



TF

Transform

SHARED SERVICE ORGANIZATION

[www.transformssso.ca](http://www.transformssso.ca)

*Leading Innovation. Improving Healthcare.*



# Physician-Led Emergency Department Optimization Dashboard

*Enhancing Efficiencies in the ED and Beyond*

eHealth 2015: Making Connections  
June 1, 2015

Dr. Tony Meriano, Chief Medical Information Officer  
Transform Shared Service Organization





# **T**ransForm SHARED SERVICE ORGANIZATION

- TransForm Shared Service Organization (TransForm) is jointly owned by the five hospitals in the Erie St. Clair LHIN
- TransForm offers information technology/ information management, supply chain services, and through the Transformation Office, project management, quality improvement and, change management support to a wide range of local acute and community healthcare providers.



- Windsor Regional Hospital (WRH) is comprised of two sites – the Ouellette and Metropolitan Campus, making it one of the largest community hospitals in Ontario.
- WRH is the regional provider of numerous advanced care areas such as Complex Trauma, Cardiac Care, Stroke and Neurosurgery, and Cancer.
- Two separate ED – with a total volume of approximately 130,000 visits / year



# WHAT IS THE EXTRA PROGRAM?

**T**ransForm  
SHARED SERVICE ORGANIZATION

- *14 month Extra program for healthcare improvement supports teams of up to four health leaders in the design, implementation and evaluation of an improvement project in their own organization or ministry, or with multi-site teams.*



Canadian Foundation for  
**Healthcare  
Improvement**

*...you will be carrying out an improvement project (IP) designed to actively engage you and your organization(s) in a change strategy supported by evidence. You will be building on your own experience and applying the knowledge and skills from the EXTRA program to issues and real situations in your home organizations in order to integrate and translate learning into practice.*

- EXTRA Program - *Improvement Projects and Coaching Guide*



## ANECDOTE

- Lilly, a 5 year old girl is brought to the ER with an asthma attack on Friday night – she waits 7 hours in a waiting room full of coughing sick patients
- She comes back to the ER five days later and is seen right away treated and discharged



Why is there a difference in her experience?

# WHY IS ONE DAY CHAOTIC AND ANOTHER SO SMOOTH?

- Volume of patients
- Staff productivity
- Bed holds
- Consultant delays
- Complexity of patients
- Sick calls
- ???

The screenshot shows the Windsor Regional Hospital website. The header includes the hospital logo, the slogan "OUTSTANDING CARE - NO EXCEPTIONS!", and a photo of four healthcare professionals. Below the header, there are sections for "Our Vision" and "Our Mission". A navigation menu is visible. The main content area features a "Quick Links" section, a "Patient Testimonial" video, and a "FOR MORE INFORMATION ON The New Single-Site Acute Care Hospital" section. A red circle highlights a yellow box titled "Average length of time since triage for patients still in the Emergency Department". This box lists wait times for two campuses: "Metropolitan Campus" at "4 hrs 6 mins" and "Ouellette Campus" at "4 hrs 26 mins". To the right of this box are buttons for "send an e-greeting", "thank a staff member", "provide Feedback to us", and "donate now".

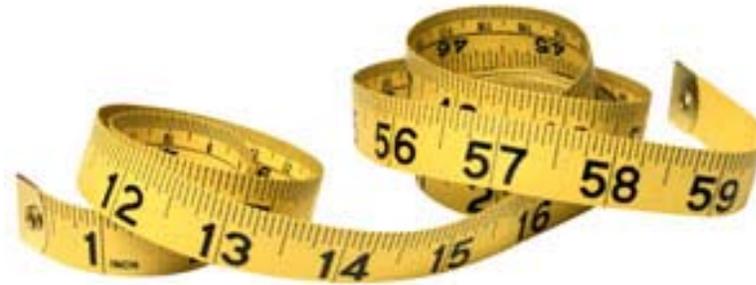


## A STARTING POINT FOR CHANGE

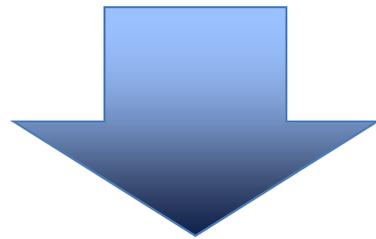


Everyone has an opinion but what variables really impact efficiency and flow in the ER?

