Critical Care Services Ontario
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One year Post Life or Limb Policy Implementation: Evaluation to support Acute Care Quality Services

Nasim Haque, Bernard Lawless, Linda Kostrzewa, Tess Palatino, Meiyin Gao

Background

With over 13.6 million residents, and a significantly sparse geography, Ontario's critical care system continues to have a formidable challenge of providing timely treatments to its acute care patients. Towards addressing the quality of care needs for acute patients, the Ministry of Health and Long Term Care (MOHLTC) developed the Life of Limb (LorL) Policy in response to recommendations from the Office of Chief Coroner for a provincial "no refusal" policy when critical injuries or conditions of life or limb are involved. The MOHLTC announced the Policy on January 13, 2014. MOHLTC further mandated CCSO to implement the policy in all hospitals of Ontario, and CritiCall to coordinate all LorL consultations and for collection of all LorL related data as an integral part of its centralized information collection system.

Key Elements of the Policy are: (1) LorL Policy is in effect when a patient is LorL threatened and therapeutic options exist, which are needed within 4 hours; **(2)** No patient with LorL threatening condition will be refused care; and **(3)** Local Health Integration Network boundaries will not limit a patient's access to appropriate care.

Aims

The main aim of the evaluation was to assess the progress of the policy one year post-implementation to help identify opportunities for system improvements. More specifically the evaluation aims to:

1) Identify system gaps and measure the process and outcome of the policy by analyzing routinely collected LorL data within last 12 months.
2) Understand the perspectives of stakeholders about the policy and their experiences with its implementation.

Action taken

- The Policy mandated collection of uniform LorL data including time indicators to allow assessing transfer time and any gaps across Ontario's acute care hospitals.
- Quarterly reports are produced at provincial, LHIN, and hospital levels and shared with all stakeholders.
- Performance management mechanism was established.

Evaluation Design

- **Method:** Mixed method, posttest only design was used. *Quantitative*: retrospective analyses of past 12 months data. *Qualitative*: Key informant interviews with stakeholders. In this poster we are presenting the Quantitative results.
- **Data Analyses:** (i) Descriptive analyses; and (ii) model estimates were done using time linear trend regression
- **Variables**:

(1) *Dependent:* Total transfer time within 4 Hours (Yes/No), Time to confirmation within 30 minutes (Yes/No), Confirmation to accept within 30 minutes (Yes/No), and Accept time to admit within 3 hours (Yes/No).

(2) *Independent:* (i) time trend; (ii) demographics: age and gender; (iii) Number of calls the call center made to reach the needed specialty for patient.

Results

Figure 1:Life or Limb declared cases (N= 11662) (Apr 2014 - Mar 2015)

