

# Senior Response Team – Treating Senior’s in the Community: A Review of Literature

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## Background

Alberta is looking for new and different ways to reduce emergency department wait times, decrease bed shortages, decrease the volume of patients presenting to the emergency department, and play a broader overall role in Albertan’s health. The Government of Alberta has put forth five strategies in the document *Becoming the Best: Albert’s 5-Year Health Action Plan 2010-2015* to “ensure Albertans receive the right care, from the right person, at the right time.”<sup>1</sup> Strategy 1.8 is to “expand the role of emergency medical technicians and paramedics to”

- *Treat patients on-site instead of taking them to an emergency department, as appropriate.*<sup>1</sup>

The trend of paramedics assessing and treating patients in the community and providing referral for follow up care, if needed, has been explored internationally. The literature surrounding the assessment and treatment of seniors within the community has been proposed in several models – with the majority of the research data coming from the UK’s National Health Service (NHS) studies with paramedics. Little research has been conducted on the role of paramedics treating patients on-site specifically in supportive living facilities. However, several studies are under way with nurse practitioners and nurse specialists. Despite the inability to agree on what type of practitioner should deliver treatment to patients, in their homes or supportive living facilities, it has been agreed treating patients in the community has the potential to decrease emergency department attendance, and increase overall patient satisfaction.<sup>2,3</sup>

The purpose of this paper is to review relevant literature, assess trends, and to extrapolate data to explore the use of a specialized paramedic team managing certain medical conditions at the supportive living sites, permitting EMS to decrease the number of patients transported to hospital.

Although more research needs to be done to determine if elderly patients can be treated safely and effectively within the community. Preliminary data suggests that not only is it possible but it appears to decrease unnecessary transports to emergency departments and increases overall patient satisfaction.

There have been several models used to trial the effectiveness of assessment and treatment of the elderly in the community including those with paramedics and nurses. Several trends emerged during the discussion.

- Additional Education
- Scope of Practice
- Economic Analysis
- Integration with Other Health Professionals
- Effect on Elderly Patients

### **Additional Education**

Upon review of the current literature, there are several international studies under way or recently completed that strive to assess the safety and efficacy of treating elderly patients in the community. A 2004 study in the UK assessed paramedic practitioner's treatment of patients over 60 years old within the community who met defined criteria.<sup>2</sup> The paramedic practitioners received additional formal education, the patients reported overall increased satisfaction, decreased emergency department visits and admission rates.<sup>2</sup> Paramedics were dispatched via interception of emergency calls or by request from other crews on scene.<sup>2</sup> It was concluded that "paramedics with extended skills can provide clinically effective alternative to standard ambulance transfer and treatment in the emergency department for elderly patients with acute minor conditions".<sup>2</sup>

In Australia, a trial is currently underway to determine the ability of paramedics to determine patient suitability to participate in a trial where they would receive treatment in their homes by a nurse practitioner. Consenting patients, over 16 years old, for conditions such as minor injury and simple infection are assessed by a community treatment team within four hours of paramedic referral.<sup>3</sup> Paramedics are not members of the mobile treatment team; however, they were responsible for the initial patient assessment. Perhaps with additional education they would be capable not only of determining eligibility to receive treatment within the home but also to administering it. This study is not driven specifically towards the elderly but data from the population subset could be further analyzed for future projects.

The use of paramedics in a more autonomous role in an attempt to incorporate the ambulance service into health care has led to a variety of job titles. Taking on names such as paramedic practitioner, advanced paramedic practitioner and emergency care practitioner. Each classification requires additional education ranging from eight weeks theory at the paramedic practitioner level to obtaining a Bachelor of Science with Honours in Pre-Hospital Care or a Masters in Advance Clinical Practice as an advanced paramedic practitioner.<sup>4</sup> Doy and Turner state "the emergency care practitioner occupies the space between the general practitioner, the nurse, and the paramedic"<sup>5</sup> Various hours of clinical practicum accompany most theory sections. The literature suggests paramedic training should move away from vocational training and towards university based education in order to meet the demands of autonomous management of specific patient populations in an effort to expand paramedic's

scope of practice to diagnosis and treat patients with minor illness and injury within the community.<sup>4,6</sup> Advanced assessment and patient management skills are the focus including triage techniques, wound closure, advocating for patient health and use of supporting social agencies.<sup>7</sup>

