

System Transformation Update

PHSSC

August 6, 2019



Background

COTW March 7, 2019 - Provided information to Council on the System Transformation Project to assist with key decisions regarding the future of Niagara EMS as a Mobile Integrated Health system.

PHD 07-2019 - described recommended changes to the EMS Response Time Performance Plan (RTPP) and implementation of a new Clinical Response Plan (CRP) as well as the integration of the Emergency Communications Nurse System (ECNS).

Response Time Reliability Performance Results

CTAS	Target Time (mins)	Target %	2015	2016	2017	2018
SCA	6	55	57.72%	52.16%	60.64%	59.25%
1	8	80	77.15%	75.37%	76.92%	76.23%
2	11	90	84.73%	83.58%	82.48%	81.75%
3	15	90	89.91%	88.77%	85.41%	82.70%
4	20	90	94.77%	95.34%	91.93%	89.38%
5	30	90	99.59%	99.29%	98.98%	98.80%

Revised Response Times

CTAS	Target Time Previous/Revised (mins)	Target %
SCA	6/6	55
1	8/8	80
2	11/15	90
3	15/30	90
4	20/60	90
5	30/120	90

The Future of NEMS



Current patient journey

SYSTEM CENTERED CARE



Is there a better way to provide care?

“Central to each (country’s) vision is the concept of providing pre-hospital care as a system, rather than just a single service type, that can provide a flexible response to a wide range of patient complaints with other related healthcare providers.” (Sheffield, pg. 44)



