COVID-19 Impacts on Niagara Emergency Medical Services

Public Health & Social Services Committee
PHD 5-2020
July 14, 2020
Kevin Smith, Chief/ Director
Niagara Emergency Medical Services
COVID-19 Impacts on Niagara EMS

PHD-05-2020 For Information Only

Business Continuity
• uninterrupted provision of all EMS services since the onset of COVID-19

Enhanced Role in COVID Response
• NEMS continues to assume unconventional roles in response to the pandemic

System Demand
• call volume for NEMS has decreased by 9.2% compared to YTD 2019
• a decrease of ambulance offload delays by 81%

System Performance
• system performance normalized with a positive impact on response times
Business Continuity

Niagara EMS COVID-19 DASHBOARD

June 29 – July 5, 2020

PPE Supplies
- Surgical
- N95

Face Shields
- Gowns
- Hand Sanitizer
- Gloves

Time at Hospital
- 2019: 97 Hours/day
- 2020: 73 Hours/day

Call Volumes
2020 Average
- 187 Incidents/day
- 115 Pt Transports/day

Staffing Levels
- Staff out (COVID*)
- Staff out (other)
- Staff available

* COVID-related staff off work: COVID, self-isolation, family isolation, etc.
Enhanced Role in COVID Response

Community COVID-19 Assessment and Testing (CCAT)

- A team of paramedics that provide community specimen collection (swabbing) for people who are homebound and unable to attend an Assessment Centre or their own physician

- Specialized PPE to reduce consumption of disposable supplies

- Over 500 tests completed
Enhanced Role in COVID Response

Infection Prevention & Control (IPAC) Coaching & Support

• created after Public Health’s observation that some long term care home and retirement home outbreaks exacerbated by improper PPE usage

• a team of paramedics training on appropriate PPE usage procedures to LTC facilities, retirement homes, Public Health Inspectors and local area municipality employees

• Over 500 trained to date
Enhanced Role in COVID Response

Pandemic Response Plan

• a modification to the allocation of EMS resources in preparation for a possible response to 911 call volume increases and/or hospital overcapacity challenges

• included the use of NEMS Emergency Call Nurses (ECN) to provide enhanced telephone triage for 911 callers under a specific Pandemic Protocol

• reduction of tiered response calls for municipal fire services from approximately 10% of all EMS calls to 3%

Niagara Region

NIAGARA EMERGENCY MEDICAL SERVICES
2020 call volume decreased by 9.2% compared to YTD 2019
# System Demand

## Call Volumes by Initial Clinical Presentation

<table>
<thead>
<tr>
<th>EMS Call Type (MPDS)</th>
<th>EMS Calls 2019 n(%)</th>
<th>EMS Calls 2020 n(%)</th>
<th>Change 2020</th>
<th>2020 compared to previous 4 year average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assault/ Sexual Assault</td>
<td>629 (2.58)</td>
<td>682 (3.07)</td>
<td>8.4%</td>
<td>0.85%</td>
</tr>
<tr>
<td>Cardiac Arrest</td>
<td>336 (1.38)</td>
<td>385 (1.73)</td>
<td>14.6%</td>
<td>20.22%</td>
</tr>
<tr>
<td>Chest Pain</td>
<td>2007 (8.22)</td>
<td>1790 (8.06)</td>
<td>-10.8%</td>
<td>-6.36%</td>
</tr>
<tr>
<td>Overdose/ Poisoning</td>
<td>865 (3.54)</td>
<td>928 (4.18)</td>
<td>7.3%</td>
<td>59.18%</td>
</tr>
<tr>
<td>Psychiatric/ Abnormal Behaviour</td>
<td>1588 (6.50)</td>
<td>1426 (6.42)</td>
<td>-10.2%</td>
<td>-2.79%</td>
</tr>
<tr>
<td>Stab/Gunshot</td>
<td>36 (0.15)</td>
<td>42 (0.19)</td>
<td>16.7%</td>
<td>35.48%</td>
</tr>
<tr>
<td>Stroke</td>
<td>690 (2.83)</td>
<td>717 (3.23)</td>
<td>3.9%</td>
<td>8.19%</td>
</tr>
<tr>
<td>Total</td>
<td>24,424</td>
<td>22,212</td>
<td>-9.1%</td>
<td>-3.73%</td>
</tr>
</tbody>
</table>
System Demand

EMS Offload Hours per Month, 2019-2020

- First 12 weeks 2020 offload delay was 4853 hours
- Following 11 weeks since pandemic onset reduced to 909 hours

*June 2020 only includes June 1 - 28*
# System Performance

Response time comparison for the time period pre COVID-19 and current

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AVG</td>
<td>AVG</td>
<td>90th</td>
<td>90th</td>
</tr>
<tr>
<td>Sudden Cardiac Arrest</td>
<td>6:36</td>
<td>6:05</td>
<td>10:55</td>
<td>9:16</td>
</tr>
<tr>
<td>1</td>
<td>6:56</td>
<td>6:10</td>
<td>11:45</td>
<td>9:31</td>
</tr>
<tr>
<td>2</td>
<td>8:57</td>
<td>8:31</td>
<td>14:47</td>
<td>13:54</td>
</tr>
<tr>
<td>3</td>
<td>17:43</td>
<td>15:32</td>
<td>33:06</td>
<td>27:18</td>
</tr>
<tr>
<td>5</td>
<td>24:21</td>
<td>18:58</td>
<td>49:19</td>
<td>35:41</td>
</tr>
</tbody>
</table>

Response Time Target

- 90th except as shown
- 6:00 55th
- 8:00 80th
- 15:00
- 30:00
- 60:00
- 120:00

**With the significant reduction in offload delays, decreased call volumes and recovery of these emergency resources, for the first time since the implementation of the system transformation in Q3 of 2019, response time performance targets are able to be achieved**
COVID-19 Impacts on Niagara EMS

Summary

• staffing levels remain consistent for full business continuity
• ability to continue to provide specialized support services specific to COVID-19 response
• benefits of transformation to mobile integrated health model being realized – resource rationalization
• strong collaboration ongoing with Niagara Health to avoid the resumption of lengthy offloads
Thank you