Diabetes Education Center - Lancaster

A NEW BEGINNING

or

Continuing the Work of Those Who Have Gone Before

MIKE DORRITY

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PALMETTO TRI-COUNTY INTERNAL MEDICINE
&
THE DIABETES EDUCATION CENTER LANCASTER, SC

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- Michael Kimbrell, MD
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Background and Problem

- A new Diabetes Education Center is being established “To educate the Lancaster service area concerning diabetes and to prevent, manage, and reduce the probability of complications.”
- Outcome measures are needed to evaluate the effectiveness of the center and compare it with education and intervention offered in an office practice setting
- One of the new center’s program evaluations will be “% of patients in poor control of diabetes (>8%HBA1C)”

Aims

- Establish a database to help track and analyze HBA1Cs for diabetic patients at PTCIM and at The Diabetes Education Center
- Evaluate effectiveness of diabetic education on HBA1C for individual patients at PTCIM and for the practice as a whole
- Identify other appropriate measures to monitor education effectiveness

Measures

- Number and percentage of diabetic charts reviewed for diabetic type and HBA1C values
- Percent of patients with HBA1C>8% and average HBA1Cs by group (Type 1, Type 2, & education)
- Number and type of outcome and process measures identified in scientific literature

Changes for Improvement

- Set up HBA1C database for use as outcome measure in effectiveness of education center and office practice
- Provide ideas for future study in evaluating effectiveness of center

PDSA Cycle #1

- Plan: Review charts of diabetic patients and enter HBA1C levels and dates of visits into database
- Do: Reviewed 32 charts of patients coded for DM visits since January 2000 and entered HBA1Cs and dates of visits since Jan 1999 into Excel spreadsheet
- Study: This represents approximately 3.2% of diabetics at PTCIM (data from student project Dec. 1999). There is currently no efficient and accurate method of identifying diabetic patients
- Act: Report results to Dr. Kimbrell and Julie Bowers and brainstorm methods for further ID of patients, chart review and entry into database

PDSA Cycle #2

- Plan: Categorize patients at PTCIM based on education received and correlate this with HBA1C level
- Do: Created table with most recent HBA1Cs with dates, DM Type, and #of formal education sessions by patient
- Study: 62% of diabetic patients in database have HBA1Cs that require intervention. Thus far, patients with education do not have better HBA1Cs than patients without. Factors affecting this may include small sample size and referral bias.
- Act: Report results to Dr. Kimbrell and Julie Bowers along with ideas for better study of individual HBA1C progression

Data

%pts with HBA1C>8% 62

	Average HBA1C
Total Patients (32)	8.9
Type 1(18)	9.2
Type 2 (14)	8.5
no education (13)	8.2
poor education (7)	9.2
fair education (8)	9.9
good education (4)	8.6
excellent education (0)	no data

PDSA Cycle #3

- Plan: Search literature for studies relating to diabetic education and outcome measures
- Do: Performed search of Medline and ADA site and reviewed studies used in Education Center grant proposal
- Study: Found abstracts and studies using several different process and outcome measures. Process measures included foot and retinal exams, education attendance, office visit frequency, and frequency of laboratory testing of HBA1C, lipids. Outcome measures other than HBA1C levels included patient knowledge (testing performance), self management skills, weight loss, improvement in dietary behavior, number and length of hospitalizations, ER visits, complications, and sick days.
- Act: Provide abstracts and results to Julie Bowers for possible use in future studies.

Lessons Learned

- Hard work by several people has paid off in the development of the new Diabetes Education Center which should be a great addition to the community and a help to many residents of Lancaster County!
- Prior planning prevents poor performance but success is often achieved by trial and error.
- Creating a database is a tremendous task, best left for computer and database experts.

More Lessons Learned! (in cliché)

- When all else fails, read the directions!
- Too many cooks spoil the broth but many hands make light work.
- Communication, communication, communication!