Let’s make change happen  Agir pour innover

Paramedic Palliative Support at Home - Nova Scotia, PEI & Alberta

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Nova Scotia/PEI

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  - The Investigators have no conflicts of interest to declare

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Alberta

- **Conflicts of Interest:**
  - The Investigators have no conflicts of interest to declare

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## Organizational Context & Population

<table>
<thead>
<tr>
<th>Nova Scotia</th>
<th>PEI</th>
<th>Alberta</th>
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</thead>
<tbody>
<tr>
<td>• EHS provides provincial emergency medical services through a long term performance based contract with EMC</td>
<td>• Island EMS, operates on a long-term service agreement with the Gov. of PEI and is responsible for the delivery of out of hospital emergency care and inter-facility transfers</td>
<td>• Alberta Health Services (AHS) provides emergency medical services (EMS) under a provincial model</td>
</tr>
<tr>
<td>• The population of NS is 1,000,000 with a mix of urban, suburban and rural communities, and First Nations.</td>
<td>• Island EMS responded to over 17,000 calls for service</td>
<td>• The population of AB is over 4,100,000 with a mix of urban, suburban and rural communities, and First Nations spanning over 660,000 square kilometers</td>
</tr>
<tr>
<td>• EHS responds to 160,000 service requests annually with 1000 paramedics</td>
<td>• Island EMS employs 200 paramedics</td>
<td>• AHS responds to 500,000 service requests annually with 5,600 paramedics employed by AHS EMS and our contracted partners</td>
</tr>
</tbody>
</table>
The Problem

Paramedics respond to many calls for patients with palliative goals of care (e.g., 1% of calls are from patients receiving palliative care in NS)\(^1\)

Some are connected to home care, family physicians, and/or palliative programs...

...Some are not

Connected patients/families tell us\(^2\) that they call 9-1-1 if:

- Their usual supports are delayed or not available
- They feel they need a rapid response
- Emotional and stressful situation and they "panic"

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1. NS EHS, 2014
2. Paramedics Providing Palliative Care at Home Program–Patient/Family Focus Groups, 2014
The Innovation

Interdisciplinary collaboration & continuity of care

Education - LEAP Mini for Paramedics and culture shift

Expanding paramedics tools, skills and resources to better support patients receiving palliative care

Paramedic support without transport to hospital

Making goals of care accessible and known to paramedics
How we Know it is an Improvement

- Before these programs, the alternative was transport to the ED; this alternative also did not include the medications recommended by palliative care.

Survey: In the absence of this program, most families indicated they would have gone to the ED

- “I would have had to help him out of bed and try to get him to the hospital. One time it was during a blizzard so that would have been impossible, but they were able to come to us. The paramedics were truly were exceptional.”
Family (NS/PEI)

“That was his wish. He said ‘I want to die in my bed’. We felt confident that we could provide him with the necessary care, but on a Sunday afternoon his condition deteriorated. [Paramedics] helped him and stayed for many hours.... We were able to focus on spending those last hours totally with him. Their presence was so remarkable for us.”

Paramedics (NS/PEI)

“I have been privileged to attend several palliative calls. The new protocols, drugs, and thinking, have allowed me to bring a level of care to these situations and patients that bring a dignity and respect to the reality of dying. To receive a hug from a palliative patient in my care has been one of my most treasured moments as a paramedic.”

Family (Alberta)

“I still remember when [the paramedics] came through the door . . . the amount of compassion, and they seemed so completely understanding about where I was. It made the difference between him dying in hospital and dying at home . . . You’ll get, as I did, an amazing sense of comfort to know they are really fighting for you, to make your wish come true, to keep you at home.”

Paramedics (Alberta)

“It left me with a good feeling being able to respect this patient’s wishes to be left at home and yet still be able to provide some care to keep her comfortable in her time of need. For myself, I felt connected to the patient and her family even having just met them. I left there feeling comforted by the fact that I was able to make a difference in this patient’s life.”
Results Summary

 Symptoms Managed in the Home – Most patients were treated at home and not transported to ED

 EMS Time Savings – Despite longer time on scene, the overall time on task for EMS staff was lower when compared to EMS events where transport occurred

 Preferred Location of Care – The majority of family members surveyed said that the patient received treatment in their preferred location of care

 Satisfaction – High family and staff satisfaction with program

 Increases in paramedic comfort and confidence in palliative care
Most Treated At Home

- 89% of patients were successfully treated in place and not transported to the ED

Preferred Location of Care

- The majority of family members surveyed said that the patient received treatment in their preferred location of care

EMS Time Savings

- Despite longer time on scene, the overall time on task for EMS staff was lower when compared to all EMS transport events

(n=112 in year one – March 2015 through March 2016)

94% preferred location

n=35

ATR, n=112

All provincial EMS events where transport occurred
Paramedic Comfort & Confidence

