

Shared Group Medical Appointments for Diabetic Foot Care

Ryan J. McGuire, RN, MSN, CCE, Denise Overby-Reyes, RN, MSN, GNP-C, and Michael DeMarco, DPM

When wait lists for the diabetic foot care clinic at this health care system were growing and staff availability was short, these authors implemented an alternative strategy to deal with the problem.

There is an increasing pressure for clinicians to treat more patients in less time, while still meeting the demands for proper screening, prevention, education, and quality care. Hiring more clinicians in order to meet these demands also necessitates hiring support staff, increasing space, and increasing associated expenses. Therefore, the traditional model of one office, one patient, one clinician, and one fixed time slot may no longer accommodate the needs of an ever-growing patient population.

The nurse practitioner (NP) diabetic foot clinic at the Southeast Louisiana Veterans Healthcare System (SLVHS), New Orleans, LA was experiencing this patient overload. There were 106 patients on the wait list, 56 of whom had been waiting more than 30 days for appointments. The foot clinic had 36 available 30-minute slots each week. The rate of new consultations approximated the appointment rate, thus keeping the appointment wait list backlogged. In addition, the existing appointment

slots used examination rooms in an already crowded clinic.

Some available solutions to this problem—such as open access or same-day access—can improve patient access over the short term but may not improve productivity or efficiency. For that reason, the NPs managing primary diabetes foot care and podiatry implemented an alternative strategy: scheduled group medical appointments for diabetic foot care. In this article, we describe this strategy and discuss how it eliminated wait times greater than 30 days, freed up needed examination rooms, provided education to patients and caregivers, and served as a diabetic foot screening tool to triage patients to an appropriate intervention.

STRATEGY FOR CHANGE

Edward Noffsinger, PhD, director of clinical access improvement at Palo Alto Medical Foundation, Palo Alto, CA, introduced the drop-in group medical appointment (DIGMA) model. The DIGMA model allowed patients who needed a follow-up appointment to drop in on one of the scheduled group appointments. This allowed one clinician with staff support to manage 20 or more patients in one 90-minute group session.¹⁻⁴

John Scott, MD originated the similar concept of shared medical

group appointments (SIGMA) at Kaiser Permanente Clinic, Hidden Lake, CO, using the cooperative health care clinic model. This model also utilized a 90-minute group format with a physician, a registered nurse, and support staff. The cooperative clinic model has been shown to be particularly well suited for disease management and specialty care.⁵⁻⁹

Adapting the group model

Staff at the SLVHS adapted the group appointment model to design a diabetic foot shared group medical appointment (foot-SIGMA). This model incorporated the elements of group appointments with foot care guidelines from the National Institute for Health and Clinical Excellence (NICE), workflow analysis, VA and DoD diabetes guidelines, and VA computerized patient record system (CPRS) templates.^{10,11}

Patients were scheduled for a 90-minute group session, which was held twice weekly in a large classroom with audiovisual accommodations. Patients' family members were allowed to attend and their caregivers were encouraged to attend. Initial education materials were mailed to patients with their appointment letters so that they and their family members could familiarize themselves with foot care.

Mr. McGuire is a nurse practitioner in the ambulatory medicine service and the diabetic foot clinic, **Ms. Overby-Reyes** is a nurse practitioner and the APRN manager of provider coordination, and **Mr. DeMarco** is a diplomate of the American Board of Podiatric Orthopedics and Podiatric Primary Medicine, all at the Southeast Louisiana Veterans Healthcare System, New Orleans, LA.

