Muskoka EMS Response Time Performance Plan & Community Paramedicine
Response Time Performance Plan

Key Points to the Legislative Changes:

• The District of Muskoka must ensure the Response Time Plan is maintained, enforced and evaluated, and provide updates where necessary;

• Provide a copy of the Response Time Plan to the Ministry of Health & Long-Term Care (MOHLTC) no later than October 31st of each year; and

• Report by March 31st each year after 2013, the results of the previous year’s Response Time Plan.
Anticipated targets recommended in June 2012 were not met on CTAS 1, 4 and 5 calls.

Average response times improved for both CTAS 2 and 3 calls.

Muskoka will continue to have challenges with remote and rural response areas including park and island calls which require longer travel times.
All calls for 2012 from January to September demonstrated a similar outcome to the Pilot project, showing unmet targets in CTAS 1 but improved response times in CTAS 2, 3, 4, and 5 calls.

NOTE: CTAS 1 calls represent less than 2% of Muskoka’s call volume and when evaluating call details, remote and long distance transport times, including island calls, attributed to the unmet target time.
Muskoka EMS faces unique challenges in accessing patients which need to be considered in Response Time Planning, including available resources, geography, population density, population demographics and community expectations.

**Recommendation:**

<table>
<thead>
<tr>
<th>Category</th>
<th>Target time from crew notified until on scene (T2-T4)</th>
<th>% Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCA</td>
<td>Arrival of defibrillator on the scene of sudden cardiac arrest (SCA) within 8:00 minutes (this includes public AEDs, fire and police)</td>
<td>75%</td>
</tr>
<tr>
<td>SCA</td>
<td>Arrival of defibrillator on scene of sudden cardiac arrest (SCA) within 8:00 minutes by EMS only</td>
<td>75%</td>
</tr>
<tr>
<td>CTAS 1</td>
<td>Arrival of paramedics within 12:00 minutes</td>
<td>75%</td>
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<tr>
<td>CTAS 2</td>
<td>Arrival of paramedics within 14:00 minutes</td>
<td>75%</td>
</tr>
<tr>
<td>CTAS 3</td>
<td>Arrival of paramedics within 14:00 minutes</td>
<td>75%</td>
</tr>
<tr>
<td>CTAS 4</td>
<td>Arrival of paramedics within 16:00 minutes</td>
<td>75%</td>
</tr>
<tr>
<td>CTAS 5</td>
<td>Arrival of paramedics within 16:00 minutes</td>
<td>75%</td>
</tr>
</tbody>
</table>

- Increase in CTAS 1 Response Time from 10:00 minutes to 12:00 minutes
- Increase in CTAS 4 and 5 Response Time from 14:00 minutes to 16:00 minutes
Community Paramedicine

The necessitated review of the supporting Deployment Plans and the development of the Response Time Plan enabled Services to further evaluate opportunities to add additional value for EMS services in their communities through Community Paramedicine programs.
A recent development was the appointment of Dr. Samir Sinha, who is the Provincial Lead to Ontario’s Seniors Care Strategy.

Source: *With Respect to Old Age: Ontario’s Seniors Care Strategy and the Potential Roles of Paramedicine* by Dr. Samir Sinha, Provincial Lead to Ontario’s Seniors Care Strategy.
Dr. Sinha highlighted the following points in his report:

- The Conference Board of Canada, 2011 states that there are approximately 77,000 Long-Term Care Home residents in Ontario.

- This will grow in the next 20 years to 238,000 Ontarians.

- Denmark has avoided building any new LTC beds over two decades by strategically investing in its home and community care services.

http://www.diw.de/documents/publikationen/73/diw_01.c.359021.de/dp1038.pdf

This is Ontario's Time to Lead

Source: With Respect to Old Age: Ontario’s Seniors Care Strategy and the Potential Roles of Paramedicine by Dr. Samir Sinha, Provincial Lead to Ontario’s Seniors Care Strategy.
Paramedics are trained and skilled to respond to 911 emergency calls, to treat the ill and injured, and transport them to emergency departments for definitive care.

Not everyone requires transport. Some may need assessment and referral to an appropriate agency.

This need is evident for care of seniors and residents in rural and remote areas and for the care of vulnerable residents.
Seniors use 40% of the hospital services in Canada.

They account for 45% of provincial and territorial government health spending.

60% of Paramedic responses are for patients over the age of 60.

EMSCC identified that patients over the age of 80 represent 27% of all requests for assistance through 911.

Source: Conference Board of Canada, 2011
In an effort to maximize efficiencies in patient care and resources, many Paramedic services are finding innovating programs and introducing best practices to address the non-emergency primary care needs of seniors and other vulnerable members in their communities.

Community Paramedicine is a model of care whereby Paramedics apply their training and skills in non-traditional community based environments, outside of the usual emergency response and transportation model.
A Community Paramedic practices within an “expanded scope” which includes the application of skills and protocols beyond the base Paramedic training.

With the expanded scope, the Paramedic can be located in communities where there is a shortage of other health care providers.
Paramedics can work collaboratively with other community agencies and they can manage patients who do not require transportation to an emergency department.

Through an expanded scope of practice, they can manage and refer a patient to the most appropriate community agency.

By referring the patient, there will be a significant reduction in visits to emergency departments, hospitalizations and re-admissions.
PERIL Study
(Paramedics assessing Elders at Risk for Independence Loss)

This study was conducted by Sunnybrook. It showed that 20% of people over 65 and 44% over 85 lacked the support they needed to function daily.

