

Getting a Foot in the Door: Improving the Completion and Documentation of the Diabetic Foot Exam at the ECU Internal Medicine and Pediatrics Clinic



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BACKGROUND

Foot ulcers are one of the most common complications of diabetes and are responsible for more admissions than any other diabetic complication.¹ If left untreated, foot ulcers can worsen and lead to deformities, and even amputations.¹

The American Diabetes Association recommends an annual diabetic foot exam with a monofilament, which has been shown to clue providers into sensory changes that can be prevented from worsening.²

Prior to this quality improvement project, the average monthly percentage of completed foot exams in the ECU Med-Peds clinic was 64 percent. The clinic consists of 29 providers and supporting staff, which includes a diabetes nurse educator.

1. Oliver TJ, Muthuguru M. Diabetic Foot Ulcer. [Updated 2021 Aug 19]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2022 Jan. 2. Wu, Stephanie C et al. "Foot ulcers in the diabetic patient: prevention and treatment." *Vascular health and risk management* vol. 3,1 (2007): 65-76.

PROJECT AIM

Global Aim: To reduce the incidence of ulcer formation and foot amputations secondary to diabetic neuropathy, by increasing the completion and documentation of diabetic foot exams.

Specific Aim: By January 15th, 2022, 75% of patients between the ages of 18-75 who have been diagnosed with diabetes will have documentation of a received foot exam in the past one year at the ECU APHC.

PROJECT DESIGN

Location: The ECU Internal Medicine- Pediatrics Combined Clinic

Length: January 2020 – Present

Individuals Involved: Attending providers, residents, medical students, medical assistants/nurses.

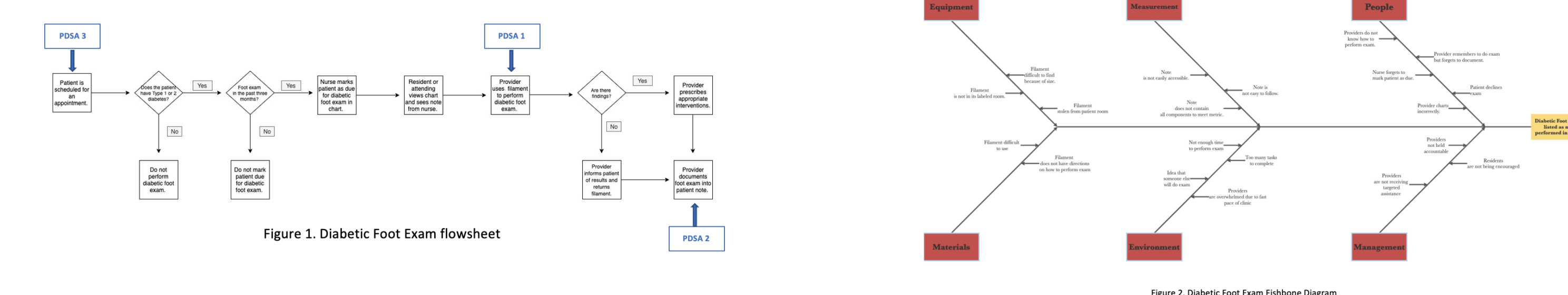
Framework: Plan-Do-Study-Act Cycles (PDSA)

Outcome Measure: Average monthly percentage of completed diabetic foot exams in EPIC.

Balancing Measure: Despite accurate documentation, the foot exam not being performed properly and therefore the provider/patient not being clued into sensory changes and worsening neuropathy.

PROJECT STRATEGY/CHANGES MADE (PDSA CYCLES)

Prior to PDSA 1, a thorough literature review was completed. The ECU Internal Medicine and Family Medicine clinic were visited to identify why quality metrics regarding the foot exam documentation were at goal. A survey was sent out to all providers to identify perceived barriers to the foot exam being properly completed and documented, of which there was a 60 percent response rate. A fishbone diagram was also created to identify barriers, as well as a flowsheet that details the process of getting a foot exam and the areas that PDSA cycles were implemented, as seen below.



PDSA 1: Increasing the availability and visibility of the monofilaments in each exam room in the Med-Peds Clinic.

