

## CASE STUDY: ST. THOMAS ELGIN GENERAL HOSPITAL

*Achieving the Impossible 7.0 Hours Wait Time at 90th Percentile for Admitted Patients*

### EXECUTIVE SUMMARY

## Executive Summary

St. Thomas Elgin General Hospital (STEGH) is the top hospital performer in Ontario for emergency department (ED) wait times. This community hospital's best performing metrics within the South West Local Health Integration Network (LHIN) and Ontario include:

- ED Length of Stay for admitted patients
- ED Length of Stay for non-admitted low-acuity patients
- ED time to an inpatient bed for admitted patients
- ED Length of Stay for non-admitted complex patients

STEGH was previously acknowledged in the Ontario Quality Health Monitor 2011 as a success story with relative Alternative Level of Care (ALC) improvement over 50%. One of the key drivers noted for this success is the:

*"...implementation of Medworxx Clinical Criteria, which monitors each patient daily to evaluate the level of care requirements (acute care, rehabilitation, complex care, or home independently or with community supports)..."*

*as well as "using a bed optimization system or electronic bed board to obtain real-time data on bed availability throughout the organization."*

Leaders at STEGH tackle the challenge of patient flow across the hospital with the Medworxx Patient Flow solution. Today, attention to patient flow at STEGH cascades from the front-line staff to the Board. This focus is enhanced through the organization's adoption of Lean systems of operation and leadership, as the hospital goes through an ongoing process of strategic transformation.

*It's through Medworxx Patient Flow that we can manage, and have a system that manages, patient flow. If we don't put it in the broader context, then we're not leveraging the data we're collecting. Simultaneously, Medworxx is about every patient, every day."*

- Paul Collins, CEO, STEGH

# Patient Flow Success

With the implementation of Medworxx Patient Flow and the support of KM&T Lean Evolutions, STEGH has been able to gain greater depth and breadth of indicators and measures. “Medworxx status indicators and clinical criteria map directly into quality and safety measures for hospitals – meaning the range of data comprehensively reflects the patient flow system as a whole.” says Collins.

In 24 months, STEGH...

- Reduced time to in patient bed from 6.2 hours to 1.4 hours
- Reduced ED Admitted Length of Stay (LOS) from 12 hours to 7 hours
- Reduced ED Non-Admitted Complex LOS from 5.3 hours to 4.9 hours
- Reduced ED Non-Admitted minor LOS from 3.8 hours to 2.8 hours
- Reduced ED Physician Initial Assessment (PIA) time from 2.9 hours to 2.3 hours
- Reduced ALC patients from 26% to 13% (designation of ALC to LTC from 38 patients to 2 patients)

**2013 PLATINUM LEVEL HEALTHCARE  
 WORKPLACE QUALITY AWARD  
 RECIPIENT FROM THE ONTARIO HOSPITAL  
 ASSOCIATION AND MINISTRY OF HEALTH  
 AND LONG TERM CARE**

This award is presented to hospitals who demonstrate practices consistent with best practices for achieve a quality workplace environment STEGH has won this award for four consecutive years.

## ABOUT STEGH

STEGH is a medium-sized community hospital servicing the city of St. Thomas and all eight municipalities within Elgin County.

The hospital has 171 beds and 860 staff (including 70 physicians). There are 7,000 admissions, more than 8,000 surgeries performed and 47,000 visits to emergency each year and growing.

## The Challenge

The story of STEGH’s patient flow solution is the story of first the creation and subsequent adoption of what became the Medworxx Patient Flow solution encompassing Clinical Criteria, Bed Management, and Forms & Assessments modules.

In Ontario, the Ministry of Health had changed its historic budgeting pattern in the early 1990’s, motivating hospitals to begin to focus on management of their bed utilization through reduced length of stay. STEGH did not want to just reduce utilization at the expense of care quality or reduce hospital beds arbitrarily: they wanted to improve utilization of their beds using a quality improvement approach that could support bed reductions if necessary, and ultimately better manage existing resources.

# The Approach

Using the Medworxx Patient Flow allows STEGH to engage front-line staff, relieve pressure from the ED, increase hospital bed management visibility, and smooth patient flow for organization-wide change.

## EMBEDDING PATIENT FLOW ON THE FRONT LINES

Front-line nurses enter data into Medworxx Clinical Criteria for every patient, every day, ensuring that the appropriate level of care for each patient is assessed. Jen Hilt, Clinical Informatics Specialist at STEGH noted that proper, ongoing training of front-line nurses (both RNs and RPNs) on how to correctly enter and interpret the data was critical.

Medworxx Patient Flow identifies care plan needs and patients' status, as well as pending discharges. The Medworxx Bed Management module is also used by housekeeping staff, making it the first time that housekeeping became part of the patient flow journey, along with nurses and all the other ancillary departments at STEGH. Moreover, communication is two-way: housekeeping can provide feedback as to whether a bed is cleaned, on hold, or not cleaned, and this information is stored in Medworxx Bed Management, optimizing the flow of beds.

Medworxx Bed Management combined with Medworxx Clinical Criteria is a powerhouse duo, and provides STEGH with a 360 degree picture of their patient flow processes. Hilt says: "With Medworxx Bed Management, STEGH is now able to utilize data as well as add functionality that is not captured in any electronic solution we're currently generating, thereby increasing transparency, and reducing silos of information."

