Type 2 Diabetes: Four Critical Times to Refer, Assess and Adjust Care
Faculty

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Learning Needs Code 1 5190, Code 2 5000, Code 3 5460
Maggie Powers

Board Member/Advisory Panel
• Board Member: American Diabetes Association
• Advisory Panel: Eli Lilly Diabetes Education

Employee
• International Diabetes Center at Park Nicollet
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Employee

- Joslin Diabetes Center
Learning Outcomes

• Review evidence and recommendations related to DSMES
• Identify the 4 critical times for referral for diabetes education
• Differentiate between National Standards of DSMES and the Joint Statement / Algorithm for DSMES referral
• Discuss implications for practice and key resources for RDNs
Polling Question

Where you work, when someone is diagnosed with type 2 diabetes are they automatically referred to diabetes education?

a) Yes
b) No
Polling Question

Where you work, when a referral for diabetes education is made, who typically sees the patient with type 2 diabetes?

a) Only nurse  
b) Only dietitian  
c) Usually nurse and dietitian  
d) Other
Polling Question

Do you know the difference between the national Standards of DSMES and the Joint Statement Position Statement on DSMES?

a) Yes – I’m confident
b) I think so
c) I know about one of the papers – but not both
d) This is all pretty new to me
Polling Question

According to a recent position statement, what are the critical times to refer for diabetes education?

a) At diagnosis and once a year after that

b) After diagnosis at: 6 months, 12 months, 5 years and 10 years

c) At diagnosis, Annually for an assessment, when complications arise, when transitions occur

d) When A1C is above 7.5, when there are unexplained highs or lows, when planning for pregnancy and when requested by the patient
National Standards for Self-Management Support

Linda Haas, PhD, RN, CDE (Chair) 1
Melinda Marynik, Med, RD, CDE (Chair) 2
Juni Beck, PharmD, CDE, BC-ADM 3
Carla E. Cox, PhD, RD, CDE, CSSD 4
Paulina Duker, MPH, RN, BC-ADM, CDE 5
Laura Edwards, RN, MPA 6
Edwin B. Fisher, PhD 7
Lodesta Hanson, MD, CDE, FACE, FACP 8
Daniel Kent, PharmD, BS, CDPh 9
Leslie Koler, RN, BSN, MBA 10

Diabetes Self-Management Education and Support for Adults with Type 2 Diabetes: A Guide to Care

ADA Standards of Medical Care in Diabetes recommends all patients be assessed and referred for:

NUTRITION: A registered dietician for medical nutrition therapy
EDUCATION: Diabetes self-management education and support
EMOTIONAL HEALTH: A mental health professional, if needed

Four critical times to assess, provide, and adjust diabetes self-management education and support

1. At diagnosis
2. Annual assessment of education, nutrition, and emotional needs
3. When new comprehensive factors influence self-management
4. When transitions in care occur

When primary care provider or specialist should consider referral:
- Newly diagnosed: All newly diagnosed individuals with type 2 diabetes should receive GUM 2
- Nutritional, emotional: Addressed with linked point education
- Change in medication, activity, or insulin:
- NPH, insulin: Minimum preponderance of hypoglycemia
- Planning pregnancy or pregnant:
- For support to access to insulin (exchange transfusion)
- Reduced doses of oral antihypertensive drugs
- Reduced doses of oral antihypertensive drugs
- Reduced doses of oral antihypertensive drugs

Change in:
- Life situation and competing demands
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A Snapshot of Diabetes in the United States

29.1 Million
29.1 million people have diabetes.
That's about 1 out of every 11 people.
1 out of 4 do not know they have diabetes.

What Can You Do?

You can prevent or delay type 2 diabetes:
- Lose weight
- Eat healthy
- Be more active

You can manage diabetes:
- Work with a health professional
- Eat healthy
- Stay active

Learn more at www.cdc.gov/diabetes/prevention or speak to your doctor.

86 Million
86 million American adults—more than 1 out of 3—have prediabetes.
1 out of 3
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

**Medical Nutrition Therapy (MNT)** Application of nutrition care process; includes individualized nutrition assessment, nutrition diagnosis, intervention and monitoring and evaluation; if not included in DSME program, refer to registered dietitian

* CMS/Medicare uses DSMT – Diabetes Self-Management Training

The Good News!

...and the not-so-good news...
Diabetes Education is Effective

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

Review article

Diabetes self-management education for adults with type 2 diabetes mellitus: A systematic review of the effect on glycemic control

Carole A. Chrvala\(^a\), Dawn Sherr\(^b\),*, Ruth D. Lipman\(^b\)

\(^a\) Health Matters, Inc., Chapel Hill, NC, USA
\(^b\) American Association of Diabetes Educators, 200 W. Madison Street, Chicago, IL 60606, USA

Chrvala et al. Pt Ed & Counselling 2016;99:926-943
More people are meeting target goals!
(However, improvements are still needed!)

