Team-Based Approach to Diabetes Care
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Disclosures

• Presenter disclosures, if any listed here.
Why Choose a Team-based Approach?

High-functioning patient-centered teams may:

- Work more efficiently and effectively to improve health outcomes
- Optimize health system performance resulting in better care, better health, and more cost-effective care
- Improve provider experience by decreasing care burden

A Team-based Approach

“Collaborative, multidisciplinary teams are best suited to provide care for people with chronic conditions such as diabetes and to facilitate patients’ self management.”

• Treatment plans should align with the Chronic Care Model, emphasizing productive interactions between a prepared proactive practice team and an informed activated patient.
• When feasible, care systems should support team-based care, community involvement, patient registries, and decision support tools to meet patient needs.
Recognize:
Consider diabetes risk factors for all of your patients and screen appropriately for diabetes.

Register:
Develop a registry for all of your patients with diabetes.

Resource:
Support self-management through the use of interprofessional teams which could include the primary care provider, diabetes educator, dietitian, nurse, pharmacist and other specialists.

Relay:
Facilitate information sharing between the person with diabetes and the team for coordinated care and timely management changes.

Recall:
Develop a system to remind your patients and caregivers of timely review and reassessment.

Who is on the Diabetes Care Team?

Health care professionals with complementary skills and who share a common goal and approach

* General practitioners
* Diabetes educators.
* Registered nurses
* Advanced practice nurses
* Licensed practice nurses
* Medical office assistants/care coordinators
* School nurses/community health workers
* Others as needed according to patients’ needs, patient load, organizational constraints, resources, clinical setting, geographic location, and professional skills

* Podiatrists
* Dentist
* Social workers.
* Registered dietitian
* Trained peer leaders
* Psychologists
* Endocrinologists
* Nephrologists
* Pharmacists
* Eye doctors

Example of an In-hospital Interdisciplinary Care Model

Interdisciplinary Diabetes Care

**For Non-Pregnant Adults**

**BEDSIDE NURSE**
Assesses patient for education needs

- Goal:
  - Patient verbalizes understanding of Diabetes Survival Skills

  1. Medications
  2. Monitoring

**PHARMACIST**
Resolves medication safety issues

- Goal:
  - Patient with complex medication issues is safe

  1. U-500 insulin
  2. Insulin pumps

**MEDICAL AND SURGICAL PROVIDER**
Provides effective glycemic control

- Goal:
  - Patient has orders for safe and effective diabetes care management
  1. Order sets
  2. Daily monitoring
  3. Discharge Rx and instructions
  4. Follow-up appt with diabetes provider

**RN/SW CASE MANAGER**
Assesses patient for discharge needs

- Goal:
  - Patient is connected to resources for post-acute care

  1. Assure pt has diabetes supplies
  2. Provide patient with Outpatient Diabetes Education resources and contact # (from CM Resource page)
  3. Address and food insecurity issues

**REGISTERED DIETITIAN**
Assesses patient for nutritional needs, including food insecurity

- Goal:
  - Patient verbalizes understanding of nutrition principles for diabetes

  1. All newly diagnosed patients
  2. Referrals from medical providers
  3. Referrals from nurses

**DIABETES EDUCATION COMMUNITY RESOURCES**
Goal:

- Diabetes Self-Management Education resources available for patient
  - Home Health and Telehealth
  - Vidant Wellness Centers
  - VMG Health Coaches
  - Public Health Departments
  - Community Care Plan
  - Independent Entities (ECU, LMH, etc)

**TOOLBOX**
Basics of Diabetes card
TIGR Dashboard-Videos
DM Patient Education Box
*Nutrition Care Manual*
Mosby Patient Education
Micromedex Patient Education

**DIabetes Education Resources in Eastern NC (on CM Resource page)**
VMC Adult Diabetes Discharge Supplies Process
Practical Inpatient Management of Adults with Diabetes and Hyperglycemia

Chronic Care Model (CCM): 6 Core Elements

- Delivery system design (team-based approach)
- Self-management support
- Decision support (evidence-based care)
- Clinical information systems
- Community resources and policies
- Health systems

Effective Team Models of Care May Vary

- **Building multidisciplinary teams**
  - adding new team members such as diabetes educators, registered dietitians, social workers, psychologists, or pharmacists

- **Expanding the professional role of an existing team member within the primary care practice setting**
  - training nurses as health coaches or care coordinators, training medical office assistants to conduct pre-visit screenings

- **Establishing small teams or “teamlets”**
  - led by providers who are supported by one or more health care professionals, such as an advanced practice nurses, registered nurses, licensed practice nurses, medical office assistants, or care coordinators, to improve case management.

