Inlow's 60-Second Diabetic Foot Screen Gets a New Look!

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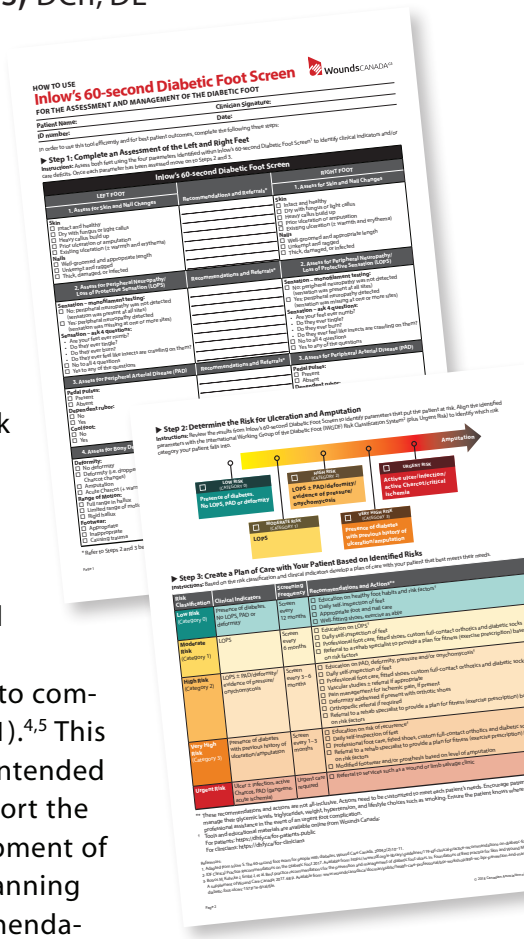


Dr. Shane Inlow wrote a two-page article, published in 2004, to help guide clinicians in assessing and planning care for patients with or at risk for diabetic foot ulcers.[1]

A few years later, clinicians in Northern Canada indicated that one of their problems was communicating effectively with experts in larger centres about their patients' foot problems. The article by Dr. Inlow came to mind, and Inlow's 60-Second Diabetic Foot Screen was created to give clinicians a common language and process to perform such an assessment.[2] This tool then underwent a validation study that included interrater and intrarater reliability and predictive validity to determine consistency of risk recognition for development of ulceration independent of specific assessor and practice setting.[1,3]

Four years later, a growing body of work by the International Working Group on the Diabetic Foot (IWGDF) resulted in a risk-classification tool based on risk factors and their correlation to complications (see Table 1).[4,5] This tool is intended to support the development of care-planning recommendations based on the patient's level of risk.

Table 1: Risk and Likelihood of Complications[4]

Modified IWGDF Risk Classification	Likelihood of Developing an . . .	
	Ulcer	Amputation
Low Risk (Group 0) • no neuropathy	2%	0.04%
Intermediate Risk (Group 1) • peripheral neuropathy	4.5%	0%
High Risk (Group 2) • peripheral neuropathy, peripheral arterial disease, deformity	3 – 13.8%	0.7 – 3.7%
Very High Risk (Group 3) • ulcer history, previous amputation	31.7 – 32.2%	2.2 – 20.7%

Adapted from Lavery et al., 2008.

In an effort to improve its usability, the Inlow 60-Second Diabetic Foot Screen has now been augmented to include the IWGDF's risk classification system[6] and additional clinician information to support related care planning. This resource is also downloadable from here.

The expanded tool, beginning on page 28, involves three simple

steps that allow clinicians to perform assessment and risk stratification, and to create a proposed plan of care based on risk. These additions will support clinicians and administrators in identifying patients at high risk of complications and will provide a guide for them to provide consistent, timely, evidence-based care.

Note: This updated version was built on the validated parameters of the original Inlow tool. Minor changes have been made to align it more closely with the International Working Group on the Diabetic Foot's risk classification system.

Over the next year, the revised tool will undergo extensive revalidation in multiple sites across Canada.

The Inlow 60-Second Diabetic Foot Screen supports enhanced documentation, improves patient care and encourages timely referrals to prevent ulcer recurrence and avoid unnecessary amputations.

References

1. Inlow S. The 60-second foot exam for people with diabetes. Wound Care Canada. 2004;2(2):10–11.
2. Orsted HL. Development of the Inlow 60-Second Diabetic Foot Screen: A practice-ready bedside tool to guide assessment and care. Wound Care Canada 2009;7(2):40–42.
3. Murphy CA, Laforet K, Da Rosa P, et al. Reliability and predictive validity of Inlow's 60-Second Diabetic Foot Screen tool. Adv Skin Wound Care. 2012;25(6):261–6.
4. Lavery L, Peters E, Williams JR, et al. Reevaluating the way we classify the diabetic foot: Restructuring the diabetic foot risk classification system of the International Working Group on the Diabetic Foot. Diabetes Care. 2008;31(1):154–56.
5. Edgar JG, Peters EJ, Lavery LA. Effectiveness of the diabetic foot risk classification system of the International Working Group on the Diabetic Foot. Diabetes Care. 2001:24(8):1442. Available from: IDF Clinical Practice Recommendations on the Diabetic Foot 2017: www.idf.org/e-library/guidelines/119-idf-clinical-practice-recommendations-on-diabetic-foot-2017.html.
6. International Diabetes Federation. Clinical Practice Recommendation on the Diabetic Foot: A guide for health care professionals. International Diabetes Federation, 2017.