Figure 1—Prevalence of meeting ABC goals among adults aged ≥20 years with diagnosed diabetes, NHANES 1988–2010. Estimates are age and sex standardized to the 2007–2010 diabetic NHANES population. *P < 0.01, estimates are compared with those of 2007–2010. †P < 0.05, estimates are compared with those of 2007–2010.

Risks of diabetes complications have decreased over time

Is business booming for RDNs?

29.1 million diabetes

86 million prediabetes

= 115.1 million potential patients

If 10,000 RDNs.... Can you each handle 11,500 patients?
Diabetes Realities

• Growing number of people with diabetes
• 30% hospital admissions have diabetes-related diagnosis
• Education programs closing
• Shortage of endocrinologists and PCPs
• Limited number of educators
• Haven’t widely communicated the evidence
Where are the patients?

5% Medicare beneficiaries used DSME services
6.8% those privately insured used DSME services

Discussion question #1

What factors do you think contribute to these statistics?
2015 National Practice Survey

• Patients are not getting DSME within first year of diagnosis
  • The majority of respondents (46%) reported <25% pts received DSME within 1 year of diagnosis

• Patients are not completing programs
  • Only 27% indicated that more than 75% enrollees complete the program
AADE Systematic Review

Does DSME improve A1C in T2D adults as compared with those who received usual care (and no DSME)?

Carole A. Chrvala, Dawn Sherr, Ruth D. Lipman

*Health Matters, Inc., Chapel Hill, NC, USA

**American Association of Diabetes Educators, 200 W. Madison Street, Chicago, IL 60606, USA

Objective: Assess effect of diabetes self-management education and support methods, providers, duration, and contact time on glycemic control in adults with type 2 diabetes.

Method: We searched MEDLINE, CINAHL, EMBASE, ERIC, and PsycINFO to December 2013 for interventions which included elements to improve participants' knowledge, skills, and ability to perform self-management activities as well as informed decision-making around goal setting.

Results: This review included 118 unique interventions, with 61.9% reporting significant changes in A1C. Overall mean reduction in A1C was 0.74 and 0.17 for intervention and control groups; an average absolute reduction in A1C of 0.57. A combination of group and individual engagement results in the largest
Study Design

The Question: Does DSME improve A1C in T2D adults as compared with those who received usual care (and no DSME)? [Randomized control trials]

<table>
<thead>
<tr>
<th></th>
<th>Intervention Group (SD)</th>
<th>Usual Care Controls (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean Age</td>
<td>58.5(5.21)</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>
</tr>
</tbody>
</table>

Chrvala et al. Pt Ed & Counselling 2016;99:926-943
## 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>

Chrvala et al. Pt Ed & Counselling 2016;99:926-943
## 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>
</tr>
</tbody>
</table>

Chrvala et al. Pt Ed & Counselling 2016;99:926-943
### Change in A1C Based on 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>≤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>

Chrvala et al. Pt Ed & Counselling 2016;99:926-943
DSME benefits adults with T2DM: *A1C improvement*

Results were even stronger when:

- Both group and individual engagement
- Team involvement
- Longer duration – more then 10 hours of DSME had greater improvement in A1c

Chrvala et al. Pt Ed & Counselling 2016;99:926-943
Do others know the value of DSME?
• All people with diabetes should participate in DSME and DSMS both at diagnosis and as needed thereafter B

• An individualized MNT program is recommended for all people with diabetes as an effective component of the overall treatment plan A

• DSME/DSMS should be patient centered, respectful and responsive to individual patient preferences, needs, and values, which should guide clinical decisions A

• DSME/DSMS and MNT can result in cost-savings and improved outcomes B

• DSME/DSMS and MNT should be adequately reimbursed by third-party payers E

ADA. Standards of Medical Care. Diabetes Care 2016;39(Supp1):52-59
Type 2 Diabetes: Therapy Decision Aid

ADA Standards of Medical Care. Diabetes Care 2016;39(Supp1):52-59
DSME is Underutilized

• 5% of Medicare beneficiaries with newly diagnosed diabetes used DSMT benefit\(^1\)

• 6.8% of individuals with newly diagnosed T2D with private health insurance received DSME/S within 12 months of diagnosis\(^2\)

• _____% had a Medicare claim for DSMT in 2012\(^3\)

DSME is Underutilized

• 5% of Medicare beneficiaries with newly diagnosed diabetes used DSMT benefit\(^1\)
• 6.8% of individuals with newly diagnosed T2D with private health insurance received DSME/S within 12 months of diagnosis\(^2\)
• **Only 1.7%** had a Medicare claim for DSMT in 2012\(^3\)

All people with diabetes should participate in DSME and DSMS both at diagnosis and as needed thereafter

---

Why is DSME Underutilized?

