

Impact of Patient Self Testing on Time in Therapeutic Range

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Background/Significance: Oral anticoagulation therapy with warfarin is used to prevent or treat thromboembolism. Due to its narrow therapeutic index and potential interactions, maintaining a therapeutic International Normalized Ratio (INR) and maximizing Time in Therapeutic Range (TTR) can be challenging for patients and staff. After reviewing previous studies and listening to patients who were interested, Anticoagulation Management Service (AMS) developed a program utilizing Patient Self Testing (PST) devices as a means to improve TTR.

Objectives: Determine if PST improved time in therapeutic range.

Implementation: Once AMS primary nurses determine patient eligibility, a referral is completed and sent to the physician for signature. AMS sends the PST order to a collaborating Independent Diagnostic Testing Facility (IDTF). The IDTF trains each patient on the device. Once the patient is self testing, the IDTF faxes INR results to AMS and warfarin dosages are adjusted accordingly. Patients are encouraged to test at weekly intervals.

Performance Improvement Outcome: Using an INR range of 2 – 3, 121 self testing patients were identified in December 2010. Atrial fibrillation was the most common diagnosis, followed by venous thromboembolic disease. The mean age was 68.9 years. INR dates ranged from 2007 – 2010. TTR was analyzed comparing INR response before and after PST was initiated for each patient. TTR significantly improved after the onset of PST (median 72.9% v. 77.6%, $p < 0.001$). Since the length of follow-up was different between pre and post periods, the number of INRs every 30 days and intervals between tests were calculated. These variables were also significantly different after the onset of PST (both with $p < 0.0001$).

Implications for Nursing Practice, Research, Policy, and/or Education: PST is a beneficial technique to improve TTR and holds promising implications for many patients. Further studies are needed to identify which patients may benefit the most from PST and how to maximize patient satisfaction. In addition, future research should explore the feasibility of PST with patient self-adjustment of warfarin dosages.

Increasing Seasonal Flu Vaccination Rates at 900+ Bed Teaching Hospital

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Background/Significance: Vaccination against influenza annually is widely recognized as the most effective means of preventing influenza infection. Despite the recognized value of influenza vaccination, many healthcare workers are reluctant to be vaccinated against influenza or for a number of reasons fail to do so. Nationally, only 65% of all healthcare workers are vaccinated against influenza each year despite access to vaccination.

Objectives: The primary objectives were to increase vaccine rates among healthcare workers and to reduce the transmission of influenza from unvaccinated healthcare workers to patients.

Implementation: The primary strategies included: a centrally located and visible employee flu vaccine clinic held over a one week period, use of peer vaccinators who were trained as 'flu champions' in patient care areas so that clinical staff could vaccinate one another, and walk-in visits to the Occupational Health Service.

In addition, the hospital implemented a 'mask policy' that requires unvaccinated employees and staff to wear a surgical mask, when providing care to an inpatient or working in his/her room' or when providing care in the outpatient setting in an enclosed room or within 3-6 feet of a patient. Employees and staff required to wear a mask are identifiable to managers as they were not provided with a sticker for their badge as vaccinated employees and staff were.

Performance Improvement Outcome: For the 2010-2011 influenza season, Massachusetts General Hospital was able to attain an employee influenza vaccination rate greater than 80% and a rate among employees and staff considered to be direct care providers approximately 90%.

Implications for Nursing Practice, Research, Policy, and/or Education: Evidence shows that the high seasonal flu vaccine rates among healthcare workers decreases absenteeism. More importantly, high vaccine rates will also help reduce the morbidity and mortality of hospitalized patients.