HOW TO USE

Inlow's 60-second Diabetic Foot Screen

FOR THE ASSESSMENT AND MANAGEMENT OF THE DIABETIC FOOT

WoundsCANADA.ca

Patient Name: **Clinician Signature:**

ID number: **Date:**

In order to use this tool efficiently and for best patient outcomes, complete the following three steps:

▶ Step 1: Complete an Assessment of the Left and Right Feet

Instructions: Assess both feet using the four parameters identified within Inlow's 60-second Diabetic Foot Screen[1] to identify clinical indicators and/or care deficits. Once each parameter has been assessed move on to Steps 2 and 3.

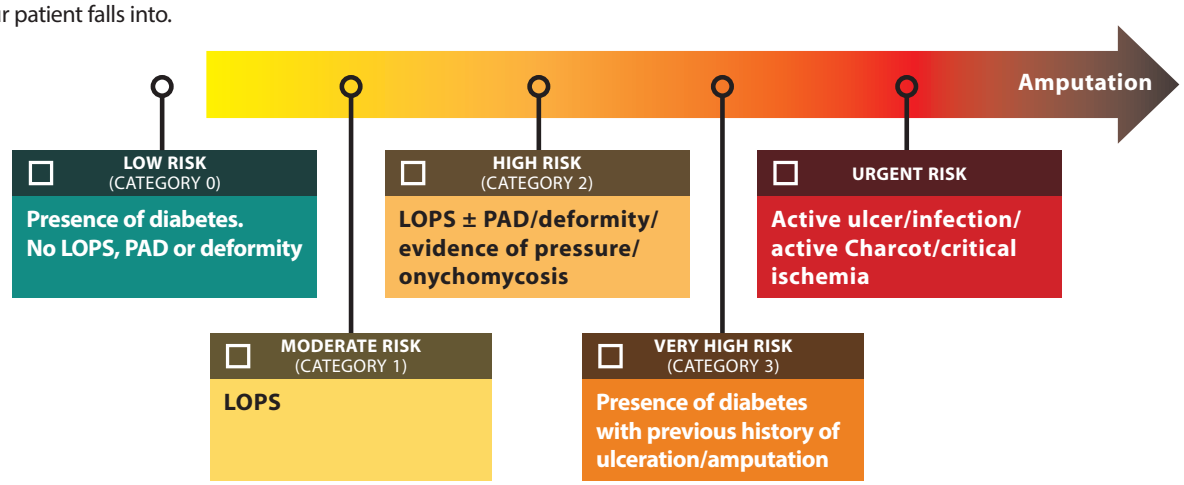
Inlow's 60-second Diabetic Foot Screen

LEFT FOOT		RIGHT FOOT
1. Assess for Skin and Nail Changes	**Recommendations and Referrals***	**1. Assess for Skin and Nail Changes**
Skin ☐ Intact and healthy ☐ Dry with fungus or light callus ☐ Heavy callus build up ☐ Prior ulceration or amputation ☐ Existing ulceration (± warmth and erythema) **Nails** ☐ Well-groomed and appropriate length ☐ Unkempt and ragged ☐ Thick, damaged, or infected		**Skin** ☐ Intact and healthy ☐ Dry with fungus or light callus ☐ Heavy callus build up ☐ Prior ulceration or amputation ☐ Existing ulceration (± warmth and erythema) **Nails** ☐ Well-groomed and appropriate length ☐ Unkempt and ragged ☐ Thick, damaged, or infected
2. Assess for Peripheral Neuropathy/ Loss of Protective Sensation (LOPS)	**Recommendations and Referrals***	**2. Assess for Peripheral Neuropathy/ Loss of Protective Sensation (LOPS)**
Sensation – monofilament testing: ☐ No: peripheral neuropathy was not detected (sensation was present at all sites) ☐ Yes: peripheral neuropathy detected (sensation was missing at one or more sites) **Sensation – ask 4 questions:** • Are your feet ever numb? • Do they ever tingle? • Do they ever burn? • Do they ever feel like insects are crawling on them? ☐ No to all 4 questions ☐ Yes to any of the questions		**Sensation – monofilament testing:** ☐ No: peripheral neuropathy was not detected (sensation was present at all sites) ☐ Yes: peripheral neuropathy detected (sensation was missing at one or more sites) **Sensation – ask 4 questions:** • Are your feet ever numb? • Do they ever tingle? • Do they ever burn? • Do they ever feel like insects are crawling on them? ☐ No to all 4 questions ☐ Yes to any of the questions
3. Assess for Peripheral Arterial Disease (PAD)	**Recommendations and Referrals***	**3. Assess for Peripheral Arterial Disease (PAD)**
Pedal Pulses: ☐ Present ☐ Absent **Dependent rubor:** ☐ No ☐ Yes **Cool foot:** ☐ No ☐ Yes		**Pedal Pulses:** ☐ Present ☐ Absent **Dependent rubor:** ☐ No ☐ Yes **Cool foot:** ☐ No ☐ Yes
4. Assess for Bony Deformity (and Footwear)	**Recommendations and Referrals***	**4. Assess for Bony Deformity (and Footwear)**
Deformity: ☐ No deformity ☐ Deformity (i.e. dropped MTH or bunion, chronic Charcot changes) ☐ Amputation ☐ Acute Charcot (+ warmth and erythema) **Range of Motion:** ☐ Full range in hallux ☐ Limited range of motion in hallux ☐ Rigid hallux **Footwear:** ☐ Appropriate ☐ Inappropriate ☐ Causing trauma		**Deformity:** ☐ No deformity ☐ Deformity (i.e. dropped MTH or bunion, chronic Charcot changes) ☐ Amputation ☐ Acute Charcot (+ warmth and erythema) **Range of Motion:** ☐ Full range in hallux ☐ Limited range of motion in hallux ☐ Rigid hallux **Footwear:** ☐ Appropriate ☐ Inappropriate ☐ Causing trauma

