Improving The Adherence of Family Doctors to Diabetic Foot Exam At Jazan Armed Forces Hospital .

Dr: Amani Ali Kotb, Dr :Hesham Mohaili , Dr: Gassem Hussein, Dr: Walaa Elsayed, Mrs: Fatma Mohamed, Mrs: Ibstesam Mohamed, Mr: Abdullah Madkour, Mr: Mahamud Dogdogi.

Abstract

Diabetic foot imposes a great challenge on the affected individuals, affecting both mental, physical health and well-being.(1)*unfortunately* in our hospital some diabetic patients never receive a foot exam, not even a quick look at their feet .

The aim of this project was to increase the percentage of patients with diabetes at family clinics who receive annual foot exams from (7%) to (90 %) within 10 months, starting on 1st January 2023.

- *A root cause analysis* was completed at the project site to identify specific barriers unique to the family practice. The main barriers that were identified included insufficient training of medical staff, poor documentation of diabetic foot exam results in patient file, unavailability of assessment tools in clinics, and time constraints.
- *We successfully achieved this target* by the end of the project through 3 main initiatives brief training sessions, provision of foot screening bundles, and decreased workload by activation of virtual and medication refill clinics.
- *Available Knowledge:*

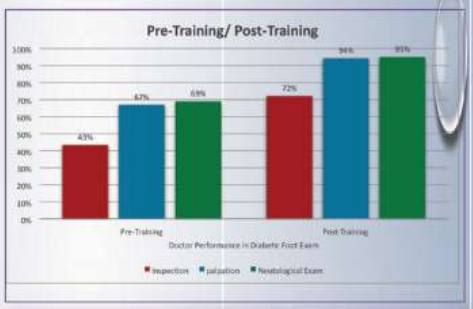
Diabetic foot ulcer (DFU) is one of the main complications of diabetes. Among diabetic patients, the lifetime risk of DFU is 25%. (2) Around 60% of diabetic wounds are infected at presentation.(3) The lower extremity amputation rates in infected ulcers are as high as 28%. (4) Based on a large study performed involving Saudi diabetic patients, the risk of developing DFUs is 2%, and the amputation rate is 1%. (5).

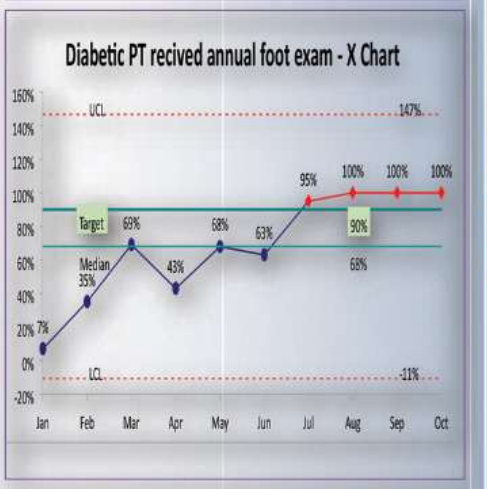
Methodology

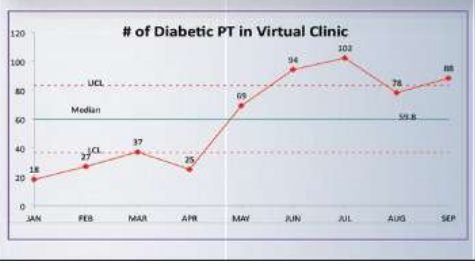
- ✓ This project was studied by the IHI model of improvement with whole steps involving, brainstorming, creating a team, Root cause analysis, prioritization plan, and others.
- ✓ After team selected, a brainstorming session was done to understand the causes and to clarify the project's key performance indicators.

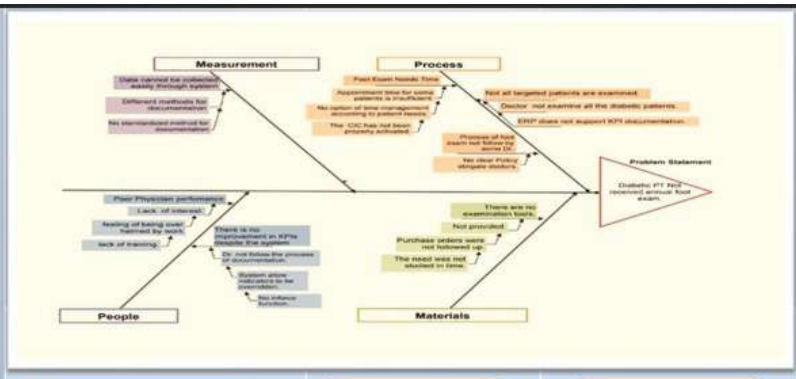
Fig (1) fishbone tool to identify causes :

Results









Interventions

There were 3 components of interventions :

- diabetic foot workshop and providing each clinic with foot-screening bundles followed by training sessions with pre-post training assessment of doctors .
- formulating new electronic form for the diabetes registry including specific icons for diabetic foot exam results based on MODHS guidelines.
- increasing the number of eligible patients registered at virtual clinics.

Discussion

There was a great achievement of doctor performance in diabetic foot exam after receiving in service training through our project

- inspection items improved form (43.3 % to 72.1%), Around 65 % of the participants did not make assessment of foot wear even studies proved that well-fitted shoes can decrease callus development, and toe deformity, thus, decreases the risk of DFU. (3)
- Overall palpation items improved from (67% to 94.3%) Only 35 % of doctors correctly identify indications, how to perform ABI testing in right way although evidence suggests that ABI is useful in predicting healing of wound and the potential of ulceration. (5)

Conclusion

If the adherence of family doctors to the guidelines of the ADA in evaluation and management of the diabetic foot changes from being reactive to proactive. The number of people who present with ulcerated and infected feet will decrease significantly.

Limitations

- ❑ Poor compliance of some doctors.
- ❑ shortage of staff especially at the time of annual leave.

References

1. Fisher TK, Armstrong DG. Your annual comprehensive foot exam. Diabetes Self-Management. Singh, N.; Armstrong, D.G.; Lipsky, B.A. Preventing Foot Ulcers in Patients with Diabetes. JAMA 2005, 293, 217–228.
2. Lavery, L.A.; Armstrong, D.G.; Wunderlich, R.P.; Mohler, M.J.; Wendel, C.S.; Lipsky, B.A. Risk Factors for Foot Infections in Individuals with Diabetes. Diabetes Care 2006, 29, 1288–1293.
3. Lavery, L.A.; Armstrong, D.G.; Wunderlich, R.P.; Mohler, M.J.; Wendel, C.S.; Lipsky, B.A. Risk Factors for Foot Infections in Individuals with Diabetes. Diabetes Care 2006, 29, 1288–1293.
4. Al-Tawfiq, J.A.; Johndrow, J.A. Presentation and Outcome of Diabetic Foot Ulcers in Saudi Arabian Patients. Adv. Ski. Wound Care 2009, 22, 119–121.
5. Al-Rubeaan, K.; Al Derwish, M.; Ouizi, S.; Youssef, A.M.; Subhani, S.N.; Ibrahim, H.M.; Alamri, B.N. Diabetic Foot Complications and Their Risk Factors from a Large Retrospective Cohort Study.

Abbreviations

DFU: Diabetic Foot Ulcer
ABI: Ankle Brachial Index
MODHS: Ministry of Defense Health Services
ADA: American diabetic association