ACCESS TO DIABETIC FOOT CARE

Continued from page 14

Assessment:	LEFT FOOT	RIGHT FOOT
WARM, DRY, PINK	Yes	Yes
Full ROM.	Yes	Yes
Pedal Pulses	Yes	Yes
CAP REFILL >3	Yes	Yes
MONOFILIMENT DEFICITS: 3/9	3/9	3/9
DEFORMITY:	No	No
Cyanosis	No	No
Edema	No	No
Lesions	No	No
Maceration	No	No
Calluses	Yes	Yes
Ulcer	No	No
Onychomycosis	Yes	Yes
Tinea Pedis	No	No
Plan:		
-NO RISK D/C FROM DIABETES FOOT	[]	
-LOW RISK * F/U	YEAR: [X]	
-F/U EDUCATON CLASS	NEXT AVAILABLE []	
-TOENAIL TRIM TODAY	TIMES: 3	
-HIGH RISK * F/U	MONTHS: 0	
-NP FOOT CARE CONSULT	[]	
-CONSULT PODIATRY	[]	
-CONSULT VASCULAR	[]	
-CONSULT OTHER [SEE NOTES]	[]	
ORDER SUPPLY		
-ZEASORB POWDER	[X]-LAMASIL CREAM	[]
-UREA CREAM	[]-CASTELLANI PAINT	[]
-LACHYDRIN CREAM	[]-CLOTRIMAZOLE CREAM	[]
-DIABETIC SHOES	[X]-GEL INSERTS	[]
-ARCH SUPPORTS	[]-SANDER PROVIDED	[]
GIVEN INFO: "Footcare for People with Diabetes"" Diabetes and You"		
PT VERBALIZED UNDERSTANDING [X] FAMILY MEMBER PRESENT [X]		
ADDITIONAL COMMENTS: Pt exhibits good understanding of nail care		

Figure. Sample of the template used by the nurse practitioner to enter patient data from the diabetic foot clinic group appointment into the computerized patient record system.

At the beginning of the session, patients signed a consent form so their foot-related medical information could be shared with the group. Patients who did not want to give consent were scheduled for individual appointments with an NP. Patients who did not show up for the group appointment were rescheduled for another one.

After the NP introduced the group appointment concept and procedures, a health technician checked patients'

vital signs and passed out additional educational materials. Next, a film on self-management of foot care was shown. During the film presentation, the NP inspected each patient's feet and documented the findings on paper copies of a VA CPRS template (Figure). Based on this examination, which included pulse palpation, the NP determined the patients' levels of risk and took appropriate action (scheduling a follow-up appointment or referring the patient for a podiatry

consultation) according to the NICE foot care algorithm (Table 1).^{11,12}

A question and answer period, moderated by the NP, allowed patients and their family members to share their experiences and problems. Key points about foot care were reviewed. Patients requiring management of simple foot problems, such as dystrophic nail debridement, remained after the group session for individual appointments with the NP.

Consultations in other clinics (such as NP foot care, podiatry, vascular, diabetes, education, or hypertension) were scheduled for those patients who required attention for additional problems. Needed medication and supplies (including diabetic shoes and arch support) were noted on the paper templates. After the session, data from the templates were entered into the CPRS to document the visit and order the medications, supplies, or services needed.

OBSERVED IMPROVEMENTS

To see if the group appointment was beneficial, we compared an average day of foot-SIGMA with an average week of regular foot clinic appointments (Table 2). Sixty patients were seen by an NP through foot-SIGMA and 36 were seen by a primary care provider (PCP) through regular foot clinic appointments. Thus, the foot-SIGMA resulted in 24 more patients being seen in one day than were seen in a week of regular appointments. This allowed the NP to see more patients during the week.

Approximately 22% of the patients seen through foot-SIGMA were determined by the NP to be at no risk for diabetes-related foot problems and were discharged to their respective PCPs. This highlighted the need to provide diabetic foot care information to the PCPs and additional training so they can identify better those pa-

Table 1. Guidelines for action within the group diabetic foot clinic, based on a risk threshold examination^{11,12}

Risk threshold	Definition	Action
None	Not diabetic, consulted for other foot problem	Discharge patient from diabetic foot clinic
Low	Normal sensation, palpable pulses	Schedule annual follow-up
Moderate	Neuropathy or absent pulses or other risk factor	Schedule six-month follow-up
High	Neuropathy or absent pulses plus deformity or skin changes or previous ulcer	Schedule three-month follow up; if active problems detected, refer patient for podiatry consultation

Table 2. Comparison of one foot clinic week to one foot-SIGMA^a day

Parameter	One foot clinic week	One foot-SIGMA day	Interpreted difference of foot-SIGMA
No. of NP ^b hours	18	8	10 hours saved
No. of patients seen	36	60	24 more patients seen in one day than previously seen in one week
% of patients discharged to their PCP ^c	0	22.2	Patients not appropriate for the diabetic foot clinic identified
No. of health technician hours	8	8	None
Patients screened for podiatry consultations	Unscreened	Screened	Screening resulted in only 6% of patients requiring podiatry referral
% of patients referred for:			Patients' risks of foot problems properly identified to avoid unnecessary follow-up
1-year follow-up	0	33.3	
6-month follow-up	40	33.3	
3-month follow-up	60	11.2	
No. of patients waiting for > 30 days	56	0	Appointment wait list eliminated
Foot care education	Dispersed at random	Programmed into appointment	Prevention of foot problems emphasized
No. of room slots used	36	6 ^d	30 room slots freed up
Patient satisfaction	Poor	Good	Improved—patient dissatisfaction with long wait times resolved; only three patients requested individual appointments under foot-SIGMA

