# New ways to use clinic data: better information means better interactions

HOTCHKISS BRAIN INSTITUTE

Roach P<sup>1,2,3</sup>, Lee JYY<sup>1,2</sup>, Birchall N, Cadotte D<sup>1,2,4</sup>

<sup>1</sup>Hotchkiss Brain Institute; <sup>2</sup>Department of Clinical Neurosciences; <sup>3</sup>Department of Community Health Sciences; <sup>4</sup>Alberta Health Services







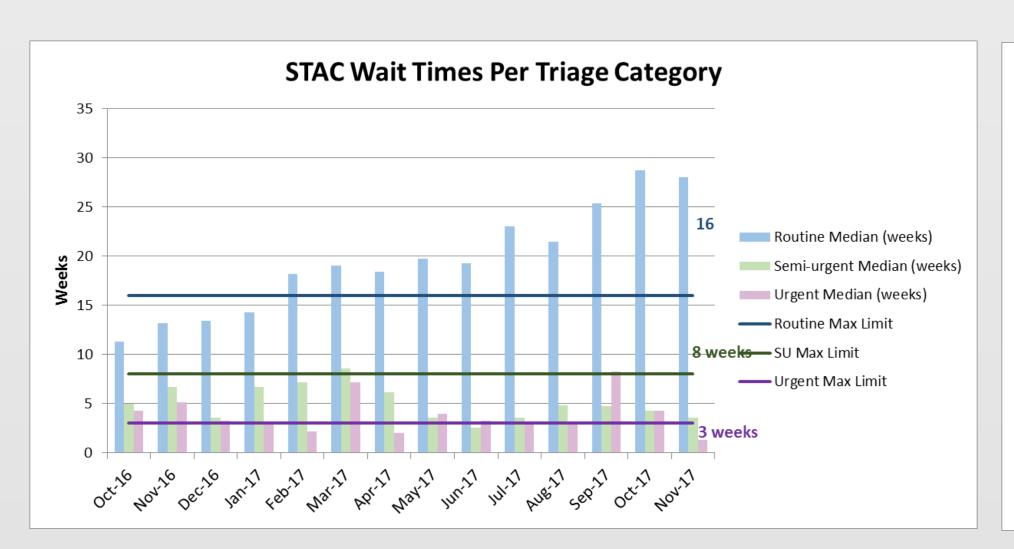
#### The Context

There is presently a dramatic lack of pertinent patient information available at the time of referral to a spine surgeon. Assessment requires the collection of complex pieces of information by the surgeon in order to construct a treatment plan that suits a patient's individual situation.

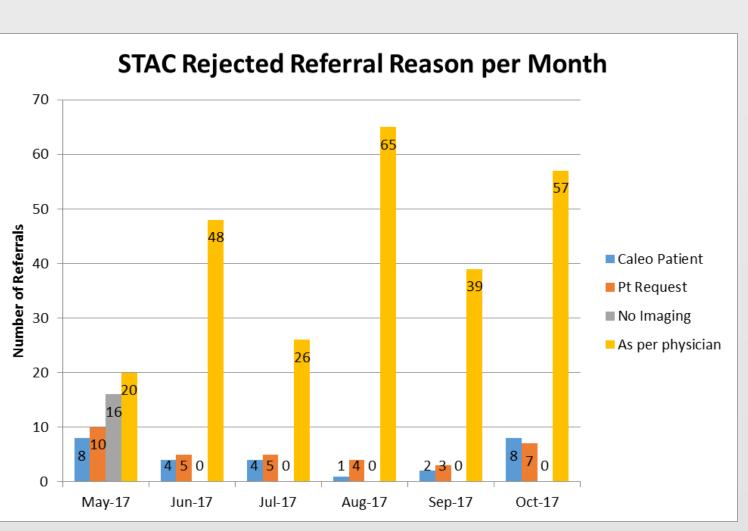
Gathering this data at the first clinic visit takes time and results in longer wait times for patients to receive the appropriate care and decreases the amount of time during the clinic visit that can be used to address the patient's self-identified issues. In worst cases, this can prolong the time from diagnosis to surgical intervention.

Prolonged post-operative recovery, decreased functional outcome measures, increased pain and affected mental well-being are associated with longer wait times [1, 2]. Residual pain and side effects from delayed treatment not only represents additional cost burden to the healthcare system but significantly affects the individual's quality of life [3, 4].

#### **Current Wait Times**



## **Current Referrals Rejected**



### The Idea

Goals: to minimize barriers to care and optimize time to triage and surgical care.

#### **Barriers to Care**

At time of referral, the patients will be emailed a confidential link to enter their updated clinical data or contacted to provide an email address for this purpose and consent to contact via email will be taken over the phone. Patients unable to complete electronic forms prior to the clinic visit will still have the opportunity to complete their forms at the appointment. The implementation of the electronic patient form completion will follow a PDSA (plan, do, study, act) cycle.

#### **Optimizing time to triage**

The provided health data summarized into a report that will be reviewed by the spine clinic team and used to triage patients into an urgent or routine appointment. These reports will also be used to inform treatment plans and clinical decision making. This will allow for more time during the clinic appointment to discuss patient-identified issues.