**Pre:** n=235 (33% female, 13 mean yrs on job, 44.7% PCP)

**Post:** n=267 (31% female, 12.5 mean yrs on job, 44.2% PCP)
## Return on Investment

### Cost

<table>
<thead>
<tr>
<th>Cost</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) LEAP for 1200 medics</td>
<td>$413,291.00</td>
</tr>
<tr>
<td>2) First round new meds</td>
<td>$2,364.18</td>
</tr>
<tr>
<td>3) 0.5 FTE coordination</td>
<td>$40,000.00</td>
</tr>
<tr>
<td>4) Upgrade SPP database</td>
<td>$156,038.22</td>
</tr>
<tr>
<td><strong>Tangible Direct Cost</strong></td>
<td><strong>$661,693.40</strong></td>
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</table>

### Benefit

<table>
<thead>
<tr>
<th>Benefit</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Value of avoided ED visits</td>
<td>$41,741.49</td>
</tr>
<tr>
<td>2) Value of avoided admissions</td>
<td>$3,049,880.92</td>
</tr>
<tr>
<td>3) Value of 114 returned unit hours to system</td>
<td>$16,197.33</td>
</tr>
<tr>
<td><strong>Tangible Direct Benefit</strong></td>
<td><strong>$3,107,819.74</strong></td>
</tr>
</tbody>
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\[
\text{ROI} = -\text{Tangible Direct Cost} + \text{Tangible Direct Benefit}
\]
\[
= -661,693.40 + 3,107,819.74
\]
\[
= +2,496,126.34
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Improving the Experience of Care

What worked well

• Enhanced collaboration between paramedics and home care, palliative care
• Breaking down silos, working as a team
• Improved process for Expected Death at Home (NS)
• Improved process for continuity of care/communication between EMS and community palliative care providers (AB)
• Medication admin, narcotics, IV and subcut access already part of paramedic skill
Improving the Experience of Care

Challenges
- Fear calls would deplete system resources
- Cost of education/training
- Fear of replacement of other services/professions
- Paramedic comfort with treat and release, palliative support as goal of care
- Fit of palliative care with paramedic identity

Future potential
- Interest from other services/provinces
- Potential for expansion to other chronic disease, populations not well served by ED visit
Sustainability

› Program in NS and PEI have been transition from a “project” funded by a grant to a Program of NS EHS and Island EMS.

› Program in AB is in final phase of development (includes expansion to pediatrics) and transitioning to operations for sustainability (incorporation within provincial EMS Medical Control Protocols as standard of care)

› Considerations regarding ongoing costs such as education for new hires, refresher education, etc.
  • Discussions underway of incorporating palliative education into paramedic core training (part of culture shift from the start)
Spread

› This innovation can look different across provinces...

› The following table highlights the similarities and difference between these programs.

› The differences highlight that there is not one or “right” way to incorporate palliative care into EMS.

<table>
<thead>
<tr>
<th>EMS Palliative Program</th>
<th>NS</th>
<th>PEI</th>
<th>Alberta</th>
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<tbody>
<tr>
<td>Treat and release for palliative patients</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Program uses existing EMS teams (no specialty palliative EMS teams) – palliative care is integrated into existing practices</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Non lights and sirens response</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Care aligned with the patient’s wishes/goals of care</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Palliative care delivered by all levels of paramedic practice</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>No user fee if care provided in home</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Access across province, regardless of how rural or remote</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Palliative supports by paramedics 24/7</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>EMS activated by on scene health care clinician</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Mandatory call to online medical oversight physician</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Available to palliative pediatric patients</td>
<td>✓</td>
<td>✓</td>
<td>Phase III</td>
</tr>
<tr>
<td>Palliative goals of care determined prior to call</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Palliative patients must be registered to receive EMS response</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>EMS activated by palliative patient/family</td>
<td>✓</td>
<td>✓</td>
<td>Phase II</td>
</tr>
<tr>
<td>Expanded EMS formulary for palliative patients</td>
<td>✓</td>
<td>✓</td>
<td>Phase II</td>
</tr>
<tr>
<td>Palliative training provided to paramedics</td>
<td>✓</td>
<td>✓</td>
<td>Phase II</td>
</tr>
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</table>
My system is a little different - will this work in other provinces?

- The program on PEI enrolled only their direct palliative care patients
- The program in AB initially started in urban centers activated by an RN in the home, but has since expanded across the province and includes 911 calls from patients/families
- NS all ground ambulance, available to adults and pediatrics and enhanced access to goals of care through the Special Patient Program

We have mostly primary care paramedics- what can they do?

- Psychosocial support is a key element, including identifying imminent death. Repositioning, fans etc are of value. In NS primary care paramedics can give medication for nausea.
- 40% of palliative assess, treat and refer calls in Alberta required only PCP scope of practice (psychosocial support, oxygen, fluid administration)
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