Diabetes Self-Management Education and Support (DMSE/S) has long been accepted as a foundation of diabetes care. Recently published systematic reviews clearly reinforce that DMSE is effective in improving glycemic control in a cost effective manner.

Despite the evidence and support of leader organizations in recognizing the importance of DMSE/S as necessary for optimum management of diabetes, there is still a gap in the knowledge by those with diabetes and providers on what DMSE is, how and when to access it and the expectations for those who participate in the process.

A position statement supported by ADA, AADE, and AND lay out clear guidelines for when, what and how DSME/S should be provided for adults with type 2 diabetes to maximize outcomes. Clinicians and patients should be aware that many payers including Medicare provide financial coverage for diabetes education and support. Although there are some barriers to reimbursement, primary care providers need to be aware of the DSME/S roadmap and make the required referrals for DSME/S.

There is inconsistency in utilization to DSME/S with some patients being referred at diagnosis and others only when their HbA1c is out of target or there are complications or not at all. To address this inconsistent care and delayed self-management education, an Algorithm of Care includes examples of when a referral is needed at each of four critical times and what are the areas of focus for diabetes education. Examples in the algorithm provide guidance to primary care providers and specialists in understanding when to refer and to educators to explore whether they are seeing patients at critical times.

References:

Maximizing Diabetes Education to Improve Quality Outcomes

Presenter
Joan Bardsley MBA, RN, CDE, FAADE

American Diabetes Association

DSME/S Position Statement
Background, Purpose, Evidence

Collaboration

Writing Team
・ Margaret A. Powers (Chair)
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・ Paulina Duker
・ Martha M. Funnell
・ Amy Hess Fischl
・ Melinda Maryniak
・ Linda Siminerio
・ Eva Vivian

Haas L and Maryniuk MD et al. National Standards for DSME/S Diabetes Care; 2012

Definitions

Diabetes Self-management Education (DSME)
Ongoing process of facilitating the knowledge, skill, and ability necessary for diabetes self-care

Diabetes Self-management Support (DSMS)
Activities that assist in implementing and sustaining the behaviors needed to manage diabetes

Powers MA et al. DSME/S Position Statement 2015
Diabetes Care, The Diabetes Educator, Journal of Academy of Nutrition and Dietetics

Purpose of Position Statement

・ Address triple aim - improve patient experience of care and education, improve health of individuals and populations, reduce diabetes-associated per capita health care costs

・ Provide health care teams with information required to better understand the educational process and expectations for DSME and DSMS and their integration into routine care

・ Create a diabetes education algorithm that defines when, what, and how DSMS/S should be provided for adults with type 2 diabetes

Powers MA et al. DSME/S Position Statement 2015
Diabetes Care, The Diabetes Educator, Journal of Academy of Nutrition and Dietetics

The 2015 DSME/S position statement presents 4 critical time to provide DSME/S. Without looking at the statement can you list the 4 critical times?

Where you work, when someone is diagnosed with type 2 diabetes are they automatically referred to diabetes education?
What is true regarding DSME / S?
1. A1c can be reduced by as much as .88%.
2. Benefits of education increase over time
3. Individual sessions are more effective than groups or combination of individual and group sessions
4. 10 hours or less of DMSE is more effective than greater than 10 hours in achieving maximum outcomes

Benefits Associated with DSME/S
- Improved health outcomes
  - Reduced A1c by as much as .88%
  - Reduced onset and/or advancement of complications
  - Reduced hospital admissions and readmissions
- More healthful eating patterns and regular activity
- Enhanced self-efficacy and empowerment
  - Increased healthy coping
  - Improved quality of life

NOTE: 1) Benefits of education decrease over time, 2) sustained improvement requires time and follow-up, and 3) effectiveness directly correlated to amount of time spent with educator

Evidence Confirmed
AADE: Systematic Review of the Impact of Diabetes Self-Management Education on Glycemic Control in Adults with Type 2 Diabetes

<table>
<thead>
<tr>
<th>PICOS component</th>
<th>Study question</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>Patient population or problem</td>
</tr>
<tr>
<td>I</td>
<td>Intervention</td>
</tr>
<tr>
<td>C</td>
<td>Comparison group</td>
</tr>
<tr>
<td>O</td>
<td>Outcomes</td>
</tr>
<tr>
<td>S</td>
<td>Setting</td>
</tr>
</tbody>
</table>