^aFoot-SIGMA = diabetic foot shared medical group appointments. ^bNP = nurse practitioner. ^cPCP = primary care provider.

^dUsed as needed.

tients who meet the criteria for the NICE foot care model. About 33% of patients were determined to be at low risk for diabetes-related foot problems and were scheduled for a yearly

follow-up appointment in the NP foot care clinic. Another 33% were at moderate risk for diabetes-related foot problems and were scheduled for a six-month follow-up appointment.

Patients at high risk represented 11% of those seen and were scheduled for a three-month follow-up appointment. Some of these patients required intervention for minor foot problems

after the group sessions. Only 6% of the patients seen at the group appointments required podiatry consultations for acute foot problems.

THE FINAL WORD

The utilization of foot-SIGMA eliminated the need for patients to wait more than 30 days for an appointment, allowing us to do today's work today. This reduced the amount of negative patient comments about diabetic foot appointments and freed up needed clinician time and examination rooms. By teaching self-care to patients and teaching proper screening to PCPs, group sessions reduced demand to the point that their frequency could be reduced from twice to once weekly. Moreover, education on vital self-care for the diabetic foot facilitated self-monitoring and early detection of problems. ●

Author disclosures

The authors report no actual or potential conflicts of interest with regard to this article.

Disclaimer

The opinions expressed herein are those of the authors and do not necessarily reflect those of Federal Practitioner, Quadrant HealthCom Inc., the U.S. government, or any of its agencies. This article may discuss unlabeled or investigational use of certain drugs. Please review complete prescribing information for specific drugs or drug combinations—including indications, contraindications, warnings, and adverse effects—before administering pharmacologic therapy to patients.

REFERENCES

1. Noffsinger EB. Increasing quality of care and access while reducing costs through drop-in group medical appointments (DIGMAs). *Group Pract J.* 1999;48(1):12-18.
2. Noffsinger EB. Operational challenges to implementing a successful physicals shared medical

appointment program. Part 1: Choosing the right type of shared medical appointment. *Group Pract J.* 2002;51(2):24-34.

3. American College of Physicians. Group visits: Are they right for my practice? *ACP Observer.* April 2004.
4. Terry K. Don't be afraid of same-day scheduling. *Med Econ.* 2004;81(21):64-66, 68.
5. Jaber R, Braksmajer A, Trilling J. Group visits for chronic illness care: Models, benefits, and challenges. *Fam Pract Manag.* 2006;13(1):37-40.
6. Dreffer D. Group visits hit the road. *Fam Pract Manag.* 2004;11(8):39-42.
7. Scott JC, Robertson BJ. Kaiser Colorado's Cooperative Health Care Clinic: A group approach to patient care. *Manag Care Q.* 1996;4(3):41-45.
8. Houck S, Kilo C, Scott JC. Improving patient care. Group visits 101. *Fam Pract Manag.* 2003;10(5):66-68.
9. Pennachio D. Should you offer group visits? *Med Econ.* 2003;80(15):70-72, 82, 85.
10. VA/DoD clinical practice guideline for management of diabetes mellitus. National Guideline Clearinghouse web site. http://www.guideline.gov/summary/summary.aspx?doc_id=5185. Revised 2003. Accessed November 16, 2007.
11. Foster A. An evaluation of NICE guidelines on foot care for patients with diabetes. *Nurs Times.* 2004;100(22):52-53.
12. National Institute for Clinical Excellence. *Type 2 Diabetes: Prevention and Management of Foot Problems, Revised Version. Appendix E. NICE foot care guideline (revision): Algorithm.* Sheffield, England: National Collaborating Centre for Primary Care; 2004. <http://www.nice.org.uk/nicemedia/pdf/CG10algorithm.pdf>. Accessed November 16, 2007.