Refining Nursing Symptom-driven Guidelines for Laboratory Test Ordering

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Introduction

Recent reports suggest that up to 30% of medical interventions provide no benefit to patients. In a response to ED over-crowding, guidelines commonly exist to guide blood test ordering in patients waiting to see a physician. In many cases, this increases the use of tests without benefitting patients. We describe a quality improvement project designed to reduce the number of laboratory tests considered 'routine' for waiting patients.

Methods

A multidisciplinary group reviewed existing symptom prompted nursing blood test guidelines for serum electrolytes and glucose, renal function tests, liver tests, lipase, toxicological tests and beta Human Chorionic gonadotrophin levels. Order sets were revised with tests eliminated from the 'routine' panels that were not felt to 'routinely' contribute to patient care. The new guidelines were communicated to nursing staff in a series of educational sessions, and the revised guidelines were posted at nursing stations. Physician ordering practice was not changed. A pre-post evaluation compared the period 1 December 2014, - 30 November 2015 with 1 December 2015 - 30 November 2016. Although clinical outcomes and patient wait times were not evaluated.

Results

The use of tests in these categories decreased 32% between the two periods, at a net saving of $210,246c. The largest savings came from total protein (73% decrease), Creatine kinase (68%), chloride (64%), glucose (49%), and albumin (47%). Sodium/Potassium testing decreased by only 13%. The only increase in test ordering recorded was AST (3% increase).

Conclusion

Simply changing symptom driven order sets resulted in significant savings to the system. In the era of 'Choosing wisely' regular review of lab order sets is indicated. Further study is needed to assess the effect of these changes on patient flow and on clinical outcome.