Educating the Educator: Diabetes Self-Management Education for the Bedside Nurse

Pamela Illesca, BSN, RN; Brigit VanGraafeiland, DNP, CRNP, FAAN; Beth Abate, DNP, AGPCNP-BC, ANP-BC, RN-BC

JOHNS HOPKINS SCHOOL of NURSING

Introduction & Background

Why This Project?

- Increasing Diabetes Mellitus Type 2 (DMT2) prevalence rates, deaths, and financial burdens.
- Diabetes self-management education (DSME) recently endorsed by the American Diabetes Association (ADA) and International Diabetes Federation (IDF).
- The literature supports DSME for the reduction of hospital readmissions and improved patient outcomes.

Where is the Gap?

- Inpatient registered nurses (RNs) report not feeling comfortable with DSME.
- The literature suggests nurses are not adequately prepared to provide DSME in the hospital.

Why Educate the Nurses?

- The inpatient RN spends the most time at the bedside delivering diabetic care and educating patients.

How Should We Educate?

- RNs consider online learning activities as suitable for their working conditions and needs; considered a safe and relaxed environment.

Purpose & Aims

Purpose: To increase bedside RNs' teaching skills, comfort, familiarity, & knowledge of DSME

Aims

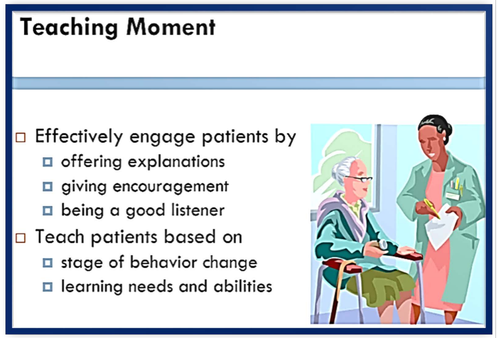
1. Determine med-surg RNs' teaching skills, comfort, familiarity, & knowledge of delivering DSME using validated Diabetes Management Knowledge Assessment Tool (DMKAT) before educational intervention.
2. Implement an educational module to educate RNs regarding DSME to subsequently educate DMT2 patients regarding blood glucose readings, symptoms, emergency plan, and insulin administration during their inpatient stay.
3. Determine med-surg RNs' teaching skills, comfort, familiarity, & knowledge of delivering DSME using validated DMKAT after educational intervention.

Methods

Design: Pretest, posttest pilot study.
Setting: Inpatient med-surg unit.
Inclusion Criteria: RNs working on the med-surg unit.
Exclusion Criteria: RNs who visit unit periodically to cover staff shortage (i.e., travel or float pool nurses).
Intervention:

- Project introduction delivered by study lead through video (shared via OneDrive).
- Staff shared feedback through remote modalities.
- Voluntary, self-paced, validated educational intervention delivered via an online MyLearning course.

Data collection: Pre/post DMKAT (online survey) scores at baseline and post-intervention (15-weeks span).



Results

Aims 1 & 3

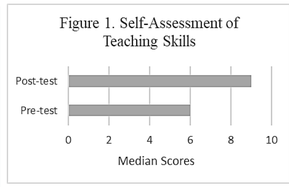
- Statistically significant increase in RN self-reported teaching skills, comfort, familiarity, and knowledge in providing DSME to patients ($p<0.05$).
- No statistically significant increase in objective knowledge levels ($p=0.127$).

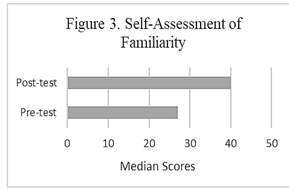
Aim 2

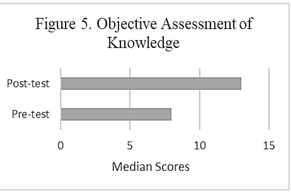
- Total of 26 participants were recruited. 19 participants were lost at follow-up: 9 completed the learning course and 7 of these 9 participants were assessed at follow-up.
- There was high overall feasibility and satisfaction described by participants.

Demographic characteristics	(*N* = 26)
Age, n (%)	
21-30	3 (11.5)
31-40	5 (19.2)
41-50	13 (50)
51-60	3 (11.5)
Older than 60	2 (7.7)
Sex, n (%)	
Male	4 (15.4)
Female	22 (84.6)
Education, n (%)	
ADN	7 (26.9)
BSN	10 (38.5)
MSN	2 (7.7)
Other	7 (26.9)
Work Status, n (%)	
Part-Time	2 (7.7)
Full-Time	21 (80.8)
PRN	3 (11.5)
Ethnicity, n (%)	
Caucasian	9 (34.6)
African American	11 (42.3)
Asian American	2 (7.7)
Hispanic/Latino	2 (7.7)
Other	2 (7.7)
Years of Nursing Experience, n (%)	
0-4 years	11 (42.3)
5-9 years	2 (7.7)
More than 10 years	13 (50)
Attendance at in-service or CE in which diabetes was the focus, n (%)	
None	19 (73.1)
Within last 6 months	0 (0)
> 6 months but < 1 year ago	2 (7.7)
> 1 year but < 2 years ago	2 (7.7)
> 2 years ago	3 (11.5)
Number of patients with diabetes cared for on weekly basis, n (%)	
None	2 (7.7)
1-2	6 (23.1)
2-5	14 (53.8)
6-10	3 (11.5)
> 10	1 (3.8)
The greatest obstacle to managing blood glucose in the hospital, n (%)	
Personal knowledge deficit	8 (30.7)
Hand-off communication	7 (26.9)
Unclear glucose targets	6 (23)
Unfamiliar with hospital policies	6 (23)
Ineffective insulin regimen	10 (38.5)
Lack of coordination between BGM, IA, MD	19 (73.1)

CE=Continuing Education
BGM=Blood Glucose Monitoring
IA= Insulin Administration







Conclusions

- Intervention has capability to increase RNs' teaching skills, comfort, familiarity, & knowledge of DSME to subsequently improve health outcomes for people challenged with a DMT2 diagnosis.
- Future studies should be mindful of :
  1. length of educational course
  2. timing the intervention is being presented

Dissemination

- Submission to relevant peer-reviewed journals.
- Share findings with stakeholders: unit and institution-wide.
- Advocate for continued efforts to educate RNs on DSME utilizing online learning platforms
- Potential collaboration with authors of intervention tools.

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