Measure first!



## Variation in Emergency Department productivity at Windsor Regional Hospital Ouellette Campus.

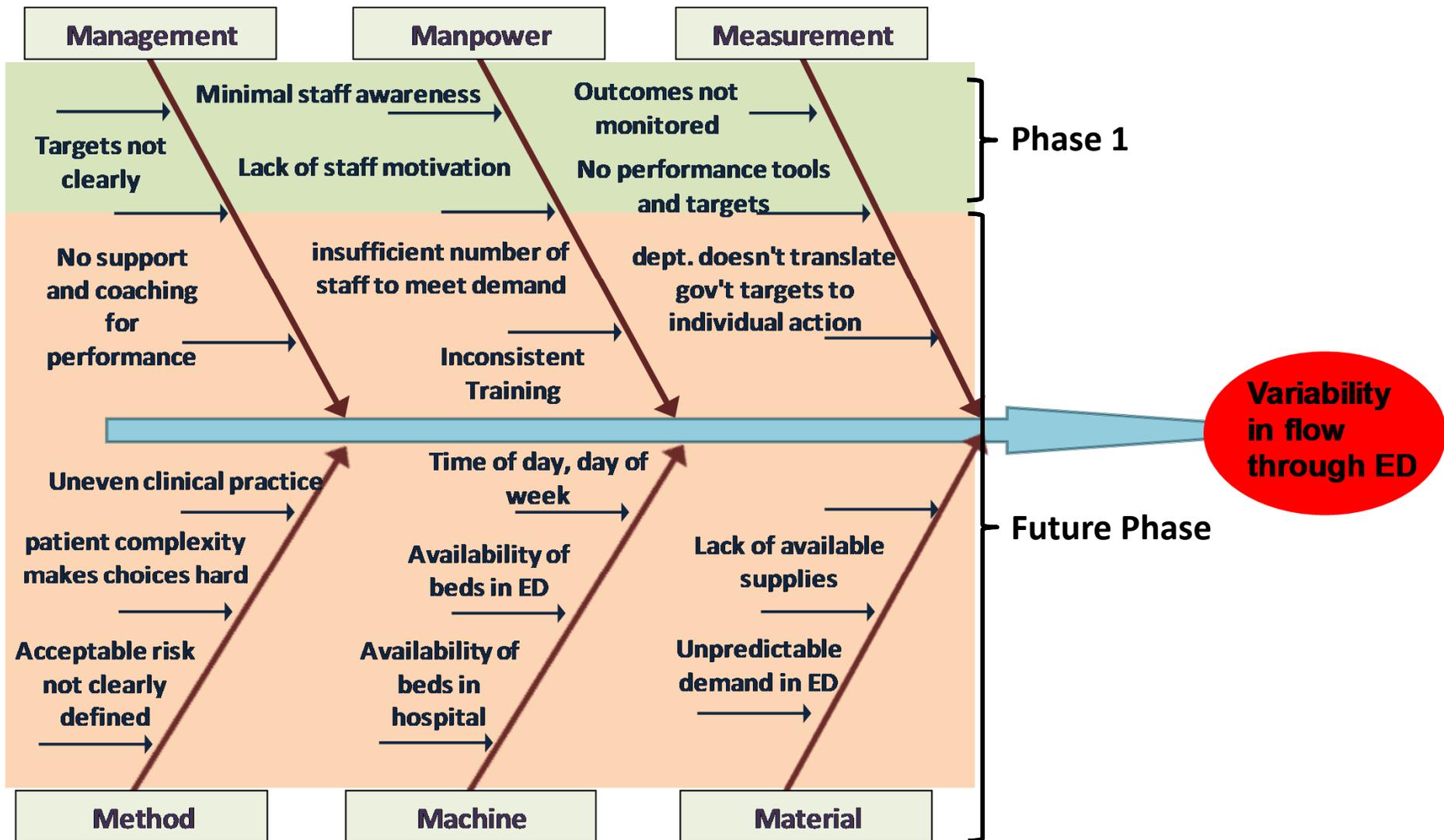


Individual performance data is not routinely shared with front-line clinicians

Highly variable flow is a function of many factors. Sources include non-standard or inefficient processes that negatively impact the hospital's compliance with Pay-for-Results targets, the department morale, and most importantly, patient satisfaction.

