Mental Illness and Diabetes in Vulnerable Populations: developing a diabetes champion program

American Association of Diabetes Educators
Houston, Texas
Monday, August 12, 2019
Disclosure to Participants

- Notice of Requirements For Successful Completion
  - Please refer to learning goals and objectives
  - Learners must attend the full activity and complete the evaluation in order to claim continuing education credit/hours
- Conflict of Interest (COI) and Financial Relationship Disclosures:
  - Speaker’s Bureau: Astra Zeneca, Insulet
  - Advisory Board: BD
  - Stock Holder: Medtronic Diabetes

Objectives

- Identify one risk factor for type 2 diabetes in people with serious mental illness.
- State one difference in a traditional diabetes champion program versus one for psychiatric nurses.

Introduction

- Master’s Project
- RN, CDE at a tertiary care hospital with an existing diabetes champion program (DCP) and an adjacent psychiatric hospital with no CDE or any diabetes resources.
- Identified sub-optimal diabetes care and education for psychiatric patients transferred to my tertiary care hospital.
- Opportunity to improve outcomes in this vulnerable population by educating mental health nurses on diabetes care & education.
- Chose a mentor from Nurs Educ at the affiliated psychiatric hospital.
- Started to look for some data to collect before I started an intervention.
What classifies as “mental illness?”

- Refers collectively to all diagnosable mental disorders.
- Characterized by sustained, abnormal alterations in mood, thinking, or behavior with distress & impaired functioning.
- Accounts for more disability than any other illness including cancer and heart disease (WHO).
- Present in ¼ adults in U.S. and ½ over lifetime.

Scope of the Problem

- Multiple stakeholders
- High incidence of poor glucose control in psychiatric patients
  - 78.8 to 84.3% of pts had BG > 200 mg/dL (spring '15)
  - 13.4 to 17% with BG ≥ 300 mg/dL
- DM and SMI are frequent co-morbidities
  - Literature reports 8 to 17% of psychiatric patients have DM
- Together impact life expectancy
  - ↓ life expectancy by 20-25 years

Literature on DCPs

- ↓ in 30 day re-admissions (Healy et al; Corl et al)
- ↓ in insulin errors (Jornsay & Garnett)
- ↑ in patient education (Spolett '93; Jornsay & Garnett)
- ↑ RN confidence and knowledge (Modic, et al)
- Improved in-patient glycemia (Spolett '06)
- Improved case management (Welch et al)

Reeves, W.C., et al. CDC, Morbidity and Mortality Weekly Report, September 2, 2011 / 60(03); 1-32.
Literature on DCPs for Psych RNs

• None exists
• But, there is an increased call for nursing involvement in the management of medical co-morbidities
  – Wellness programs for patients with SMI (Chiverton et al)
  – DM Self management education (Lawless et al)
  – ↓ causes of premature mortality (Bradshaw & Pedley)
  – Patient centered medication adherence (Pyne et al)
  – Best practices for psychiatric patients (Sajatovic et al)

Chiverton et al, 2007; Lawless et al, 2016; Bradshaw & Pedley, 2012; Pyne et al, 2013; Sajatovic, 2011

Theoretical Program Basis

• Jean Watson's Theory of Caring
  – Dr. Watson worked as a psychiatric RN
  – Her view of a human being as “valued person …to be cared for, respected, nurtured, understood and assisted”
  – Given the marginalization of people w SMI, Watson’s actual caring occasion promotes RN/patient relationship

• Patricia Benner’s Novice to Expert
  – DM Champion info and skills sequentially built week by week


Program Design

• Program design based on the educational research of Trivette and colleagues
  – Total enrollment < 30 people
  – Program education on multiple occasions
  – Total number of hours >10
• Chose 15 hours-total CEUs needed to sit for CDE exam

Curriculum Design

• Based on American Association of Diabetes Educators (AADE) 7 healthy behaviors
• Designed to bridge the transition to out-patient diabetes and mental health care
• Skill/concept taught to RN was to be taught to a patient before the next class
• Discussion of how this teaching went at the beginning of each class


Curriculum

• Nine classes in total, each 90 minutes long
• Each class had:
  – An initial discussion of how their teaching went
  – A didactic portion related to the topic
  – A hands-on portion also related to the topic

Curriculum

<table>
<thead>
<tr>
<th>OBJECTIVES</th>
<th>CONTENT FOCUS</th>
<th>TIME FRAME</th>
<th>PRESENTER</th>
<th>METHODS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lists learner's objectives in behavioral terms</td>
<td>Outline of the content for each objective.</td>
<td>Time frame for each session</td>
<td>Faculty</td>
<td>Description of the teaching methods, strategies, materials &amp; resources for each objective</td>
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<tr>
<td>Session #1</td>
<td>1. RN can explain the role of the Diabetes Champion. 2. RN can identify an effective patient education strategy and resource. 3. RN can describe one critical component of Teach Back</td>
<td>90 minutes</td>
<td>Ann Marie Hasse, RN, CDE, NSUH Department of Medicine</td>
<td>Lecture, discussion, handouts, case study role play scenarios</td>
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<td></td>
<td>A. A. Resource to colleagues and patients B. Participates in diabetes PI projects.</td>
<td></td>
<td>Donna Jornsay, RN, CDE LIJ Nursing Education</td>
<td></td>
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<td>A. A. Motivational interviewing skills to identify patient barriers. B. ADA, NIH, DEC, Websites, journals, JDRF, Diabetes Resource Coalition of LI, AADE</td>
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<td>A. Have patient demonstrate the required skill.</td>
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Curriculum

• Session 1: Patient Education
  – DC can explain the role of the Diabetes Champion.
  – DC can identify an effective patient education strategy and resource
  – DC can describe one critical component of Teach Back
  – DCs teach one another any skill and then present to the group what they learned from this experience.

