With a total of 262 beds, 175 physicians and over 1,200 employees, the Brant Community Healthcare System (BCHS) is a regional system that supports the improvement of health programs and services through two area facilities. Brantford General Hospital is an acute health care centre and the Willett facility provides urgent care and community outreach programs. The general hospital provides specialty programs and services for 120,000+ residents. Its emergency room (ER) handles approximately 47,400 emergency visits per year – an average of 130 visits per day.

Over the last five years, BCHS has invested over $80 million toward system improvements and continue to find new ways to integrate advances in technology, skills and procedures that improve the way health care is provided.

ED PulseCheck is used in the main emergency room facility at Brantford General Hospital.

Demonstrating their stated value of “quality, respect and accountability,” BCHS is a four-time Hamilton-Niagara Top 10 Employer and a Quality Healthcare Workplace Award winner from the Ontario Hospital Association (OHA) and Healthforce Ontario.
Challenges
Before implementing ED PulseCheck, BCHS tracked patient flow through their ER using paper index cards and handwritten notes that were posted on a large wooden tracking board. This system was updated manually and had the potential to slow the progression of care. As they worked to triage and track patients as well as measure door-to-doctor (physician initial assessment or PIA), the ER staff would manually track and capture the milestones as they went, then return cards to the big board.

While the system worked, the hospital wanted to best support Ontario’s province-wide strategy to reduce wait times. They also wanted to gain more control over their data in order to improve services and continue to better serve the community. To meet these goals, they would need the ability to capture and document activity electronically in near real-time.

This meant replacing a hand-written paper-based system; that was familiar to the staff, but fraught with other challenges:

- Hand-written notes or remarks could be difficult to read
- Manual documentation was not readily accessible by all clinicians
- Index cards sometimes got misplaced, leaving tracking activity incomplete
- Reporting was unverified and often unobtainable
- There were limited opportunities to share facility-wide status with staff or patients
- Lack of verified reporting made it impossible to support analysis or benchmarking
- There was a reduced ability to document length of stay (LOS), ambulance offload times or other statistics important to the Local Health Integration Network (LHIN)

BCHS wanted a more streamlined, accurate way to track activity through their ER so they could identify opportunities for greater efficiency, reduce patient wait times and get the most accurate data collected to report to the LHIN.

Selection
BCHS wanted to take on the challenge while keeping their nurses and clinicians happy. With ED PulseCheck’s proven record in achieving physician satisfaction, it made the short list of options that BCHS would consider for their shift from a paper-based system to an electronic one.

Integration was their next consideration. BCHS has used an electronic system throughout the rest of the hospital since 1999 and they sought an ER system that would be compatible. And a clear record of compatibility with the current system became a key indicator that ED PulseCheck would save time and resources through easy integration.

Finally, implementation needed to be prompt with minimal downtime and a well-supported training process. ED PulseCheck leaped ahead and quickly proved they were the right choice. They provided 24/7 implementation and support to BCHS. “Our implementation was very quick,” states Lindsay Schaeffer, ICT Consultant at BCHS. “We focused on tracking and triage. We started in mid-September and went live in early November – it was barely 8 weeks.”

According to a recent report by the Commonwealth Fund, Canada ranks last for emergency room wait times. Additionally, a 2013 health policy survey showed no improvements in wait times since 2004. BCHS recognized that improving triage and admission processes could help ER clinicians deliver more efficient and effective care.
Solutions
The stakeholders of BCHS wanted a solution, but they also wanted a partner to support their effort and provide experienced insights to match their needs. After selecting ED PulseCheck, we worked with BCHS to do their initial needs-identification and has continued to support the hospital as their system has evolved. Jason Alley, Optum’s emergency department technical lead shared that “the process has been seamless. We’ve been in constant contact with BCHS to make sure their needs are our top priority.”

BCHS’s number one priority was to change over from the old tracking board system to an Electronic Medical Record (EMR). “Initially our physicians were concerned the implementation would slow them down, but we replaced the wooden tracking boards with large monitors and it was exciting to see the data in near real-time,” said Schaeffer. “Nurses really love the system and like being able to have a view of doctors’ actions and orders at their fingertips.” Now, in the rare cases when the system is down, a nurse told us, “The reaction is clear. You’ll hear several of the staff saying ‘How are we going to survive without ED PulseCheck.’”

