Prevention Through Increasing Patient Awareness Around Cardiometabolic Risk and Empowering Individuals to be Engaged in their Care

Moderator - Anne Sumner, MD, FAHA

Kimberly Ketter, MSN, AGNP-C, CDE
Goutham Rao, MD, FAHA
Doris Browne, MD, MPH
Shannon Christen, RD, CDE
The Complex Needs of Persons Living with Cardiometabolic Disease

Kimberly A. Ketter, MSN, AGNP-C, CDE

President/Nurse Practitioner
Case Management Associates, LLC
Diabetes Wellness Center
Goals of This Discussion

- Identify 4 specific challenges that patients with cardiometabolic disease experience

- Discuss reasons why these challenges exist

- Develop a plan to satisfy the needs of these complex patients using the nursing process.

- Discuss unique nursing care/clinic models
Patient Challenges

- Compliance issues: Medication costs (including insulin, glucose testing supplies), addiction, other physical impairment (blindness, memory loss)

- Socio-Economic issues: Low household income, disabilities, inadequate family support, substance abuse, illiteracy, lack of trust in the medical community, lack of resources including mental health services and transportation
Patient Challenges cont...

- Food Deserts: Limited access to fresh fruits and vegetables, unhealthy food selections at “corner stores”

- Poor health literacy and access to health education: Limited Diabetes Self-Management Education (DSME)/Heart health education classes in communities and low referral rates to existing programs.
Definition: “The nursing process is considered the appropriate method to explain the nursing essence, its scientific bases, technologies, and humanist assumptions that encourage critical thinking and creativity and permits solving problems in professional practice.”

<table>
<thead>
<tr>
<th>Area</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessment</td>
<td>Collecting and analyzing data using a holistic approach</td>
</tr>
<tr>
<td>Diagnosis</td>
<td>Answers the question “What is wrong?”</td>
</tr>
<tr>
<td>Plan</td>
<td>Is measurable and goal-oriented. “How do we fix the problem and what is the deadline?</td>
</tr>
<tr>
<td>Implementation</td>
<td>Nursing care is implemented using a step-by-step process. Follow the recipe!</td>
</tr>
<tr>
<td>Evaluate</td>
<td>Were the efforts effective?</td>
</tr>
</tbody>
</table>
Meeting the Need

- Perform a detailed community needs assessment
  - What is available, what is lacking, what is the population’s demographic
- Expand the availability of diabetes/heart health education in the community
  - Utilize places of worship, primary care
- Encourage involvement of community stakeholders
  - Program grants, promote/support local community health resources
- Empower patients to become the CEO of their health care
- Encourage culturally-sensitive community case management entities
  - Encourage innovative, advanced-practice nursing models
  - Resource centers, nurse-operated diabetes education/management clinics, etc.
Case Study

- Patient D.M. 47 y.o. AM
- Type 2DM, HTN, CHO, Obesity
- A1C >16; BMI > 35
- Referred by primary care office for DSME/Management
- Blind r/t sarcoidosis
- Not independent, on insulin, wife giving injections
- Reports depression
- Not checking blood sugars or BP

- A-Blind, dependent, depressed, uncontrolled diabetes
- D- Knowledge deficit r/t diabetes and hypertension diagnosis
- P- Switch from insulin syringe administration to insulin pen, enroll in DSME. Refer to center for the blind/Vision of Hope
- I- Monitor BG logs, BP logs, scheduled for DSME/Heart Health classes
- E-A1C improving, PT and wife report increased independence, improved med compliance and mood. F/U self assessment in 6 months
References


Challenges in Identifying Individuals with Pre-Diabetes and Those At Risk in Adults and Children

Goutham Rao, MD, FAHA

Immediate Past-Chair, Obesity Committee, American Heart Association
Jack H Medalle Professor and Chairman
Department of Family Medicine and Community Health
University Hospitals of Cleveland and Case Western Reserve University
Cleveland, Ohio
Definitions

- **American Diabetes Association**
  - Impaired glucose tolerance: 2-h glucose of 140-200mg/dL
  - Impaired fasting glucose: 100mg/dL-125mg/dL
  - HbA1C%: 5.7% - 6.4%

- **World Health Organization**
  - IFG: 110mg/dL – 125mg/dL
  - IGT: 2-h glucose of 140-200mg/dL
Prevalence

- 37% of American adults (86 million people)
- 50% of Chinese adults (~ 500 million people)
- 16% of American adolescents
Problems

