

North East LHIN Demonstration Pilot Project: Non-Urgent Patient Transportation

FINAL REPORT

MANITOULIN-SUDBURY DSB

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Introduction to Non-Urgent Patient Transportation

Under the regionalized system of health care in the province of Ontario, patients are often transferred from one medical facility to another to receive specialized care or care which is unavailable at their local facility. Unless a patient lives in a larger, urban area containing a tertiary care facility, they will undoubtedly have to seek specialized care, as needed, elsewhere. When this patient resides in Northern Ontario they are often transported from one facility to the next via ambulance. The lack of an alternative transportation option and the lack of a widespread existence of the private-for-profit Medical Transportation Service (MTS) industry in Northern Ontario further reinforces the ambulance as the preferred option for transportation.

Looking at Northern Ontario we find that Emergency Medical Services (EMS) are struggling to meet the emergency medical needs of their citizens. An aging population and the great geographic challenges found in the vast North make for increased call volumes and extended response times. Towns and villages throughout Ontario, but particularly in the North, who actually have an ambulance within their community, typically have only one located within their boundaries. Rural communities do not have the luxury of multiple ambulances on shift within their area. Emergency response capability is at both minimum and maximum capacity at any given time. When you combine strained EMS resources with the reliance of ambulance use for non-urgent activity, you have a system that is struggling to meet the emergency medical needs of its people.

Manitoulin-Sudbury District Services Board (DSB) considers itself a leader in proactive approach to this issue. Keeping in mind the Ministry of Health & Long Term Care (MOHLTC) goals of establishing a patient-focused, results-driven, integrated and sustainable publicly funded health system, we believe we have developed a system fully capable of delivering on multiple levels.

Historical Significance

Historically, non-urgent patient transfers have been completed by Ambulance Services. Before the year 2000, when private operators ran Ambulance Services on contract for the MOHLTC, completion of non-urgent transfers was a normal occurrence. For many services in rural Northern Ontario, post municipal download in 2000, it is still the case.

Regardless, the issue surrounding non-urgent patient transportation is not new. The following is a breakdown of historical significance within the realm of non-urgent patient transportation.

1991 The Emergency Medical Services Review “Swimmer Report”

Noted within was a 40% increase in non-urgent transfers in the 1980’s. Additionally noted was the inappropriateness and inefficiency of local Ambulances services to provide this service.

1997 A document was produced by the MOHLTC entitled, “Guide to Choosing Appropriate Patient Transportation”

This hospital guide specifies that an ambulance should be used if:

1. It is an emergency situation
2. If the patient has been judged by a physician or a health care provider designated by a physician, to be: unstable; in need of a nurse, other primary care provider, emergency medical attendant or paramedic enroute; and in need of a stretcher. The conditions must apply concurrently.
3. An ambulance is the only available means of transportation.

1999 The Ontario Hospital Association (OHA) produced a position paper calling on the MOHLTC to take action on 8 issues with the impending Ambulance download

One of said recommendations was that “the MOHLTC should designate non-emergency inter-facility transfers as part of the ambulance service system and that continuum of care and the costs of these transfers should be funded accordingly”.

2002 The MOHLTC commissioned a study by the IBI Group on behalf of the Land Ambulance Implementation Steering Committee to investigate “Non-Emergency Inter-Facility Patient Transfers”

Once received, the final report was not released to the public by the MOHLTC. Through a Freedom of Information Request the report was released and following 4 major points were revealed:

1. Patient Transfer Arrangements Need to be Improved
2. Mode Choice Should Reflect Patient Care Needs
3. Ambulances Should be Used Predominantly for Emergencies
4. MTS Operations need to be regulated.

2004 The OHA drafts a paper entitled, “Non-Emergency Ambulance Transfer Issues for Ontario’s Hospitals”

Within that paper, the OHA produced results of a survey of hospitals on their current experiences with local ambulance services in relation to non-urgent transfers. 84 surveys were returned and 91% of respondents indicated that they had experienced delays or difficulties with non-urgent EMS Transfers, 97% cited delayed departures, and 87% cited this as an inefficient use of resources due to missed/delayed departure and late/missed appointments.

2005 “Annual Report of the Office of the Auditor General of Ontario”

Stating an increase in requests for EMS resources to perform non-urgent transfers the report found that the MOHLTC was somewhat ignoring the issue stating;

“The Ministry did not track or analyze the total number of scheduled transfers to institutions done by private medical transport services; the number that could safely be done by medical transport services but were actually being done by ambulances; or the number that should have been done by ambulances but were done by medical transport services.”

In failing to analyze the data, the MOHLTC was also failing to evaluate whether this was the most cost effective solution. It was recommended that; *“The Ministry should work jointly with municipalities and the hospital community to:*

- *develop and put in place standards for non-ambulance medical transport services to address passenger safety; and*
- *take steps that will encourage the use of the most cost-effective resources for the scheduled transfer of non-emergency patients.”*

The MOHLTC submitted a response indicating that a working group had been established to look into the matter.

2007 “Annual Report of the Office of the Auditor General of Ontario”

An update was provided to the Auditor General whereby the MOHLTC concluded that the issue on non-ambulance medical transportation fell within the realm of the Ministry of Transportation.

More Recent & Local Impact

More recently documents and studies have looked at this topic and there continues to be not one that indicates the burden on current EMS to be appropriate.

2010 Position papers were created by both the Northern Ontario Municipal Association (NOMA) and the Northern Ontario Service Deliverers Association (NOSDA) to deal with this issue

**April
2011**

NOSDA AGM in April

President Norm Gale of the Ontario Association of Paramedic Chiefs (OAPC formally AMEMSO) went on record detailing:

1. Increased demands on EMS – emergency call volumes are rising mainly due to an aging population not increased population levels
2. EMS is providing a service not within the legislated mandate – Ambulances are meant for emergency use. When considering usage for transfers the person should meet the threshold of what is written within the Ambulance Act. They should have been judged by a physician to be in an unstable medical condition *and* to require while being transported, the care of a physician, nurse, other health care provider, emergency medical attendant or paramedic *and* the use of a stretcher. Often times none of these factors are met and performing these non-legislated requests hinders EMS ability to meet legislated demands.
3. EMS is inefficient and ineffective – cannot guarantee that EMS will be on time, cannot guarantee that EMS can bring the patient and/or nurse escort back, paying highly trained well paid professionals for something that does not require their skills.
4. Comes at the expense of emergency coverage (the legislated demand) – when an ambulance is out of the rural community emergency coverage is almost always sacrificed. Crews often sit on standby to balance the issue.

