and making them available to physicians, that improve the compliance,” reports Hilgendorf. Kewanee Hospital has also tried placing the standing orders forms in a location that is more visible to physicians.

After physicians write the orders, nurses transcribe the orders into the computerized information system. “The system is really user friendly,” states Hilgendorf, “and the screen set-ups match the standing order sheets.” Reporting is an integral part of their approach to improve compliance. Performance results are reported to the medical staff and the Board of Directors every six months and quarterly to CCU/CPS and ER committees. Contact: Shellie Adkison-Hilgendorf, Executive Director of Inpatient Services at shilgendorf@kewaneehospital.com.

Beta Blockers at Arrival for AMI Web Based Resources

See Appendix I. for additional web based resources for beta blocker at arrival.

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. Beta Blockers at Arrival for AMI Web Based Resources

Medical Quality Improvement Community (MedQIC) and the American Heart Association (AHA)

This document outlines web resources for beta blockers at arrival for AMI. To access these resources, click on or enter the web address and follow the additional steps. Other relevant web based resources are described in previous AMI articles in this series.

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 are listed at the above address. Access at: <http://www.medqic.org/>, in the center locate What do you want to do? Click on *Browse by Topic* then click on Acute Myocardial Infarction.

Clinical Guidelines. The American Heart Association (AHA) is a second comprehensive web resource of Scientific Statements and Practice Guidelines Topics. Access at: <http://www.americanheart.org>, in the left menu bar select *Publications* then in the left menu bar select *Scientific Publications*. In upper right, see *Related Links* for:

- Fact Sheet: Beta Blockers for Acute Myocardial Infarction, April 27, 2005
- ACC/AHA/AHRQ/CMS/JCAHO Practice Advisory, April 27, 2005: Commitment to Respond to COMMIT/CCS-2 Trial Results Beta Blocker Use for Myocardial Infarction within 24 Hours of Hospital Arrival.

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-SCIP Measures* or *Hospital-SCIP Interventions*, enter your *keyword*. Use of different “key words” (beta blockers, arrival, arrival time, timing, contraindications, documentation) will increase your returns (with some duplication).