



CAN Health Project Summary Report - Close-Out

Company Information			
Name:	Stepscan Technologies Inc.		
Innovation Type:	Falls risk assessment technology		
Website:	https://stepscan.com/		
Value Proposition:	Reduce the assessment time for fall risk, quality of objective fall risk profile & risk stratification, improve patient outcomes and proactive care of persons identified at high risk for a fall, decrease the incidence of new falls, development of new foot ulcers & the number of DFU hospital admissions.		
Contact Name:	Crystal Trevors	Email:	crystal@stepscan.com
Edge Information			
Edge:	Health PEI		
Contact Name:	Carolyn MacPhail	Email:	clmacphail@ihis.org
Procurement Information			
Anticipated Type:	RFP	Target Date:	After February, 2023
Call Point: Rehabilitation, Diabetes Educators, Continuing Care, Geriatric Health <i>(recommended team to engage for procurement discussions)</i>			
Cost Estimates			
Basic Cost Breakdown: ACOA Funded Portion: \$149,992 In-kind: \$150,300			
Volume Discount Cost Breakdown (if applicable):			
CAN Health Network Contact			
Contact Name:	Dylan Mitchell	Email:	dylan.mitchell@horizonnb.ca

PROBLEM STATEMENT (150 words or less)

Falls are an important public health concern among the elderly, even more so with our aging diabetic population. The impact of a fall goes beyond injury consequences to include psychological distress, fear of falling and reduction of physical activities linked to unsteadiness. Fear of falling and decreased mobility further increases risk for falling. A reduction in physical activity is of concern for people with diabetes as physical activity plays an important role in helping to regulate glycemic control.

Many patients incorrectly attribute their feelings of unsteadiness and balance problems to the natural aging process. Studies support that most falls are not only predictable, they are preventable. Early identification of fall risk is an important aspect of fall prevention.

A Diabetic Foot Ulcer (DFU) increases the risk of falls. It is possible to delay or even avoid the development of DFUs with early detection and adequate treatment at early stages.

COMPANY SELECTION:

- Call for Innovation Process (more than 1 eligible Company applied)
- Call for Innovation Process (only 1 eligible Company applied)
- Other (please describe below)

Which company was ultimately chosen to move forward to a commercialization pilot? List out the reasons as to why this product was chosen over others.

A market scan was conducted, and the results determined this was a unique solution to the region and across Canada. In addition, Stepscan is a PEI grown company able to facilitate a close relationship with Health PEI that enables on site setup, demonstration and education.

PROJECT OUTCOMES SUMMARY

Summary of Project Outcomes:

Many fall prevention plans include assessments of fall risk in the form of paper-based surveys, patient reported symptoms and low-tech functional performance tools (e.g. Berg Balance Scale). Stepscan provides a technical solution with objective measures to support a better-informed fall-risk determination and comparative analysis of patient progress over time. Stepscan has the potential to be easier, more efficient and provide more consistent (repeatable) accuracy.

Timely comprehensive fall prevention strategies should target those most at risk of falls. Interventions include increasing the strength of lower limb muscles, balance and gait training, visual gaze training, correct use of assistive devices such as a cane, wearing proper shoes and orthotics, medication review, and addressing other health concerns (e.g. glycemic control, foot calluses, etc). There is an increasing recognition of the importance of appropriate foot management in the prevention of falls, and diabetes presents a special case for the importance of foot care interventions.

Stepscan provides a high-resolution objective measure of high peak plantar pressures, one of the many factors associated with fall risk. This can lead to the detection of points at risk for development of ulcer in the plantar surface on the foot and allow for early interventions. Diabetic foot ulcers (DFU) are the most common complication of diabetes, affecting 4% to 10% of patients (CADTH). Eighty-five (85) percent of lower limb amputations in diabetes patients result from DFU. Following a lower-limb amputation, people with diabetes not only

suffer the clinical and psychological consequences of limb loss, they also have a five-year mortality rate of 50%.

A DFU increases the risk of falls. Infections and injuries sustained after a fall place a person with diabetes at higher risk of amputation. While high technology solutions such as Stepscan is not commonly used today, in the future, it could find an important place in risk prevention programs to inform appropriate treatment plans for prevention of falls and diabetic foot complications.

This project focuses on outcomes using Stepscan technology such as; Reduction of the assessment time for fall risk and improve the quality of objective fall risk profile & risk stratification, improve patient outcomes and proactive care of persons identified at high risk for a fall, decrease the incidence of new falls, development of new foot ulcers & the number of DFU hospital admissions.