This presentation was followed up by another from Senior Emergency Health Services (EHS) Manager, Dr. Tony Campeau. During that presentation it was mentioned that it would be hoped that the Ombudsman Report would shed light on this topic and that MTS regulatory measures could be produced. This representative from the MOHLTC EHS Branch stated that this issue is not one for the MOHLTC, rather it is one for the Local Health Integration Network's (LHIN's) and Ministry of Transportation (MTO).

May 2011 A report is drafted for the DSB Board containing much background information and a 4 step approach to the matter

1. Consultation with Stakeholders
2. Redevelopment of the Deployment Plan
3. Presentation of a Business Case to the Minister of Health

4. Monitoring of the situation

All 4 steps were acted on in short order and a comprehensive business case was forwarded to the Minister of Health with letters of support from all relevant stakeholders in October 2011.

**August
2012**

North East Local Health Integration Network (LHIN) involvement

Contacted EMS providers throughout the area and held a teleconference on the issue of non-urgent transportation. Up until then there had been some indication from the LHIN that they were going to be reviewing this issue by striking a committee.

**October
2012**

North East LHIN posts an Expression of Interest

Regarding 6 month pilot projects that would provide a steering committee with the evidence on concepts that could be employed to assist on the non-urgent transportation front. Manitoulin-Sudbury DSB and its partners put together 2 proposals; one for Chapeau and one from Manitoulin/LaCloche.

**December
2012**

Informed that our Manitoulin/LaCloche proposal was one of three accepted

Legislation

To fully understand this topic it is important to reiterate the responsibilities of Ambulance

Services. All EMS in Ontario is governed by strict MOHLTC directed legislation. Additionally, there are other acts relating to the operation of an ambulance service with the preeminent document being the “*Ambulance Act*”.

While the Ambulance Act does not outright prohibit the use of Ambulances for non-urgent transfers (it does not prohibit the use of an Ambulance for any purpose), it does define ambulance to be “a conveyance used or intended to be used for the transportation of persons who;

- a) have suffered a trauma or an acute onset of illness, either of which could endanger their life, limb or function;
- b) have been judged by a physician or a health care provider designated by a physician to be in an unstable medical condition and to require, while being transported, the care of a physician, nurse, other health care provider, emergency medical attendant or paramedic, and the use of a stretcher.”

Many patients being transferred by Manitoulin-Sudbury EMS from one facility to another do not fall within the criteria as listed above.

In the realm of governing legislation it is also important to note that The Highway Traffic Act and Municipal Act also have applications relating to medical transportation services.

Current Healthcare in Ontario

In June of 2010 the Government of Ontario passed the Excellent Care for All Act, setting standards to ensure that Ontarians receive health care of the highest possible quality and value. This means that:

1. The patient is at the centre of the health care system.
2. Decisions about patient care are based on the best evidence and standards.
3. The health care system is focused on the quality of care and the best use of resources.
4. The main goal of the health care system is to get better and better at what it does.

Furthermore, in 2012 the MOHLTC developed Ontario's Action Plan for Healthcare. The action plan has three priorities:

1. Keeping Ontario Healthy
2. Faster Access to Stronger Family Health Care
3. Right Care, Right Time, Right Place

The MOHLTC has made improvements in health care over the years by creating better access (more family doctors, Family Health Teams, cutting wait times for key procedures), better quality (annual public quality improvement plans, executive compensation linked to achievement of quality improvement, public hospital reporting on 9 key patient safety indicators), and better value (cutting the costs of generic drugs, accountability agreements with hospitals tying funding to performance, balancing hospital budgets through accountability to the LHINs).

The one area where the MOHLTC has been silent until recently is in the consideration of a public medical transportation model.

Emergency Medical Services throughout Northern Ontario can no longer compensate for a regionalized health care system that lacks a true medical transportation model. In the advanced age of medicine, much of the most fundamental medical diagnostic equipment is not located at the local hospital level. Rural community Hospital physicians are requiring more than ever that a patient to be transported for a higher level of diagnostic testing, or specialist care only available at a tertiary regionalized facility. Again, it must be noted that it is also in these rural communities that you will find only one ambulance available at any particular time. Losing that ambulance for the hours it takes to transport and wait with a patient is unacceptable to the emergency needs of that community.

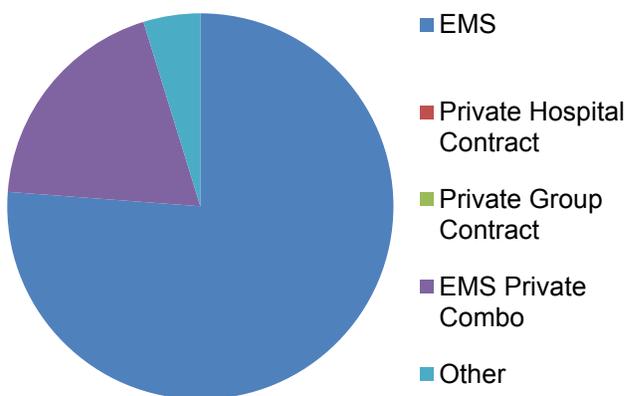
Putting the emphasis on better quality care will also mean better value for our investment – because quality and value go hand-in-hand. Waste, inefficiency and poor quality are costly to the health system – a system that consumes an ever-greater portion of the provincial budget. Quality care does not mean more expensive care. On the contrary - quality care means cost-effective care. Moving forward, Ontario health will put the patient front and centre, focus on better delivery and make smarter use of limited resources.

Minister of Health & Long Term Care, Deb Matthews

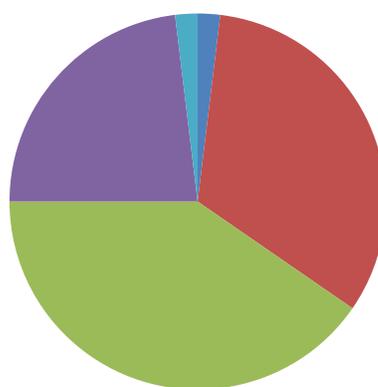
Regarding the Excellent Care for All Act.

A survey was conducted by the OHA in June of 2013 entitled, “*Non-Emergency Ambulance Transfers*”. There was a 48% response rate from Ontario Hospitals. A question was raised whether the current non-emergency transfer arrangement meets the needs of your hospitals patient population. 40% of those surveyed indicated that their current arrangements do not meet their needs. Overall 25% of hospitals rely solely on EMS to provide non-emergency services. To highlight the inequities in the delivery of patient care in our regionalized provincial health system, the following charts depict the breakdown of utilized services within the North West LHIN and North East LHIN, compared to the rest of the LHIN’s in Ontario.