Curriculum

• Session 2: Pathophysiology
  – Type 1 5 x 8 index cards with
  – Type 2 different characteristics of
  – Pre-Diabetes the various diabetes types
  – LADA
  – GDM

Curriculum

• Session 3: Mental Illness
  – Impact of Psychiatric Meds on glycemia
  – Postpartum depression
  – Diabetes distress
  – Community attitudes towards mental illness
  – Only session that did not have a hands-on component
Curriculum

• Session 4: Medical Nutrition Therapy & Exercise
  – Plate method
  – Carb counting
  – 150 minutes/week with no more than 2 days off

Used Panera's foods to get participants to guess carb and fat grams

Curriculum

• Session 5: Blood Glucose Monitoring
  – Blood glucose targets
  – Need to individualize
  – Relationship between BGs and A1c
  – DCs given a meter and check their own glucose
  – Alternative site testing/CGMs

Curriculum

• Session 6: Orals and Injectables
  – Mechanisms of action of different drug classes
  – Game associating medication with target organs
Curriculum

• Session 7: Insulins and Hypoglycemia
  – Onset, peak and duration of all
  – Different insulin concentrations
  – How to teach the insulin pen
  – Hypoglycemia and glucagon
  – Self injection to understand patient anxiety
  – Team activity: arrange insulin by fastest to slowest

Curriculum

Session 8: Insulin pumps / glucose sensors
  - Review hospital policy/documents
  - Time to play with all the pumps; features
detailed by company clinical experts
  - How to calculate doses, ISF, ICR

Curriculum

Session 9: ADA Standards of Care
  - Complication surveillance, prevention, detection
  - Foot Care
Program Outcomes
• To educate and develop a multidisciplinary group of diabetes champions (DCs)
• DC Roles:
  – Direct patient and family diabetes education
  – Staff Education
  – Performance improvement projects around diabetes

Program Outcomes, con’t
• DC Evaluation:
  – Competency assessment for teaching blood glucose monitoring
  – Competency assessment for teaching insulin pen techniques
  – Pre to post test score comparison
    • Passing grade of 85% or greater

Program Analysis
• Program Evaluation: 4.8 on a scale of 5
• All DCs demonstrated competency in teaching blood glucose monitoring and insulin pen use
• DC pre- to post-test scores:
  – Pre-test average of 39.3%; range 21-54%
  – Post-test average of 90.7%; range 75 to 98%
Program Analysis, con’t
• Long-term Goals:
  – ↑ in patient education
  – ↓ in blood glucose values
  – ↓ in transfers to the tertiary care hospital for BG control
  – A full-time CDE position in the psychiatric hospital

Program Analysis:
Unintended Program Outcomes
• Quarterly rotation of hospitalist coverage for medical problems in the psychiatric hospital
• Funding for a part-time CDE position was obtained
• Proposal for a FT CDE; transfer to tertiary care hospital and BG data for Apr-June 2016 included in proposal
• DC monthly Journal Club–first one was held 4-14-16.
• Full time CDE was hired 8 months later and she continues this work

Graduation
• 18 nurses and 1 dietitian completed this program
• They are a multi-ethnic group of champions
  – in NYS 90% of CDEs are Caucasian
• 47% of DCs speak a 2nd language
  – Only 17% of NYS CDEs speak a second language
• DCs pinned as a sign of their success
My Learner Outcomes

• The post test scores and the participant evaluations let me know my teaching was effective.
• Personally, designing a curriculum and evaluation methods was very rewarding.
• My leadership & communication skills were enhanced

My Learner Outcomes, con’t

• DCs comments:
  • “I loved the interactive exercises—these really drove home the teaching”;
  • “I never believed I could test my own blood glucose”;
  • “You made diabetes come alive for me”; 
  • “Wow, I was so, so nervous before I gave a shot, and it didn’t even hurt”.

#AADE
Thank you, thank you, thank you…
• Dr. Patricia Bitar, for your direction, feedback and encouragement,
• Dr. Robin DeWald, for your early direction and approval of my idea,
• Dr. Nataliya Shaforost, for your friendship, and guidance with scaling back my ideas,
• Maira Barnes, MS, RN-BC, CNE for your mentorship, support and understanding of what it means to live with serious mental illness.
• And last but never least…
• Ann Marie Hasse, MSN, RN, CDE for teaching and developing the program with me…

Leadership Role
• Identified the problem and lack of appropriate education and care for this underserved population
• This started a conversation in senior leadership
• The DCP became one piece of a bigger solution
• Inter-professional collaboration was key
  — Letting the division chief know what I was doing and why
  — Communicating to nursing leadership at tertiary care hospital and at psychiatric hospital

Leadership Role, con’t
• This project highlights AADE’s new vision for our profession, PROJECT VISION
• As CDEs, WE are diabetes experts and we need to get ourselves to the table(s) to:
  — advocate for people living with diabetes,
  — to advocate for changes in the way(s) we deliver care
  — Increase our population health efforts
References:


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