- **Medicare barriers**: number of hours covered, location, group vs individual, DSMT vs MNT on same day, who can refer, cost sharing, etc.

- **Individual barriers**: need/value, time, access, cost, cultural, stigma, etc.

- **Patients / Clinicians / Health Systems / Payers** are unclear about:
  - Therapies other than medications
  - Benefits of DSME
  - Available reimbursement
  - When to refer
  - What is included in DSME
  - How to refer
Rating Medication Therapies

Efficacy
Hypo risk
Weight
Side effects
Costs

ADA Standards of Medical Care. Diabetes Care 2016;39(Supp1):52-59
If DSME were a pill, would you prescribe it?
If DSME were a pill, would you prescribe it?¹, ²

Benefits of DSME

Efficacy .............

Efficacy Rating¹

A1c Reduction

High     >1%
Moderate >0.5-1%
Low      ≤0.5%


Efficacy

• 22 RCT: Average A1c reduction of 1.1% with combined group & individual¹

• 9,000 pts in ADA ERP Program: Average A1C reduction of 1.3%²

• 5,000 pts in UKPDS : Average A1C reduction of 1.9% during run-in³

². JE Condon. Personal communications (2015)
³. UKPDS Lancet (1998)
United Kingdom prospective Diabetes Study (UKPDS): A1C decrease during run-in

- 3 month dietary run-in to study
- Monthly clinic visits with dietitian and physician

HbA1c (%)

A1C decreased 1.9%

If DSME were a pill, would you prescribe it?\(^1,2\)

**Benefits of DSME**

**Efficacy**

- **High**

**Efficacy**

- 22 RCT: Average A1c reduction of **1.1%** with combined group & individual\(^1\)
- 9,000 pts in ADA ERP Program: Average A1C reduction of **1.3%**\(^2\)
- 5,000 pts in UKPDS: Average A1C reduction of **1.9%** during run-in\(^3\)

---

If DSME were a pill, would you prescribe it?¹, ²

Benefits of DSME

- **Efficacy**: High
- **Hypo Risk**: Low
- **Weight**: Neutral/Loss
- **Side Effects**: None
- **Costs**: None

Cost
- **Reimbursement is available**

Cost Savings
- **The average annual hospital charges for 33,000 patients who received any educational visit were $6,244, 39% less than the $10,258 per year average for patients who had no such visits.**¹
- **Lower healthcare costs for people that received diabetes education.**²

¹ Robbins et al. Diabetes Care (2008)
Cost Savings with Education

Commercial Insurance Claims

Medicare Claims

If DSME were a pill, would you prescribe it?1, 2

Benefits of DSME
Efficacy............. High
Hypo Risk........... Low
Weight....Neutral/Loss
Side Effects........ None
Costs........ Low/Savings

Cost
• Reimbursement is available

Cost Savings
• The average annual hospital charges for 33,000 patients who received any educational visit were $6,244, 39% less than the $10,258 per year average for patients who had no such visits.1
• Lower healthcare costs for people that received diabetes education. 2

If DSME were a pill, would you prescribe it?\textsuperscript{1, 2}

Benefits of DSME

Efficacy............. High
Hypo Risk.......... Low
Weight....Neutral/Loss
Side Effects....... None
Costs........Low/Savings
Psychosocial Effects...

Psychosocial Benefits

• Reduces Diabetes Distress, the often hidden emotional burdens, stresses, and worries that are part of managing a demanding, progressive, chronic disease like diabetes \textsuperscript{1}

  • 2/3 people with diabetes distress experience significant improvement after education intervention

If DSME was a pill, would you prescribe it?¹, ²

Benefits of DSME
Efficacy............ High
Hypo Risk......... Low
Weight....Neutral/Loss
Side Effects....... None
Costs.......Low/Savings
Psychosocial Effects.... High

Psychosocial Benefits
• Reduces Diabetes Distress, the often hidden emotional burdens, stresses, and worries that are part of managing a demanding, progressive, chronic disease like diabetes ¹
  • 2/3 people with diabetes distress experience significant

Increases or Improves: Quality of life, Self-efficacy, Empowerment, Healthy coping, Knowledge, Self-care Behaviors, Adherence to food plan, Healthier food choices, More activity, Use of glucose monitoring, Lowers blood pressure and lipids

Reduces: Problems in managing diabetes, diabetes distress, the risk of long-term complications and (preventing acute complications)
If DSME was a pill, would you prescribe it?  