- Heterogeneity
  - IGT ≠ IFG ≠ increased HbA1C

- Diabetes Prevention Program
  - 2.8 year lifestyle intervention resulted in 58% risk reduction in incident diabetes
  - Persistent risk reduction up to 15 years later
  - Highly motivated overweight adults; 150 minutes of exercise per week
  - Most subjects in DPP and similar studies had IGT
  - Success in translation to community settings is highly variable (16-26% based on weight loss).
  - Demonstrates reduction in risk factors though not events or mortality.
Comparison of A1C to Oral Glucose Tolerance Test for the Diagnosis of Prediabetes in Overweight and Obese Youth

- Khokhar et al – Clinical Diabetes July 2017
- A1C alone is a poor discriminator of prediabetes in our study population, with low sensitivity (70%) and specificity (48.8%). BMI z score, A1C, and homeostatic model assessment of insulin resistance are significant predictors of prediabetes and, when taken together, provide better discrimination for prediabetes.
What Are the Risks?

- Type 2 diabetes
  - HR, of IFG (110-125mg/dL) of 4.4 in a 10-year population based study.

- Cardiovascular events
  - FPG of 100-125mg/dL associated with increased risk of cardiovascular event in univariate but not multi-variate analysis in the Multi-Ethnic Study of Atherosclerosis (MESA)
So What to Do?

- Value of conveying risk upon patient behavior
  - E.g. coronary calcium scoring
- Diabetes is under-diagnosed
  (7.2 million among 30.2 million adults with diabetes)
- Continue our current practices
- Consider a better label: “at risk for diabetes”
Challenges and Opportunities in Supporting Undertreated Audiences in Risk Management

Doris Browne, MD, MPH

President
National Medical Association
Diabetes Ethnic/Racial, Sex Prevalence > Age 18 in U.S.
Lifestyle Modification

Self-Management Education: Certified Diabetes Educator who
  • Cares and teaches with enthusiasm
  • Respects and understands patients
  • Understands patient’s culture
  • Uses appropriate technology and media
Advantages of Advanced Diabetes Management Professionals

- Adjust medication
- Treat and monitor acute & chronic complications and other comorbidities
- Adjust psychosocial issues
- Participate in research monitoring
Lifestyle Modification & Pharmaceutical Adherence

- ADA sponsored A1c Champions’ lectures:
  - Better accepted with calorie appropriate meal and prizes

- Health Fairs:
  - Invite stakeholders (patients), families & neighbors
  - Provide freebies: educational literature, gifts & healthy foods
  - Literature accepted to “give to family members” when not accepted for stakeholders
Lifestyle Modification & Pharmaceutical Adherence

- **Prevention:**
  - Publicizing advantages of exercise, caloric restriction, normal BP with culturally appropriate material (via radio, tv, social media sites, movies, etc.)
  - Hyper- and hypoglycemia – destroys brain cells = cognitive dysfunction

- **Protection:**
  - Stakeholders need safe housing, safe travel and food & water free of known harmful products

- **Partnerships:**
  - Government Agencies
  - Providers (include Psychiatrists and Psychologists)
  - Public & Private Corporations
  - Pharmaceutical Companies
  - Community organizations
Effective Strategies to Motivate Lifestyle Changes, Evaluation, and Counseling

Shannon Christen, RD, CDE

University of Colorado Hospital
UCHealth
Motivations for Lifestyle Changes

- Find out the “why”
- Then dangle it – even though that “why” is not your “why” many times
  - Revenge weight loss
  - Competition – between family members, friends, spouses
  - They want something else but need to change or improve something
  - Major Events in life – weddings, births, deaths, reunions
- Most adult learners are not motivated by consequences
Evaluation

- What are the barriers?
  - Food insecurity
  - Change in Routine
  - Cultural beliefs

- What is considered success?
  - Weight in pounds, clothing size, improved labs
  - They traded a poor choice food for a better choice
  - They started tracking their intake with an app or measuring cup

- What is the risk/benefit of this change?
  - Cost – clothes, food, medications
  - Time commitment
  - Body shaping
Counseling

- Share
  - Success, struggles, empathize and cheer them on because CHANGE is HARD

- Create a cut point for corrective action
  - The 2 pound rule

- Need to mitigate expectations
  - Slower approach to weight loss is ok in many cases

- Follow the golden rule
  - Don’t ask your patients to do things you are NOT willing to try yourself
Panel 2 - Breakout Session

Prevention through increasing patient awareness around cardiometabolic risk and empowering individuals to be engaged in their care

- What are the 3 short-term solutions that could have the largest impact?

- What are the 3 long-term solutions that could come out of the summit?