* Refer to Steps 2 and 3 before completing this area.

▶ Step 2: Determine the Risk for Ulceration and Amputation

Instructions: Review the results from Inlow's 60-second Diabetic Foot Screen to identify parameters that put the patient at risk. Align the identified parameters with the International Working Group of the Diabetic Foot (IWGDF) Risk Classification System[2] (plus Urgent Risk) to identify which risk category your patient falls into.



▶ Step 3: Create a Plan of Care with Your Patient Based on Identified Risks

Instructions: Based on the risk classification and clinical indicators develop a plan of care with your patient that best meets their needs.

Risk Classification	Clinical Indicators	Screening Frequency	Recommendations and Actions**
Low Risk (Category 0)	Presence of diabetes. No LOPS, PAD or deformity	Screen every 12 months	☐ Education on healthy foot habits and risk factors† ☐ Daily self-inspection of feet ☐ Appropriate foot and nail care ☐ Well-fitting shoes, exercise as able
Moderate Risk (Category 1)	LOPS	Screen every 6 months	☐ Education on LOPS† ☐ Daily self-inspection of feet ☐ Professional foot care, fitted shoes, custom full-contact orthotics and diabetic socks ☐ Referral to a rehab specialist to provide a plan for fitness (exercise prescription) based on risk factors
High Risk (Category 2)	LOPS ± PAD/deformity/ evidence of pressure/ onychomycosis	Screen every 3–6 months	☐ Education on PAD, deformity, pressure and/or onychomycosis† ☐ Daily self-inspection of feet ☐ Professional foot care, fitted shoes, custom full-contact orthotics and diabetic socks ☐ Vascular studies ± referral if appropriate ☐ Pain management for ischemic pain, if present ☐ Deformity addressed if present with orthotic shoes ☐ Orthopedic referral if required ☐ Referral to a rehab specialist to provide a plan for fitness (exercise prescription) based on risk factors
Very High Risk (Category 3)	Presence of diabetes with previous history of ulceration/amputation	Screen every 1–3 months	☐ Education on risk of recurrence† ☐ Daily self-inspection of feet ☐ Professional foot care, fitted shoes, custom full-contact orthotics and diabetic socks ☐ Referral to a rehab specialist to provide a plan for fitness (exercise prescription) based on risk factors ☐ Modified footwear and/or prosthesis based on level of amputation
Urgent Risk	Ulcer ± infection, active Charcot, PAD (gangrene, acute ischemia)	Urgent care required	☐ Referral to services such as a wound or limb salvage clinic

** These recommendations and actions are not all-inclusive. Actions need to be customized to meet each patient's needs. Encourage patients to manage their glycemic levels, triglycerides, weight, hypertension, and lifestyle choices such as smoking. Ensure the patient knows where to access professional assistance in the event of an urgent foot complication.

† Tools and educational materials are available online from Wounds Canada:
For patients: https://dhfy.ca/for-patients-public
For clinicians: https://dhfy.ca/for-clinicians

References:
1. Adapted from Inlow S. The 60-second foot exam for people with diabetes. Wound Care Canada. 2004;2(2):10–11.
2. IDF Clinical Practice Recommendations on the Diabetic Foot 2017. Available from: https://www.idf.org/e-library/guidelines/119-idf-clinical-practice-recommendations-on-diabetic-foot-2017.html
3. Botros M, Kuhnke J, Embil J, et al. Best practice recommendations for the prevention and management of diabetic foot ulcers. In: Foundations of Best Practice for Skin and Wound Management. A supplement of Wound Care Canada; 2017. 68 p. Available from: www.woundscanada.ca/docman/public/health-care-professional/bpr-workshop/895-wc-bpr-prevention-and-management-of-diabetic-foot-ulcers-1573r1e-final/file.