Northern LHIN's



the Rest of Ontario's LHIN's



It becomes quite evident that the rest of Ontario has a system that relies far less on EMS as a means of transportation for non-emergency patient transfers. Another question proposed was, “*what are the benefits of the Current Arrangement*”? Broken down based upon the EMS arrangement 60% suggested Low Cost as a benefit, while 40% indicated trained staff and performance standards as the benefit. That is easily understood. For the hospitals there is no cost to utilize an ambulance. That service is picked up by ambulance funding which comes from the MOHLTC and Municipalities. Note that the MOHLTC portion of the ambulance funding does not directly impact upon hospital funding as they come from different branches of the MOHLTC. There were no answers to the above question reflecting availability, timely access, or patient flow as benefits to their current system. Drawbacks of the EMS model included the following:

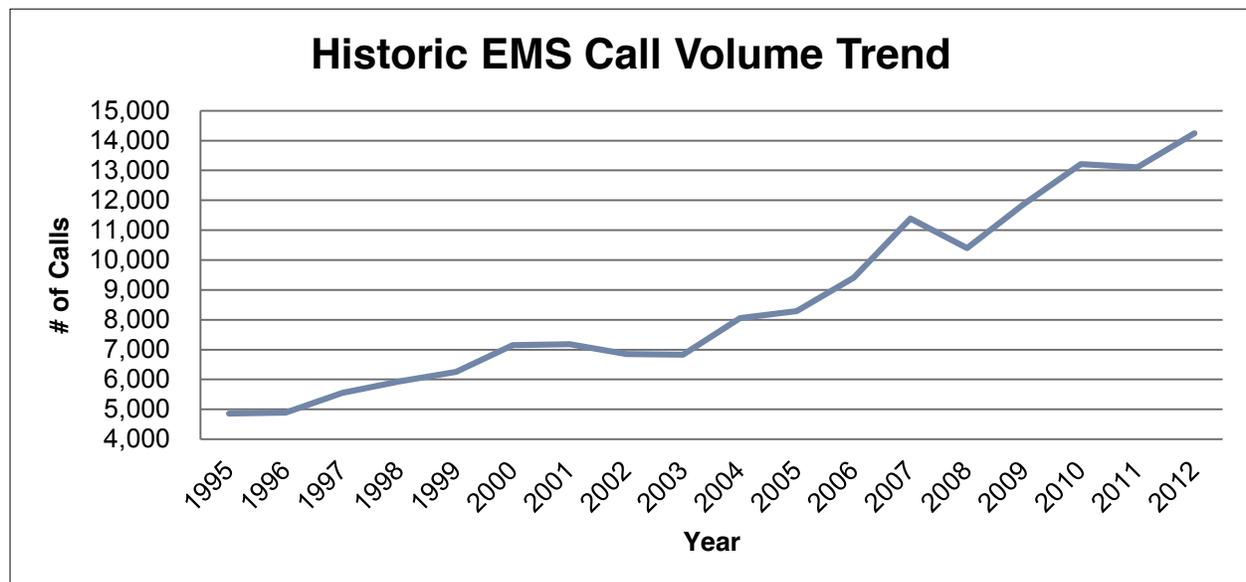
- Limited Hours 29%
- Cost 25%
- Response Time 17%
- Stranded Staff 17%
- Other 13%
- Safety 0%

Overall, the present state of regionalized health care in Ontario is somewhat fractured. While the MOHLTC has enacted legislation to improve healthcare in all of Ontario there are still vast differences between North and South. Geography within the vast North is the main opponent to any benefit of a regionalized system. In Northern Ontario where distances are far greater between tertiary care facilities there are also less abundant resources for the provision of non-emergency transportation. While this is a barrier to effective care it must overcome as more and more specialized diagnostic tools become available and essential in the continuum of patient care. Doctors are graduating from medical school with the expectation that these tools will be available to them as a standard of general care, yet many of these tools often are only available at regionalized centres.

The Future of Healthcare in Ontario

The trend in EMS call volumes mirrors that of our healthcare system as a whole. Ontarians are great users of healthcare, but an analysis of demographics will tell an alarming story.

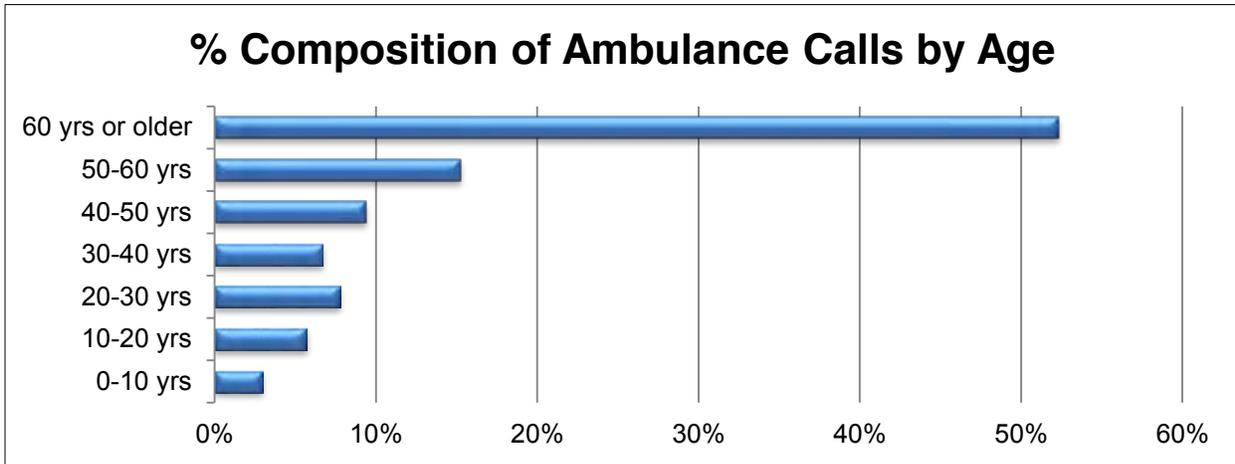
The following is a chart depicting the rise of EMS Call Volumes over the past 17 years.



There has been a substantial increase in EMS call volumes over the years. Over the past 10 years Manitoulin-Sudbury DSB has experienced an increase of 109% in call volumes.