1. Extra Program – Problem Identification
2. Research – Audit and Feedback
3. Stakeholder engagement
4. Metrics or Indicator selection
5. Vendor RFP – Selection
6. Steering committee
7. Product development – (we are here)
8. Beta testing
9. Roll-out

# VARIABLE ED PRODUCTIVITY ARISES FROM MULTIPLE SOURCES





## Audit and Feedback

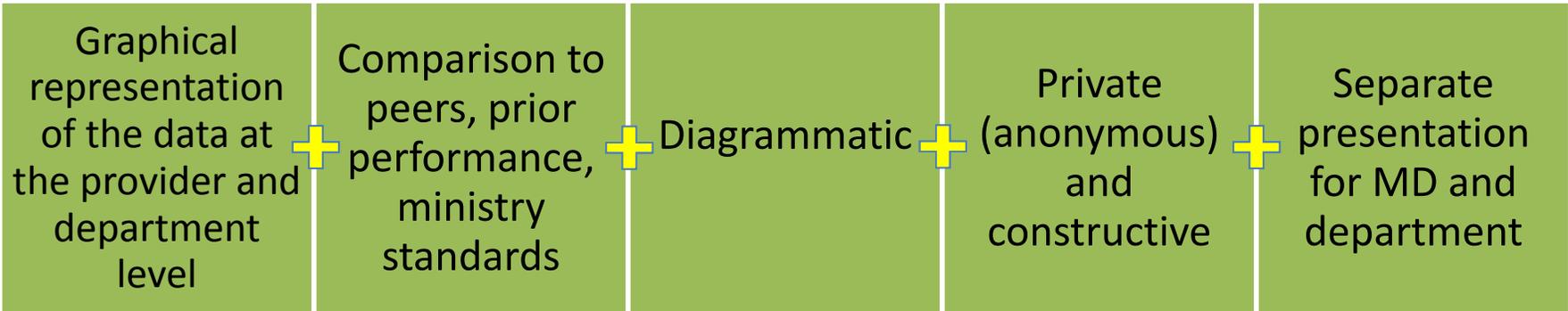
Effects of Audit and Feedback (A/F) tools are variable, with *a median 4% increase in performance.*

Highly effective A/F interventions (75<sup>th</sup> percentile or better) increase compliance with desired practice by at least 16%.

Five factors enhance A/F effects: low baseline performance, feedback from supervisor or colleague, repeat feedback, provided verbally and in writing, targets and an action plan included.

Ivers N, Jamtvedt G, Flottorp S, Young JM, Odgaard-Jensen J, French SD, O'Brien MA, Johansen M, Grimshaw J, Oxman AD. Audit and feedback: effects on professional practice and healthcare outcomes. *Cochrane Database of Systematic Reviews* 2012, Issue 6. Art. No.: CD000259. DOI: 10.1002/ 14651858.CD000259.pub3.

## Dashboard



- # Patients per Day
- # Patients left without being seen
- 90<sup>th</sup> pctile LOS non-admit complex (I-III)
- 90<sup>th</sup> pctile LOS non-admit minor (IV-V)
- Time to inpatient bed
- # admitted patients waiting for bed
- Breakdown of patients by CTAS
- Average Consult Response Time
- X-Ray Turnaround Time
- Porter Turnaround Time

