



Report to: DSB Program Planning Committee

From: Michael Maclsaac, Chief of Paramedic Services  
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Date: April 27, 2015

Re: Self-Loading Stretcher System Issue Report

## **RECOMMENDATION**

Manitoulin Sudbury District Service Board, Paramedic Services Department is seeking agreement to amend the current Board approval for migration to the self-loading stretcher solution as a component to the capital purchase of new ambulances over the next seven (7) years. The amendment would allow the Department to enter into a lease program for self-loading stretcher systems that will permit fleet-wide migration in 2016 while seeing the payment cycle equally distributed over seven (7) annual payments.

## **Executive Summary**

During the October, 2015 Manitoulin-Sudbury DSB Board meeting, approval was granted to proceed with a seven (7) year plan to migrate to the self-loading stretcher system in the Paramedic Services ambulance fleet. It was recognized that this product would decrease the risk of acute and cumulative injury to paramedics as a direct result of the activity of lifting. Amortization of the self-loading stretcher system was set at seven (7) years starting from the year of initial purchase (21 ambulance purchases divided by 3 ambulance purchases per year). Manitoulin-Sudbury DSB Paramedic Services Department has explored the capacity for a lease program that will allow for the immediate migration of the fleet to the self-loading solution, while amortizing payments for the project over a seven (7) year period. We have confirmed with DSB auditors that the lease expense can be amortized over the course of seven (7) years.

## **History**

Approval of the self-loading systems was approved by the Manitoulin-Sudbury DSB Board in October of 2015. The proposal for this system was intended primarily to help reduce the physical requirements of lifting for paramedics, and ultimately to reduce incidents of injury. The load limits within the self-loading system also eliminates the necessity for bariatric systems that are not currently available in all Paramedic Services vehicles. In Northern Ontario, a sampling of eight other services revealed that seven had migrated to power cot systems, and five had included the self-loading aspect of the solution. The Board has approved the program designed to migrate to the self-loading solution. At the

time that the initial project concept was presented to the Board, the responsible proposal included a staged migration over seven (7) years.

### **Objectives**

The purpose of this business case is to allow for migration of ambulance stretcher systems from the manual cots to the power cot with self-loading solution in a single year, and with a lease payment cycle that would see seven (7) equal payments to the vendor's designate from 2016 through 2022. This objective would replace the approved migration of three (3) systems annually, set to commence with the 2016 purchase year, and with project completion by year end 2022.

### **Current Issues**

The use of manual cot systems has been found to increase incidences of cumulative injury events with health care workers, including paramedics. Most health care organizations have introduced a near zero lift protocol for their workers, and Paramedic Services are now evolving to introduce similar products intended to mitigate injury events related to the controlled aspects of lifting. An assessment of WSIB claims related to the Paramedic Services Department, since early 2008 has revealed a total of 91 claims. A total of 39 (42.8%) WSIB claims directly relate to either lifting of the stretcher, or an injury directly related to the manual stretcher use. These two factors are the leading cause of WSIB claims for DSB. While the impact of these injuries has had limited impact on NEER costs, there have been significant workplace accommodations that have a causal relationship to the use of manual stretcher systems.

Year	WSIB Lost Time (hours)	Modified Work (hours)	Modified Backfill Costs (\$)
2009	156	120	\$3,801
2010	285	64	\$2,073
2011	36	0	\$0.00
2012	804	0	\$0.00
2013	840	363.5	\$12,562
2014	182	2354	\$83,049

Although the approved migration plan would allow for system conversion completion by 2022, a tactical plan would allow for activation in high use areas first, meaning that there would be a greater benefit in earlier years. Despite this plan, the immediate migration in a fleet wide manner with maintenance of the seven (7) year payment cycle would realize a system wide benefit **immediately**.

### **Funding Parameters**

Costs associated with migration to a self-loading stretcher system have been approved within the capital reserve. The Board has approved the annual amortized payment of \$135,000.00 to purchase three (3) Self-loading stretcher systems. The assumed annual inflation rate of 2% for capital purchases would see a purchase cycle as set out in the table below. The expressed total project cost has been approved at \$1,003,100. While considering an annual inflation rate, the pricing plan does not consider a volatile Canadian

dollar and the subsequent exchange rate that would require calculation when purchasing a product made in the United States.

The Stryker self-loading stretcher system costing as approved for purchase in 2016 is \$43,169 per unit plus installation. The following table details the approved 7-year budget allocation against the proposed lease option (note HST is not included within either calculation).

Self-loading Stretcher Budget	2016	2017	2018	2019	2020	2021	2022	Total Project Cost
Approved 2016 Budget	135,000	137,700	140,400	143,000	146,100	149,000	151,900	<b>1,003,100</b>
Stryker Lease *	137,632	137,632	137,632	137,632	137,632	137,632	137,632	<b>963,424</b>
Installation Costing **	23,750							<b>987,174</b>

\* Stryker lease program includes the 2016 price for all 21 units, while not including the installation price.

\*\* Installation is quoted through a local vendor and would be financed in year through operational dollars.

The option of an immediate implementation of the solution in a fleet-wide manner would see the purchases confirmed at 2016 prices, but would see the payment cycle spread over seven (7) years with a confirmed 2% interest rate, and a one dollar (\$1.00) buyout rate in 2023.

The installation of the self-loading system, if a fleet-wide migration were to be completed in year one of the project, would be contracted locally. The cost associated with this installation has been confirmed at \$1,150 per ambulance, with total costing for installation at \$23,750. Adoption of the lease program over 7 years would equate to a total project cost of \$987,174, which is under the current approved budgetary allotment.

## **Conclusion**

The Board approval in October of 2015 for a project that would allow for the addition of the Self-loading stretcher solution of each new ambulance purchase would realize a fleet-wide conversion by 2022. The result of the approved plan would be a staged reduction in injury rates associated with lifting and moving of the stretcher devices.

Since the Board approval, the Paramedic Services Department has been approached by Stryker with a proposal to complete wholesale migration to the self-loading stretcher system in 2016, while payments for this conversion would take place over the period from 2016 to 2022. The overall program cost would be significantly less than the costs of the budgeted program and the injury reductions would be more immediate. The vendor has provided a guarantee calling for a 50% reduction in stretcher related injuries. Approval to enter into the lease agreement, would allow for a consistent product for use a full success.