Redefining the patient journey

Present healthcare system challenges

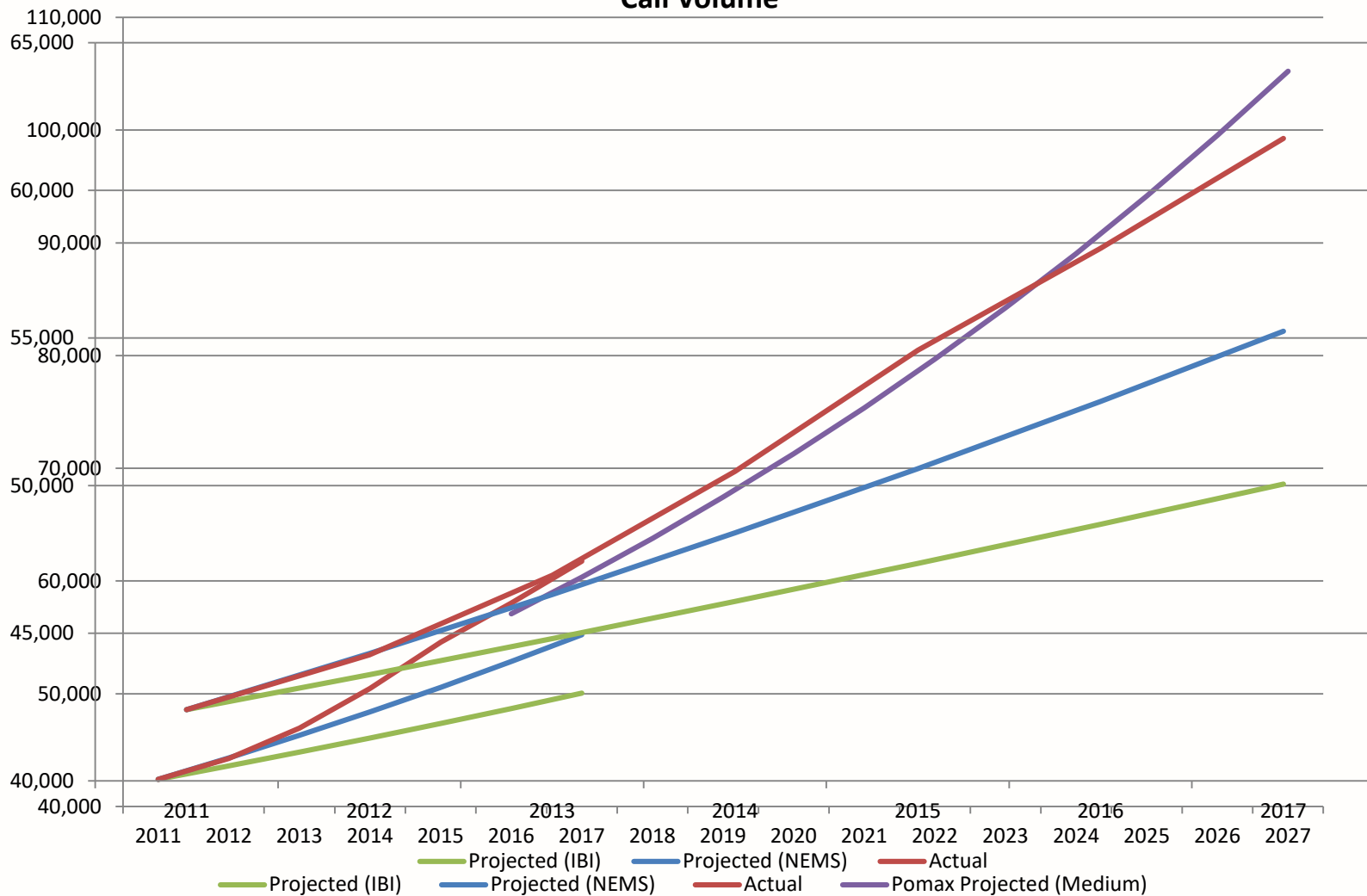


System Transformation

3 Phases

1. Mobile Integrated Healthcare model - implemented Q2 2018
2. Evidence-based Clinical Response Plan – pending Sep 2019
3. Emergency Communications Nurse (ECN) secondary triage – pending Sep 2019