- **Coordinating shared care between primary care providers and specialists**
  - podiatrists, eye doctors, dentists, pharmacists, endocrinologists, therapist, psychiatrist

- **Expanding access to team care through non-traditional approaches to health care**
  - telehealth, shared medical appointments, and group education

- **Augmenting clinical care teams by linking to the resources and support of community partners**
  - school nurses, community health workers, trained peer leaders and others

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American Diabetes Association
Think-Pair-Share

• Do you currently work in a team-based environment?
• Who is on your ideal diabetes management team and why?
• Do you have plans to expand your diabetes management team in the next year, and if so, to include what team members?
• Do you currently use technology (e.g., telehealth etc.) to expand your team?
Challenges to Implementing an Interdisciplinary Team Approach

- Traditional hierarchal structure of many institutions may act as a barrier to effective IDT care
- Financial resource constraints to establish an IDT
- Inadequate access to appropriate specialties
- Poor communication within the team and with patients
- Organizational factors, such as individual work schedules, can prevent regular communication among team members

Think-Pair-Share

- What challenges, if any, have you experienced in implementing a team-based approach?
- Do you have any insights on how to overcome any of the challenges on the previous slide?
Populations Where a Team-Based Approach is Specifically Recommended

- **Pregnant women with preexisting diabetes**
  - High-risk obstetrician, endocrinologist, dietitian, nurse, and social worker, as needed
  - Insulin management in pregnancy is complex

- **Youth with type 1 and type 2 diabetes**
  - Diabetes educators, dietitians, psychosocial support

- **Patients with diabetes distress**
  - Diabetes educators and behavioural health management specialists

- **Patients being treated for obesity management**
  - Specialists in metabolic surgery, nutrition therapy, mental health professionals

- **People with diabetes presenting for metabolic surgery also have increased rates of depression and other major psychiatric disorders**

- **Hospitalized patients**
  - Appropriately trained specialists or specialty teams may reduce length of stay, improve glycemic control, and improve outcomes

Shared Medical Appointments (SMAs): A Form of Team-Based Care

A shared medical appointment, or group visit

- Multiple patients are seen as a group for follow-up care or management of chronic conditions

SMA model has been used in

- Adults with chronic medical conditions (including diabetes)
- Women receiving prenatal care
- Patients requiring urgent care visits
- Patients needing routine health care maintenance

http://www.aafp.org/about/policies/all/shared-medical.html
Shared Medical Appointments (SMAs):
Example of Appointment Structure

0 - 5 minutes
- Vitals, downloads
- Orientation to group clinic room

15 - 20 minutes
- Patient alone with provider
- Rotation through separate room

45 - 60 minutes
- Ice breakers
- Patient-driven, facilitator-mediated

20 - 30 minutes
- Individual patient, parent, provider
- Review goals, plan, answer questions

Conclusion
- Vitals, downloads
- Review chart/data

Check-in
- Patient
- Parent
- Provider

Physical Exam
- Normal development
- Adding diabetes
- Parental Guidance

Group Room
- Review chart/data
- Patient plans decided
- Participate in discussion

Parents to parent group

Group Room
- Individual patient, parent, provider
- Review goals, plan, answer questions

Patient plans decided
- Participate in discussion

Parent Group
- Individual patient, parent, provider
- Review goals, plan, answer questions

Parent Group
- Individual patient, parent, provider
- Review goals, plan, answer questions

Patient
- Orient to group clinic room

Parent
- Orient to group clinic room

Provider
- Review chart/data

American Diabetes Association


http://www.aafp.org/about/policies/all/shared-medical.html
Using SMAs in Type 1 Diabetes Adolescent Transition Population

### Parent Survey
- 92% felt more supported
- 92% felt more comfortable asking questions
- 92% better understood information compared to during regular visits.
- 92% would recommend Team Clinic to others
- 92% wanted to attend another Team Clinic.

