Insulin Crisis Administration Curriculum

Letty Revell

August 7 - August 29, 2001

Palmetto Tri-County Internal Medicine
Lancaster, SC

- Julie Bowers, CFNP, CDE
- Joye Whitaker, CRRN
- F. Michael Kimbrell, MD
- Catawba-Wateree, AHEC

Problem

- In 1998, the prevalence of diabetes in Lancaster county was 6.4% of the population. (national 5.9%, state 5.7%)
- Most persons in need of insulin are diagnosed in the office and are expected to administer their insulin that evening.
- Target community includes
  - Type 1 diabetics
  - Inadequately controlled type II diabetics
  - Gestational diabetics
- The Diabetes Education Center does not have a crisis curriculum in place to insure adequate education for self-administration of insulin

Aim

- To improve instruction techniques for self-administration of insulin, ensuring that persons with diabetes in need of insulin will be able to correctly administer their insulin.
- The Diabetes Education Center supports this aim as evidenced by their request for development of such a curriculum.

Measures

- Patient score on post-test examination after education
- Patient return demonstration of newly learned technique as measured by successful completion of a checklist
- Feedback from health care providers on the use of this new curriculum

Possible Changes for Improvement

Development of Insulin Crisis Administration Curriculum

Drivers:

- Lack of method to adequately & efficiently educate patients on insulin self-administration techniques
- Current time & space constraints in physician's office
- Medication safety issues

Barriers:

- Different forms of insulin administration are available, making a comprehensive curriculum difficult to develop
- Difficult to ensure patients will fully understand how to administer insulin after a short tutorial
- Curriculum must be updated as new information becomes available

PDSA Cycle
Plan

- To formulate a crisis curriculum that simplifies insulin administration instruction
- To create a return demonstration checklist the patient must complete after instruction
- To create a post-test insuring the patient understands important concepts of insulin administration

PDSA Cycle
Do

- Watched videotapes on insulin administration in preparation for development of the curriculum
- Educated myself on insulin guidelines
- Identified target population through Diabetes Education Center
- Submitted preliminary curriculum, demonstration checklist, & post-test for approval by healthcare professionals
- Implemented curriculum on a trial basis

PDSA Cycle
Study

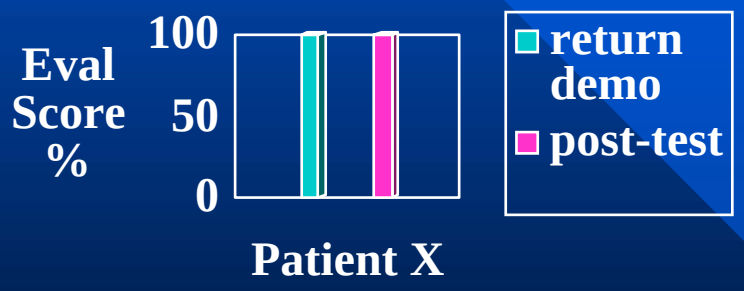
- After performing a practice administration of the curriculum, evaluated weaknesses and areas of improvement
  - Additional information about use of multiple insulin cartridges & disposal of needles
- Adjustments to curriculum based on responses of healthcare professionals
  - Additional information about rotation of injection sites, shelf-life of insulin, S/S hypoglycemia

PDSA Cycle
Act

- Implementation of curriculum for patient newly placed on insulin
  - Completion of curriculum
  - Return demonstration of insulin administration
  - Completion of post-test

PDSA Cycle Data

Assessment of Insulin Administration Education



- Patient successfully completed
  - return demonstration 12/12 steps
  - Post-test score 5/5
- Followup with patient reveals ease and comfort with insulin administration

PDSA Cycle
Act, cont'd

- Current data collection performed
- Future data collection
  - Continuation of project at Diabetes Education Center
  - Continue to evaluate effectiveness of this curriculum
    - » pt return demonstration checklist
    - » pt post-test

Lessons Learned

- Organization of a new curriculum is time-consuming due to unexpected discrepancies in information
- Personal education about insulin
- Difficult to evaluate long-term effectiveness of education - need ongoing study to monitor future compliance based on teaching methods
  - Must be adaptable to change