## Patients as Team Members

Patient forms have been developed and tested, with the support of a patient advisor who is part of the project team and has already inputted into the project design, in order to capture referral data and patient reported functional metrics (including pain state), as well as patient goals for their appointment and potential treatment.

Patient and Physician Forms satisfaction forms have been developed in collaboration with our patient team member.

# Funding

This study was made possible by funding from the CMO & Calgary Zone Medical Affairs Quality Innovation Fund; and support from the Brain and Mental Health Research Clinics of the Hotchkiss Brain Institute, Department of Clinical Neurosciences, and Department of Psychiatry at the University of Calgary, Calgary, AB.

## Measures for PDSA Cycles

Data Summary

•Physician and clinic staff feedback re: summary forms – clinic physicians will be asked to evaluate whether or not the information improves the ability to effectively triage patients and help their clinical decision making.

Physician Feedback • Physician feedback re: quality of patient encounter – is the physician able to redirect efforts away from routine data collection and focus on explaining medical condition and treatment options to patients

Patient Feedback • Patient feedback re: timing and quality of interaction with triage clinic, engagement in health care decision making. Will be asked before and after clinic visit.

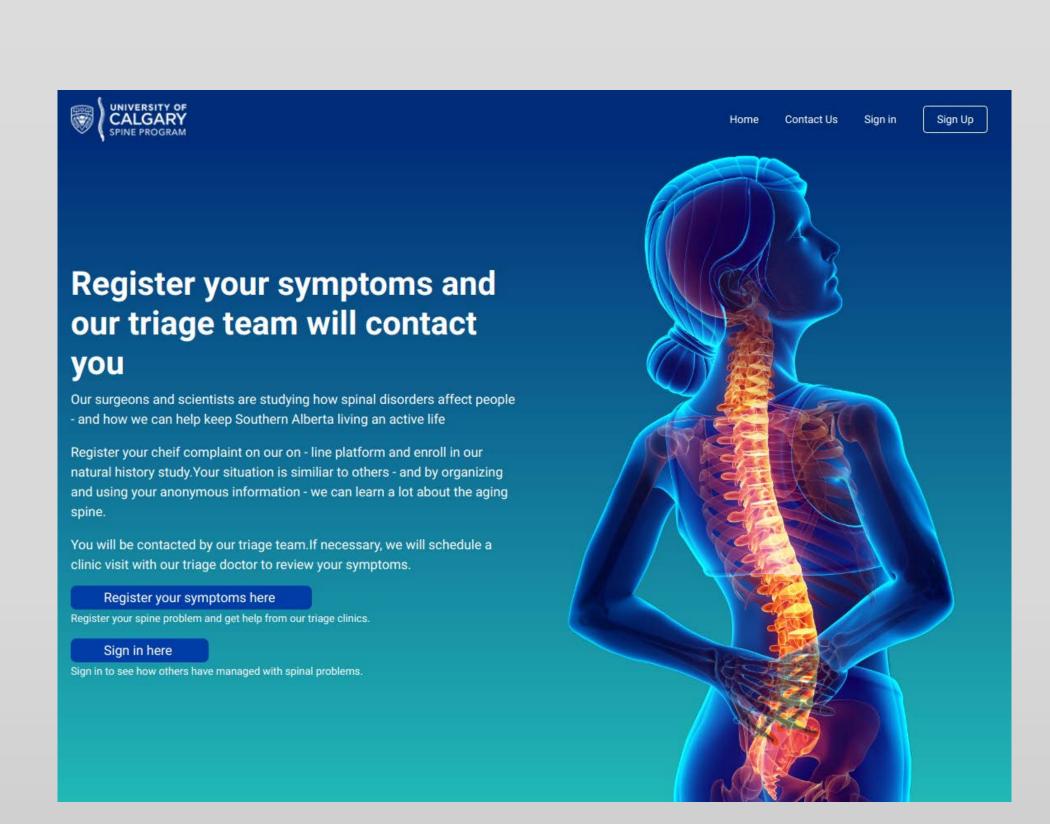
#### Lessons Learned...so far

Collecting and using patient data in these new ways means navigating ethical risks to managing this data, and the discussion will touch on the use of ARECCI in QI to mitigate these risks. Having a patient advisor as a team member has been invaluable for capturing the voice of the end user, as we try to fully understand what concerns may arise from a patient perspective while considering all the ethical implications of the work we are implementing.

## **Current Progress & Next Steps**

Electronic data capture will be completed through a secure web-based application that uses end-to-end encryption

From here, a patient summary will be generated and made available to the triage team prior to the patient visit.



### References

- 1. Bailey, C.S., et al., Does the wait for lumbar degenerative spinal stenosis surgery have a detrimental effect on patient outcomes? A prospective observational study. CMAJ Open, 2016. 4(2): p. E185-93.
- observational study. CMAJ Open, 2016. 4(2): p. E185- 93.

  2. Braybrooke, J., et al., The impact of surgical wait time on patient-based outcomes in posterior lumbar spinal surgery. European Spine Journal, 2007.
- 16(11): p. 1832-1839.3. Phillips, C.J., The Cost and Burden of Chronic Pain. Rev Pain, 2009. 3(1): p. 2-5.
- 4. Lachaine, J., et al., Painful neuropathic disorders: an analysis of the Regie de l'Assurance Maladie du Quebec database. Pain Res Manag, 2007. 12(1): p. 31-7.