### Patient Survey
- 96% felt more supported
- 82% felt more comfortable asking questions
- 82% better understood information compared to during regular visits.
- 88% would recommend Team Clinic to others
- 84% wanted to attend another Team Clinic.

75% of providers reported that the quality of care was higher in the SMA compared to traditional clinic appointments.

Using Culturally Tailored SMA
Improved Glycemic Control

Figure 2. Bar graph comparison of the clinical measure of HbA\textsubscript{1c} between the SMA group and usual care group.

SMA HbA\textsubscript{1c}, 9.3
SMA HbA\textsubscript{1c}, 8.1
SMA HbA\textsubscript{1c}, 1.26
Usual Care HbA\textsubscript{1c}, 8.6
Usual Care HbA\textsubscript{1c}, 8.6

Think-Pair-Share

• Do you have any experience with SMAs?
• If you have had experience with a SMA, what were the advantages and disadvantages that you observed?
# EMPOWER-D: Using Technology as a Resource in a Multidisciplinary Team

## Technological interventions included:

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wirelessly uploaded home glucometer readings with graphical feedback</td>
<td>Significantly reduced A1C at 6 months (−1.32% INT vs −0.66% UC; p &lt; 0.001)</td>
</tr>
<tr>
<td>Comprehensive patient-specific diabetes summary status report</td>
<td>Significantly reduced LDL-C at 12 months (−6.1 mg/dl INT vs 0.0 mg/dl UC, p = 0.001)</td>
</tr>
<tr>
<td>Nutrition and exercise logs</td>
<td>Significantly more patients in the INT group improved diabetes control (&gt;0.5% reduction in A1C) than UC</td>
</tr>
<tr>
<td>Insulin record</td>
<td>• at 6 months 70.3 (95% CI 63.6 to 76.9) vs 53.4 (95% CI 46.3 to 60.6); p = 0.002</td>
</tr>
<tr>
<td>Online messaging with the patient’s health team</td>
<td>• At 12 months 69.9 (95% CI 63.2 to 76.5) vs 55.4 (95% CI 48.4 to 62.5); p = 0.006</td>
</tr>
<tr>
<td>Nurse care manager and dietitian providing advice and medication management</td>
<td></td>
</tr>
<tr>
<td>Personalized text and video educational ‘nuggets’ dispensed electronically by the care team</td>
<td></td>
</tr>
</tbody>
</table>

Think-Pair-Share

• What forms of technology do you use in your practice as part of your diabetes care model?
• Is there any form of technology that you intend to implement in your practice in the next 12 months?
REDEEM: Improving Psychosocial Functioning

Interventions

**CASM**
- A 40-min, previously validated, Web-based diabetes self-management improvement program

**CAPS**
- A 60-min in-person intervention that included CASM plus PST (an eight-step process to identify and define DD, establish realistic goals, generate ways to meet these goals, weigh the pros and cons of each, choose and evaluate solutions, create a DD action plan, evaluate outcome, and engage in pleasant activities)

**Leap Ahead**
- A minimal intervention in comparison with the other two conditions, received a 20-min, computer-delivered health risk appraisal (e.g., seat belt and sunscreen use) along with diabetes information regarding healthy living, diet, and physical activity preceding each of the eight calls

Effect on psychosocial functioning

- Collaborative care interventions and a team approach demonstrated efficacy in significant and clinically meaningful reductions across intervention groups in
  - Diabetes Distress Scale (DDS),
  - Emotional Burden (EB)
  - Regimen Distress (RD) DDS subscales

- Diabetes Distress-specific interventions (CAPS) may be necessary for patients with initially high levels of Regimen Distress

Change the Care System

- Successful practices prioritize a high quality of care. Changes to increase quality of care include:
  - Basing care on evidence-based guidelines
  - Expanding the role of teams to implement more intensive disease management strategies
  - Redesigning the care process
  - Implementing electronic health record tools
  - Empowering and educating patients

Elements of PCMH That Support Better Diabetes Care and Outcomes

PCMH Component Deemed Essential (Evidence-based)

- Diabetes Self-Management Education
- **Team-Based Care**
- Care Coordination & Case Management
- Specialty Care Team Members
- Pharmacists Services
- Behavioral Health
- Electronic Health Records