### **Scope of Practice**

Suggested scope of practice for practitioners treating patients in the community vary, but tend to focus on patients with minor illness or injury. Mason et. al suggests that community paramedic practitioners carry equipment for procedures such as wound management, splinting, and phlebotomy in addition to blood pressure and cardiac monitoring devices, radiography referral cards, general referral letters and certain drugs for prescription under standard protocols.<sup>7</sup> Scope of practice for paramedic practitioners in Sheffield UK includes the treatment of fall, lacerations, epistaxis, minor burns, and foreign bodies in the ear, nose, and throat with optional capability for radiograph requests and referral to other health care agencies.<sup>2</sup> Mobile treatment members in Perth Australia, which does not include paramedics, are able to treat isolated minor injuries from a low risk mechanism, simple infection, and specific 'hardware problems' such as a block urinary catheter.<sup>3</sup> Emergency mobile nurses Ontario deal with hydration concerns, infection, feeding tube issues, pain, and breathing concerns.<sup>8</sup> Paramedics, nurses, and other allied health care workers working under specific guidelines to treat patients within the community are emerging around the world. Preliminary research suggests there is an effect on the number of unnecessary transports to the emergency department.

The Government of Nova Scotia recently initiated an Extended Care Paramedic Project aimed at assessing and treating seniors at their bedside in non-emergent situations within the nursing home.<sup>9</sup> "This program focuses on nursing-home patients and bringing more services directly to them in their home, with a variety of other benefits to the health-care system, such as reducing wait times and making other paramedic units available for emergency responses in our community".<sup>9</sup> This project is ongoing, to date no data has been released regarding the success of the program.

### **Economic Analysis**

The use of paramedic practitioners in Sheffield UK to treat older people in the community was analyzed in 2008 to determine if it was cost effective. Paramedic practitioners were found to spend a longer time on scene with the patients however; they were able to decrease the number of emergency department visits and hospital admissions.<sup>2</sup> Eight factors were included in the cost analysis of the project from the cost of the paramedic practitioners themselves to emergency department and impatient costs.<sup>10</sup> Ultimately, it was concluded that paramedic practitioners are cost effective when the economic results are considered in tandem with "the clinical, operational and patient-related benefits".<sup>10</sup> Cost benefit analysis are included in the proposal for randomised control trial in Perth Australia to date no data has been released. Further examination into the cost of paramedics treating seniors in the community needs to be

conducted to determine the financial benefits of avoiding unnecessary transport to the emergency department.

### **Integration with Other Health Professionals**

Emergency Mobile Nursing Service's in Canada preliminary data from a 2008 pilot project aimed at treating elderly patients within long term care facilities suggests a mobile team "could be an effective strategy to reduce the number of avoidable transfers to the ED."<sup>8</sup> Staff nurses were selected for the pilot based on perceived desirable attributes including a variety of experience including the acute care setting and a passion for the elderly.<sup>8</sup> The nurses visited a group of long term care facilities "proactively identifying residents who might require care" working with the facilities, emergency mobile nurses were called prior to an ambulance, provide treatments and they followed the patients care through the emergency department if required.<sup>8</sup> Overall the number of ambulance transfers from the participating long term care facilities decreased.<sup>8</sup>

### **Effect on the Elderly**

Information regarding the safety of treating elderly patients in the community is scarce. Mason et. al suggests that "paramedics trained with the appropriate skills working in the community assessing and treating older people with minor acute conditions are doing so in a manner that is at least as safe as the standard care provided by EMS and the ED"<sup>11</sup> Continued research in this area needs to be conducted, however, the preliminary research is promising. Past research shows that older patients (>65 years old) use Emergency Medical Services (EMS) more often than younger patients, with patients over 85 years old using EMS more often than any other age group for transport to the emergency department.<sup>12</sup> Current data out of Ontario shows that one quarter of Long Term Care residents made a visit to an emergency department over a six month period of data collection.<sup>13</sup> The effect of these hospital transfers on the elderly patients needs to be considered, Jones et. al states "ambulance transfer to the ED (emergency department) is both physically and emotionally difficult for the NH (nursing home) patient and his or her family."<sup>14</sup> While data from a study of paramedic practitioners in the UK shows that elderly patients treated within the community, avoiding emergency department transfer, were more likely to report being "very satisfied" when compared to those patients transferred to the hospital.<sup>2</sup>

### **Conclusion**

Reducing unnecessary transports to the emergency department could be facilitated by creating specialized teams of paramedics with supplementary education capable of treating seniors within the community, specifically at supported living sites. Reduction in unnecessary transports to emergency departments is an important part of AHS strategy to reduce wait times. Using the right care— treatment for seniors with minor injuries and illnesses, by the right person – a paramedic with specialized training, at the right time – at the supported living site,

decreasing unneeded stress created by transfer to the emergency department – aligns with AHS goal to utilize EMS more effectively and to their full potential.

### Works Cited

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