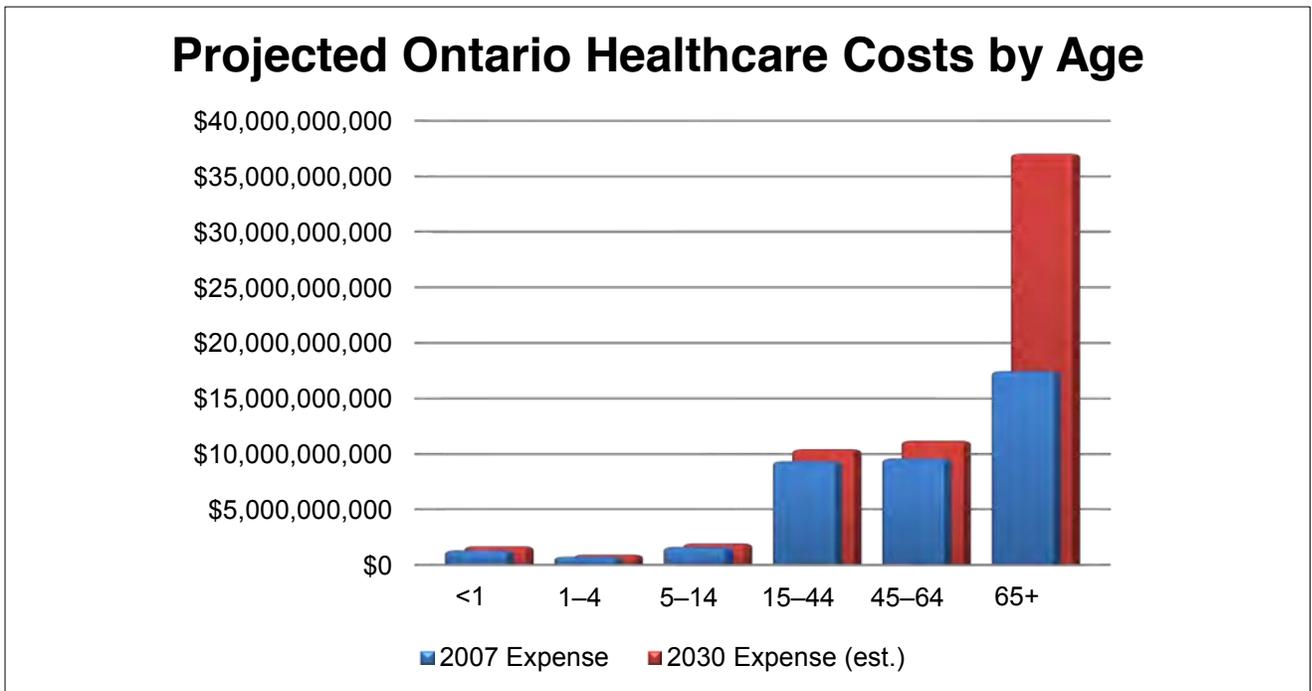
The issue surrounding calls volumes as a whole is due to the demographic makeup of the healthcare user. It is projected that over the next 15 years the growth in population of 15-64 yr. olds will decline, while the population of those 65 & older will grow.

The following table breaks down the current composition of EMS call by age.



With the aging population there are additional pressures as there is a disproportionate usage of ambulance services for those over the age of 60.

If you factor current costs of healthcare based upon usage by age and then factor the predicted trends in the aging population you get what is referred to as the “aging tsunami”. The following chart depicts current costs and predicted costs by the year 2030 if the current trends hold true.



With the present and future of healthcare in a state of flux, it is more important than ever to bring forth efficient and effective alternatives to current models. Additionally, when looking at new sources options for providing healthcare in Ontario it must be done with an eye to the economic benefit or waste in doing so. It is with this understanding that Manitoulin-Sudbury DSB undertook putting a theory into practice with its non-urgent patient transportation model.

An Efficiently Viable Solution

As indicated above, Healthcare in Ontario is facing a real crisis if the predicted trends continue without a change. Healthcare providers must look to more efficient means of performing essential duties. There is gross inefficiency in having EMS perform non-urgent patient transportation. The nature of the Emergency transportation industry involves highly trained and well paid personnel (paramedics), in quite costly vehicles (ambulances) not only from a purchase price but from an expected level of maintenance perspective. When dealing with true medical emergencies, the costs are justified; everyone would like a fully trained paramedic in a fully functioning ambulance when a loved one is medically unwell. But is the same level of care/expectation present for non-urgent stable patient transportation?

A reliable patient transportation network, both to and between hospital sites, is a major system component of a modern, integrated health care delivery network. The current state of patient transport capacity within the regions of Manitoulin and Sudbury is principally the responsibility of the EMS service, as administered by the Manitoulin-Sudbury DSB. The ability of EMS to respond to emergent, urgent and non-urgent patient transportation requests is severely taxed.

As mentioned previously, the North East LHIN engaged health care providers in the area on this issue of non-urgent patient transportation. Three Pilot project sites were chosen from a variety of proposals answering a LHIN Expression of Interest posted in the fall of 2012. Manitoulin-Sudbury DSB, in partnership with Espanola Regional Hospital & Health Centre, and Manitoulin Health Centre were fortunate enough to be one of the three proposals chosen to participate in this study.

The basic model of this project follows the principles as laid out in a Business Case submission to the MOHLTC in October 2011. The establishment of a two tiered system of medical transportation is seen as being the most efficient and safe way of transporting patients. Such a system leverages the knowledge of the current experts in the medical transportation field while providing for a more effective, efficient and timely means of moving stable patients.

The pilot project focuses on expanding capacity in a cooperative, collaborative and integrated manner and is predicated on the following components:

1. Three recently decommissioned and suitably prepared ambulances will be used as transport vehicles – two will operate at any one time (the third will be held in reserve), with one car stationed in Mindemoya and the second vehicle in Espanola (actual start locations Little Current and Espanola);
2. Part-time patient transfer attendants will be hired and trained by Manitoulin-Sudbury DSB to provide 80 hrs/wk of non-urgent transport of patients between the region's hospital sites;
3. Appropriate and standardized triage of patient transport needs will be accomplished by the hospitals;

4. Manitoulin-Sudbury DSB will collect all required statistical reports to measure the degree of success of the demonstration project over the six month period;
5. Dispatch services will remain with the Central Ambulance Communication Centre (CACC) (actually never occurred as the Emergency Health Services Branch of the MOHLTC would not allow it); and
6. Funding will transfer from the North East LHIN to one of the participating hospitals, who shall act as the administrative lead/paymaster for the six-month demonstration pilot project.

Established through existing non-profit organizations, the service was thought to be operated at a lower cost than that of a private sector, which is profit motivated. Estimates suggested an hourly ongoing cost of \$63.96, whereas the private industry rates range from \$100.00 to upwards of \$150.00 per hour sometimes with a daily guaranteed minimum cost structure.

Additionally, by building on existing infrastructure, services and processes, we have not reinvented the wheel. As each organization already meets rigid quality standards (e.g. infection control), there will be synergistic benefits of aligning these standards across each sector. This too will further support the work being undertaken to implement the Excellent Care for All Act. Ultimately, all organizations would achieve improved response times/reduced wait times by working together to better coordinate drop-offs and pick-ups to achieve better scheduling thus avoiding duplication of service and related multi-trips to and from Sudbury.