Participants

<table>
<thead>
<tr>
<th>Patients</th>
<th>Intervention Group (SD)</th>
<th>Usual Care Controls (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean Age</td>
<td>58.5 (5.2)</td>
<td>58.7 (5.35)</td>
</tr>
<tr>
<td>Mean Baseline A1C</td>
<td>8.55 (1.11)</td>
<td>8.48 (1.08)</td>
</tr>
<tr>
<td>Number Enrolled</td>
<td>11,854</td>
<td>11,093</td>
</tr>
<tr>
<td>Number at Follow-up A1C</td>
<td>11,584</td>
<td>10,466</td>
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</table>

Change in A1C: Single versus Team DSME

<table>
<thead>
<tr>
<th>Provider</th>
<th>Number of interventions</th>
<th>Intervention (SD)</th>
<th>Control (SD)</th>
<th>Absolute Difference in A1C with DSME added</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single</td>
<td>69</td>
<td>-0.74 (0.63)</td>
<td>-0.17 (0.49)</td>
<td>0.57</td>
</tr>
<tr>
<td>Team</td>
<td>46</td>
<td>-0.74 (0.64)</td>
<td>-0.18 (0.54)</td>
<td>0.56</td>
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</tbody>
</table>
Change in A1C by Mode of DSME Delivery

<table>
<thead>
<tr>
<th>Mode</th>
<th>Number of interventions</th>
<th>Intervention (SD)</th>
<th>Control (SD)</th>
<th>Absolute difference in A1C with DSME added</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Models Together</td>
<td>118</td>
<td>-0.74(0.63)</td>
<td>-0.17(0.5)</td>
<td>0.57</td>
</tr>
<tr>
<td>Combination</td>
<td>22</td>
<td>-1.0(0.6)</td>
<td>-0.22(0.62)</td>
<td>0.88</td>
</tr>
<tr>
<td>Group</td>
<td>33</td>
<td>-0.62(0.46)</td>
<td>-0.10(0.42)</td>
<td>0.52</td>
</tr>
<tr>
<td>Individual</td>
<td>47</td>
<td>-0.78(0.63)</td>
<td>-0.28(0.46)</td>
<td>0.50</td>
</tr>
<tr>
<td>Remote</td>
<td>12</td>
<td>-0.50(0.67)</td>
<td>-0.17(0.46)</td>
<td>0.33</td>
</tr>
</tbody>
</table>

Change in A1C: Single versus Team DSME

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</tr>
</tbody>
</table>

Change in A1C Based on DMSE Contact Time

<table>
<thead>
<tr>
<th>Time</th>
<th>Number of interventions</th>
<th>Intervention (SD)</th>
<th>Control (SD)</th>
<th>Absolute Difference in A1C with DSME added</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;10 hours</td>
<td>55</td>
<td>-0.71(0.55)</td>
<td>-0.25(0.47)</td>
<td>0.46</td>
</tr>
<tr>
<td>&gt;10 hours</td>
<td>36</td>
<td>-0.84(0.65)</td>
<td>-0.15(0.55)</td>
<td>0.69</td>
</tr>
</tbody>
</table>

Barriers to DSME/S

- Time
- Location
- Referral
- Diversity
- Value confusion
- Clear expectations
- Cost, reimbursement

Sorry State of DSME/S

- 6.8% of individuals with newly diagnosed T2D with private health insurance received DSME/S within 12 months of diagnosis
- 4% of Medicare participants received DSME/S and/or MNT
Barriers to DSME/S

- Time
- Location
- Referral
- Diversity
- Value confusion
- Clear expectations
- Cost, reimbursement

**DSME/S Algorithm of Care**

4 Critical Times for DSME/S

1. At diagnosis
2. Annually
3. When complicating factors occur
4. When transitions in care occur

1. At Diagnosis

- All individuals with type 2
- Include emotional health and nutrition
2. Annually
Annual assessment of education, nutrition and emotional health needs
- Change in medication
- HbA1c out of range
- Maintain positive health outcomes
- Planning pregnancy
- Support
- Weight issues
- New life situations

3. Complicating factors
When new complicating factors influence self management
- Health conditions
- Physical conditions
- Emotional factors
- Basic living needs

4. Transitions
When transition in care occur
- Living situations
- Medical care team
- Insurance coverage
- Ages related change

Areas of Focus: Patient-centered Assessment
Sample questions to guide a patient-centered assessment
1. How is diabetes affecting your daily life and that of your family?
2. What questions do you have?
3. What is the hardest part right now about your diabetes, causing you the most concern or most worrisome to you about you diabetes?
4. How can we best help you?
5. What is one thing you are doing or can do to better manage your diabetes?

