Foot Ulcer Risk Examination Script

- SKIN SENSATION: Begin the examination by assessing the patient's ability to detect light touch and pressure. Position the patient comfortably in supine or long sitting and so that the patient's lower extremities are in front of yourself. Notify the patient as to what you are going to do: "I am going to touch your lower leg and foot in various locations. When you feel me touch your left leg or foot say "Left." When you feel me touch your right leg or foot say "Right."" Demonstrate this on the patient. Further instruct the patient on the type of stimuli that will be provided: "I am also going to touch in two different ways, with light touch or pressure. I want you to tell me which leg I am touching and if it is light touch or pressure. When you feel me touch your right foot with pressure say "Right pressure" and if you feel me touch your left leg with light touch say "Left touch."" Light touch should be administered to the patient by gently stroking the skin and blunt pressure by applying approximately 1 pound of force to the skin using your thumb. Then proceed to demonstrate the full task, to ensure the patient understands and is able to properly notify you. Now notify the patient that you will be performing this task with his/her eyes close. Ask the patient to close his/her eyes and begin to assess sensation of each lower extremity. Apply light touch or blunt pressure, in no specific order, beginning proximally and ending distally at the foot. Be sure to apply light touch/pressure at various locations including anterior, posterior, medial, and lateral aspects of the lower leg and both the dorsal and plantar surface of the foot. Observe whether the patient is able to detect light touch and blunt pressure. Record the outcome on the Foot Ulcer Risk Examination (FURE) score sheet by checking the appropriate category under either Right or Left.
 - O During sensation assessment a basic clinical examination is being utilized to determine the presence of deficits. This approach is taken to accommodate for limited resources and in order decrease time of assessment. Evidence supports the use of a 10g (5.07) monofilament to assess sensation in diabetic populations. Specifically, the Semmes-Weinstein nylon monofilaments have been determined to be valid and reliable when testing for neuropathy. A monofilament is applied to the plantar surface of the foot across various sites, ranging from one to fourteen. The various sites include locations of the foot that most frequently ulcerate. The most commonly used sites are the metatarsal heads and the distal surface of the big toe, but research varies on definitive sites for testing.
- <u>SKIN INTEGRITY:</u> Now proceed to assess the patient's skin integrity. Visually inspect the skin for any skin abnormalities of the lower leg and/or foot. Observe for the presence of severely dry cracked, flaking skin, redness, blisters, swelling below the calf and of the foot, discolored or bruised skin, callous, bunion, ingrown nails, hammertoe, etc. If you observe any of the following, record the outcome on the FURE score sheet. If you observe a blood stained callous, record that outcome under a separate category on the FURE score sheet. A blood stained callous is usually indicative of an active ulcer under the callous.
- <u>HISTORY OF FOOT ULCER:</u> During the skin integrity assessment, observe also for any current foot ulcers. In addition, question the patient, their family, and/or caregivers whether the patient has a history of foot ulcers. Record the outcome on the FURE score sheet.

- VASCULAR ASSESSMENT: Next is the vascular assessment of the foot. This assessment comprises of the detection of the presences of normal pulses of the foot. Detection of normal pulses indicated good blood flow to the foot. Palpate for the posterior tibialis pulse by located the patient's medial malleolus. Slide posterior to the malleolus and feel for the pulse of the artery. Observe for a pulse. To detect the dorsalis pedis pulse, locate the first and second metatarsals. Apply gentle pressure to the dorsal aspect of the foot between the first and second metatarsals. Feel for the pulse throughout the length of the metatarsals until you find it. Record whether the pulses can or cannot be detected on the FURE score sheet. If the patient previously demonstrated impaired or absent sensation, along with absent pulses record this special circumstance on the FURE score sheet.
- <u>MOBILITY:</u> Next position the patient in a seated position with feet flat on the floor. Instruct the patient to safely reach for and look at the bottom of their foot, as if to assume a figure-four position. Observe whether the patient is able to achieve the position for both the right and left lower extremity, independently. Record the outcome separately for either extremity.
- <u>FOOTWEAR:</u> Next assess the patient's footwear. Check for proper fitting, excessive wear and tear, and whether the footwear possesses any protective properties (closed toe, closed heel, appropriate tread, etc.) Record outcome on FURE score sheet.
- <u>PATIENT SURVEY:</u> Finally question the patient about whether they have the following conditions: peripheral vascular disease, history of amputation, or low/poor vision. The presence of either of the conditions is related to a significantly higher risk of developing a foot ulcer.

SCORING

Combine the scores from each category, in order to develop a total for the right lower extremity and the left lower extremity. Rank each lower extremity's risk of developing a foot ulcer.

Low Risk: A score less than or equal to 6.

Moderate Risk: A score greater than or equal to 7

High Risk: A score greater than or equal to 7 AND have marked the following: absent sensation AND absent pulses, current or previous ulcer, previous amputation, the presence of a callous AND absent sensation, the presence of a callous AND absent pulses, or a blood stained callous.

References:

Leese G. et al. Stratification of foot ulcer risk in patients with diabetes: a population-based study. *Int J Clin Pract.* May 2006;60(5):541–545.

McCall J. A Guide to Diabetic Foot Screening: How to Carry out Foot Screening Risk Stratification. NHS Scotland. http://www.sdsp.org.uk/FootScreening/FootScreening.htm Last updated April 7, 2006. Accessed February 28, 2012.

Baker N, Murali-Krishnan S, Rayman G. A user's guide to foot screening. Part 1: Peripheral neuropathy. *The Diabetic Foot.* 2005;8(1):28-37.

Baker N, Murali-Krishnan S, Fowler D. A user's guide to foot screening. Part 2: Peripheral arterial disease. *The Diabetic Foot.* 2005;8(2):58-70.

Boyko E et al. A prospective study of risk factors for diabetic foot ulcers: the Seattle diabetic foot study. *Diabetes Care*. 1999;22:1036–1042.