Since the original submission there has been more discussion on this topic within different circles. The North East LHIN Steering Committee, under the guidance of Performance Concepts Consultants, is engaging in discussion amongst all stakeholder including CACC's, Hospitals, the Ministry of Health & Long Term Care (MOHLTC), EMS Providers and ORNGE. On the political front this topic was raised by a number of groups at the annual Association of Municipalities of Ontario (AMO) conference in Ottawa in August. One group, the Northern Ontario Service Deliverers Association (NOSDA), had an audience with the Minister of Health on this topic where it became evident that the Minister herself understood this issue to be a large one not only within rural northern Ontario but also within the province as a whole.

Pilot Project Objectives

To quote the North East LHIN Expression of Interest the objectives were clear in that they were, *“seeking to pursue one or more time limited pilot/demonstration projects of innovative strategies/models which will help in the broader review of the issue as a whole”*.

Results were to be aimed towards strategies that:

- *Improve timely services to clients.*
- *Improve client experiences with non-urgent transfers to and from acute care facilities, or to/from hospitals and LTCH's.*
- *Decrease pressures in EDs and inpatient units related to patients awaiting timely transfers.*
- *Ensure sustainable emergency medical services in all communities.*

The North East LHIN dictated results fall in line with those of the Patient Transportation Service (PTS) partnership. A distinctive part of this project is that the North East LHIN was expecting a coordinated approach amongst different organizations. They were looking for joint proposals or letters of support between two or more organizations. This is unique in that the North East LHIN was making the push to get typically independent and unaligned organizations to open up to each other and work together for the benefit of the patient.

One final objective not reflected within the North East LHIN's Expression of Interest but still a viable objective to measure is economic efficiency. While it is most important that a patient comes first there must also be an eye towards fiscal responsibility.

Final Results

The Pilot Project is being measured on 6 months' worth of activity. It started on March 11, 2013 thus ending its 6 months as of September 6, 2013. Keeping in mind the above noted LHIN objectives and also factoring in economic efficiency, the success of this project can be measured. There are three perspectives to this project that must be considered; the hospitals, EMS, and most importantly the patient. Statistics were tracked internally during the course of the Pilot Project to be able to quantify the results of this project. From the qualitative viewpoint, surveys were performed from both the patient and hospital staff perspectives. The following will underline how these objectives have been met both from a quantitative and qualitative standpoint.

1. Improve timely services to clients

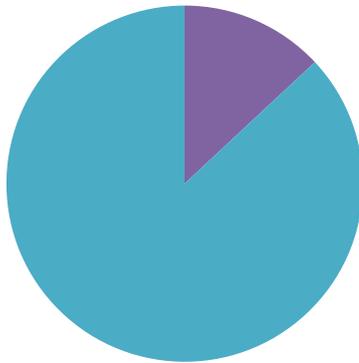
During the course of the Pilot Project statistics have been gathered which show an improved level of responsiveness to the needs of the patient. While a baseline set of historical data has not been established (due to inability to gather statistically), the current model has proven quantifiable success through its statistical gathering. The statistical evidence garnered in relation to this objective involves timeliness to arrival at scheduled appointments.

Over the 6 month Pilot Project the PTS was early or on time to patient appointments 126 times. Considering the unpredictable nature of medical necessity, the PTS was not on time to patient appointments 114 times. An analysis of these 114 instances provides explanations as to why. The average time late for an appointment is 26 minutes however the average notice lead time for the late appointment arrivals was 1 hour and 25 minutes. Understanding that the most reasonable amount of time it would take between the two closest facilities (ERHHC & Health Sciences North) would be 1 hour and further realizing that it takes in the neighbourhood of 30 minutes to deploy a vehicle and load up a patient for transport, a lead time of 1 hour and 25 minutes does not allow for timely arrival at appointment. If you factor in weather and optimal travelling conditions, we can rationalize any tardiness almost to the point of suggesting that being late to appointments doesn't exist given a proper amount of time to get there. Eliminated from the dataset were pickup times booked past the appointment time and any other last minute request that did not have a defined appointment time. The end statement must be that given the proper opportunity, this service is quantifiably on time in responding to the needs of the patients.

A review of the qualitative perception of timeliness can be done through an analysis for the patient and staff surveys. The following are the results from the surveys on questions related to timeliness.

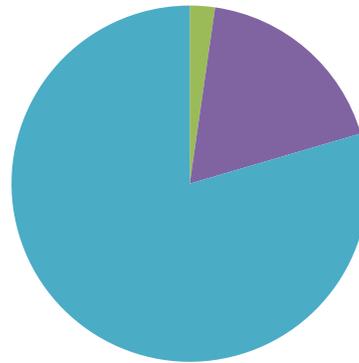
Staff Related Questions

Was the PTS On Time for Pick Up?



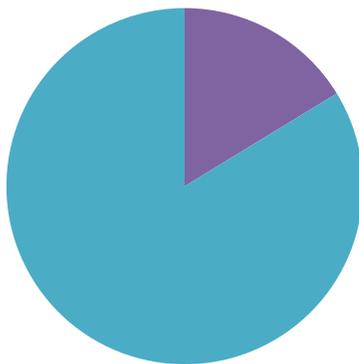
■ Agree ■ Strongly Agree

Was the PTS On Time for Booked Appointment?



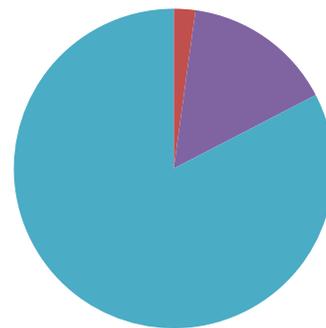
■ Neutral ■ Agree ■ Strongly Agree

Was the PTS On Time for Return Trip?



■ Agree ■ Strongly Agree

Was the PTS Able to Respond in a Timely Fashion?

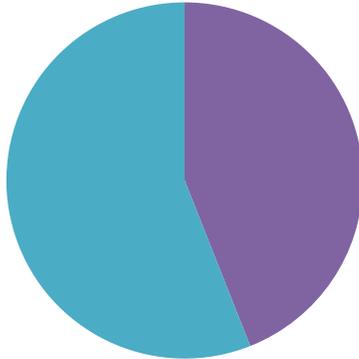


■ Disagree ■ Agree ■ Strongly Agree

From a purely personal perspective of the hospital staff, the quality of the service of the Pilot Project in terms of timeliness is an overwhelming success. 177 responses either agree or strongly agree on the above questions relating to being timely, while 1 response is neutral and 1 response disagrees that the service was timely.

