

Improving Productivity: Lean Six Sigma & DAWN AC

KAISER PERMANENTE, COLORADO, USA

“Lean thinking begins with driving out waste so that all work adds value and serves the patients needs”

RESULTS

Using Lean Six Sigma and DAWN AC, CPAS were able to improve productivity, making the following estimated savings, to enable time to be spent on more relevant patient care activities.

410 Hours/51 Days

Annual estimated CPAS provider time freed up through the routine CBC monitoring project

145 Hours/18 Days

Estimated time saved annually from choosing letters rather than phone calls for communicating ‘in range’ INR results to patients

1,594 Hours/213 Days

Annual estimated time saved by eliminating the requirement for double documentation across 15 pharmacists

Introduction

The Kaiser Permanente Clinical Pharmacy Anticoagulation Service (CPAS) decided to use Lean Six Sigma techniques to improve productivity and expand services for its members. In the context of managing anticoagulation therapy, Lean is a practice that considers the expenditure of resources for any other goal other than the creation of value for the patient, to be wasteful and thus a target for elimination. Six Sigma encompasses the design, improvement and management of patient care processes.

Improving Productivity: Lean Six Sigma & DAWN AC

The first project involved an assessment and evaluation of the practice of routine monitoring of complete blood counts (CBC) in all patients.

A study conducted at CPAS found that routine CBC monitoring was clinically unnecessary for low risk anticoagulant patients and therefore was not adding value to patient care. A Lean Six Sigma project revealed that on average, CPAS staff spend approximately 2 minutes (128 seconds) processing a CBC reminder for one patient.

Based on the result of applying the Lean process, a decision was made to stop routine CBC monitoring for all patients except those with mechanical heart valves and a process was developed in DAWN AC to automatically identify patients who no longer needed monitoring and convert annual CBC monitoring reminders to ‘complete’. Provider time freed up through this project was 410 hours annually.

A second project was then carried out to assess and evaluate the practice of double documentation in DAWN AC and the Electronic Medical Record (EMR).

CPAS staff copied patient encounter information from DAWN AC directly into the EMR. An interface between DAWN AC and the EMR will eliminate double documentation, saving an estimated 213 days per year across 15 pharmacists.

During the project, it was also noted that some CPAS providers prefer to communicate ‘in range’ INR results via letter rather than contacting the patient by phone. The average time for telephone communication was 86 seconds versus 18 seconds when communication is by letter.

An estimated 145 hours can be freed by communicating ‘in range’ results to all patients by letter with time being spent on more relevant patient care activities.

Improving Efficiency: DAWN AC Reports

Generating reports in DAN AX can provide a wealth of information about the current processes employed in an anticoagulation service and options for monitoring and implementing improvements.

The following reports are used at the CPAS in Denver to determine what changes can be made to improve our daily work processes.

Volume of Work by Clinic and Pharmacist

This information is also used to show trends regarding the performance of each pharmacist on a monthly basis. This type of reporting now provides a way to follow trends regarding workload and provide the documentation needed for adding additional staff.

Number of DNA/Dosing Letters Report

To help review our current process for sending letters, reports were developed to provide the number of dosing and DNA letters that were printed over a specific time range. Results from the last 2 years of data have shown out total number of dosing/DNA letters have decreased even when our time in range and total number of DNAs have remained consistent. We are currently in the process of determining the reason for this decrease.

Number of Procedures Report

To help determine the number of procedures provided by our service, the staff were asked to document the type of procedure in the Procedures Tab in DAWN AC. A report was then generated to provide the number of procedures that were developed within a specific time frame, the type of procedure, and the date of each procedure. We have used this information during coaching sessions with staff and have started the process of implementing a standard procedure plan for our Colonoscopy bridge therapy plans.

Aspirin Reminders Report

The CPAS has implemented a reminder in DAWN AC to alert the staff when the patient needs to be asked if they are still on aspirin. The dose of ASA (or lack of ASA use) is then documented in the drug interaction field in DAWN AC.

DAWN AC reports provide an avenue for extracting useful information about your anticoagulation service. The information in these reports can be used in a number of ways to provide necessary information to improve daily work processes or documentation needed for additional staff.

For further information contact the 4S DAWN team on [015395 63091](tel:01539563091), or email sales@4s-dawn.com

Established in 1984, 4S DAWN Clinical Software are trusted by over 300 healthcare organisations across the world to deliver reliable, disease specific solutions that increase patient safety, facilitate productivity gains and improve quality of care.

