Gestational Diabetes Crisis Curriculum, v.1.1 Lancaster County

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Problem

- The prevalence of diabetes in Lancaster County in 1998 was 6.4% (National 5.9%, State 5.7)
- Less than half of the population of Lancaster County reads above a third grade level
- The Diabetes Education Center receives many referrals from local OBs of women newly diagnosed with Gestational Diabetes
- The DEC has had problems with this patient population because these woman are often “in shock” over their diagnosis, do not understand the seriousness of their disease, and often do not return for follow-up visits
- Though the DEC has an established “Crisis Curriculum” to educate these women about their disease and the importance of tight control, it was felt that this curriculum presupposed a degree of medical familiarity not present in the general population of the county

Aims

- To educate women with Gestational Diabetes about their disease and how it can be controlled
- To present this information in a way that is comprehensible across cultural and educational barriers
- To improve the health of these women and their babies by creating a positive change in their health care behavior
- To increase the number of women with Gestational Diabetes who return to the DEC for follow-up care/education
- The DEC supports these Aims as evidenced by their request that I modify the aforementioned curriculum in the described manner

Measures

- A curriculum with a Flesch-Kincaid Grade Level Score between 7 and 8, and ideally a Flesch Reading Ease Score >70
- An increase in score on an identical test administered before and after curriculum presentation
- A post-curriculum increase in adherence to prescribed blood glucose testing and insulin administration regimens, ideally with improved blood glucose control demonstrated by an increased percentage of readings within target ranges
- Positive feedback from both health care providers and patients on the new curriculum

Possible Changes for Improvement

Modification/Utilization of Existing Diabetes Crisis Educational Curriculum

- Drivers

  - Lack of easily understood curriculum to efficiently educate Gestational Diabetics

  - Easy identification of patients in need of this program via physician referral

  - Ready access to educators and programs already in place at the DEC

- Barriers

  - Complexity of material makes a comprehensive yet easily understood curriculum difficult to develop

  - The prevalence of non-English speakers in the community makes it essential that any curriculum, if not already in the appropriate language, be easily translatable to such

PDSA Cycle
Plan

- To modify an existing Gestational Diabetes Crisis Curriculum, making it more easily understood across cultural and educational barriers
- To create a test to be administered both before and after this curriculum is presented for the purpose of evaluating the immediate success of this educational tool
- To take all the Gestational Diabetics referred to the DEC during March through this curriculum, and when possible to obtain data on their blood glucose control 1-2 weeks after our session

PDSA Cycle
DO

- Educated myself about Gestational Diabetes
- Re-wrote the existing curriculum and test as described above, submitting it for approval to the DEC director and AHEC site coordinator
- Performed a Flesch-Kincaid Readability Analysis on the the appropriate portions of this new curriculum
- Administered the curriculum and testing (via a translator) to VM, the only Gestational Diabetic to keep her DEC appointment during the month of March
- Analyzed above patient’s blood glucose records before and 2 weeks after our session

PDSA Cycle
Study

- The finalized curriculum met with subjective praise from its reviewers and participant
- Flesch-Kincaid Readability Analysis (via Microsoft Word)

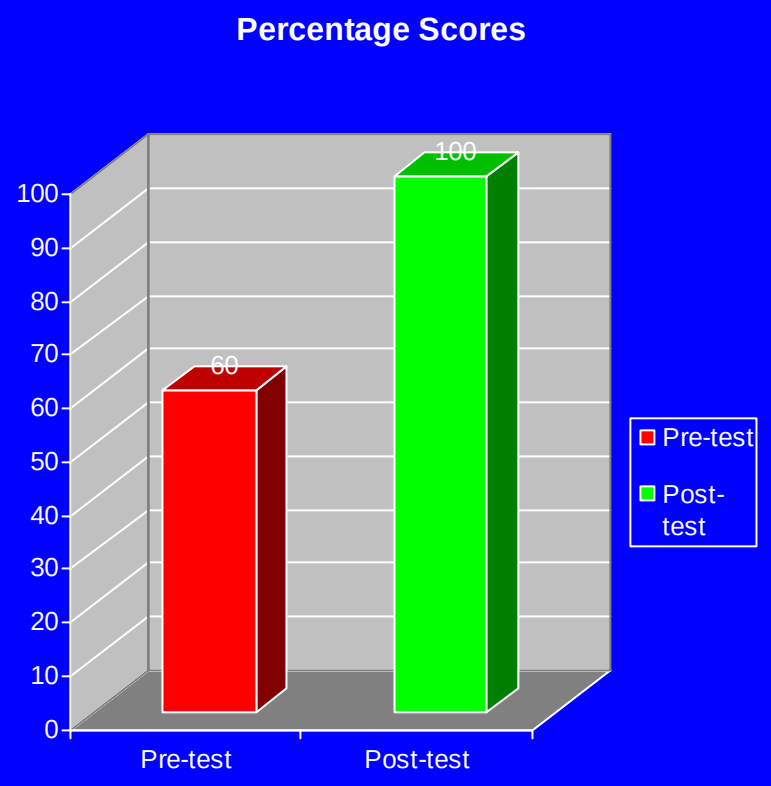
  - Grade Level Score- 7.6 (7-8 recommended for standard documents, number represents actual "grade level")

  - Reading Ease Score- 70.1 (60-70 recommended for standard documents, number is on a 100 point scale, with 100 being the easiest to read)

  - Estimated scores from original curriculum 12 and 20.0, respectively

PDSA Cycle Study (con.)