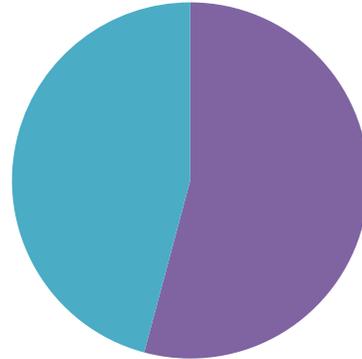
Patient Related Questions

The PTS Was on Time to Pick Me Up



■ Agree ■ Strongly Agree

The PTS Got me to My Destination on Time



■ Agree ■ Strongly Agree

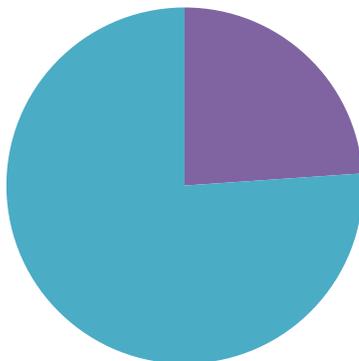
The patient experience in terms of timeliness is 100% in agreement that the service was able to meet its objectives of providing a timely service. Overall, from a qualitative perspective the projects goal of timely care to the patient must be deemed an overwhelming success.

2. Improve client experiences with non-urgent transfers to and from acute care facilities, or to/from hospitals and LTCH's

When considering experiences of patients the only real measurement is an evaluation of qualitative surveys. The following survey questions again detail the differences in perspective from both the hospital staff and the patients.

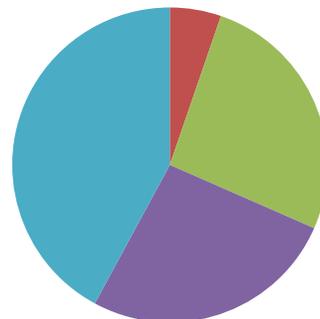
Staff Related Questions

The Level of Care Met My Expectations?



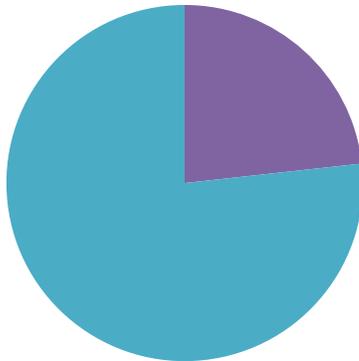
■ Agree ■ Strongly Agree

The Ride/Vehicle Was Comfortable



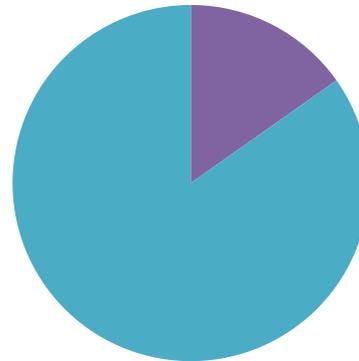
■ Disagree ■ Neutral
■ Agree ■ Strongly Agree

Client Service Met My Expectations



■ Agree ■ Strongly Agree

Transfer Attendants Were Courteous & Respectful

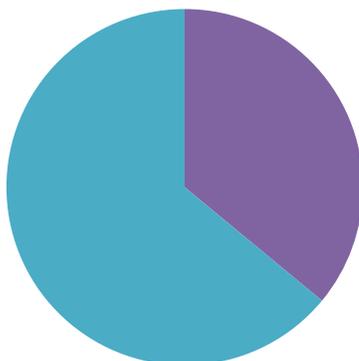


■ Agree ■ Strongly Agree

From a hospital staff perspective their experiences with the patient transportation service have met or exceeded their expectations in many cases. Their experience is overall a good one. The one area where the experience could be better is in the actual ride of the means of transportation. This will be elaborated on further below.

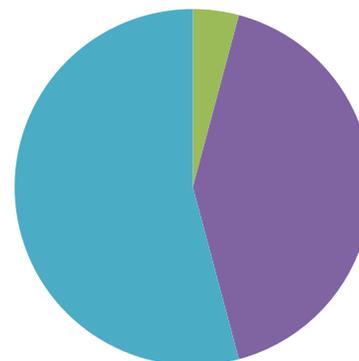
Patient Related Questions

Attendants were Courteous and Professional



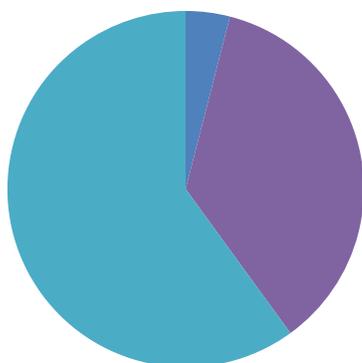
■ Agree ■ Strongly Agree

Overall Transfer was a Pleasant Experience



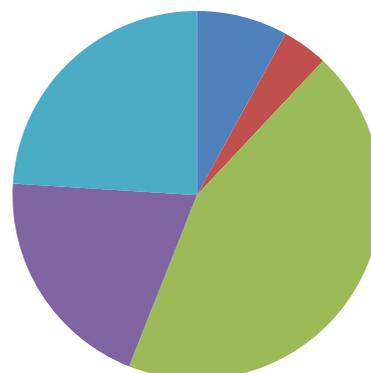
■ Neutral ■ Agree ■ Strongly Agree

Vehicle Appeared Clean & Tidy



■ Agree ■ Strongly Agree

Vehicle/Ride was comfortable



■ Strongly Disagree ■ Disagree
 ■ Neutral ■ Agree
 ■ Strongly Agree

Over 92% of patients strongly agree or agree with the statement that their “overall transfer was a pleasant experience”. Additionally, many of the other areas were again met with strong approval. The biggest and only real concern revolves around the ride quality of the vehicles that they are being transported in. Different options exist to rectify that situation however they all would require an influx of up front capital. The current model is utilizing 7 and 8 year old former ambulances as a means of transportation. While these units are donated from the DSB, they may not provide the most effective mode of transportation.

3. Decrease pressures in EDs and inpatient units related to patients awaiting timely transfers

This objective again revolves around timely access to the appropriate means of transportation. Under the alternative model of non-urgent transportation patients are being moved in a more effective and consistent manner. Appointment times are being met on a more regular basis as proven above, and there is a level of certainty around the arrival of the transporting unit. When arrangements occur as planned from a sending facility perspective pressures within all departments are lessened.

One noted factor along with the obvious decrease in non-urgent EMS activity is the overall 10% decrease in **urgent** EMS patient transportation between medical facilities. While the non-urgent patient transportation unit is not responsible for delivery of urgent patients, the reliability of the non-urgent transportation team can be seen across the patient acuity spectrum. It can be reasoned that a timely response to a non-urgent patient lessens the chance that the same patient may evolve into an urgent patient should they not have received the timely care when originally needed. In other words, getting to a patient on time reduces the chances of a detrimental effect on a patient’s health which would have necessitated an up-coded urgent

transfer. It can be said that providing a timely and responsive service has a positive effect on patient health and wellbeing.

