Meeting the Joint Commission Standard for Anticoagulation Management in a Community Hospital Setting

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IDENTIFICATION:
The Joint Commission’s National Patient Safety Goals (NPSG) are intended to promote specific improvements in patient safety. NPSG Goal 3E, Anticoagulation Therapy: “Reduce the likelihood of patient harm associated with the use of anticoagulation therapy” requires that all hospital inpatients receiving anticoagulation be assessed, managed and monitored daily for appropriate anticoagulation therapy. In response to this patient safety goal, a pharmacy managed warfarin protocol was developed to improve anticoagulation therapy and compliance with the goal for inpatients at a community hospital. This project was designed to demonstrate the efficacy and effectiveness of a pharmacy managed protocol as compared to one managed by the prescriber.

PROCESS:
To standardize the management of anticoagulation therapy, standard warfarin (Coumadin) order sets and a warfarin pharmacy dosing record were developed and approved by the Pharmacy and Therapeutics Committee and the Medical Staff. Inpatients requiring anticoagulation are enrolled in the pharmacy-managed protocol once the prescriber completes the standardized order. Physicians deemed experts in their field (i.e. oncologists, cardiologists) could continue to manage their patients on a physician monitoring protocol. Once the pharmacy protocol was initiated, patients INR’s were monitored and warfarin doses were adjusted according to INR results based on the standard protocol. Pharmacists took part in an education and training program and were required to complete a competency prior to assuming responsibility for managing patients on the protocol. Nursing and Medical Staff received education and training on the NPSG requirements and “best practice” implementation measures. During the course of therapy, those patients enrolled in the pharmacy managed protocol received education regarding their anticoagulation therapy from the pharmacist. All INR results and warfarin doses were documented daily on a physician order form and the warfarin dosing record both of which were placed in the patient medical record. Data was collected for both the pharmacy managed protocol and the physician monitoring protocol from August 2008 through April 2009. Additionally, widespread communication via emails, newsletters, posters, and pharmacy initiated telephone calls to medical staff provided awareness of the NPSG and promoted the utilization of the pharmacy managed protocol.
**SOLUTION:**

Records on 1278 patients receiving anticoagulation between August 2008 and April 2009 were reviewed-999 patients were enrolled in the pharmacy-managed protocol and the remaining 279 were in the physician monitoring protocol. Utilization of the pharmacy managed protocol increased from 50% in August 2008 to 95% in April of 2009. The percent of patients discharged with an INR that was lower than the therapeutic range was comparable to those patients discharged on the physician managed monitoring protocol- approximately 65% for both patient populations. The average length of stay in the hospital was ~ 4.2 days which is a limitation for getting patients within a therapeutic range.

**OUTCOMES:**

There was no demonstrated difference between patients managed on either warfarin protocol during the study period. The protocol has been received well by the medical staff and compliance with the pharmacy-managed protocol has increase to 95% compliance based on the patient outcomes.
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Objectives
- Promote specific improvement in patient safety as related to NPSG Goal 03.05.01, Anticoagulation Therapy
- Establish a process for anticoagulant to be assessed, managed and monitored daily for appropriate anticoagulation therapy
- Demonstrate the efficacy and effectiveness of the Pharmacy managed protocol as compared to the one managed by the prescriber.

Methods
- Developed Standard warfarin (Coumadin) order sets and a warfarin pharmacy dosing record approved by the Pharmacy and Therapeutic committee and Medical Staff.
- Prescriber completes the standardized order sheet initiating the patient into the Pharmacy driven protocol.
- Patients INR monitored daily and warfarin dosed.
- Doses adjusted according to INR results based on the standard warfarin protocol.
- Pharmacists participated in education and training program and were required to complete a competency prior to assuming responsibility of patients on protocol.
- Nursing and Medical Staff received education and training on the NPSG requirements and best practice implementation measures.
- Patients enrolled in the Pharmacy managed protocol received education regarding their anticoagulation therapy from the pharmacist.
- INR results and warfarin results were documented daily on the physician order form and warfarin dosing record both placed in the patient’s medical record.
- Data collected for both Pharmacy driven and physician monitoring protocol from August 2008 – August 2009.
- Physician deemed experts in their fields (i.e. Oncological & Cardiologist) could continue to manage their patients on a physician monitoring protocol.

Results
- Records on 2007 patients receiving anticoagulant between August 2008 – August 2009 were reviewed - 1711 patients enrolled in the Pharmacy driven protocol and the remaining in the physician driven protocol.
- Utilization of Pharmacy managed protocol increased from 60% in August 2008 to 67.2% in August 2009.
- The percent of patients discharged with an INR that was lower than the therapeutic range was comparable.
- Length of Stay average was 4.2 days which limits the ability of patients to reach the therapeutic level prior to discharge.

Conclusion
- No demonstrated difference between patients managed on pharmacy driven protocol vs. physician driven protocol.
- As physician confidence grew, increased usage of Pharmacy driven protocol resulted.

Disclaimer
Authors of this presentation have the following to disclose concerning possible financial or personal relationships with commercial entities that may have a direct or indirect interest in the subject matter of this presentation:
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