EMS Call Volume Projected vs Actual Call Volume

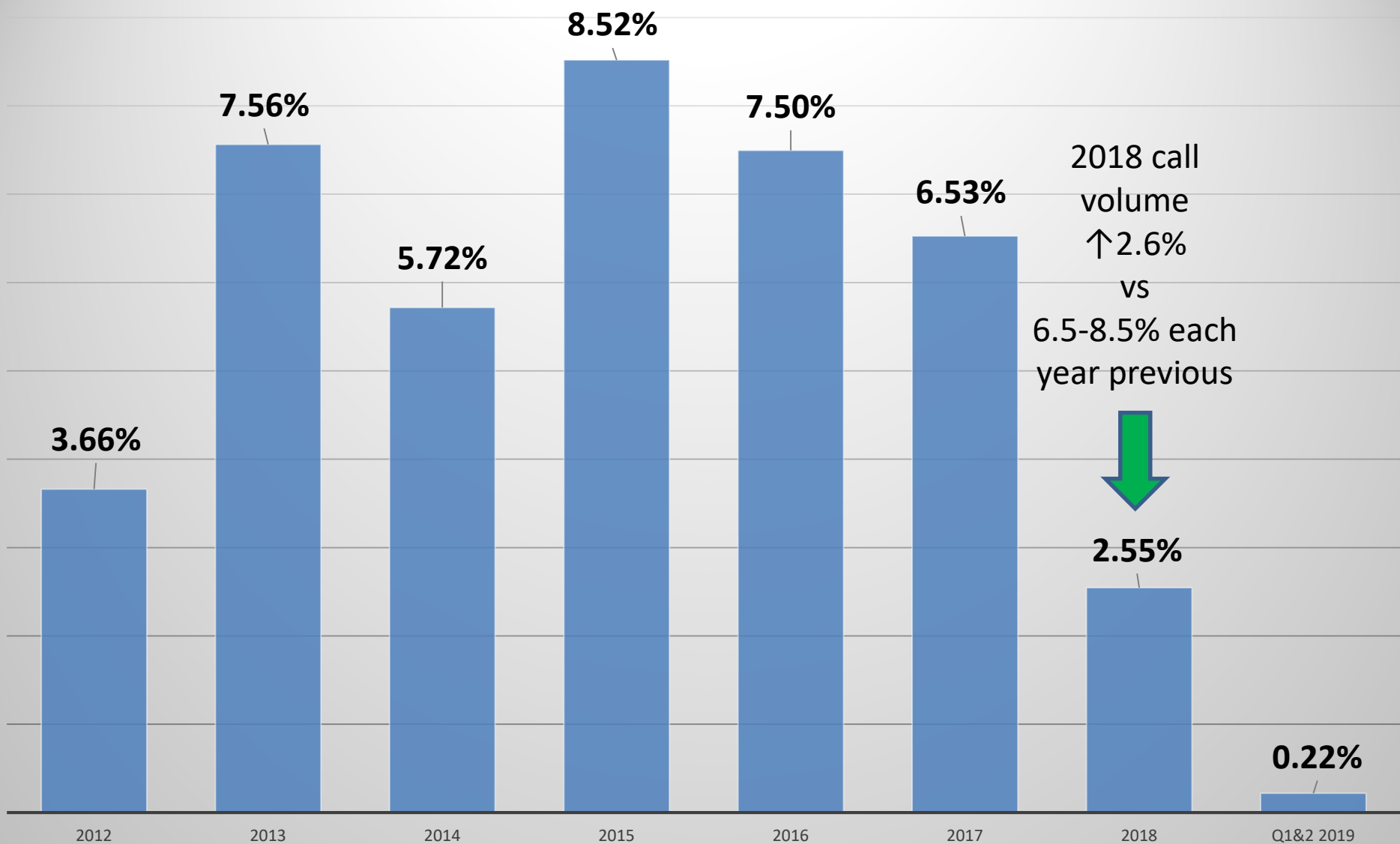


Top Five EMS Transports to EDs in Niagara (2013-2015)

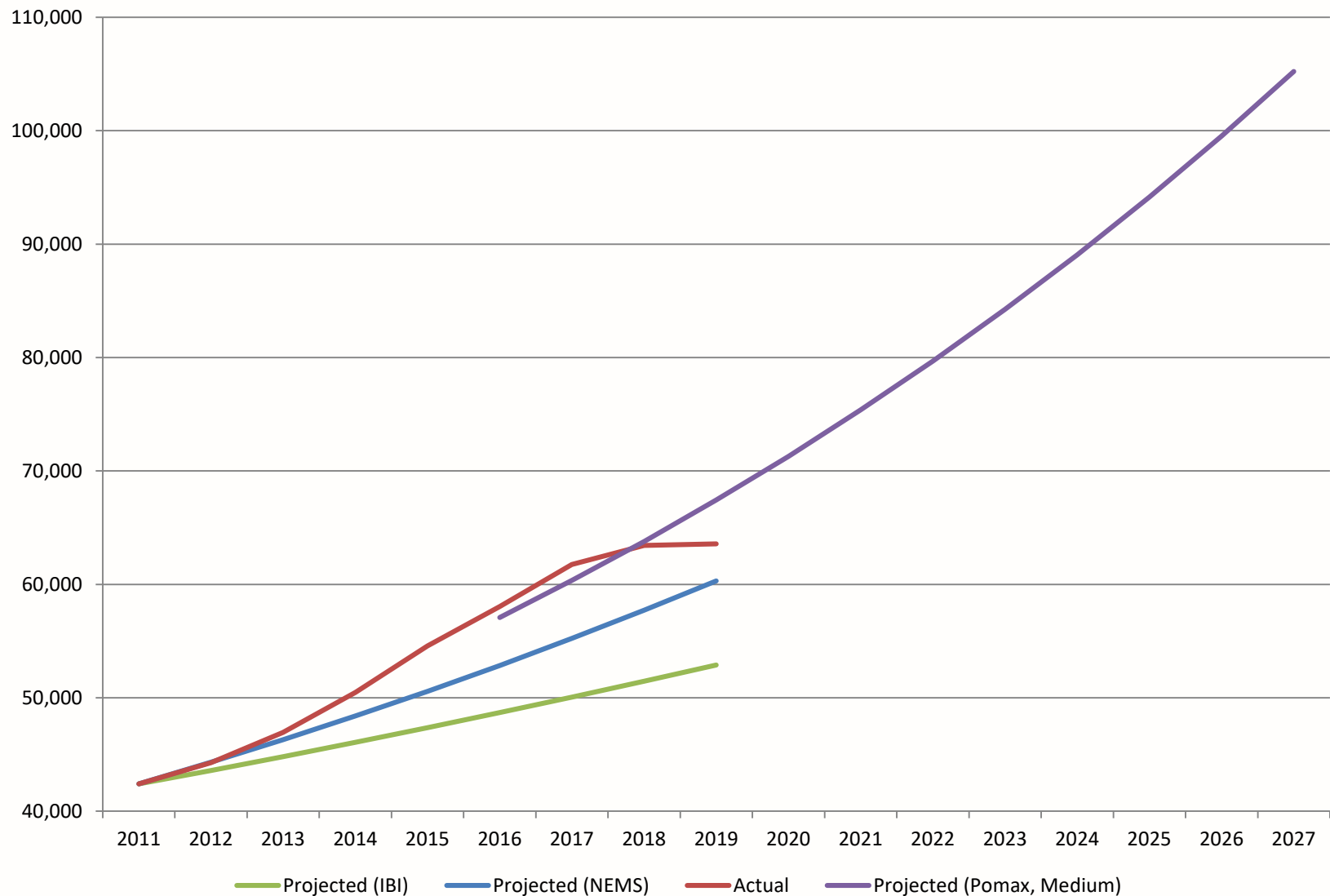
Niagara	1	2	3	4	5
0<1 years	Resp. Distress	Seizure/Post Ictal	General Illness/ Weakness	Other Medical/ Trauma	Newborn/Neonatal
1-4 years	Seizure/Post Ictal	General Illness/ Weakness	Resp. Distress	Soft Tissue Pain/ Trauma/Edema	Other Medical/ Trauma
5-9 years	Musculoskeletal Trauma	Seizure/Post Ictal	Soft Tissue Pain/ Trauma/Edema	Behaviour/ Psychiatric	Resp. Distress
10-14 years	Musculoskeletal Trauma	Behaviour/ Psychiatric	Soft Tissue Pain/ Trauma/Edema	Syncope	Seizure/Post Ictal
15-19 years	Musculoskeletal Trauma	Behaviour/ Psychiatric	Alcohol Intoxication	Soft Tissue Pain/ Trauma/Edema	Drug Overdose
20-24 years	Musculoskeletal Trauma	Behaviour/ Psychiatric	Abdominal Pain NYD	Soft Tissue Pain/ Trauma/Edema	Seizure/Post Ictal
25-44 years	Musculoskeletal Trauma	Abdominal Pain NYD	Behaviour/ Psychiatric	Soft Tissue Pain/ Trauma/Edema	GI Problems/Pain/ Vomiting/Nausea
45-64 years	General Illness/ Weakness	Musculoskeletal Trauma	Abdominal Pain NYD	Soft Tissue Pain/ Trauma/Edema	Ischemic Chest Pain
65-74 years	General Illness/ Weakness	Resp. Distress	Musculoskeletal Trauma	Abdominal Pain NYD	GI Problems/Pain/ Vomiting/Nausea
75-84 years	General Illness/ Weakness	Musculoskeletal Trauma	Resp. Distress	GI Problems/Pain/ Vomiting/Nausea	Abdominal Pain NYD
85+ years	General Illness/ Weakness	Musculoskeletal Trauma	Resp. Distress	Soft Tissue Pain/ Trauma/Edema	GI Problems/Pain/ Vomiting/Nausea