### Key PCMH Components in Highlighted PCMH Demonstration Projects

<table>
<thead>
<tr>
<th>Demonstration</th>
<th>Results</th>
<th>Key PCMH Components</th>
</tr>
</thead>
</table>
| Geisinger Health System (Pennsylvania) | - 18% reduction in inpatient stays and 36% reduction in readmissions  
- Reduced ESRD                    | - Advanced EHR with patient and physician tracking and communication  
- Personal Health Navigator: care coordination and follow-up  
- Evidence-based care plans with  
- Nurse Care Coordinator services |                                                                                  |
| HealthPartners (Minnesota)          | - Cost savings and reduced hospitalizations and ER visits  
- Improved diabetes and cardiovascular measures  
- Improved patient satisfaction | - Enhanced communication mechanisms between providers and patients  
- Electronic registry management  
- Family-centered care plans  
- Care coordination           |                                                                                  |
### Key PCMH Components in Highlighted PCMH Demonstration Projects (Cont’d)

<table>
<thead>
<tr>
<th>Demonstration</th>
<th>Results</th>
<th>Key PCMH Components</th>
</tr>
</thead>
</table>
| Pennsylvania Chronic Care Initiative (Southern Pennsylvania) | • Improvement in diabetes and cardiovascular risk factors  
• Increased preventive measures and appointments including screening, self-management, eye and foot exams, vaccination rates, smoking cessation, and preventive medication use | • Care managers and practice coaches for coordination  
• Quality reporting  
• Electronic registry management  
• Team-based structure with strong leadership and staff learning collaborative |
| Group Health Cooperative (Seattle, WA)             | • Improved quality measures  
• Reduction in hospitalizations and ER visits  
• Cost-savings  
• Improved patient and provider satisfaction | • Team model with higher proportions of non-physician staff  
• Longer appointment times  
• Online patient portals  
• Enhanced communication and follow-up  
• Increased patient access to physicians |
## QI Strategies for Lowering A1C (Meta-Analysis*)

<table>
<thead>
<tr>
<th>Rank</th>
<th>Intervention</th>
<th>Number of trials</th>
<th>Mean difference in HbA1c (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Promotion of self-management</td>
<td>60</td>
<td>−0.57 (−0.83 to −0.31)</td>
</tr>
<tr>
<td>2</td>
<td>Team changes</td>
<td>47</td>
<td>−0.57 (−0.71 to −0.42)</td>
</tr>
<tr>
<td>3</td>
<td>Case management</td>
<td>57</td>
<td>−0.50 (−0.65 to −0.36)</td>
</tr>
<tr>
<td>4</td>
<td>Patient education</td>
<td>52</td>
<td>−0.48 (−0.61 to −0.34)</td>
</tr>
<tr>
<td>5</td>
<td>Facilitated relay of clinical data</td>
<td>32</td>
<td>−0.46 (−0.60 to −0.33)</td>
</tr>
<tr>
<td>6</td>
<td>Electronic patient registry</td>
<td>27</td>
<td>−0.42 (−0.61 to −0.24)</td>
</tr>
<tr>
<td>7</td>
<td>Patient reminders</td>
<td>21</td>
<td>−0.39 (−0.65 to −0.12)</td>
</tr>
<tr>
<td>8</td>
<td>Audit and feedback</td>
<td>8</td>
<td>−0.26 (−0.44 to −0.08)</td>
</tr>
<tr>
<td>9</td>
<td>Clinician education</td>
<td>15</td>
<td>−0.19 (−0.35 to −0.03)</td>
</tr>
<tr>
<td>10</td>
<td>Clinician reminders</td>
<td>18</td>
<td>−0.16 (−0.31 to −0.02)</td>
</tr>
<tr>
<td><strong>All</strong></td>
<td></td>
<td><strong>120</strong></td>
<td><strong>−0.37 (−0.45 to −0.28)</strong></td>
</tr>
</tbody>
</table>

*Effects were greater with baseline HbA1c>8.0% and less in HbA1c≤8.0%*

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Quality Improvement Strategies Resulted in Statistically Significant Improvements Compared to Usual Care

Systematic review and meta-analysis found statistically significant improvements in:

- Glycated hemoglobin (mean difference 0.37%, 95% CI 0.28 to 0.45; 120 trials)
- Low-density lipoprotein cholesterol (0.10mmol/L, 95% CI 0.05 to 0.14; 47 trials)
- Systolic blood pressure (3.13mmHg, 95% CI 2.19 to 4.06, 65 trials)
- Diastolic blood pressure (1.5mmHg, 95% CI 0.95 to 2.15; 61 trials)
- Likelihood of patients receiving aspirin and anti-hypertensive drugs
- Rate of screening for
  - Retinopathy
  - Renal function
  - Foot abnormalities

Interdisciplinary Diabetes Care Team (IDCT) Facilitates Better Patient Outcomes

After 18 months of intervention the use of the IDCT was significantly associated with improvements in:

- HbA1c ($p = 0.00001$)
- LDL-cholesterol ($p = 0.00039$)
- Increase the use of statins ($p = 0.04308; \text{OR: 1.902}$)
- Increase the use of anti-platelet therapy ($p = 0.00544; \text{OR: 2.213}$)
- Number of targets reached ($p = 0.005$)

Proportions of patients reaching therapeutic targets in users and non-users of the IDCT.

![Bar chart showing proportions of patients reaching targets](chart.png)

T0: baseline value, T1: value after 18 months of intervention
N = total number of included patients in the different subgroups. IDCT+ = group of patients who have consulted the IDCT and who presented with values of all three primary outcome parameters. IDCT- = group of patients who have not consulted the IDCT and who presented with values of all three primary outcome parameters.

Team Changes and Case Management the Most Effective Quality Improvement Modifications

• Reductions in A1C values of at least 0.50%:
  - Team changes (0.67%; 95% CI, 0.43%-0.91%; n = 26 trials)
  - Case management (0.52%; 95% CI, 0.31%-0.73%; n = 26 trials)

• Interventions involving team changes reduced A1C by 0.33% more (95% CI, 0.12%-0.54%; P = .004) than those without this strategy

• Interventions involving case management reduced A1C by 0.22% more (95% CI, 0.00%-0.44%; P = .04) than those without case management.

• Interventions in which nurse or pharmacist case managers could make medication adjustments without awaiting physician authorization reduced values by 0.80% (95% CI, 0.51%-1.10%), vs only 0.32% (95% CI, 0.14%-0.49%) for all other interventions (P = .002)

Shojania KG et al. JAMA 2006;296:427e40.
In the random-effects model, the pooled standardized mean difference in levels between the intervention and control groups was −0.38 (95% CI −0.47 to −0.29; p < 0.001), favouring disease management over usual care.
Effect of a Multidisciplinary-Risk-Assessment-and-Management-Programme (RAMP-DM) on Patient-Assessed Parameters

Participation in RAMP-DM was effective in improving physical component of HRQOL, Global Rating Scale and patient enablement among diabetes mellitus patients with suboptimal HbA1c, but not in those with optimal HbA1c.

RAMP-DM participation (compared to non-RAMP-DM participation) was associated with

- Greater improvement in SF-12v2 physical component summary score at 12-months (coefficient: 3.80; P-value < 0.05) and 24-months (coefficient: 3.82; P-value < 0.05)
- Patients being more likely to feel more enabled at 12-months (odds ratio: 2.57; P-value < 0.05)
- Improved GRS at 24-month (odds ratio: 4.05; P-value < 0.05)

### RAMP-DM Reduced Diabetic Microvascular Complications

<table>
<thead>
<tr>
<th>Microvascular Complications</th>
<th>ESRD</th>
</tr>
</thead>
<tbody>
<tr>
<td>adjusted hazard ratio [HR]: 0.73; 95% CI: 0.66-0.81; P &lt; 0.001</td>
<td>adjusted HR 0.40 (95% CI: 0.24-0.69; P &lt; 0.001)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>STDR or Blindness</th>
<th>Lower-limb Ulcers or Amputation</th>
</tr>
</thead>
<tbody>
<tr>
<td>adjusted HR 0.55 (95% CI: 0.39-0.78; P = 0.001)</td>
<td>adjusted HR 0.49 (95% CI: 0.30-0.80; P = 0.005)</td>
</tr>
</tbody>
</table>
Team-Based Approach Reduces Lower Limb Amputations

Team-Based Approach Reduces Lower Limb Amputations

Team-Based Approach Reduces Lower Limb Amputations: Amputations in DFU Wagner Grade 3-5

Team-Based Diabetes Care Improves HQoL

Overall, 68% of patients experienced improvements in HbA1c.