Additionally, ED PulseCheck has provided greater tracking capabilities to staff, providing increased visibility and accurate reporting on a day-to-day basis. This has helped change expectations at BCHS, knowing that they can see exactly what is going on from anywhere. Carrie Wozny, BCHS Value Stream Group Leader, Episodic Care, said, “I love that I can, any time night or day, access ED PulseCheck. I love the transparency and availability of information to everyone in the department. It’s extremely easy to use. Plus, it’s positive to patients because they don’t get lost in the old paper board system.”

Results
Since implementing ED PulseCheck, BCHS has seen notable results ranging from internal efficiency to patient communication as well as more accurate emergency room operations tracking that is being reported internally and to the LHIN. This has impacted three key areas:

1. Improved workflow
   While a few BCHS clinicians grabbed hold of ED PulseCheck more quickly than others did, overall the system has given great visibility to every member of the staff – from the CEO to volunteers – on what is going on in near real-time. From ambulance offloads to patient discharge, they now have the data to work from. This eliminates wasted time and errors found in the previous system, while also providing day-to-day records to examine for additional opportunities to improve workflow across the BCHS emergency room.
2. Patient visibility

An added benefit was providing better patient visibility and satisfaction. Working with both Ed PulseCheck and their website developers, Blueprint Agencies in Paris, Ontario, BCHS displays wait-time related metrics on their website, including the number of patients waiting to see a physician, the average wait time to see a physician, and more:

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Brantford General Hospital

# of Patients waiting to see a physician: 2
Average time to see a physician is: 0 hr 19 min
Longest wait time to see a physician is: 0 hr 40 min
Trend is decreasing.
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This transparency allows the public to set realistic expectations, judge their experience and evaluate the quality of the hospital. Additionally, BCHS staff could provide more accurate and timely information to the patient.

3. Improved data

Data was the most valuable shift caused by ED PulseCheck. PulseCheck worked with BCHS staff to carefully build out reporting methods based around their needs. Working with near real-time and verified data, PulseCheck has helped ER leadership recognize areas of opportunity to advocate for additional resources. BCHS found that accurate, consistent data collection and reporting to the LHIN provides the ability to gain nursing staff and better manage the patient population. They are also able to track key statistics, including door-to-doctor, physician initial assessment, door-to-discharge and length of stay on a regular basis. This can impact their CTAS levels and show areas for improvement.

**Working With Pulsecheck**

During implementation, PulseCheck was at Brantford General Hospital 24/7 to help with training which was an important factor for success. Like all emergency departments, they work three shifts and PulseCheck was available to train each one individually. “It’s a very easy product to use – anyone can do it. We started with a focused goal, but it’s such a powerful program. We have been moving forward, increasing functionality ever since,” says Wozny.

BCHS is continually discovering new ways to use ED PulseCheck to improve their data gathering and PulseCheck is at their side to ensure they get the functionality, the reporting and the system integration they need to increase efficiency, and align hospital resources with patient needs. “Broader visibility into the patient location and open rooms helps the entire hospital. Everyone can benefit from this view into the ER,” notes Wozny.

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**About Harris Pulsecheck Clinical Solutions**

Harris Pulsecheck Clinical Solutions is a global provider of innovative information solutions that enable rapid and sustained delivery of clinical documentation, financial and operational results in the emergency departments, surgical suites and intensive care units of the hospital. Harris PulseCheck Clinical Solutions offers the most advanced suite of integrated products focused on these life-critical areas of the hospital where the patients are the most vulnerable, the care process is the most complex and an increasing majority of hospital costs and potential revenue are concentrated. Headquartered in Wakefield, Massachusetts, Harris PulseCheck Clinical Solutions has licensed systems for use at more than 2000 hospitals in 21 countries.

For more information about Harris PulseCheck Clinical Solutions, visit [www.harrispulsecheck.com](http://www.harrispulsecheck.com)