**Mental
Health**

**Falls &
Generally
Unwell**



EMS Call Volume Projected vs Actual



System Transformation – “Unscheduled” Mobile Integrated Health teams

- Multidisciplinary teams – designed for purpose – alternative response to low acuity 911 calls
 - Falls Intervention Team (Paramedic/OT) – “FIT”
 - Mental Health and Addictions Response Team (Paramedic/MH Nurse) – “MHART”
 - Community Assessment and Response Team (Paramedic) – “CARE”
- Continue to expand Community Paramedic Programs

Early Results

- ✓ 2018 **2.6%** volume increase compared to **6.6%** yearly average from 2011-2017
- ✓ **0.22%** for 2019 YTD (Q1 & 2)
- ✓ **5%** reduction overall of mental health transports to hospital to ED despite a **8%** increase in mental health calls coming into our communication centre
- ✓ increase of **3%** in calls for falls but a **4%** decrease in transports to ED - the previous year saw an increase of **9%** in falls
- ✓ **6%** increase of calls for general unwell patients but an overall decrease in transports to ED of **9%** for this cohort

= increased availability for paramedics to respond to high acuity calls



Mobile Integrated Health Units

In Action

[Click to start video](#)



New Clinical Response Plan (CRP)

- Planning included Physicians, Base Hospital, SSCs and Paramedics
- Facilitated by Brock University
- Responses tailored to each Determinant rooted in Best Practice and Clinical Evidence
- Compared against Plan implemented in UK with nearly identical outputs
- Implementation scheduled for Sep 2019

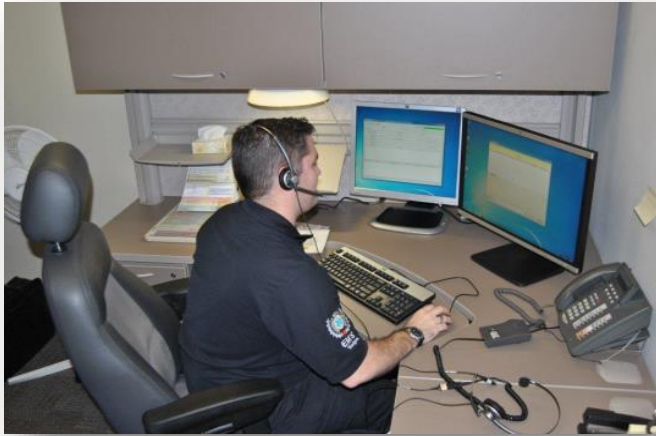
Impact of CRP

- Paramedic response time based on clinical needs in relation to timely intervention
- Reduces the number of lights and siren calls from ~40% to ~10-15%
- Improves emergency resource availability/response time for the most critically ill and injured patients
- Reduces requirement for tiered response – primarily fire services

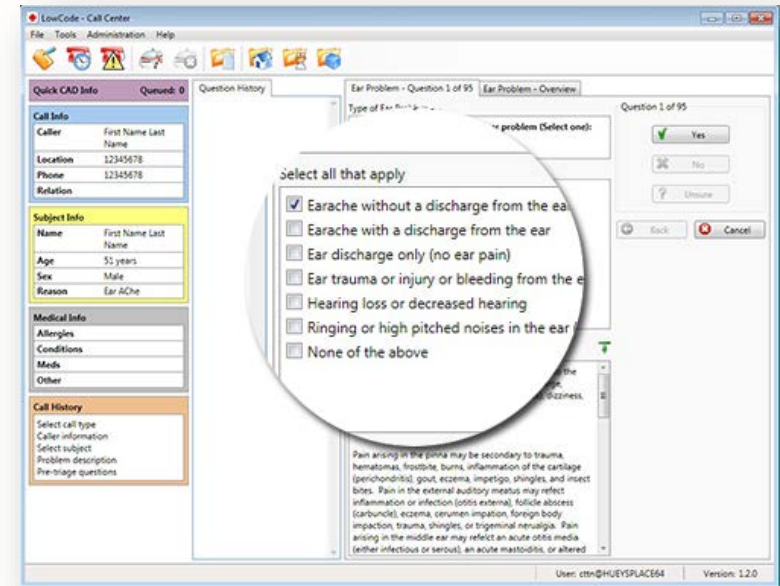
CRP & Fire Tiered Response

- In 2018 NEMS responded to 64,611 incidents
- Fire services was tiered on 15,870 of these (24.5%)
- Projected volumes for fire tiered response under the new CRP based on 2018 data: 7,234 fire responses (11.2%)
- Does not include tactical support
- Meeting held with Fire Chiefs May 29th to review

ECNS - LowCode



- Secondary triage for low acuity patients
- Completed research (Omega Project)
- 15-20% call volume eligible for non-ambulance response
- Alternate care pathways
- Implementation Sept 2019



Internal Consultations

- Staff involved in program development
- CUPE 911 kept informed
- Trained all paramedics in new CRP
- Training for System Status Controllers in August prior to go-live

Provincial Consultation

- Since early 2018 NEMS has been working with Ministry of Health on System Transformation Project to demonstrate a mobile integrated health system (MIH)
- April 2019 Ontario government indicated it is considering a restructuring of paramedic services in Ontario
- NEMS staff had met previously with Premier's Council on Improving Healthcare and Ending Hallway Medicine

A Healthy Ontario: Building a Sustainable Health Care System

2nd Report from the Premier's Council on Improving Healthcare and Ending Hallway Medicine

June 2019



Ontario 

7

Ensure Ontarians receive coordinated support by strengthening partnerships between health and social services, which are known to impact determinants of health.