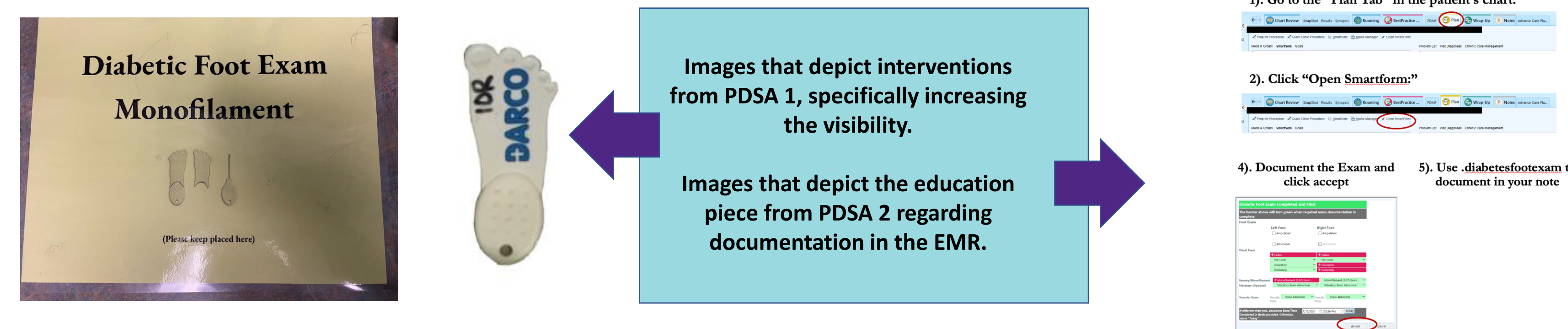
Prior to PDSA 1, only 50 percent of the exam rooms had monofilaments in them., which were in drawers. PDSA 1 involved replacing the monofilaments in the remaining 50 percent of rooms and placing the monofilaments on laminated bright yellow sheets that were placed on the counter, such that the provider could have a visual reminder to complete the exam.

PDSA 2: Educate the providers in the Med-Peds clinic on how to properly complete and document the diabetic foot exam.

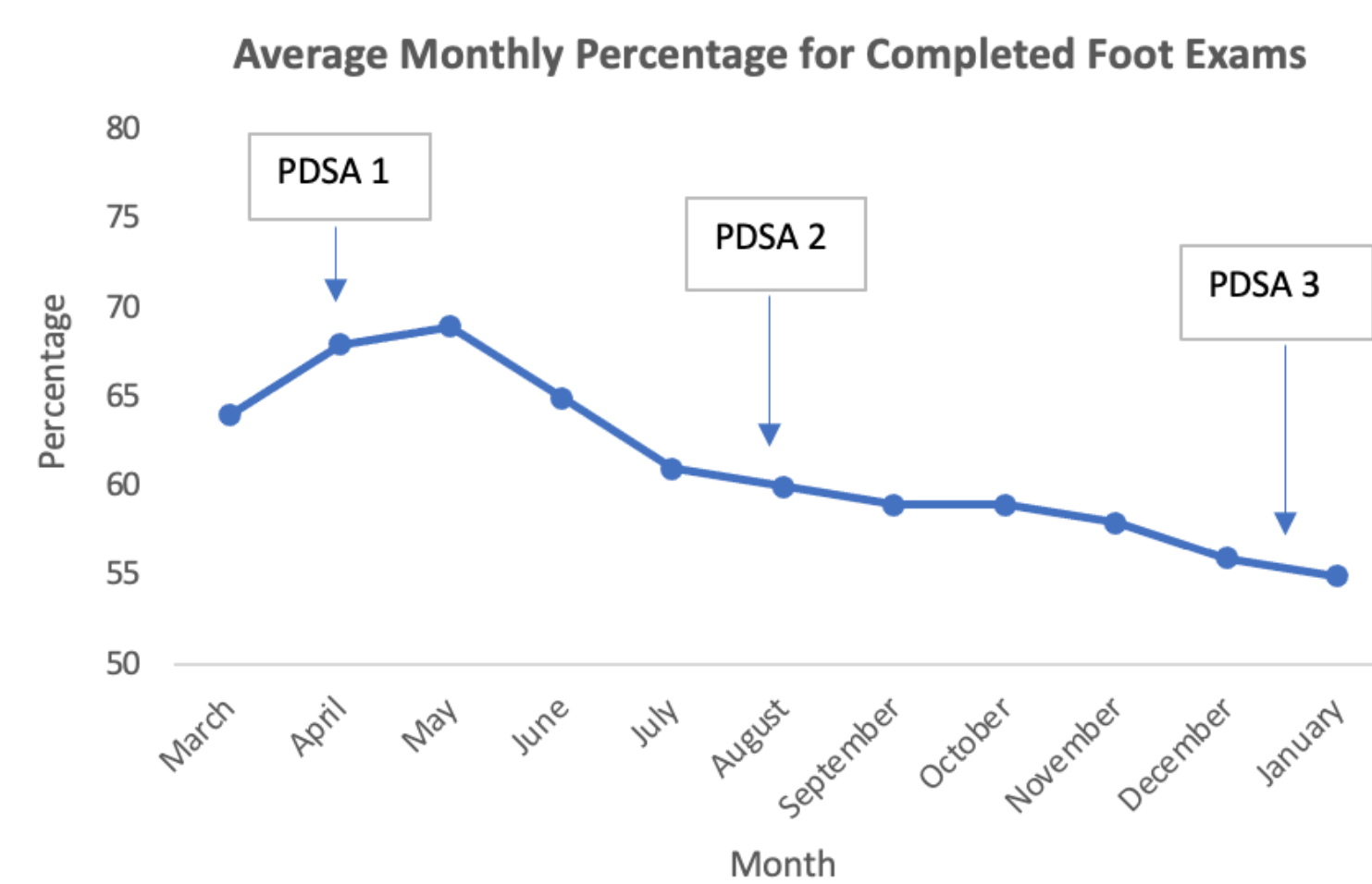
During a noon conference meeting, 15 out of 29 clinic providers were shown a PowerPoint presentation that detailed the importance of the diabetic foot exam, how to complete one, and how to document it in the EPIC smartform. The presentation was then sent out to all faculty to reference.