4. Ensure sustainable Emergency Medical Services in all communities

The development of an alternative model of non-urgent patient transportation has allowed EMS Ambulances to remain in their communities a far greater amount of time than before. As it would be inaccurate to include statistics service wide, the statistics gathered below regarding call volumes include only calls in the areas affected by the non-urgent patient transportation Pilot Project. The PTS has performed 472 patient transfers resulting in 1218 hours moving patients. That is 472 times and 1218 hours where an ambulance was not removed from their community. The following table reveals the call volumes for EMS in 2012 vs. 2013. Also note that the overall transfer volume has gone up over the course of the year. There were 857 non-urgent patients transported in 2013 by both services as compared to 763 moved in 2012.

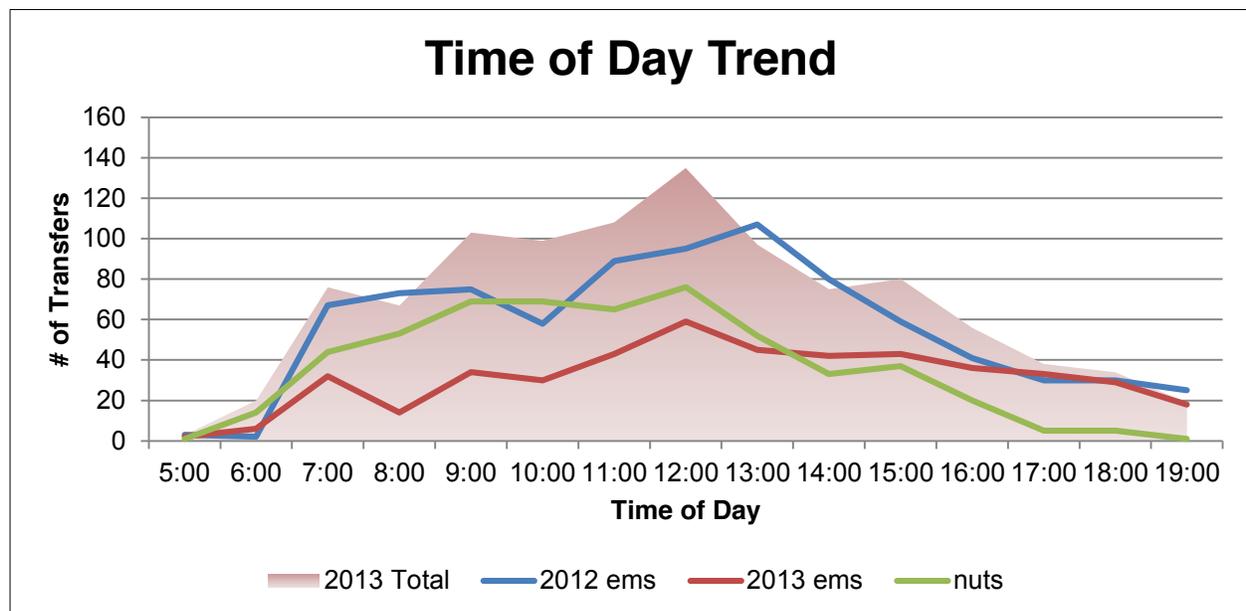
Code	2012	2013	% Change
1	558	319	
2	205	66	
Total Non-Urgent	763	385	50%
3	298	265	
4	74	69	
Total Urgent/Emergent	372	334	10%

A review of response times for the same time periods in 2012 (without the PTS) and 2013 (with the PTS) reveals some interesting data. Understanding that one factor of EMS response time performance involves responses within a timeframe of 8 minutes for the most serious of patient dispositions; that being the Canadian Triage Acuity Scale (CTAS) 1 patient. The following table details EMS response times for 2012 and 2013 with the percentage change noted on 2 levels.

	# of Calls	EMS Response Performance	% of the time
2012	14	CTAS 1 in under 8 minutes	29%
2013	20	CTAS 1 in under 8 minutes	37%
Difference	43%		28%

Reviewing the table even though there has been a 43% increase in number of CTAS 1 calls EMS has been able to improve upon performance by 28%. This must at least partially be attributed to the PTS enabling EMS to remain within their populated communities.

Further analysis of the utilization of the PTS in comparison to EMS can be done looking at time of day stats. The following chart depicts the time of day trends over the course of the 6 month Pilot Project period.



As seen above the utilization of EMS in 2013 for non-urgent patient transportation has been drastically cut much to the benefit of emergency response times.

5. Economic Efficiency

In most other areas of the province there is a robust Medical Transportation Services industry. This private, for profit industry had signed contracts with hospitals who have realized that moving a patient to another facility when they no longer should/need to be within their facility has benefits, especially considering the performance based model of funding for hospitals. Strictly put, having a patient take a bed when they no longer are suited for that bed, costs more money than it does to transport them to a more appropriate facility. The ongoing costs for these transportation services range anywhere from \$100-\$150/hr with minimum daily or weekly hours built into the service contracts. While these costs are palatable due to as mentioned above, a publicly operated model can be even more economical.

The current 6 month pilot project has shown over 6 months that costs are \$56.43/hr on an ongoing basis and when startup costs are factored in for the 6 month period costs are \$81.38/hr. Understand that startup costs are made up mostly of one-time costs or costs that can be amortized over a period of far greater than 6 months. The purchase of stretchers and equipment can span 5 years or greater however the full costs have been included within the current pilot project over only a 6 month period.

There are monetary factors that need to be considered for a full time system such as a Unionized environment, supervision and dispatch oversight, and reliability/suitability of the vehicles but even with these costs included it is estimated that the financial benefit will still be

evident. Potential improvements and/or changes to the current model are explored later in this document.

Lastly, in terms of costs, it is an EMS policy that all non-urgent transfers for treatment or diagnostic services require that a medical escort come along with the patient. This is due to the possibility that EMS could have to return to their home community due to lack of resources available to respond to medical emergencies. In these cases both the patient and the escort may need to stay at the receiving facility for an unknown period of time. This uncertainty has been minimized with the PTS.

Detailed Financial Outcomes

One of the overall successes of this particular pilot project is in the area of finances. The following is a breakdown of the financial expenditures in comparison to the budgeted amount.

6 Month Costs	Budget	Expenditure	Surplus/Deficit
Startup	\$ 51,056.00	\$ 47,987.00	\$ 3,069.00
Ongoing	\$ 133,035.00	\$ 112,167.00	\$ 20,868.00
Total	\$ 184,091.00	\$ 160,154.00	\$ 23,937.00

Over the course of 6 months the PTS was underspent by \$23,937 or 13%. Actual ongoing monthly costs were \$18,085. Based upon the financial success of the program we were able to extend the pilot project until the end of September without any additional funds. The cost per hour works out to \$56.43 factoring in ongoing costs only. If the startup costs were also factored in, the cost per hour would be \$81.38 but again it must be noted that the startup costs would be there whether the program lasted months or years. Amortizing the startup costs over a longer period would reduce the cost per hour on a global level. To explain this further the calculated global cost per hour if the project were run over the course of the year at the same level would be \$68.90, and over 2 years would be \$62.67.