DSME/S Algorithm of Care: Action Steps
Areas of Focus and Action Steps

At Diagnosis

Primary care provider / endocrinologist / clinical care team

- Answer questions and provide emotional support regarding diagnosis
- Provide overview of treatment and treatment goals
- Teach survival skills to address immediate requirements (safe use of medication, hypoglycemia treatment if needed, introduce eating guidelines)
- Identify and discuss resources for education and ongoing support
- Make referral for DSME/S and MNT

Areas of Focus and Action Steps

Diabetes education

Assess cultural influences, health beliefs, current knowledge, physical limitations, family support, financial status, medical history, literacy, numeracy to determine which content to provide and how regarding:
- Medications
- Monitoring blood glucose
- Physical activity
- Acute and chronic complications
- Psychosocial issues and concerns
- Health and behavior change

Areas of Focus and Action Steps

Annually

Annual assessment of education, nutrition, and emotional needs

Primary care provider / endocrinologist / clinical care team

- Assess all areas of self-management
- Review problem-solving skills
- Identify strengths and challenges of living with diabetes

Areas of Focus and Action Steps

Annually

Annual assessment of education, nutrition, and emotional needs

Diabetes education

- Review and reinforce treatment goals and self-management needs
- Emphasize preventing complications and promoting quality of life
- Discuss how to adapt diabetes treatment and self-management to new life situations and competing demands
- Support efforts to sustain initial behavior changes and cope with the ongoing burden of diabetes

Areas of Focus and Action Steps

Complicating Factors

When new complicating factors influence self-management

Primary care provider / endocrinologist / clinical care team

- Identify presence of factors that affect diabetes self-management and attain treatment and behavioral goals
- Discuss effect of complications and successes with treatment and self-management

Areas of Focus and Action Steps

Complicating Factors

When new complicating factors influence self-management

Diabetes education

- Provide support for the provision of self-care skills in an effort to delay progression of the disease and prevent new complications
- Provide/refer for emotional support for diabetes-related distress and depression
- Develop and support personal strategies for behavior change and healthy coping
- Develop personal strategies to adapt to sensory or physical limitation(s), adapting to new self-management demands, and promote health and behavior change
Areas of Focus and Action Steps

**Transitions**

When transitions in care occur

- Primary care provider / endocrinologist / clinical care team
  - Develop diabetes transition plan
  - Communicate transition plan to new health care team members
  - Establish DSME/S regular follow-up care

**Diabetes Education**

- Provide support for independent self-management skills and self-efficacy
- Identify level of significant other involvement and facilitate education and support
- Assist with facing challenges affecting usual level of activity, ability to function, health beliefs, and feelings of well-being
- Maximize quality of life and emotional support for the patient and family member
- Provide education for others now involved in care
- Identify needed adoption in diabetes self-management
- Establish communication and follow-up plans with the provider, family, and others

---

**Areas of Focus and Action Steps**

**Transitions** - When transitions in care occur

**DSME/S Algorithm of Care: Guiding Principles**

1. **Engagement** Provide DSME/S and care that reflects person’s life, preferences, priorities, culture, experiences, and capacity
2. **Information sharing** Determine what the patient needs to make decisions about daily self-management
3. **Psychosocial and behavioral support** Address the psychosocial and behavioral aspects of diabetes
4. **Integration with other therapies** Engage integration and referrals with and for other therapies
5. **Coordination of care** Ensure collaborative care and coordination with treatment goals of DSME/S is provided across specialty care, facility-based care, and community organizations

---

**DSME/S Algorithm of Care: Implementation**

<table>
<thead>
<tr>
<th>Providers / Clinicians</th>
<th>Programs</th>
<th>Individuals</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCPs</td>
<td>DSME program</td>
<td>Persons with diabetes</td>
</tr>
<tr>
<td>Endocs</td>
<td>ERB and DEAP programs</td>
<td>Educators</td>
</tr>
<tr>
<td>Hospitalists</td>
<td>Health system</td>
<td>Members of NCDBE</td>
</tr>
<tr>
<td>Professional organizations</td>
<td>Medical Homes</td>
<td>Bloggers</td>
</tr>
<tr>
<td>Student training programs</td>
<td>State health programs / health departments</td>
<td>Industry reps</td>
</tr>
</tbody>
</table>
DSME/S Algorithm of Care

References/Resources
- Bardsley J and Sheer D. AAD, Systematic Review. Presentation. August 2015

THANK YOU

Questions?