<table>
<thead>
<tr>
<th>Benefits of DSME</th>
<th>Benefits of Metformin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Efficacy</td>
<td></td>
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<tr>
<td>Hypo Risk</td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>Neutral / Loss</td>
</tr>
<tr>
<td>Side Effects</td>
<td>None</td>
</tr>
<tr>
<td>Costs</td>
<td>Low/Savings</td>
</tr>
<tr>
<td>Psychosocial benefits</td>
<td>High</td>
</tr>
</tbody>
</table>

Powers MA. ADA President Health Care and Education Address, ADA June 2016
Powers MA. If DSME were a pill. Diabetes Care 2016;39: in press December
### Benefits of DSME
- **Efficacy**: High
- **Hypo Risk**: Low
- **Weight**: Neutral / Loss
- **Side Effects**: None
- **Costs**: Low/Savings
- **Psychosocial benefits**: High

### Benefits of Metformin
- **Efficacy**: High
- **Hypo Risk**: Low
- **Weight**: Neutral / Loss
- **Side Effects**: GI
- **Costs**: Low
- **Psychosocial benefits**: NA

---

All people with diabetes should participate in DSME and DSMS both at diagnosis and as needed thereafter. B

An individualized MNT program is recommended for all people with diabetes as an effective component of the overall treatment plan. A

---

Powers MA. ADA President Health Care and Education Address, ADA June 2016

Powers MA. If DSME were a pill. Diabetes Care 2016;39: in press December
Why is DSME Underutilized?

- **Patients / Clinicians / Health Systems / Payers** are unclear about:
  - Therapies other than medications
  - Benefits of DSME – high efficacy, low hypo risk, neutral weight or loss, no/low side effects, low cost/cost savings, many psychosocial benefits
  - Available reimbursement

- When to refer
- What is included in DSME
- How to refer
DSME/S Position Statement: Collaboration

Writing Team

• Margaret A. Powers (Chair)
• Joan Bardsley
• Marjorie Cypress
• Paulina Duker
• Martha M. Funnell
• Amy Hess Fischl
• Melinda Maryniuk
• Linda Siminerio
• Eva Vivian

FROM THE ACADEMY
Position Statement

Diabetes Self-Management Education and Support in Type 2 Diabetes: A Joint Position Statement of the American Diabetes Association, the American Association of Diabetes Educators, and the Academy of Nutrition and Dietetics

Margaret A. Powers, PhD, RD; Joan Bardsley, MBA, RN; Marjorie Cypress, PhD, RN, CNP; Paulina Duker, MPN, RN; Martha M. Funnell, MS, RN; Amy Hess Fischl, MS, RD; Melinda D. Maryniuk, MEd, RD; Linda Siminerio, PhD, RN; Eva Vivian, PharmD, MS

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

Diabetes Care 38:1372-1382, 2015
The Diabetes Educator 41:417-430, 2015
Purpose of Position Statement

• **Improve patient experience** of care and education, improve health of individuals and populations, reduce diabetes-associated per capita health care costs (triple aim)

• **Provide health care teams with the 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 DSME/S should be provided for adults with type 2 diabetes
Guiding Principles for DSME
Who is this for?
<table>
<thead>
<tr>
<th>Guiding principles of initial and ongoing DSME/S</th>
</tr>
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<tbody>
<tr>
<td><strong>Engagement</strong></td>
</tr>
<tr>
<td>Provide DSME/S and care that reflects person’s life, preferences, priorities, culture, experiences, and capacity</td>
</tr>
<tr>
<td><strong>Information sharing</strong></td>
</tr>
<tr>
<td>Determine what the patient needs to make decisions about daily self-management</td>
</tr>
<tr>
<td><strong>Psychosocial and behavioral support</strong></td>
</tr>
<tr>
<td>Address the psychosocial and behavioral aspects of diabetes</td>
</tr>
<tr>
<td><strong>Integration with other therapies</strong></td>
</tr>
<tr>
<td>Ensure integration and referrals with and for other therapies including ongoing medical nutrition therapy (MNT) for all, and emotional support, as needed</td>
</tr>
<tr>
<td><strong>Coordination of care across specialties and organizations</strong></td>
</tr>
<tr>
<td>Ensure collaborative care and coordination of treatment goals across specialty care, facility-based care, and community organizations</td>
</tr>
</tbody>
</table>

Powers MA et al. DSME/S Position Statement 2015
*Diabetes Care, The Diabetes Educator, Journal of Academy of Nutrition and Dietetics*
Discussion question #2

1. Engagement
2. Information sharing
3. Psychosocial and behavioral support
4. Integration with other therapies
5. Coordination of care

What do these mean to you? Identify 1-2 that you think are most important in each category.
Table 3 - Guiding principles and key elements of initial and ongoing DSME/S (45,58,81)

Engagement: Provide DSME/S and care that reflects person’s life, preferences, priorities, culture, experiences and capacity
- Solicit and respond to questions
- Focus on decisions, reasons for the decisions and results
- Ask about strengths and challenges
- Use shared decision-making and principles of patient-centered care to guide each visit
- Engage the patient in a dialogue about current self-management successes, concerns and struggles
- Engage the patient in a dialogue about therapy and changes in treatment
- Remain ‘solution-neutral’ and support patient identifying solution(s)
- Provide support and education to patient’s family and caregiver