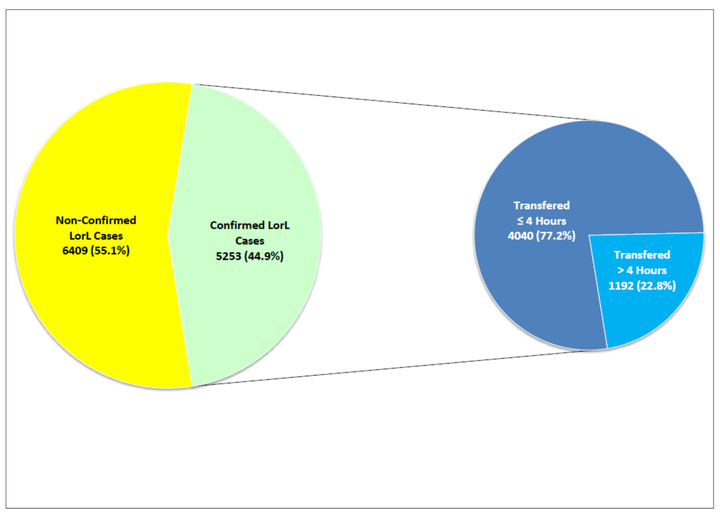


Figure 2:Confirmed LorL cases timely access to care by age group

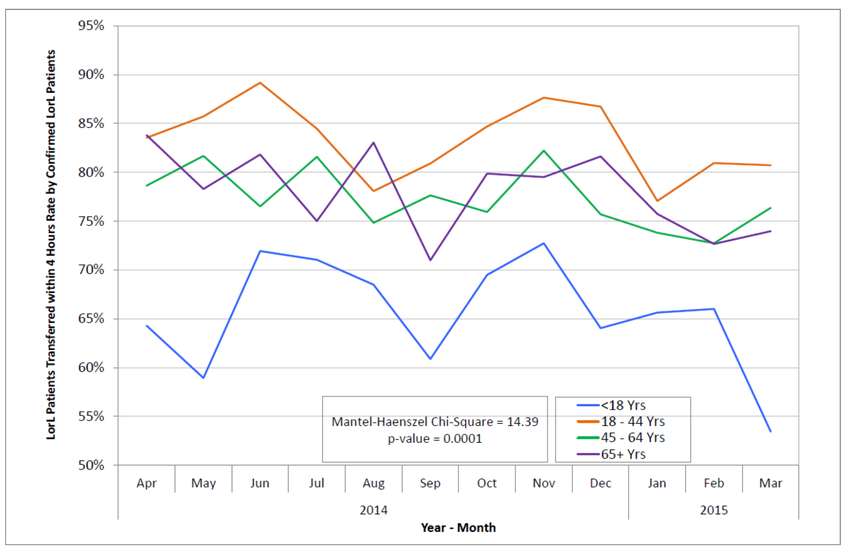
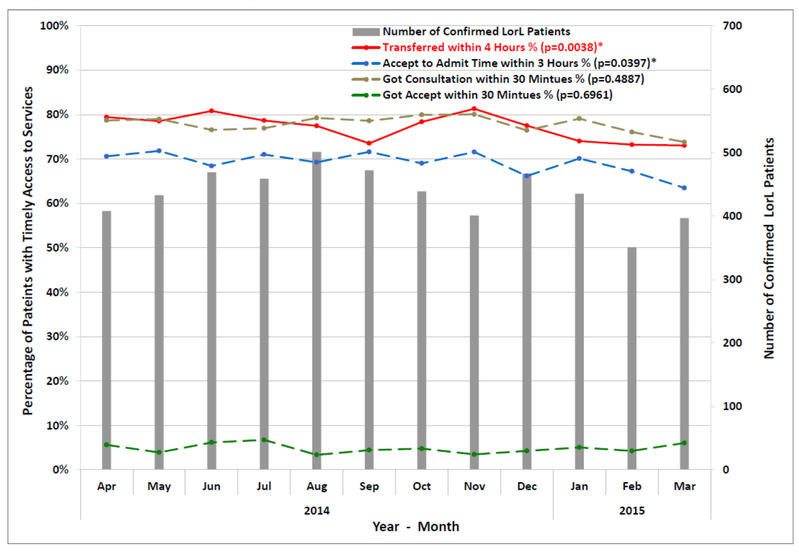