**Departmental Dashboard**

**Physician Dashboard**

- # Patients per Hour
- # Patients per Shift
- Average Patient CTAS Score
- 90<sup>th</sup> pctile LOS non-admit complex (I-III)
- 90<sup>th</sup> pctile LOS non-admit minor (IV-V)
- 90<sup>th</sup> pctile Time to PIA
- % Patients Admitted
- % shifts with learner
- Patients disposition/shift

## PROJECT VISION

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1. Real-time application: exhibit anonymous physician data that allows insight into current performance
  - This could be the confidential physician dashboard or a smaller dashboard with less real-time interaction with EDIS
2. Departmental dashboard displayed in real-time visible to all staff currently working in the department

Dashboard joins an existing WRH performance improvement framework:

- Weekly huddles
- DART
- Posted ED wait time on wrh.ca
- WRH commitments to patient satisfaction and accountability for outcomes

Ontario's ER/ALC Strategy standardizes ED wait time measurement province-wide, establishes performance benchmarks and encourages hospital-hospital comparisons. Pay-for-Results ED funding creates financial incentives for hospitals that succeed.

Dashboard closes the gap between individual performance and departmental outcomes. Dashboard is an enabler for the hospital's broader improvement agenda.

# AIM STATEMENT

Provide ED administration and 100% of ED Physicians access and ownership of current, personalized efficiency data

*Implementation creates visible, actionable data to enable, guide and measure change.*

Increase the tool's adoption rate (# of providers and frequency of use)

*Adoption creates a critical mass of users and an audit+feedback tool*

Improve departmental performance against Pay-for-Results targets by 4%

Effective outreach to the user community:

- Engaged ED Chief and ED Medical Director from the beginning. Their input was essential during the EXTRA application process.
- Engaged ED Physicians with conceptual idea.
- Concept of dashboard brought up repeatedly at ED departmental meetings and discussed one-on-one with individual physicians
- Voluntary survey distributed to ED Physicians
  - 15 responses out of 26 ED Physicians FT/PT/Casual
  - 12 additional comments
- Engaged Nursing leadership
- Engaged physicians with respect to dashboard appearance and functionality
- Recruited 5 physicians for beta testing