Information sharing: determine what the patient needs to make decisions about daily self management
- Discuss that DSME/S is an important and essential part of diabetes management
- Describe that DSME/S is needed throughout the life cycle and is on a continuum from pre-diabetes, newly diagnosed diabetes, health maintenance/follow-up, early-to-late diabetes complications, and transitions in care related to changes in health status and developmental or life changes
- Avoid being didactic
- Provide ‘need-to-know’ information and avoid providing the encyclopedia on diabetes
- Review that diabetes treatment will change over time
- Provide information to the patient using the above engagement key elements
- Take advantage of “teachable moments” to provide information specific to the patient’s care and treatment
- Assess DSME/S patient/family needs for the behavioral and psychosocial aspects of informed decision-making

Psychosocial and behavioral support: Address the psychosocial and behavioral aspects of diabetes
- Assess and address emotional and psychosocial concerns, such as diabetes-related distress and depression
- Present that diabetes-related distress and negative emotions are common and stress can raise blood glucose and blood pressure levels
- Discuss that diabetes self-management is challenging, but worth the effort
- Support self-efficacy and self-confidence in self-management decisions and abilities
- Support action by the patient to identify self-management problems and develop strategies to solve those problems, including self-selected behavioral goal-setting
- Note that it takes 2-8 months to change a habit/learn/apply behavior
- Address the whole person
- Include family members and/or support system in the educational and on-going support process
- Refer to community, on-line, and other resources

Integration with other therapies: Ensure integration and referrals with and for other therapies
- Ensure access to on-going medical nutrition therapy
- Recommend additional referrals as needed for behavioral therapy, medication management, physical therapy, etc.
- Address factors that limit the application of diabetes self-management activities
- Advocate for easy access to social services programs that address basic life needs and financial resources
- Identify resources and services that support the implementation of therapies in healthcare and community settings

Coordination of care across specialty care, facility-based care and community organizations: Ensure collaborative care and coordination with treatment goals
- Understand primary care provider and specialist treatment targets
- Provide overview of DSME/S to referring providers
- Follow medication adjustment protocols or make necessary recommendation to primary care provider
- Correspond with referring provider about education plan, progress toward treatment goals, and needs to coordinate education and support from entire clinical team
- Provision of culturally appropriate care
- Evidence-based decision support
- Use of performance data to identify opportunities for improvement

Reference: Powers M et al. DSME in Type 2 Diabetes: Joint Position Statement Diabetes Care 2015;38:1372-82
Guiding Principle: Engagement

- Solicit and respond to questions
- Focus on decisions, reasons for the decisions and results
- Use shared decision making and principles of patient centered care
- Talk about success, concerns and struggles
- Remain “solution neutral” and support patient identifying solutions

Powers MA et al. DSME/S Position Statement 2015
Diabetes Care, The Diabetes Educator, Journal of Academy of Nutrition and Dietetics
Questions to Guide the Conversation:
*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 your diabetes?
4. How can we best help you?
5. What is one thing you are doing or can do to better manage your diabetes?

Powers MA et al. DSME/S Position Statement 2015
*Diabetes Care, The Diabetes Educator, Journal of Academy of Nutrition and Dietetics*
**Guiding Principle:**
*Information Sharing*

- Discuss that DSME/S is important and essential
- Discuss continuum of diabetes – and ongoing need for DSME/S
- Avoid being didactic
- Provide “need to know” – not an encyclopedia on diabetes
- Acknowledge treatment will change over time
- Maximize teachable moments
- Acknowledge need for behavioral and psychosocial support for patient and family

Powers MA et al. DSME/S Position Statement 2015
_Diabetes Care, The Diabetes Educator, Journal of Academy of Nutrition and Dietetics_
Guiding Principle: Psychosocial and Behavioral Support

• Address emotional concerns; diabetes related distress/ depression

• Acknowledge that DSM is challenging – but worth the effort

• Note that it takes about 2-8 months to change a behavior

• Support self efficacy

• Address whole person

• Include family and/or support system in education

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

**PHQ-2**

Over the past two weeks, how often have you been bothered by any of the following problems?

*Little interest or pleasure in doing things.*

0 = Not at all  
1 = Several days  
2 = More than half the days  
3 = Nearly every day

*Feeling down, depressed, or hopeless.*

0 = Not at all  
1 = Several days  
2 = More than half the days  
3 = Nearly every day

**PAID-1**

During the past month consider how much you have worried about the future and possibility of serious complications?

