

Title of Intervention: A program to improve adherence to diabetes guidelines by primary care physicians

Intervention Strategies: Environments and Policies, Provider Education, Group Education, Individual Education

Purpose of the Intervention: To improve adherence to diabetes guidelines

Population: Primary care providers

Setting: Rural county in Indiana; health care facility-based

Partners: Indiana University School of Medicine

Intervention Description:

- **Environments and Policies:** A group, consisting of two primary care providers, an endocrinologist, the hospital-certified diabetes educator and a nurse from the hospital's quality assurance department used the Standards of Care of the American Diabetes Association as a starting point to develop guidelines to adopt as their care routine. The group discussed each guideline and, by consensus, either agreed with the guideline or modified it to reflect prevailing practice styles and beliefs. The group developed guidelines in 8 general areas: self-monitoring of blood glucose (SMBG), HbA_{1c} monitoring, screening for eye complications, screening for foot complications, screening for renal complications, lipid screening and treatment, blood pressure screening and treatment and smoking assessment and cessation counseling. After the group developed the guidelines, they presented the guidelines to their colleagues and, after discussion, the group agreed to adopt the guidelines. The guidelines were then distributed in paper form to all primary care physicians. Subsequent newsletters related to the project included the guidelines as well.
- **Provider Education:** Practice aids were developed and distributed. These included chart stickers for patients' charts, which were brightly colored and included cartoons of an eye, a kidney and a foot. These stickers were meant to trigger the staff to instruct patients to remove their shoes when they were put in the exam room and to remind physicians to recommend eye and kidney screening tests. Chart flow sheets were also developed, which facilitated tracking of laboratory results and examinations. In addition, a series of targeted education sessions were held with physicians, covering various topics related to the guidelines. These sessions were led by specialists from Indiana University School of Medicine and were intended to be evidence-based and practical, with ample time for discussion.
- **Group Education:** Within a few weeks of the physician education, an educational session on the same topic was held for patients and their families. For example, after physicians talked about dyslipidemia, a session for laypersons entitled, "High cholesterol and diabetes: what can you do?" was held. Project staff provided information to physicians' offices to mail to all patients with diabetes about these sessions; the sessions were also advertised by flyer and in the local newspaper. In addition to providing information about the topic, presenters emphasized steps patients could take at their physician's office to improve their diabetes care, such as requesting certain tests and examinations.
- **Individual Education:** A barrier to diabetes care noted by physicians was the inability to develop individualized meal plans for patients. In response to this need, a computer system was installed in the local hospital that enabled the hospital diabetes educator and registered dietician to assist patients in constructing meal plans. The system, Computer Planned Menus, was developed by the research group and was used as part of previously successful diabetes interventions.

Theory: Not mentioned

Resources Required:

- **Staff/Volunteers:** Project staff, presenters, research group, specialists
- **Training:** Not mentioned
- **Technology:** Computer planned menus system
- **Space:** Not mentioned
- **Budget:** Not mentioned

- Intervention: Chart reminders, computer program software, printed guidelines, newsletters, chart flow sheets, flyers, newspaper advertisements, informational mailings, Computer Planned Menu computer system
- Evaluation: Chart audits

Evaluation:

- Design: Pre- and post-test
- Methods and Measures: Health care provider adherence to guidelines was assessed through chart audits and comparisons of patients with diabetes. Feedback was given to health care providers about their performance on the baseline audit and use of practice aids.

Outcomes:

- Short Term Impact: Not measured
- Long Term Impact: Statistically significant improvement at one year was seen in adherence to blood pressure measurements, primary care eye exams, comprehensive foot exams and HbA_{1c} measurements. After year 2, blood pressure measurements and foot exams remained significantly improved. Median LDL cholesterol improved.

Maintenance: Not mentioned

Lessons Learned: Making changes to diabetes care is difficult in busy primary care offices, especially when physicians work independently and without computer support for data organization and reminders.

Citation(s):

Kirkman MS, Williams SR, Caffrey HH, Marrero DG. Impact of a program to improve adherence to diabetes guidelines by primary care physicians. *Diabetes Care*. Nov 2002;25(11):1946-1951.