Figure 3: Percentage of LorL cases and Transfer time details

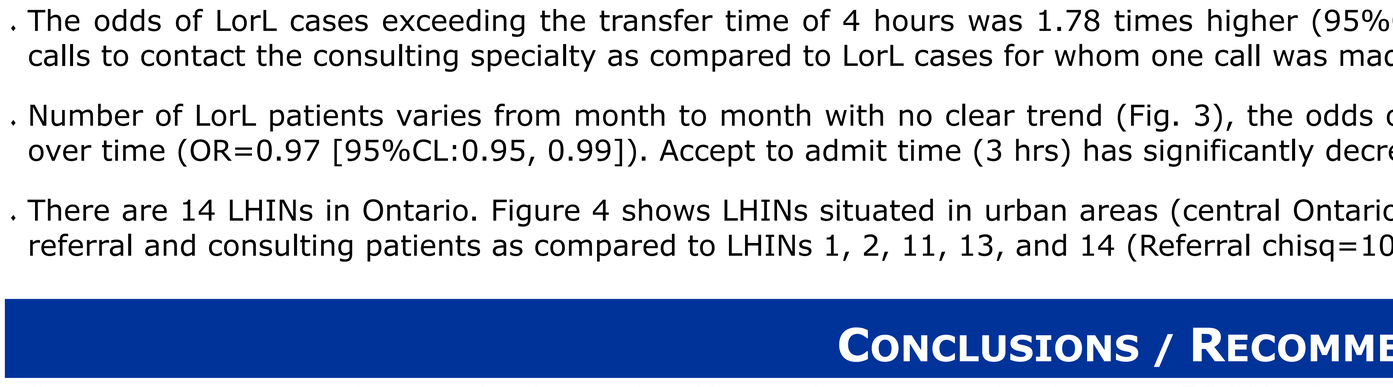


- Declared LorL cases in the 1st. Year is high (N=11662). Only 44.9% of declared cases were confirmed LorL, and of those 77.2% got transferred within 4 hrs (Fig. 1).
- There is no significant difference in transfer time for male and female LorL cases (p=0.7682). Age is significantly associated with 4 hr. transfer time. Fewer Pediatric (≤18 yrs) LorL cases meet the transfer time policy target of 4 hours as compared to other age groups (Fig. 2) and this difference is statistically significant Chisq=14.39 (p<0.0001) Figure 2.
- Figure 5 below provides the distribution of LorL patient transfers within 4 hours by specialty of care. 21.2% were neurosurgery spinal or neurology patients (N=1109) making the largest group and also have higher probability of getting transferred within 4 hours (81.7%); the 2nd largest group was of acute medicine and critical care however, only 68.4% of those cases were transferred to appropriate care within 4 hrs. Similarly, for the cardiology group only 74.1% patients met the policy target of timely transfer i.e. within 4 hrs.
- The odds of LorL cases exceeding the transfer time of 4 hours was 1.78 times higher (95%CI: 1.71,1.86) for patients for whom call center had to make multiple calls to contact the consulting specialty as compared to LorL cases for whom one call was made by the call center (model estimations table not shown).
- Number of LorL patients varies from month to month with no clear trend (Fig. 3), the odds of patients being transferred within 4 hours has significantly decreased over time (OR=0.97 [95%CL:0.95, 0.99]). Accept to admit time (3 hrs) has significantly decreased over time (OR=0.98 [95%CL:0.96, 0.99]).
- There are 14 LHINs in Ontario. Figure 4 shows LHINs situated in urban areas (central Ontario) were more successful in transferring patients within 4 hours for both referral and consulting patients as compared to LHINs 1, 2, 11, 13, and 14 (Referral chisq=1088 (p<0.0001) and Consult chisq=568 (p<0.0001).

Conclusions / Recommendations

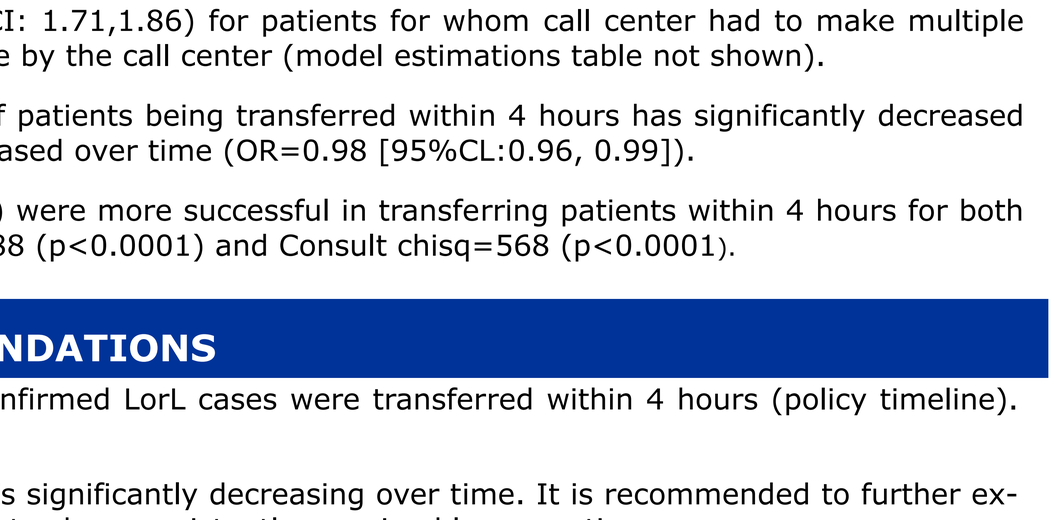
- Overall the outcome of the policy in the 1st. Year of implementation is good, 77.2% of all confirmed LorL cases were transferred within 4 hours (policy timeline). However, the trend over time for timely transfer of patient is significantly decreasing.
- Time breakdown indicates: (i) time between accepting and admit time (3hours) of LorL cases is significantly decreasing over time. It is recommended to further explore the reasons for these increasing delays. (ii) the time for accepting patient within 30 minutes has consistently remained low over time.
- Timely transfer varies by the specialty of care needed by LorL patients. It is recommended to explore the reasons in future studies.
- The pattern of referring and consulting varies widely between LHINS.

Figure 4:Percentage of transferred LorL patients within 4 hours by referral & consulting LHINs



#Patients	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12	L13	L14
Referred	458	799	276	469	256	248	214	440	466	209	516	241	444	191
Consulted	97	1093	121	622	21	152	1581	49	92	188	595	67	322	136

Figure 5: Specialty distribution: Number transferred and % transferred within 4 hours (*N=5232*)



Acknowledgement

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For additional information contact CCSO by email: csadmin@uhn.ca