Effect of Implementation of a Whole Blood Point of Care Device on After Hours Call Backs at a Rural Hospital.
Amid Abdullah1,2, Carol Boechler3, Dianne King3, Tracy Guttridge3, and Christopher Naugler1,2

1 Calgary Laboratory Services, 2 Department of Pathology and Laboratory Medicine, University of Calgary, Calgary, AB, Canada, 3 Alberta Health Services, Calgary, Alberta

Summary

Many small hospitals, especially in rural areas do not have resources to maintain 24 hour on site laboratory staff. This situation is often handled through after hours "call-backs" of laboratory technicians. However this may be associated with significantly increased manpower costs. In an attempt to manage these costs in a small rural hospital, we instituted a point of care device (i-STAT, Abbott Laboratories, Abbott Park, IL USA) to measure commonly ordered analytes. The institution of the i-STAT reduced after hours technologist call backs by a third and is expected to resulted in net cost savings for this small laboratory of approximately $55,500 CDN per year.

Introduction

Point of care testing (POCT) can be defined as medical testing at or near the site of patient care. The main advantages of POCT are convenience of testing and immediacy of results. Cost savings are not a usual expectation of POCT. In fact, use of POCT may be several times more expensive in terms of consumables than traditional laboratory testing. However, this cost must also be balanced against potential savings in human resources costs.

Here we present the results of an implementation of the i-STAT POCT device in a small rural laboratory. In the 12 months leading up to this trial, technologists at this laboratory were called back after hours for stat testing requests approximately 60 times per month. Because of union regulations, each call back was remunerated at a minimum of three hours double time wages, amounting to $227.64 CDN per call back. Emergency room nursing staff were trained by laboratory staff on how to use the i-STAT1 and laboratory technologists were called back only to perform testing not available on the i-STAT. No specific attempt was made to discourage technologist call backs. This device has previously been shown to reduce costs in other settings2, although quality assurance must be rigorously maintained as discrepant results have been reported in some settings2,3.

Methods

All tests performed with the i-STAT from the introduction date (October 15th 2010) until 01 March 2011 are included in this evaluation. Detailed cost estimates of i-STAT consumables were recorded for the first two months of use and extrapolated to estimate yearly costs.

Following the introduction of the i-STAT point of care device, there was an immediate and sustained reduction in technologist call backs of approximately 33%.

Results

Cost savings realized in first two months and extrapolated yearly savings.

Conflict of Interest Statement

The authors declare no conflicts of interest with regards to this work.

References