## EASING STRESS ON THE ED

Through the use of Medworxx Patient Flow, staff are able to understand, on a daily basis, the admission pressures from multiple areas within the hospital, especially the ED.



Medworxx Bed Management Graphical View: Provides quick snapshot of a unit.

Registration clerks in the ED pull up the Bed Management Registration List to identify bed availability in the hospital, for the admitting inpatient. Registration clerks have this information at their fingertips, and push patients through, allowing the ED to be the hub of the hospital. Hilt explains how this process allows patient flow to be centralized, "whereas, in the past individual units would have to relay the available beds for that day to the registration clerk, having the ED depend on the inpatient hospital units for this vital information. The ED physicians can also admit patients into the hospital, allowing the ER to truly have control."

## ENHANCING VISIBILITY AND COMMUNICATION

Darcy Read, Sector Director of KM&T, who is working with STEGH to implement Lean initiatives notes, “Medworx Bed Management provides constant visibility of where everyone is in the hospital, and how close they are to discharge- giving everyone a common platform for communication.”

During morning “bullet” rounds, physicians, nurses and all care teams use Medworxx Clinical Criteria reports to discuss discharge barriers and delays to the appropriate levels of care. Meanwhile, daily real- time Medworxx Bed Management reports are emailed to the Senior Leadership and Management Team at STEGH every day at 7AM and 7PM, and available on the intranet hourly to increase transparency and facilitate communication.

## RESPONSE FOR RAPIDLY CHANGING REPORTING NEEDS

STEGH also needed an easy and standardized way to collect and customize electronic forms for improving flow and selected Medworxx Forms & Assessments for their Complex Discharge Screening Tool and Alternative Level of Care (ALC) reporting:

### MEDWORXX ALC AS MODULE

Medworxx ALC Forms & Assessments Module interfaces with the Ontario ALC WTIS, and provides STEGH with a one- stop mechanism for collecting ALC information and complying with this data submission.

### MEDWORXX COMPLEX DISCHARGE SCREENING AS MODULE

With the Complex Discharge Screening Module in Medworxx Forms & Assessments, complex patients were identified and this data was directly tied to Medworxx Clinical Criteria, using this flag to ensure healthcare providers were planning towards discharge from day one.

## ORGANIZATION-WIDE CHANGE

The change that has become entrenched at STEGH has affected not only patients and front-line staff: it has affected significant change across the organization, as administrators and clinicians have found new ways of working together to improve patient flow.

In the beginning, it was all very focused on implementation issues; then, over the long term, committees began to oversee and analyze the data to understand it and proactively act on it where needed. What has changed now is the recognition that this is a leadership accountability that is built into the system- it’s a question of leaders’ performance management.

“I’ll give you one example,” says Collins. “Every Wednesday at one o’clock our management team huddles to review a scorecard of 13 critical indicators measured over the previous seven days, and one of these critical measures is called ‘ready for discharge’ — RFD. We think it’s a very serious measure, because it looks at how many of our patients in the previous seven days, evaluated according to the Medworxx criteria, were identified as ready for discharge, but were not discharged. The team monitors the RFD data for changes as well as the other 12 related quality and safety measures. This process is quite different than in years past, where that information surfaced more anecdotally and less systematically than it does now, and there wasn’t a standardized or measured way to deal with it. And now, of course, we hold all of our leaders accountable for these measures.” Collins also notes that the RFD measure is one of eight measures on the STEGH Board scorecard reviewed monthly.

# Go Lean

STEGH has a three-year partnership with KM&T Lean Evolutions Ltd, the North American office of an international consultancy with global clients, to help implement Lean approaches to streamlining operations across the organization.

Darcy Read, Sector Director of KM&T, explains 2 key benefits with Medworxx Patient Flow:

- **Discharge Planning:** With Medworxx Clinical Criteria, healthcare providers are able to see who needs to be discharged and when, accordingly to their appropriate level of care, allowing for efficient capacity/demand management.
- **Real-Time Data:** Evidence is critical in Lean transformation, and the daily availability of accurate, patient-related data in the Medworxx Patient Flow provides powerful real-time evidence used to support decision-making.

## NOTABLE PATIENT FLOW INITIATIVES:

- KM&T worked with STEGH to build STEGH's Transforming Care Office; it is the central control/facilitation point for organizational transformation and improvement activities.
- Proactive capacity/demand management is now the focus at daily bed meetings. Additionally, utilization of the Medworxx Bed Management expanded to involve the introduction of a new "active" rather than "passive" bed management methodology, leveraging predictive and actual discharge activities based on Estimated Date of Discharge (EDD).
- Outside of the ED, STEGH enhanced existing Bullet Rounds by introducing the use of Estimated Date of Discharge (EDD) instead of Estimated Length of Stay (ELOS) as the basis of discharge planning in Medworxx Clinical Criteria.

\*All product references to Clinical Criteria, Bed Management and Forms & Assessments were inserted into this document on February 26, 2014 to directly replace references to Utilization Management or UM, Bed Board or BB, and Assessments or AS, respectively. This document update was made due to a Medworxx product name change.