The Diabetes Education Center's Developmentally Appropriate Diabetes Education (DADE) Project - Lancaster County

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Tri-County Internal Medicine and the Diabetes Education Center, Lancaster,SC

- Michael Kimbrell, MD
- Julie Bowers, FNP
- Robin Fountain, MEd
- Sylvia Horres, MEd
- Lisa Swatzyna, RN
- The helpful and enthusiastic staff at TDEC

The scope of the problem

- In 1998, there were c.2818 adults with diabetes in Lancaster County
- The Diabetes Education Center has a history of effective Diabetes education for its patients
- However, its director and staff express concern regarding their ability to educate their pediatric patients effectively

Project Aims

- To revise/create an educational and management curriculum (comprising learner objectives, content, teaching and evaluation methodology, and outcome standards) which is developmentally appropriate for a selected age group.
- To increase pediatric patients' and their caregivers' knowledge and understanding of and involvement in the learning objectives of The Diabetes Education Center's curriculum.
- To make available the tools and resources which are helpful in this project so that other developmental-age-appropriate curricula may be created.

Measures

- Revision and/or assessment of all 9 Pediatric Teaching Protocols contained within the Diabetes Education Center's curriculum
- Approval of curriculum content and methodology by at least three educators who are expert in curriculum development
- Degree of satisfaction of TDEC instructors with revised curriculum, based on staff input (members of staff will have completed an inservice on the subject of developmental characteristics) : measured by questionnaire and/or interview
- Stated ability of TDEC staff to utilize methods of this project to assess and revise curriculum with regard to developmental appropriateness for given age groups : measured by interview and verbal/email feedback.

Changes for Improvement

- Research elements of curricula which are developmentally appropriate for a selected age group
- Assess and Revise the current pediatric curriculum
- Introduce the DEC staff to the developmental characteristics of the selected age group
- Introduce the DEC staff to the revised curriculum and make it available to them both to use in their educating and to function as a model for future assessment and revision

PDSA Cycle 1: Developmental Characteristics PLAN

- Interviews with TDEC staff revealed that the 6-8 year old age group was most crucial
- Interviews with individuals knowledgeable in curriculum development and/or diabetes education for 6-8 year olds (Robin Fountain, MEd and Lisa Swatzyna, RN) led to many helpful resources and much information regarding issues to be addressed

DO

- **Review of available resources led to the production of an educational document on developmental characteristics of the 6-8 year old**
- **Emphasis was placed on those characteristics most relevant to diabetes education**
- **An educational inservice was planned to familiarize TDEC with the material and use of the document**

PDSA cycle 1:

STUDY

- The “developmental stages” document was reviewed and revised by the experts
- Review of available educational materials at TDEC revealed little available guidance regarding their developmental appropriateness
- Current curriculum protocols had little specific educational/evaluative methodology

ACT

- Assessment of specific Pediatric Educational protocols by developmentally appropriate curriculum experts was planned
- Revisions to learning objectives and teaching methodologies were planned

PDSA cycle 2: Assessment and Revision of the Curriculum : PLAN

- Input was requested of child development and diabetes education experts for the assessment and revision of the individual Educational Protocols contained in the current
- Suggestions for characteristics and examples of developmentally appropriate teaching methodologies were gathered

PDSA Cycle 2: DO

- Document containing general and specific assessment and suggested revisions of current protocols was produced
- Specific educational protocols were assessed and revised, highlighting developmentally appropriate learning objectives
- New examples of educational and evaluative methodologies were produced and documented, including the development of a foundational learning exercise, “The Insulin Key Game.”

PDSA Cycle 2: STUDY

- Assessment and revision of educational protocols was reviewed by three experts in child development/curriculum development/diabetes education for the 6-8 year old
- Further revisions were made and final document produced
- Elements of new teaching methodologies were tested on three children in the target age group, with satisfactory results (objectives were met and evaluative methods were appropriate)

PDSA Cycle 2: ACT

- Document was presented and assessment solicited from Julie Bowers, FNP, and staff of TDEC
- An educational inservice was planned to familiarize TDEC staff with the revised curriculum and its use
- Educational Inservice was given in order to:
  - Educate DEC staff regarding the developmental stages and the characteristics of the 6-8 year old
  - Familiarize TDEC staff with contents and use of newly revised curriculum
  - Evaluate any change staff satisfaction with current level of expertise and effectiveness of inservice/project (surveys revealed a low level of staff confidence regarding pediatric education and a significant increase following exposure to newly produced materials. Future utility and satisfaction will be tracked by verbal feedback by Julie Bowers)

Lessons Learned and Next Steps for Future Students

- Teachers and health care workers familiar with developmental characteristics can be a great help in producing an effective educational program targeting a pediatric audience
- TDEC health care workers are open and enthusiastic regarding suggested improvements to their already effective program
- Taking the developmental abilities of your patient population into consideration can improve patient mastery and hopefully, compliance.
- It now remains to be seen what difference this particular curriculum makes in TDEC's patients and what problems/benefits are felt by staff who use it
- It will also be up to future students or TDEC staff to utilize the current curriculum and its resources as a model for producing developmentally appropriate protocols for other age groups.

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