Not a problem – Minor problem – Moderate problem – Somewhat serious – Serious problem

Guiding Principle: Integration with other therapies

- Ensure access to ongoing MNT
- Recommend additional referrals as needed
  - Behavioral therapy, medication management, exercise...
- Address factors that limit application of DSM activities
- Advocate for easy access to social service programs
- Identify community resources

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

- Understand primary care provider and specialists treatment targets
- Provide overview of DSME/S to referring providers
- Follow medication adjustment protocols or make necessary recommendations to PCP
- Communicate with referring providers
- Provide culturally appropriate care
- Use evidence based decision support
- Collect performance data for quality improvement

Powers MA et al. DSME/S Position Statement 2015
Diabetes Care, The Diabetes Educator, Journal of Academy of Nutrition and Dietetics
4 Critical Times
When should DSME occur?

1. At diagnosis
2. Annually
3. Complicating factors
4. Transitions

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

• When is DSME/S recommended?
• What DSME/S is needed at various times and by whom?
• How is DSME/S best provided?

Referral Guidance Provided

• Identifies four critical times to assess, provide and adjust DSME/S
• Specific times related to circumstances that are presented
• DSME/S and MNT programs can work with providers and health systems to ensure quality care

Powers MA et al. DSME/S Position Statement 2015
Diabetes Care, The Diabetes Educator, Journal of Academy of Nutrition and Dietetics
DSME/S Algorithm of Care: 4 Critical Times

Powers MA et al. DSME/S Position Statement 2015
Diabetes Care, The Diabetes Educator, Journal of Academy of Nutrition and Dietetics
DSME/S Algorithm of Care: 4 Critical Times

1. **At Diagnosis**
   - Needs review of knowledge, skills, and behaviors
   - Long-standing diabetes with limited prior education
   - Change in medication, activity, or nutritional intake
   - HbA1c out of target
   - Maintain positive health outcomes
   - Unexplained hypoglycemia or hyperglycemia
   - Prenatal pregnancy or pregrant
   - For support to attain or sustain behavior changed
   - Weight or other nutrition concerns
   - New life situations or competing demands

2. **Annual Agreement of Education, Nutrition, and Emotional Needs**
   - Needs review of knowledge, skills, and behaviors
   - Long-standing diabetes with limited prior education
   - Change in medication, activity, or nutritional intake
   - HbA1c out of target
   - Maintain positive health outcomes
   - Unexplained hypoglycemia or hyperglycemia
   - Prenatal pregnancy or pregrant
   - For support to attain or sustain behavior changed
   - Weight or other nutrition concerns
   - New life situations or competing demands

3. **When New Complicating Factors Influence Self-Management**
   - Needs review of knowledge, skills, and behaviors
   - Long-standing diabetes with limited prior education
   - Change in medication, activity, or nutritional intake
   - HbA1c out of target
   - Maintain positive health outcomes
   - Unexplained hypoglycemia or hyperglycemia
   - Prenatal pregnancy or pregrant
   - For support to attain or sustain behavior changed
   - Weight or other nutrition concerns
   - New life situations or competing demands

4. **When Transitions in Care Occur**
   - Needs review of knowledge, skills, and behaviors
   - Long-standing diabetes with limited prior education
   - Change in medication, activity, or nutritional intake
   - HbA1c out of target
   - Maintain positive health outcomes
   - Unexplained hypoglycemia or hyperglycemia
   - Prenatal pregnancy or pregrant
   - For support to attain or sustain behavior changed
   - Weight or other nutrition concerns
   - New life situations or competing demands

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

1. At Diagnosis
   - All individuals with type 2
   - Include medical nutrition therapy (for all) and emotional health, as needed

2. Annually
   Annual assessment of education, nutrition and emotional health needs

Refer if:
- Limited prior education
- Change in medication, activity, or nutritional intake
- HbA1c out of range
- Planning pregnancy
- Weight or other nutrition concerns
- New life situations and competing demands

Refer to:
- Maintain positive health outcomes
- Provide support to attain and sustain behavior change(s)

Powers MA et al. DSME/S Position Statement 2015
Diabetes Care, The Diabetes Educator, Journal of Academy of Nutrition and Dietetics
3. Complicating Factors  When new complicating factors influence self management, such as:

- Health conditions
- Physical conditions
- Emotional factors
- Basic living needs

4. Transitions  When transitions in care occur, such as:

- Living situations
- Medical care team
- Insurance coverage
- Ages related change
4 Critical times to assess, adjust, provide DSME

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

Areas of focus and action steps by

- Primary care providers/endocrinologists/clinical care team
- Diabetes self-management education

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

- Newly diagnosed. All newly diagnosed individuals with type 2 diabetes should receive DSME/S.
- Ensure that both nutrition and emotional health are appropriately addressed in education or make separate referrals.

What

- 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, hypoglycemic treatment if needed, introduction of eating guidelines).
- Identify and discuss resources for education and ongoing support.
- Make referral for DSME/S and medical nutrition therapy (MNT).