Think-Pair-Share

• Following this presentation, are there any changes that you would make to your practice?
Case Study: Mr. J

- Mr J is a 70-year-old retired school administrator with a 6-year history of type 2 diabetes
- He had symptoms indicating hyperglycemia for 2 years before diagnosis
- He had fasting blood glucose records indicating values of 116–124 mg/dl, which were described to him as indicative of “borderline diabetes.”
Case Study: Mr. J

• At the time of initial diagnosis, he was advised to lose weight (“at least 15 lb.”), but did not receive further education or consultation with a dietitian

• Referred by his new family physician to the diabetes specialty clinic, Mr. J. presents with recent weight gain, suboptimal diabetes control, and foot pain in his initial visit with the nurse practitioner (NP)
Case Study: Mr. J (Cont’d)

- He says that he has been trying to lose weight and has increased his exercise in the past 3 months by walking 3 times/week, however his wife indicates otherwise.
- He was initiated on glyburide (Diabeta), 2.5 mg every morning, but admits to stopping the medication without consulting his dr due to dizziness, often accompanied by sweating and a feeling of mild agitation, in the late afternoon.
Case Study: Mr. J (Cont’d)

- Other medications: atorvastatin (Lipitor), 10 mg daily, for hypercholesterolemia
- He does not test his blood glucose levels at home despite access to a blood glucose meter and his wife’s encouragement to do use it regularly
Case Study: Mr. J (Cont’d)

• A physical examination reveals the following:
  – Weight: 207 lb; height: 5’8”; body mass index (BMI): 32.0 kg/m²
  – Fasting capillary glucose: 176 mg/dl
  – Blood pressure: lying, right arm 160/94 mmHg; sitting, right arm 148/95 mmHg
  – Pulse: 89 bpm; respirations 22 per minute
  – Eyes: corrective lenses, pupils equal and reactive to light and accommodation, Fundi-clear, no arteriolovenous nicking, no retinopathy

Continued…
Case Study: Mr. J (Cont’d)

– Thyroid: nonpalpable
– Lungs: clear to auscultation
– Heart: Rate and rhythm regular,
– Vascular assessment: no carotid bruits; femoral, popliteal, and dorsalis pedis pulses 2+ bilaterally
– Neurological assessment: diminished vibratory sense to the forefoot, absent ankle reflexes, monofilament (5.07 Semmes-Weinstein) felt only above the ankle

Continued...
Results of laboratory tests (7 days before visit) are as follows:

- Glucose (fasting): 181 mg/dl (normal range: 65–109 mg/dl)
- Creatinine: 1.0 mg/dl (normal range: 0.5–1.4 mg/dl)
- Blood urea nitrogen: 17 mg/dl (normal range: 7–30 mg/dl)
- Sodium: 148 mg/dl (normal range: 135–146 mg/dl)
- Potassium: 5.1 mg/dl (normal range: 3.5–5.3 mg/dl)
Lipid panel

- Total cholesterol: 157 mg/dl (normal: <200 mg/dl)
- HDL cholesterol: 48 mg/dl (normal: ≥40 mg/dl)
- LDL cholesterol (calculated): 87 mg/dl (normal: <100 mg/dl)
- Triglycerides: 168 mg/dl (normal: <150 mg/dl)
- Cholesterol-to-HDL ratio: 3.2 (normal: <5.0)

AST: 21 IU/l (normal: 0–40 IU/l)

ALT: 23 IU/l (normal: 5–40 IU/l)

Alkaline phosphotase: 68 IU/l (normal: 35–125 IU/l)

A1C: 8.5% (normal: 4–6%)

Urine microalbumin: 48mg (normal: <30 mg)
Think-Pair-Share

• What is your assessment of Mr. J?
Case Study: Mr. J

- **Assessment**
  - Based on Mr. J.'s medical history, records, physical exam, and lab results, he is assessed as follows:
  - Uncontrolled type 2 diabetes (A1C >7%)
  - Obesity (BMI 32 kg/m²)
  - Hyperlipidemia (controlled with atorvastatin)
  - Peripheral neuropathy (distal and symmetrical by exam)
  - Hypertension (by previous chart data and exam)
  - Elevated urine microalbumin level
  - Self-care management/lifestyle deficits
    - Limited exercise
    - High carbohydrate intake
  - No SMBG program
  - Poor understanding of diabetes
Think-Pair-Share