INNOVATION IN ONTARIO

Mobile Integrated Health Response Teams

Niagara Emergency Medical Services (EMS) have partnered with local community partners to create integrated interdisciplinary response teams for non-urgent low acuity EMS callers. These response teams engage with clients and provide alternative pathways to connect them with the care or service they need through primary care, urgent care or other community health and social resources to avoid an unnecessary emergency department (ED) visit. The program includes technology and access to data, such as Clinical Connect, to ensure the response team is aware of care plans in place for these clients and to help ensure continuity in following their plan.

Based on data from the Niagara EMS, some early results in 2018 showed:

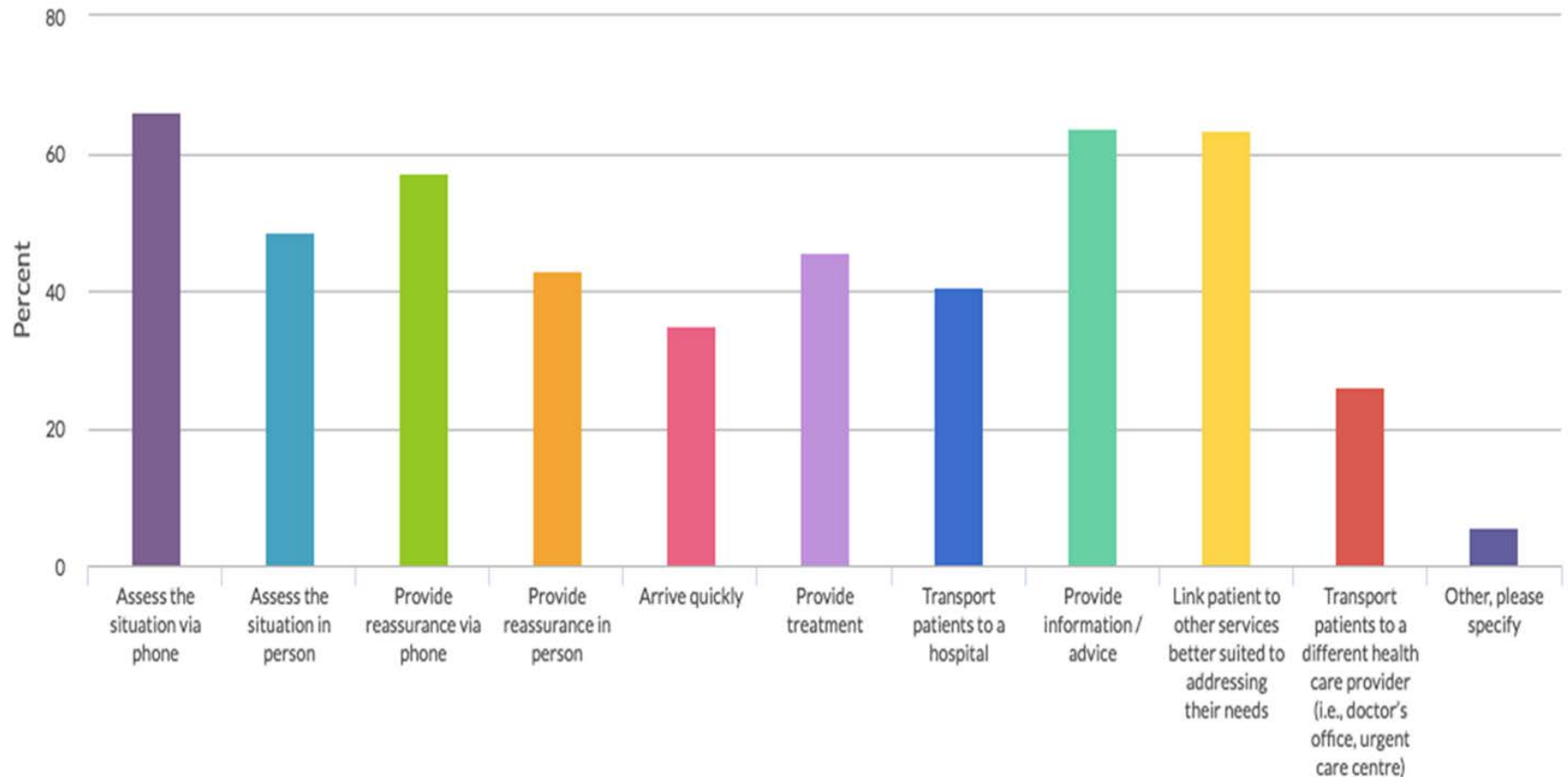
- 5% reduction in transports to ED for calls related to mental health, despite a 7% increase in mental health call volume in the region;
- 2% reduction in transports to ED due to calls for falls (call volume for falls remained stable compared with previous year); and
- 6% reduction in transports to ED due to calls for generally unwell (call volume for generally unwell remained stable compared with previous year).