Powers MA et al. DSME/S Position Statement 2015

*Diabetes Care, The Diabetes Educator, Journal of Academy of Nutrition and Dietetics*
“This position statement and algorithm provide the evidence and strategies for the provision of education and support services to all adults living with type 2 diabetes. It is imperative that the health care community, responsible for delivering quality care, mobilizes efforts to address the barriers and explores resources for DSME/S in order to meet the needs of adults living with and management of type 2 diabetes.”

Powers MA et al. DSME/S Position Statement 2015
Diabetes Care, The Diabetes Educator, Journal of Academy of Nutrition and Dietetics
National Education Standards
What’s the difference?

The “Standards”:
- Define *quality* for education programs
  - who can teach
  - what is taught
  - what is evaluated
- Model for *reimbursement*
- New emphasis on prevention /pre-diabetes
- More focus on ongoing support
# The Standards

<table>
<thead>
<tr>
<th>What the standards ARE:</th>
<th>What they are NOT:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Defines quality</td>
<td>• A how-to guide</td>
</tr>
<tr>
<td>• Evidence-based</td>
<td>• A reimbursement guide</td>
</tr>
<tr>
<td>• Aimed to ensure wide applicability</td>
<td></td>
</tr>
<tr>
<td>• Reviewed/updated every 5 years</td>
<td></td>
</tr>
</tbody>
</table>
The regulations......

• Recognition assures quality/necessary for reimbursement
• Must have a provider referral
• Medicare covers 10 hours of initial education
• Reimburse 2 hours annually
• DSME & MNT cannot be billed on same date
• Deductibles & co-pays
• Hospital programs –facility charge
• Confusion regarding scope of practice
• DSME programs struggle to cover their costs
  • even operating at peak service load
The patient (family)

Care team: PCP, Other medical providers, Diab Educator (DE), RD, Community supporters.....

DSME Process...

Education Assessment by Diabetes Educator

Stage of DM – Pt priorities – Medical hx - Supports/barriers -Other

Collaborative Goals and Individualized Education Plan

Use collaborative, interactive communication strategies

Assess progress towards goal and continue DSME as needed

Ongoing Support

MNT Assessment by RD

Measure, monitor and implement QI

- Patient questions
- Treatment options
- Physical activity
- Prevent/treat hypo
- Medications
- Monitoring
- Nutrition
- Psychosocial concerns...
Lots of Misunderstandings …..

• Opportunities for RDs!
  • An RD can be a solo provider of DSME
  • 15 hours of annual CE credit

• Don’t assume! Go to the source!
  • ADA – Education Recognition Program
    • Review criteria
    • [www.diabetes.org/erp](http://www.diabetes.org/erp)
  • AADE – Diabetes Education Accreditation Program (DEAP)
    • Interpretive Guidance
    • [www.diabeteseducator.org/deap](http://www.diabeteseducator.org/deap)
Are there other resources?
EAL  Evidence Analysis Library
www.andeal.org

Diabetes MNT:
Type 1 and 2 (2015)

FNCE Session:
Monday 8:00 – 9:30 am
Initial Series of Medical Nutrition Therapy Encounters

• The registered dietitian nutritionist (RDN) should implement three to six medical nutrition therapy (MNT) encounters during the first six months, and determine if additional MNT encounters are needed. In studies reporting on the implementation of an initial series of RDN encounters (three to 11; total of two to 16 hours), MNT significantly lowered HbA1c by 0.3% to 2.0% in adults with type 2 diabetes and by 1.0% to 1.9% in adults with type 1 diabetes during the first six months, as well as optimization of medication therapy and improved quality of life.

• Rating: Strong Imperative
Medical Nutrition Therapy Follow-Up Encounters

• The registered dietitian nutritionist (RDN) should implement a minimum of one annual medical nutrition therapy (MNT) follow-up encounter. Studies longer than six months report that continued MNT encounters resulted in maintenance and continued reductions of A1C for up to two years in adults with type 2 diabetes, and for up to 6.5 years in adults with type 1 diabetes.

• Rating: Strong Imperative
Sample Referral Forms for DSME/MNT

Academy of Nutrition and Dietetics
http://dbcms.s3.amazonaws.com/media/files/8e6c5fe8-1ec8-42a2-bfa0-2c6ae7502c1e/MNTReferral%20FormDCE2014.pdf

American Association of Diabetes Educators
https://www.diabeteseducator.org/docs/default-source/default-document-library/diabetes-services-order-form7e32db36a05f68739c53ff0000b8561d.pdf?sfvrsn=0
Next Steps
Implementation Science

Study of methods to promote integration of research findings and evidence into healthcare policy and practice.
## Target audiences for 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>Endos</td>
<td>ERP 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>
<tr>
<td></td>
<td>Payers</td>
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</tbody>
</table>