• Assuming that you are part of a multidisciplinary team, what would your next step be in the treatment of Mr. J?
# Case Study: Mr. J

<table>
<thead>
<tr>
<th>Next steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select the most pressing health care issues with the patient and prioritize his medical care to address them.</td>
</tr>
<tr>
<td>Mr. J said weight loss was main reason for visit. He agreed that his elevated glucose levels and hypertension also needed to be addressed. His provider said weight loss would also help manage his hypertension.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Contact with a dietitian</th>
</tr>
</thead>
<tbody>
<tr>
<td>The NP called the registered dietitian (RD) and referred the patient for a medical nutrition therapy assessment with a focus on weight loss and improved diabetes control.</td>
</tr>
<tr>
<td>Mr. J.’s appointment was scheduled for the following week. The RD requested that Mr. J keep a food journal recording his food intake at meals and snacks as well as estimate portion sizes.</td>
</tr>
</tbody>
</table>
Think-Pair-Share

• Assuming that you are part of a multidisciplinary team, what would your next step be in the treatment of Mr. J?
### Increase activity level

The NP discussed Mr. J’s current exercise regimen with him and his wife. Mr. J realized that his exercise was sporadic, with poor weather a reason for not exercising. Mrs. J suggested they walk together 4 times/week, moving their walk to a nearby mall in bad weather. She also suggested finding a weekly bowling league, an activity they had enjoyed previously.

### Improve glucose control without contributing to weight gain

| When glyburide was previously prescribed, the patient exhibited signs and symptoms of hypoglycemia (unconfirmed by SMBG). | Metformin, which reduces hepatic glucose production and improves insulin resistance, is not associated with hypoglycemia and can reduce A1C by 1%. Although GI side effects can occur, they are usually self-limiting and can be reduced by slow titration to dose efficacy | The NP also discussed with Mr. J a titration schedule that increased the dosage to 1,000 mg twice a day over a 4-week period. She wrote out this plan, including an appointment for phone contact and medication evaluation. |
Think-Pair-Share

• Assuming that you are part of a multidisciplinary team, what would your next step be in the treatment of Mr. J?
Case Study: Mr. J

Improve Mr. and Mrs. J’s Diabetes Knowledge

As the NP discusses his situation with Mr. and Mrs. J, it becomes apparent that they have some major gaps in their understanding of diabetes. Mrs. J comments that she is surprised that his blood glucose is high as “they never have dessert.” The NP reviews several diabetes education programs offered by her institution, including an online program and a group class.

The NP shows Mr. and Mrs. J how to use a glucose meter that features a simple two-step procedure. Mr. J agreed to use the meter twice a day, at breakfast and dinner.

The NP discusses the importance of foot care with Mr. and Mrs. J and demonstrates to Mr. J his inability to feel the light touch of the monofilament. She explained that the loss of protective sensation from peripheral neuropathy means that he will need to be more vigilant in checking his feet for any skin lesions caused by poorly fitting footwear.

Continued...
Case Study: Mr. J (Cont’d)

Enroll Mr. and Mrs. J in a diabetes education program

This diabetes specialty clinic has a group education program directed at seniors. Given that Mr. J is not very technologically savvy, he elects to enroll in the senior’s education program with the encouragement of his wife. Mrs. J is enthusiastic about the prospect of meeting new people; Mr. J is less enthusiastic.

Follow up

The NP assures Mr. J that she will share the care plan they had developed with his PCP, collaborating with him and discussing the findings of any diagnostic tests and procedures. She explains that she will also work with the RD to reinforce medical nutrition therapies and improve his glucose control. She accompanies Mr. J to the administration desk to ensure that he books a follow-up appointment.
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Background Slides

Slides for possible inclusion
Explaining the Team-Based Approach to Your Patients
Practice Transformation for Physicians and Health Care Teams

• Offers tools and materials for health care professionals and administrators undergoing practice redesign associated with health care reform.

• Details methods of team-based care that have been shown to improve quality, increase patient satisfaction, and reduce cost.

• Provides tools to develop a collaborative team approach that promotes communication, diminishes cultural barriers, and supports a common understanding of a patient’s needs.
Visit Practice Transformation for Physicians and Health Care Teams at:
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Helpful Resources
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• Abridged version for PCPs
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Thank You!