While the Pilot Project has been a true financial success it must be noted that it cannot continue under the current budgetary consideration. Noted later within this document are the thoughts for change should this program be considered for permanent ongoing implementation.

Other Generalized Statistics

As mentioned previously there were many statistics gathered by the Patient Transportation Attendants through documentation during the course of their duties. The following is a list of some other interesting statistics generated by the program.

- Unit Hour Utilization (UHU) for the PTS during the course of the project was .634. What this means is that 63.4% of the time during the course of their duties the PTS was actively engaged in patient transportation. With the 1220 hours of actively transporting patients there were 702 hours of waiting for a transfer. It has to be understood that some of the 702 hours of downtime were necessary as there are obligations to ensure cleanly

vehicles that were appropriately stocked and fuelled. Additionally, not counted in the UHU was the time it took to relay vehicles for maintenance.

- Total kilometres travelled during the course of the project were 45,288.
- Top 5 Facility utilization:
 - Health Sciences North 168 (143 returns from treatment/25 repatriations from previously being dropped off)
 - Manitoulin Health Centre Little Current 96
 - Espanola Regional Hospital & Health Centre 88
 - Manitoulin Health Centre Mindemoya 59
 - Centennial Manor 13
- The average duration of a patient transfer is: 4 hours and 07 minutes.
- We are averaging 2.42 transfers per day and that includes both one way or two way
- 472 total trips with a patient (that includes 120 one way and 176 two way trips)

Considerations for Improvement or Expansion

As with any project there are always opportunities for improvement. For this program there could also be an opportunity for expansion in terms of hours of operations.

The first area which undoubtedly requires change is in the area of supervision and dispatch. Under the original Pilot Project submission it was deemed essential that the CACC participate in providing dispatching services for the PTS as they currently did for EMS. When requested to be involved it was determined that the MOHLTC was unwilling to let their service participate. No amount of discussion was able to alter this decision. Unwilling to let the Pilot Project fall apart and wanting to let it prove its merits on the basis of the business plan, the partners decided to internally manage and fund the dispatching of the PTS units. This internal funding was not removed from the allocated funds. This can no longer continue in the current format as utilizing an EMS Manager over the past 6 months has taken its toll in terms of EMS work responsibility. It had been determined that there is the need for at the very least a 0.5 full time equivalent to coordinate and dispatch this system. This need would need to be reflected in the updated budget submission.

For a long term solution to provide the best of patient experience, consideration should be given to improving the style of vehicles utilized for this service. There are many different options that do not need to be ambulance based. The cost of a new ambulance is quite prohibitive mainly due to the high level of certification standard placed on the vehicle manufacturers by the MOHLTC. Additionally, there are only 2 main vendors for ambulances in the province of Ontario thus making for little competition. The use of extended vans or smaller gas powered vehicles could be considered on a long term basis. In this circumstance the costs would be high but over a longer amortization period this cost can be absorbed easier. With new vehicles there is also the benefit of warranties and less cost in terms of repairs in comparison to the former 7 year old ambulances currently used under the Pilot Project model.

Additionally, in terms of vehicles there is also the need for a garage to house the units when not in service. In order to ensure the ability to clean the units in the winter and ensure that they are sufficiently protected by the elements and cold, a garage should be considered to house at least one vehicle. There is current capacity in the Little Current EMS station for one unit.

One last area to consider when it comes to vehicles is branding and external markings for the units. Currently there are small decals on the doors of the vehicles indicating the logos of the 3 partners. Vehicle recognition by use of branding and decals would be appropriate as not to misrepresent them as either ambulances or delivery vehicles. Branding would also instill further confidence in the system as a professional means by which to move patients throughout the healthcare system in Ontario.

Many hospital survey results suggest an expansion of hours of operation for this system to include weekends and weeknights. This expansion could expand upon the benefits of the current model. During the course of the 6 month pilot project 178 transfers occurred on weekends and between the hours of 5pm and 7am on weekdays. This level of expansion is not reflected in the updated budget submission.

The level of care provided by the Patient Transfer Attendant (PTA) is another area where consideration for alternative options must be explored. The current model utilizes trained first aid personnel who have learned additional skills in patient transportation, driving, specialized equipment usage, and communicable disease mitigation. While the current level of training is currently sufficiently meeting the needs of patient, consideration may be given to enhancing the qualifications to that of a medically trained profession. Utilizing Personal Support Workers or even Registered Practical Nurses as the attendant to the patient with a trained driver as the second member of the team could lead to maximization of capacity for care. The requirement for a medical escort could be all but eliminated with this type of medical capacity on the transfer vehicle. It must be understood that tending to the personal needs of the patient in any more than the most basic of circumstance (food, water, climate control) is beyond the scope of the current PTA. Assisting with regular medications and personal hygiene matters would fall within the scope of practice of the RPN and possibly the PSW under certain circumstances. The consideration for an altered level of attendant would be aimed fully at maximizing resources and the best level of care for all areas surrounding the patient. The current model is sufficient and economical but an enhanced level of training may provide for more efficiency across all organizations involved.

The final area of consideration has to be in terms of boundaries and geographic limitations. Understanding that the current Pilot Project is success its success could be realized on a greater scale. There is a need for alternative non-urgent transportation models throughout North Eastern Ontario. If funding were to continue from the MOHLTC through the North East LHIN, there is no reason why a non-urgent system could not expand into other communities. Additional vehicles units based in Elliot Lake, Blind River and possibly the regional hub in Sudbury, all controlled by the same overseeing dispatch entity would ensure the most efficient utilization of resources. A truly integrated system of non-urgent transportation should have no geographic borders. One of the reasons why CACC involvement was sought in the original submission was due not only to their expertise in dispatching but also because they knew both

where the patients were and where the resources were located. Having a so called “overseeing eye” with global perspectives on needs and resources would go a long way to ensure maximum utilization of resources.

Conclusion

The Non-Urgent Transportation Pilot Project operated by Manitoulin-Sudbury DSB, Espanola Regional Hospital & Health Centre, and Manitoulin Health Centre has proven that an alternative, publicly funded system of non-urgent transportation can be an effective and efficient model of quality patient care. This partnership amongst non-traditional organizations has been mutually beneficial and one that has fostered a better understanding of the needs of each other as well as those of the patient. Sustained funding of this alternative non-profit model of non-urgent transportation will enable the healthcare system in this area of Ontario to continue with its focus of getting the patient the right care, at the right time, and at the right place.