PDSA 3: Contacting patients who have not been in the clinic to receive their foot exam due to COVID 19

PDSA 3 involved a root cause analysis. A thorough chart review was begun on 898 patients that had not had a documented foot exam in the past year to identify what the exact cause was. About a third of the patients had not been in the clinic in the past year and so the patients are set up to be contacted for an appointment.



RESULTS/OUTCOMES



Figures 3 & 4. Data depicting the average foot exam completion from March 2020 – January 2021.

Interpretation of results:

- Foot exam documentation percentages increased after PDSA 1, but then declined. Foot exam percentages have also continued to decline after PDSA 2. Not enough time has passed to assess the impact of PDSA 3.
- In this timeframe, many patients were not attending the clinic because of the COVID-19 pandemic. Additionally, new incoming residents started in July and may not be familiar with the EMR or the documentation technique.
- It is important to note that results may also be delayed since patients with diabetes come in every three to six months for an A1C check.

Month	Screening Percentage
March	64
April	68
May	69
June	65
July	61
August	60
September	59
October	59
November	58
December	56
January	55

LESSONS LEARNED

In order to increase the diabetic foot exam completion and documentation rate, it is evident that monofilaments need to be available and visible in clinics. Although there was an education component to the project, it did not seem to help increase screening percentages and the overall rate over time has declined since this intervention.

The reasons for this are thought to be multi-faceted and include the COVID-19 pandemic, new incoming residents, time constraints with patients, patient no-shows, difficulty navigating the electronic medical record, integrating the smartform into the patient note, missing monofilaments, and perceived importance of the foot exam in relation to other clinical responsibilities.

As one of the most important barriers may be buy-in and recognition of the importance of the foot exam, it would be beneficial to have champions in the clinic that can help encourage others to perform foot exams and assess progress.

Based off the root cause analysis and in addition to the no-show rate which may be attributed to the COVID-19 pandemic, it was clear that some providers had lower screening rates compared to others. Therefore, it may be beneficial to have targeted interventions for these specific providers.

NEXT STEPS

- Continue to record diabetic exam documentation monthly percentages.
- Having a resident champion in the clinic – ideally, one on each clinic day.
- Working with EPIC to relocate the diabetic foot exam smartform to a more convenient location.
- From the root cause analysis, meeting with the individual providers who have the most patients that have not received a foot exam and creating targeted interventions for each provider.
- Continuing to encourage patients who have a missed diabetic foot exam to schedule appointments.
- Ensuring the monofilaments continue to be visible and present in each room.
- Continuing to provide medical education on the importance of the foot exam to ensure buy-in from clinic providers and medical assistants.

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