

Project Ontario ECHO Skin and Wound  
Virtual Wound Care & training for Regional Complex Wound Care Teams

**Goal:**

To train teams in the Health Districts/ Ontario Health Regions in Advanced Wound Care to treat the 20% of patients that are high resource/ longstanding home care clients that make up 80% of the cost to the system.

- Physicians/ Nurse Practitioners
- Nursing
- Allied Health (Chiropractic/Footcare, Registered Dietitian, Rehab – OT, PT)

Project ECHO Ontario proposed plan to support the Limb Preservation Program by targeting all patients with leg and foot ulcers below the knee especially those with stalled, maintenance or non-healable wounds (> 3-6 months on home care), not demonstrating a positive wound healing trajectory and/or are high resource utilization.

1. Advocate for HbA1c for all leg and foot ulcer patients
2. Utilize the wound care toolkits For Indigenous, Northern, Remote, & Isolated Communities
  - Audible handheld Doppler- any Multiphasic Wave is equivalent to APBI  $\geq 0.9$  and adequate blood supply to heal. The Doppler sound can be recorded on a smart phone and sent for confirmation.
  - Can be part of the medical record for verification & save unnecessary visits to vascular surgeons in remote, isolated communities.
3. Establish a Provincial Vascular Surgery team to support evidence and implement the COMPASS study results from MacMaster to prevent strokes, heart attacks and premature deaths in persons with Peripheral Vascular Disease (Apixaban 2.5 mg bid and ASA 100 mg daily improved outcomes) [Steffel J, et al. 2020]
4. Manage Infection: N.E.R.D.S. & S.T.O.N.E.E.S.- 3 or more criteria to treat superficial/local (covert) infection topically, or Deep & Surrounding infection (Overt) systemically (Woo, Sibbald, 2009).
  - 7 Infectious disease doctor team – 4 have completed the International Interprofessional Wound Care Course and 3 are partial completion, working towards completion.
  - Systematic review of oral antibiotics for osteomyelitis to facilitate treatment in low resource communities avoiding intravenous therapy.
5. Screen for the high-risk diabetic foot & provide simple plantar pressure redistribution devices for low resource and home care patients.
  - The validated simplified 60 second screen for the high-risk diabetic foot takes 1 minute vs. The Inlow tool that has numerous questions, 3 parts and is best for the trained foot care specialist to provide care.
  - This tool and the Guyana Diabetes and Foot Care program decreased amputations 68% and identified 48% of 1266 persons screened with a high-risk foot (Lowe et al. 2015)
  - Team comprising of 5-foot care specialists was assembled (4 chiropractors- 2 in the North, 1 Mitchener Professor, a community chiropractor with experience in Guyana & Ethiopia, and a Podiatrist from Punjab India with a PhD in Biomaterials to create a simple plantar pressure redistribution kit to facilitate training and implementation of footwear into the community.

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- Engaged 50 community wound care specialists in ECHO Limb Preservation series from Hamilton- Niagara and 24 from Northeast eligible for toolkits and the other kits will be distributed to other target clinicians in the 12 additional healthcare districts.

Current Project ECHO Skin and Wound Care Leg and Foot Ulcer (limb preservation) cycle has seen a tremendous increase in the number of participants for the regular sessions and the skills/toolkits sessions. Previous ECHO cohorts had approximately 60 – 80 participants on each session

Date	Attendance ECHO Session	Attendance Skills/toolkit session
Oct 4 <sup>th</sup>	177	142
Oct 11 <sup>th</sup>	171	133
Oct 18 <sup>th</sup>	186	137
Oct 25 <sup>th</sup>	173	133
Nov 1 <sup>st</sup>	200	148
Nov 8 <sup>th</sup>	185	150

Proposed Virtual Consults:

- Wound Bed Prep.2021 Format (Soon to be published in April 2024- WBP 2024 for resource limited settings)
  - Graduates of ECHO leg and foot cycles and IIWCC
  - For 100 + Toolkit recipients (Limb Preservation ECHO)
  - Patient Navigation for Home Care Districts (after Waterloo Wellington published Project) all districts would be eligible with appropriately trained staff.
    - Initial consult x1 hour – patient / family member in the home with NSWOC at home care on CHRIS and consultant (Dr. Sibbald or WoundPedia Team member – our team collectively has 200 years + of wound care experience) and follow up.
    - Patient navigation publication home care clients since 2012 on:  
Sept 2022: 48 consults: 29% healed, 66% smaller, over 70% less supply use, decreased nursing visits, improved infection management and decreased pain.

