Augusta Health
Registered Nurse
Professional Development Program

Roadmap Supporting Documentation Template

****One Category per Sheet****

- ☐ Transformational Leadership
- ☐ Structural Empowerment
- X Exemplary Professional Practice
- ☐ New Knowledge, Innovation, & Improvements

Description/Details of Activity:

Creation of competency tool for procedure of the MedE-Kast application. This type of cast was used infrequently in the clinic. As the clinic has grown in population, Charcot foot is more common and requires the MedECast application. There are newer staff that just have not been as comfortable with the MedE-Kast as with the commonly used Total Contact Cast.

Dates of Meetings/Involvement:

See timeline included.

The Competency Tool was used in the Wound Healing Clinic's Skills Day.

Clinician Signature: Lina M. Ditzler Date 9-9-21

Supporting Signature: _See Signature Validation Page___ Date _____

(Must be someone in leadership role or in attendance at the activity/event to verify your involvement)

NPDP Project Timeline

DATE	MEETING ATTENDEES	DISCUSSION/EVENT
May 13, 2021	Tonya Meadows Frazier, RN and members of the Journal Club	I had mentioned doing a competency for the lesser used casting system as I have heard a staff member trade off a MedE-Kast because they were not comfortable. I was asked if I needed a team member to help, but I declined.
May 24 & 25, 2021	N/A	I was looking up articles to prove that total contact casting is still the gold standard in off-loading the plantar diabetic foot ulcer.
May 25, 2021	Tonya Meadows Frazier, Anne Aycock, and Amanda Wilson	It was decided that my project would be better suited for a PI project rather that an EBP project.
July 2, 2021	N/A	I made the actual competency tool.
July 5, 2021	Tonya Meadows Frazier	I showed Tonya the competency tool. She wanted a couple of paragraphs written about why a casting system was to be used.
July 6, 2021	N/A	I read the articles again that I had initially read in May to prove the casting system is still the Gold Standard in off-loading the plantar diabetic foot ulcer.
July 7, 2021	Amanda Wilson	I met with Amanda just to ask some clarifying questions for myself. Amanda no longer believes my project is suited for a PI project.
July 8, 2021	Tonya Meadows Frazier	I met with Tonya to show her all I had for the project.
August 26, 2021	Wound Healing Clinic Staff	The competency tool that I created was used to check staff off for the MedE-Kast application.

MedE-Kast Ultra Competency

NAME: _____ **DATE:** _____

TASK	DATE	INITIALS
Skin prep all areas that will be in contact with adhesive.		
Apply the prescribed topical medication to the wound bed, apply a foam pad over the area, and secure with paper tape to the skin.		
Select the appropriate size of the two provided tan stockinettes and apply one from the knee and fold over the dorsal foot. Do not disturb the dressing over the foot. Cut off any excess stockinette. Secure with plastic tape.		
Apply the protective felt padding making sure the rounded pads are over the ankle bones. The longer portion of the padding should go up the tibia towards the knee. Secure padding with plastic tape at the foot, ankle, and leg levels. Cut off any excess padding that extends beyond the toes.		
Apply the adhesive toe pad length wise after removing the adhesive backing. Start the foam at the ball of the foot, going over toes towards the dorsal foot. Secure the adhesive top and bottom to the stockinette. Cut off any excess foam on each side of the foot.		
Just before casting, have patient lay prone with knee bent and the ankle at a 90 degree angle. Roll 2 to 3 strips of cotton cast padding around the lower leg while overlapping the padding at the shin area. Apply cotton padding also where the provider prefers as well.		
Assist the provider to apply the rest of the pieces of the MedE-Kast.		

Student Signature: _____ **Date:** _____

Trainer Signature: _____ **Date:** _____

Off-loading the Plantar Diabetic Foot Ulcer

Many patients treated in the Wound Healing Clinic have diabetic ulcers on the bottom of their feet; the only way to heal those ulcers is to keep their weight off the bottom of the foot. Easy to say, hard to accomplish, when you think about all you do that requires you to be on your feet. While there are several options to accomplish and diminish pressure to the plantar foot, I wanted to see if current literature continues to support a casting system as the gold standard. According to Finestone et al., having an ulcer is a source of 84% of all amputations. This being said, it is imperative that off-loading the plantar DFU is implemented.

In the study done by Finestone et al., it was noted that the control group was being off-loaded using different foot wear options. This was decided to be unfair to the control group. All of the control group patients were then offered the casting option, as this is "clearly the best available medical practice" in patients not receiving surgery (or the study group).

A study done by Potier et al. was trying to prove that a new removable device would be comparable to a total contact cast. This did not prove to be the result. "The non-removable knee-high offloading devices allow better offloading, especially because of the 'forced' adherence, and are considered as the gold standard methods to heal neuropathic plantar DFU with no evidence for ischemia or uncontrolled infection."

These two studies prove that casting systems allow for improved off-loading. If a device is removable, there is always the temptation to take steps without the device and pressure from the bone continues to exert itself through the plantar foot ulcer.

Bibliography

Finestone, A. S.; Tamir, E.; Ron, G.; Surgical Offloading Procedures for Diabetic Foot Ulcers Compared to Best Non-Surgical Treatment: A Study Protocol for a Randomized Controlled Trial. *Journal of Foot and Ankle Research*, 2-20-2018.

Medline Instruction sheet, included in MedE-Kast total contact system.

Potier, L.; Francois, M.; Dardari, D.; Comparison of a New Versus Standard Removable Offloading Device in Patients With Neuropathic Diabetic Foot Ulcers: A French National, Multicentre, Open-Label Randomized, Controlled Trial. *BMJ Open Diabetes Research & Care*, 5-11-2020.