Provincial Consultation

- NEMS recently met with Ministry officials from Enhancing Emergency Services Ontario (EESO) to provide consult on new care models
- NEMS continues to work with the Ministry on the last phases of STP –clinical response plan & nurse triage – expected go live Sep 2019
- Continue to remain engaged with province as a leader in MIH transformation

Public Awareness – Expectations Survey

3. What is the role of EMS in NON-URGENT medical situations (e.g. flu, sprained ankle, broken arm, etc.)? Choose all that apply.



Public Awareness

YouTube CA

niagara ems

REDEFINING THE PATIENT JOURNEY

The diagram illustrates the patient journey process. It begins with 'CALL TRIAGE' on the left, represented by a headset icon. This leads to two categories: 'LIFE-THREATENING' (in a red box) and 'NON LIFE-THREATENING' (in an orange box). The 'LIFE-THREATENING' path leads to 'DISPATCH' (represented by an ambulance icon), then to 'ASSESS' (represented by two people icons), and finally to 'TRANSPORT' (represented by a hospital 'H' icon). The 'NON LIFE-THREATENING' path leads to 'SECONDARY TRIAGE' (represented by a headset icon and a question mark). From 'SECONDARY TRIAGE', the path leads to a list of goals: 'RIGHT CARE', 'RIGHT TIME', 'RIGHT PLACE', and 'RIGHT PROVIDER'. The video player shows a progress bar at 2:14 / 3:04.

NEMS Re Defining the Patient Journey

2,908 views

31 0 SHARE SAVE ...

Niagara EMS
Published on 17 Sep 2018

Niagara EMS is transforming the delivery of mobile integrated health services to our communities that is reliable and efficient to meet your needs. Watch this video to see what you might experience when you call 911 for paramedic services in Niagara.

SHOW MORE

SUBSCRIBED 9

Niagara paramedics will no longer be racing to every call

Nurses to handle less urgent calls that had been responded to by EMS

NEWS Mar 21, 2019 by Allan Benner The St. Catharines Standard



Niagara Emergency Medical services ambulance. - Bob Tymczyszyn , The St. Catharines Standard file photo

Niagara's paramedics will no longer be racing to less urgent calls, and in some cases an ambulance might not be dispatched at all.

Niagara Emergency Medical Services Deputy Chief Richard Ferron outlined upcoming changes to ambulance dispatch service at Tuesday's public health and community services committee meeting, changes that will allow paramedics to provide enhanced services despite an ever-increasing call volume with limited funding from Niagara Region.

"We were in fact the largest increase in call volume in the province of Ontario in the time period of

Niagara EMS will 'soldier on,' despite uncertainty

Paramedic service pressing on with innovative programs and improving patient outcomes

LIVING May 29, 2019 by Allan Benner The St. Catharines Standard



Niagara Emergency Medical Services system status controller Leigh Van Der Mark, from left, advanced care paramedic Rob Zahra, acting superintendent of public relations and affairs Bryce Brunarski and primary care paramedic Ben Dorion. - Julie Jocsak , Torstar

Some 911 callers may soon find themselves discussing their health issues with a nurse rather than awaiting an ambulance.

Niagara Emergency Medical Services is poised to be the first paramedic service in Canada to use the **Emergency Communication Nurse System** and employing registered nurses with emergency department experience to help people with non-emergency calls, said EMS commander Dayman Perry.

Five nurses have been hired and are in training for the job. They are scheduled to start working this



Public Awareness Continued

- Today's update to PHSSC
- Proactive media releases
- Launch of new videos informing of the changes and implementation date

Post Go-Live



Monitor and collect data and evidence

Health economic
analysis completed
by McMaster U



Develop sustainability plan



Thank
you

STARCARE 
Begins with me