Project Charter KPI Description	Baseline	Target	Mid-Point	Final
KPI #1: Type: Quality/Process Improvement Type: Patient Satisfaction/Experience Reduce the assessment time for fall risk		Target: decrease assessment time by 30%	Preliminary findings demonstrate target met	Stepscan 28% faster than traditional (Berg, TUG, 30 sec STS) not including ABC time; lower end of Confidence Interval
KPI #2: Type: Quality/Process Improvement Improve the quality of fall risk profile and risk stratification		Improvement in consistency of objective measures by 10%.	Berg Balance identified 20% "at risk" for a fall; Stepscan identified 73% of patients "at risk"	Stepscan stability score demonstrates concurrent validity with Berg, TUG and 30 sec STS; Stepscan sensitive to change in fall risk factors; Stepscan identified 36% "At risk for a fall", Berg identified 12.5 % "At risk"
		Positive HCP feedback	Feedback has been positive	Feedback has been positive; so much potential...further work to optimize cut off thresholds for fall risk stratification

KPI #3: Type: Patient Satisfaction/Experience Improve proactive care of persons identified at high risk for a fall		-# referrals received.	182	252 (Jan 12,2023)
		-# assessments completed stratified by risk profile.	75 (September 21, 2022)	128 (December 2, 2022)
		-Wait time referral to assessment.	TBD	Mean- 34 days Median 17 days Min – 1 day Max 113 days
		-Program intensity (length of appointment by appt type; # follow up visits per patient stratified by risk profile)	1 hour to 1 hour 15 minutes initial assessment (Total of Stepscan and traditional assessment times)	Initial appt length 1 to 1 ½ hr; Follow Up 1 hr As of December 2, 38% received a second visit plus 29% booked.
KPI #4: Type: Quality/Process Improvement Improve patient outcomes		Improvement of clinical measures by 10%	TBD	No statistically significant improvement in clinical indicators; this is a measure of the intervention process and not the Stepscan assessment tool
KPI #5: Type: Patient Satisfaction/Experience Decrease the incidence of new falls		Pre and post measures number of falls Target: Less than 5% of participants post intervention	TBD	History of falls in the past 2 months was reported at 0.39 falls per participant at baseline. After 2 months of the DASH program, fall rate fell to 0.28 falls per

				person in patients who had been reassessed, a reduction of 28%
KPI #6: Type: Patient Satisfaction/Experience Decrease the development of new foot ulcers		Target: Less than 5% of participants post intervention	TBD	Of 49 persons with re-assessment: Pre intervention 8% with open wound; Post intervention 4%
KPI #7: Type: Soft Cost Savings Type: Standard of Practice Decrease the number of DFU hospital admissions		Decrease by 10%	TBD	0 hospital admissions for DFU pre and post intervention

Project Status Close Out Project Outcomes

KPI's were met. Stepscan is faster and provides value as a clinical tool in providing quality objective measures of fall risk. Findings suggest Stepscan has better performance as a fall risk screening tool for older adults living in the community. Stepscan measures identify the areas of weakness helping clinicians identify treatment targets to improve fall risk. Clinicians recommend further work adding to the clinical evidence to optimize cut off thresholds for fall risk stratification. Also further exploring objective measures of peak plantar pressures and detection of points of risk for development of diabetic foot ulcers. Work is underway to tailor the intervention aligned with different risk groups; providing more intensity to those identified at high risk for a fall.

Mobile clinics have been held, results from this will help shape Health PEI's strategy in the future.

Procurement Decision

Will the Edge purchase the product/solution: TBD, RFP process underway

If Yes, how many units are you anticipating purchasing and/or what is the anticipated overall spend? TBD

If no, please provide reasoning/justification:

Describe the healthcare organization that would most benefit/would be most interested in this product.
Provincial health care authorities, Long term/assisted living, rehabilitations centres, Physiotherapy clinics.

TESTIMONIAL(S)

Executive Sponsor:

"Not only is this program benefitting patients, but through our work with the CAN Health Network, we are advancing innovation in health services for our patients across the province." Andrew – Health PEI Executive Director Community Health and Seniors Care

Clinical Lead (optional):

"Stepscan provides objective measures related to gait, fall risk and peak plantar pressure points. There is so much potential for early identification of fall risk and for early identification of persons at risk for diabetic foot ulcers. We definitely plan to continue the work building on the successes to date." Carolyn – Manager Chronic Disease Prevention and Management

Client Testimonial

"I knew I had a problem with balance and was not surprised the tests showed I had a balance problem. After the program I feel more confident walking around the house." Glen-Participant.