A minor change can trigger a chain of events leading to adverse outcomes.

Example:
A fall may lead to being trapped on the floor, developing skin breakdown, dehydration and becoming delirious and may result in admission to a nursing home.
Older adults are the highest users of ambulance services (EMS).

- Because of social isolation and lack of support and timely access to primary care, frail older people rely on EMS to function as a safety net.
- The proportion of non-urgent calls increases with age.
- If Paramedics are positioned to observe seniors in their homes, they can identify those at risk for adverse outcomes.

Paramedics are educated in 12 lead ECGs, blood glucose testing, obtaining oxygen saturation levels, wound care, IV therapy and medication administration.

Community Paramedics can assist in alleviating the increasing pressure on our health care system.
Goals of Community Paramedicine:

• Reducing 911 calls, taking pressure off the 911 system and allowing call takers to focus on emergency calls.

• This reduction in calls reduces the need for tiered response by allied services.

• Increases public safety by reducing emergency vehicles needlessly travelling through neighbourhoods with lights and sirens and use of speed.

• Reducing emergency department visits.

• Reducing ambulance off-load delay. During off-load delays, Paramedics are confined with their patients at the hospital waiting for an emergency bed rather than being available for other 911 calls. This has a negative effect on EMS and affects EMS systems’ performance globally.
Community Paramedicine in Action:

A positive outcome from Community Paramedicine is evident in Nova Scotia, on Long and Brier Islands.

• Dr. Ronald Stewart led this initiative and helped reduce emergency department visits by 40% over 5 years.

• Further positive outcomes include creating the ability for seniors to stay at home longer, being supported by family and friends, home care, EMS and other community agencies, therefore decreasing the demand on LTC beds.

• This has a ripple effect. By reducing the demand for LTC beds, there is an associated reduction in seniors held idle at hospitals due to the lack of LTC vacancies.
Community Paramedicine associated with other community programs focus on the early detection and health promotion of seniors which helps prevent the untreated chronic illnesses of seniors. This can lead to a reduction in patient mortality and morbidity.

Many rural and remote areas of Canada are experiencing a shortage of nurses and doctors providing health care services.

An alternative model is to enable Paramedics to provide health and education services, when not engaged in emergency services.
In Ontario, Toronto EMS started their Community Paramedicine referral program in 2006. This program was initiated to address:

- The growing number of paramedic responses where patients did not require transport to emergency departments (60,000 annually).
- The number of 911 calls for Paramedics because patients were unaware of how to access other health and social services.
- EMS is the first health care provider to identify a need for services to help patients when a Paramedic responds to a 911 call regarding:
  - the patient’s living conditions, their difficulty managing a medical condition, mobility or performing Activities of Daily Living (ADL).
- Toronto's Community Referrals by EMS (CREMS) allows the Paramedics to make a referral to CCAC on behalf of the patient with their consent.
2010 OMBI Report (cost savings):

Toronto EMS operates at $232 per unit hour with weighted in service of 248 hours per 1,000 people.

If Toronto EMS reduces their patient transportation to hospital by 10% via Community Paramedicine initiatives, the potential savings to EMS is $8.4 million annually.

The further impact to emergency departments would be an estimated reduction of 109,500 bed hours based on MedStar’s projection of 6 hours per primary care visit. The savings to primary health care is in the tens of millions of dollars in the GTA.

http://www.paramedicsofmanitoba.ca/storage/Self-Regulation/Tab_2.PDF
Potential Positive Impact of Community Paramedicine for Muskoka:

- Provision of care to remote areas (West side of Muskoka)
  - Assist with the management of patients at home who may not be able to access their physician.
- Provide a link between community services and patients.
  - SASOT (Seniors Assessment & Support Outreach Team) Muskoka Algonquin Healthcare (pilot).
  - Community Care Access Centres (Home Care).
- Help maintain people within their home.
- Reduce emergency department visits.
- Avoid unnecessary hospital admissions.
Potential Positive Impact of Community Paramedicine for Muskoka:

- Muskoka will always have a distinct geography, rural and remote areas, island access calls, and water incidents.
  - The average trip per call is 39 kms (total travelled distance to patient and return destination to hospital).
    - Excluded everything over 500km in query
    - Excluded out of town calls
    - Included all activity within Muskoka and borders
  - Rural and remote population density.
  - Aging population and demonstration of age in ambulance call demographics.
**Recommendation:**

- Staff to investigate the benefits related to a Community Paramedicine program for the residents of Muskoka by Muskoka EMS in partnership with Sunnybrook Centre for Prehospital Medicine.

- Muskoka EMS to develop a future report for Corporate and Emergency Services Committee outlining the details of a Community Paramedicine pilot program including Outcome Parameters, a Data Collection Plan, an Education Plan, and a potential implementation date for approval.

- Approval of Response Time Performance Measures.
References:

1. With Respect to Old Age: Ontario’s Seniors Care Strategy and the Potential Roles of Paramedicine, by Dr. Samir Sinha, Provincial Lead to Ontario’s Seniors Care Strategy
2. The Long-Term Care System in Denmark, DIW Berlin
   http://www.diw.de/documents/publikationen/73/diw_01.c.359021.de/dp1038.pdf
3. Elements of an Effective Innovation Strategy for Long Term Care in Ontario, Conference Board of Canada
5. International Roundtable on Community Paramedicine (IRCP)
   www.ircp.info
   www.medstar.org