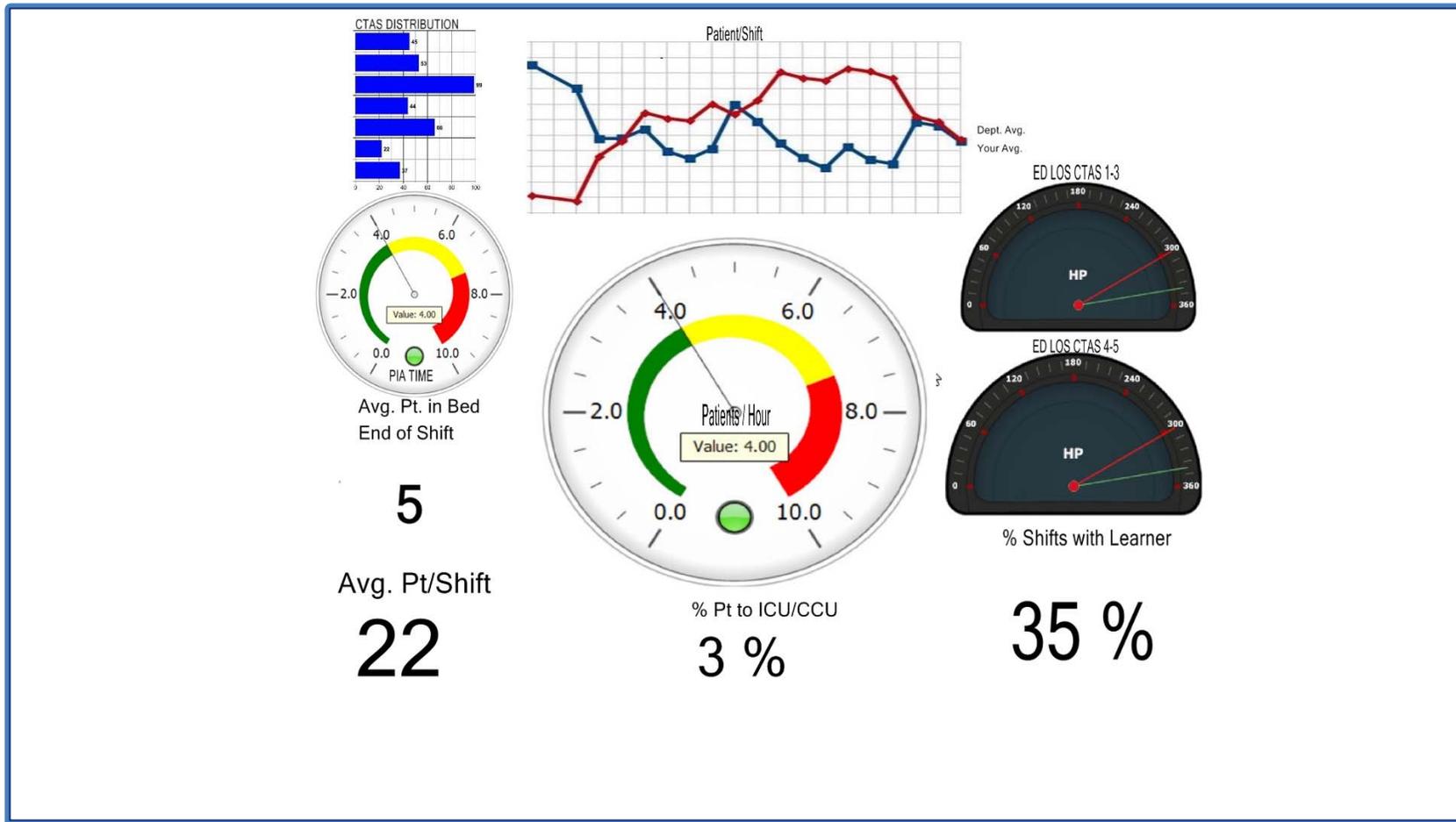
## DEVELOPMENT OF DASHBOARD

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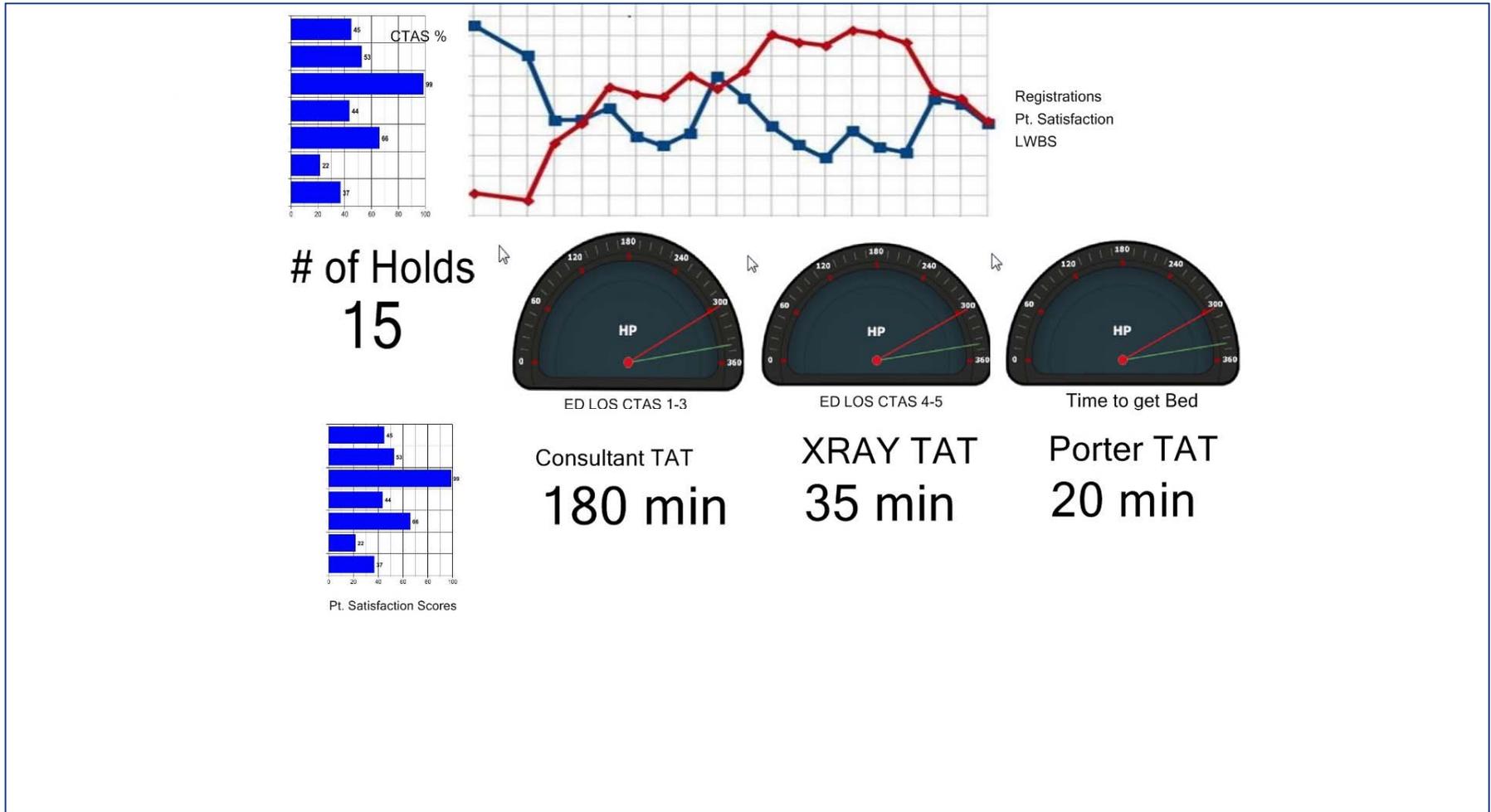
Several factors were weighed by the technology selection committee. WRH approved and funded a technology approach that:

- Provides an electronic platform to present personalized, current performance data in an anonymous and constructive fashion to physicians, other clinicians and ED administrators.
- Dashboard requires new database equipped with logic, webpages and graphical interface accessible on mobile devices.
- Does not require additional IT infrastructure.
- Is scalable: The cost to expand this to another emergency department running EDIS would be minimal.
- WRH will own software at close of contract.

# CONCEPT PHYSICIAN DASHBOARD



# CONCEPT DEPARTMENT DASHBOARD



A steering committee oversees project. Members include:

- The Extra project team
- Transform SSO CEO
- WRH Vice President, Medicine and Emergency Services
- WRH Chief of Emergency Medicine
- WRH Medical Director, Emergency Medicine
- WRH Director of Emergency
- WRH Regional Vice President, Cancer Services
- Director of Organizational Effectiveness

# PATIENT SATISFACTION MODULE

At discharge, volunteers use electronic tablets to conduct short survey of patient.



Results would be collated electronically and wirelessly link to application.



Results display on department dashboard in near real-time.

These results would NOT be linked to individual clinicians.

Patient Satisfaction Electronic Real Time Survey  
(5-point Likert scale)

1. Did you feel the emergency staff cared about you and your medical problem?
2. Did the emergency staff try and address or answer your concerns?
3. Are you happy with the care you received in the emergency department today?