- Assessment of pre and post test scores show a 60% improvement in the patient's score after administration of the curriculum



PDSA Cycle Study (con.)

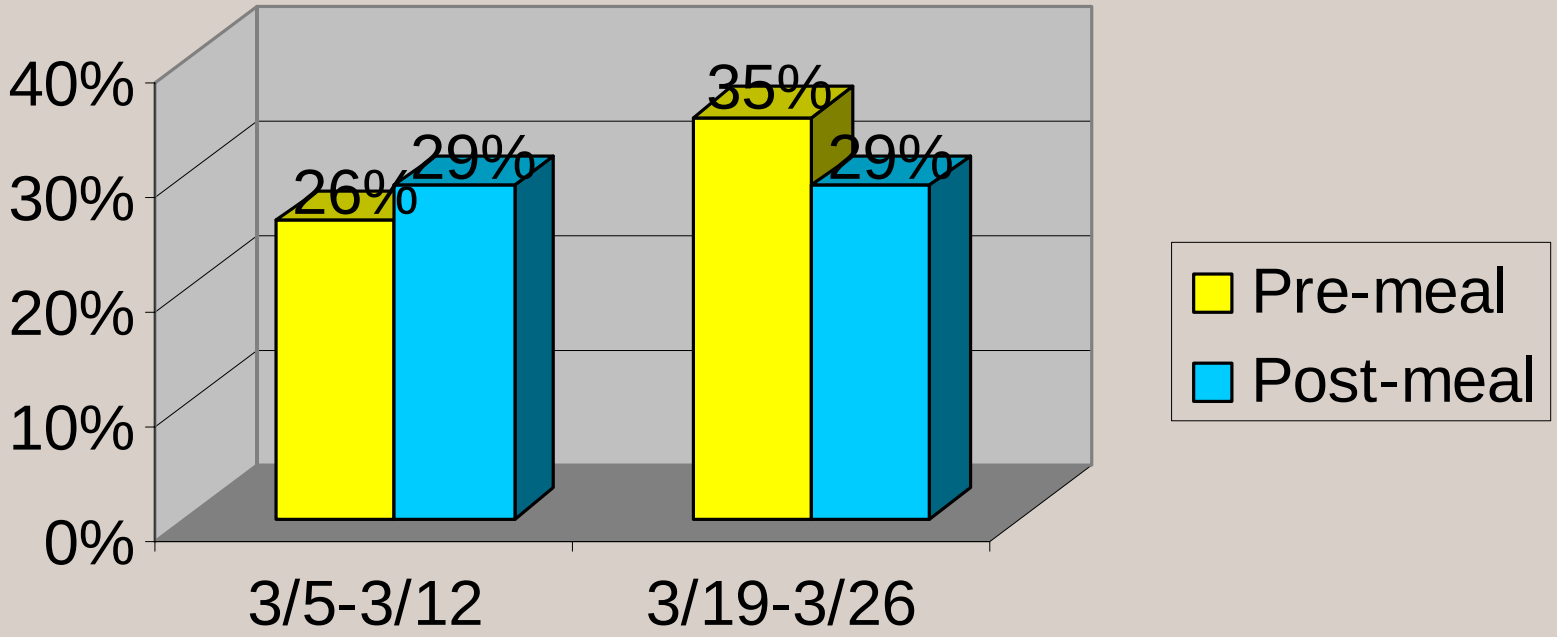
- VB recorded her blood glucose levels before each meal and 2 hours post dinner; she was equally compliant with this regimen before and after curriculum administration.

- Target Blood Glucose

  - Pre-meal 90-130 mg/dL

  - Post-meal 112-202 mg/dL

Percent Blood Glucose Values Within Target Range



PDSA Cycle
Act

- Administer curriculum and test to future Gestational Diabetics
- Evaluate test results and analyze blood glucose value “progress” as was done during this Cycle
- Continue using curriculum if results seem positive
- Adjust curriculum further to suit patient population (consider translation into Spanish)

Lessons Learned

- Effectively explaining diabetes and how to control it to a layperson is a lot harder than you might think
- The most important thing to teach someone about their diabetes is ***why*** they must control it
- Exel Chart Wizard is a beautiful thing