*ERP = Education Recognition Program (ADA)
DEAP = Diabetes Education Accreditation Program (AADE)
Using the DSME/S Position Statement

- Provides the evidence-base for the value of education and the current referral patterns
- Ties the referral to the 4 times that education is critical
- Provides objective criteria for referral
- Provides the HCP with the framework to make a referral and what to expect from the referral
- Is a resource for health systems when designing decision-support guidance for diabetes education

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Practice Applications

1. DSME and MNT are components of quality diabetes care  
   [Share benefits of DSME.]

2. There are 4 critical times to assess, provide and adjust DSME  
   [Promote 4 critical times.]

3. All persons with diabetes should have access to quality care  
   [Work with other health care professionals, health systems, payers and professional organizations (Academy) to ensure all have access to DSME and MNT.]
Margaret.Powers@parknicollet.com
Melinda.Maryniuk@Joslin.Harvard.edu
Diabetes Self-Management Education and Support for Adults with Type 2 Diabetes: ALGORITHM of CARE

ADA Standards of Medical Care in Diabetes recommends all patients be assessed and referred for:

- **NUTRITION**: Registered dietitian for medical nutrition therapy
- **EDUCATION**: Diabetes self-management education and support
- **EMOTIONAL HEALTH**: Mental health professional if needed

FOUR CRITICAL TIMES TO ASSESS, PROVIDE, AND ADJUST DIABETES SELF-MANAGEMENT EDUCATION AND SUPPORT

1. **AT DIAGNOSIS**
   - Newly diagnosed. All newly diagnosed individuals with type 2 diabetes should receive DSME/S
   - Ensure that both nutrition and emotional health are appropriately addressed in education or make separate referrals

2. **ANNUAL ASSESSMENT OF EDUCATION, NUTRITION, AND EMOTIONAL NEEDS**
   - Needs review of knowledge, skills, and behaviors
   - Long-standing diabetes with limited prior education
   - Change in medication, activity, or nutritional intake
   - HbA1c out of target
   - Maintain positive health outcomes
   - Unexplained hypoglycemia or hyperglycemia
   - Planning pregnancy or pregnant
   - For support to attain or sustain behavior change(s)
   - Weight or other nutrition concerns
   - New life situations and competing demands

3. **WHEN NEW COMPLICATING FACTORS INFLUENCE SELF-MANAGEMENT**
   - Health conditions such as renal disease and stroke, need for steroid or complicated medication regimen
   - Physical limitations such as visual impairment, dexterity issues, movement restrictions
   - Emotional factors such as anxiety and clinical depression
   - Basic living needs such as access to food, financial limitations

4. **WHEN TRANSITIONS IN CARE OCCUR**
   - Living situation such as inpatient or outpatient rehabilitation or now living alone
   - Medical care team
   - Insurance coverage that results in treatment change
   - Age-related changes affecting cognition, self-care, etc.

# Diabetes Self-Management Education and Support for Adults with Type 2 Diabetes: Algorithm Action Steps

**Four critical times to assess, provide, and adjust diabetes self-management education and support**

## At Diagnosis
- 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, introduction of eating guidelines)
- Identify and discuss resources for education and ongoing support
- Make referral for DSME/S and medical nutrition therapy (MNT)

## Annual Assessment of Education, Nutrition, and Emotional Needs
- Assess all areas of self-management
- Review problem-solving skills
- Identify strengths and challenges of living with diabetes

## When New Complicating Factors Influence Self-Management
- Identify presence of factors that affect diabetes self-management and attain treatment and behavioral goals
- Discuss impact of complications and successes with treatment and self-management

## When Transitions in Care Occur
- Develop diabetes transition plan
- Communicate transition plan to new health care team members
- Establish DSME/S regular follow-up care

## Primary Care Provider/Endocrinologist/Clinical Care Team: Areas of Focus and Action Steps

### Diabetes Education: Areas of Focus and Action Steps
- 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:
  - Medication - choices, action, titration, side effects
  - Monitoring blood glucose - when to test, interpreting and using glucose pattern management for feedback
  - Physical activity - safety, short-term vs. long-term goals/recommendations
  - Preventing, detecting, and treating acute and chronic complications
  - Nutrition - food plan, planning meals, purchasing food, preparing meals, portioning food
  - Risk reduction - smoking cessation, foot care
  - Developing personal strategies to address psychosocial issues and concerns
  - Developing personal strategies to promote health and behavior change
- 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
- 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 accommodate sensory or physical limitation(s), adapting to new self-management demands, and promote health and behavior change
- Identify needed adaptations in diabetes self-management
- 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 benefits and feelings of well-being
- Maximize quality of life and emotional support for the patient (and family members)
- Provide education for others now involved in care
- Establish communication and follow-up plans with the provider, family, and others