# MEASURING SUCCESS

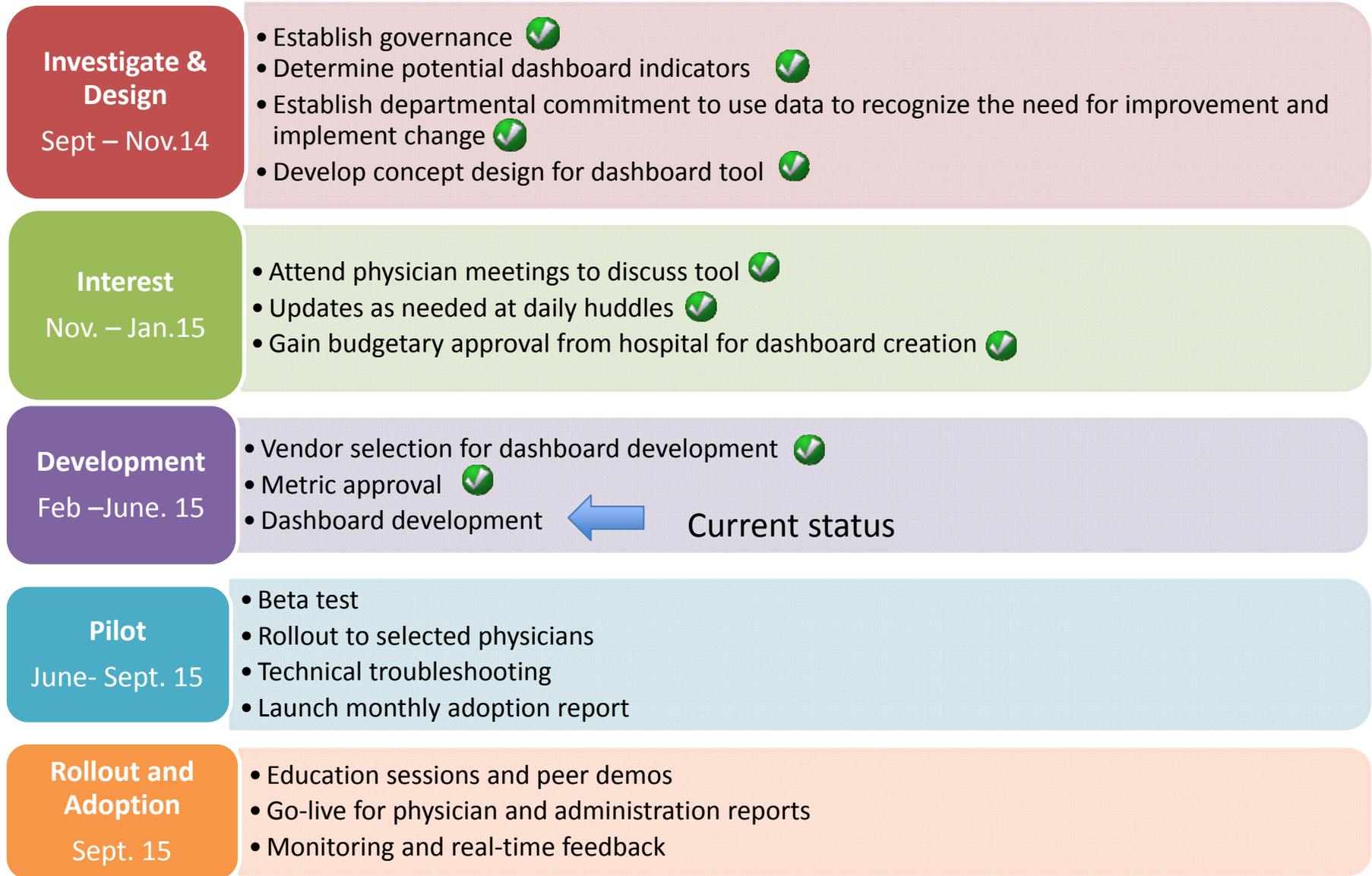
## Project success measures

- Adoption rate
  - Improvement in dashboard indicators
  - Progress toward Ministry benchmarks
- } Phase 1 objective (project team)
- } Subsequent phases (WRH)

The Dashboard initiative promotes the transparency of data, and ultimately empowers front line clinicians to problem-solve and “compete” with themselves, ministry targets and their peers, to provide superior timely care patients.

Clinician adoption is the necessary condition to create this enabler for improvement.

# PROJECT TIMELINE



# LESSONS LEARNED

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- Engage key stakeholders early and at every step
- Clinical champions – pick the right people
- Frame the problem first then build solution
- Change management strategy – can be time consuming and complicated but is essential in a traditional work environment to facilitate adoption

Thank you

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[www.wrh.on.ca](http://www.wrh.on.ca)