Lowe J, Sibbald RG, Taha NY, Lebovic G, Martin C, Bhoj I, Kirton R, Ostrow B; Guyana Diabetes and Foot Care Project Team. The Guyana Diabetes and Foot Care Project: a complex quality improvement intervention to decrease diabetes-related major lower extremity amputations and improve diabetes care in a lower-middle-income country. PLoS Med. 2015 Apr 21;12(4):e1001814. doi: 10.1371/journal.pmed.1001814. PMID: 25898312; PMCID: PMC4405371.

Steffel J, Eikelboom JW, Anand SS, Shestakovska O, Yusuf S, Fox KAA. The COMPASS Trial: Net Clinical Benefit of Low-Dose Rivaroxaban Plus Aspirin as Compared With Aspirin in Patients With Chronic Vascular Disease. Circulation. 2020 Jul 7;142(1):40-48. doi: 10.1161/CIRCULATIONAHA.120.046048. Epub 2020 May 21. Erratum in: Circulation. 2020 Jul 7;142(1):e23. PMID: 32436455.

Woo KY, Sibbald RG. A cross-sectional validation study of using NERDS and STONEES to assess bacterial burden. Ostomy Wound Manage. 2009 Aug 1;55(8):40-8. PMID: 19717855.

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**Background:**

Project ECHO Ontario Skin and Wound is designed to train wound care teams (doctors, nurses, allied health) across the province of Ontario. We have a special target population of Indigenous, North, isolated and remote communities. Each ECHO cycle is 8 weeks with Cycle 1 (Leg & Foot Ulcers) and Cycle 2 (Pressure Injuries & Miscellaneous wounds).

Our official partners in Project ECHO are Nurses Specialized in Wound, Ostomy and Continence Canada (NSWOCC) and Queen's University (Health Sciences Professional Development and Educational Scholarship). To improve patient outcomes, Diabetes Action Canada will become a proposed partner to measure educational outcomes and create databases.

Our ECHO faculty includes:

WoundPedia (193 years of combined wound care experience):

- Professor Gary Sibbald, MD, M.Ed., D.SC (Hon), FRCPC (Med)(Derm):  
ECHO Skin & Wound Project Lead, IIWCC Director
- Reneeka Jaimangal, MD, MScCH, IIWCC: Project Manager for ECHO Skin & Wound
- Laurie Goodman, RN, MHScN: Clinical Coordinator IIWCC and ECHO Skin & Wound
- Pat Coutts, RN, IIWCC: Nursing Consultant
- Sunita Coelho, RN: Nursing Consultant
- Xiu Zhao, MD, CCFP (COE): Primary Care Physician
- Laura Lee Kozody, B.Sc., DCh: Chiropodist
- Andrew Mohan, BJourn: Multimedia Coordinator
- Linda Dorrington: Administrative Assistant

NSWOCC:

- Cathy Harley, RN, CEO of NSWOCC
- Kim LeBlanc, RN, PhD, Academic Chair
- Erin Rajhathy, RN, Core Program Lead for Community Engagement

Queen's University:

- Karen Smith, MD, Physiatrist, Rehab Specialist
- Jolene Heil, RN, NSWOCC, Nursing Consultant
- Nancy Dalgarno, PhD, Director of Education Scholarship
- Eleftherios Soleas, PhD, Director of Continuing Professional Development
- Richard van Wylick, MD, FRCPC, Vice-Dean of Health Sciences Education

Adjunct Faculty:

- Patrick Rainville, Chiropodist
- Jeremy Caul, MCISc-WH, NSWOCC, Nurse Advisor for First Nations and Inuit Home and Community Care (Ontario Region)
- Dale Kalina, MD, MBA, FRCPC(ID)

Diabetes Action Canada:

- Catharine Whiteside, MD, PhD, FRCP(C), FCAHS
- Valeria Rac, MD, PhD