DSME for Older Adults:
Relative Utility of Selected Assessment Tools

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- Co-Author of AADE Practice Advisory “Special Considerations in the Management and Education of Older Persons with Diabetes” (December 13, 2013)
- NDEP Practice Transformation Task Group
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Professor, University of Delaware, School of Education

Co-Author of AADE Practice Advisory “Special Considerations in the Management and Education of Older Persons with Diabetes” (December 13, 2013)
Background

Beyond Health Literacy

The Psychometrics of Diabetes Self-management

In Aging Patients

DSME for Older Adults:

Relative Utility of Selected Assessment Tools
Older adults with diabetes

I. Trends in prevalence, costs, delivery of care
II. Current guidelines and tools for assessing their DSM* needs, challenges, resources
III. Likely sources of DSM errors and non-adherence
IV. Criteria for evaluating quality and relevance of assessments
V. Most useful assessments for older adults

*DSM=diabetes self-management
Older adults with diabetes

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Estimates of Diabetes and Its Burden in the United States

**This document is intended to provide up-to-date scientific data and statistics on diabetes and its burden in the United States. Formerly referred to as the National Diabetes Fact Sheet, this consensus document is written for a scientific audience.**

**Fast Facts on Diabetes**

29.1 million people or 9.3% of the U.S. population have diabetes.

- **Diagnosed**
  - 21.0 million people

- **Undiagnosed**
  - 8.1 million people

(27.8% of people with diabetes are undiagnosed).

All ages, 2012
Older adults are more likely to have diabetes

<table>
<thead>
<tr>
<th></th>
<th>Number with diabetes (millions)</th>
<th>Percentage with diabetes (unadjusted)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20 years or older</td>
<td>28.9</td>
<td>12.3</td>
</tr>
<tr>
<td><strong>By age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20–44</td>
<td>4.3</td>
<td>4.1</td>
</tr>
<tr>
<td>45–64</td>
<td>13.4</td>
<td>16.2</td>
</tr>
<tr>
<td>65 years or older</td>
<td>11.2</td>
<td>25.9</td>
</tr>
<tr>
<td><strong>By sex</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Men</td>
<td>15.5</td>
<td>13.6</td>
</tr>
<tr>
<td>Women</td>
<td>13.4</td>
<td>11.2</td>
</tr>
</tbody>
</table>

New cases of DM in persons >65 will continue to increase

### New Cases of Diagnosed Diabetes

New cases of diagnosed diabetes among people aged 20 years or older, United States, 2012

<table>
<thead>
<tr>
<th></th>
<th>Number of new diabetes cases</th>
<th>Rate of new diabetes cases per 1,000 (unadjusted)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20 years or older</td>
<td>1.7 million</td>
<td>7.8</td>
</tr>
<tr>
<td><strong>By age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20–44</td>
<td>371,000</td>
<td>3.6</td>
</tr>
<tr>
<td>45–64</td>
<td>892,000</td>
<td>12.0</td>
</tr>
<tr>
<td>65 years or older</td>
<td>400,000</td>
<td>11.5</td>
</tr>
</tbody>
</table>

People with diabetes have higher health costs

**Estimated Diabetes Costs in the United States, 2012**

**Total (Direct and Indirect)**

$245 billion

**Direct Medical Costs**

$176 billion

After adjusting for population age and sex differences, average medical expenditures among people with diagnosed diabetes were **2.3 times higher** than people without diabetes.

**Indirect Costs**

$69 billion

(disability, work loss, premature death).

Centers for Disease Prevention and Control
National Diabetes Statistics Report 2014
Forecast for 2025:
50% increase in prevalence and costs

![Pre-Diabetes and Diabetes Trends among Seniors in the United States](image)

<table>
<thead>
<tr>
<th>U.S. Seniors Diabetes Data and Forecasts</th>
<th>2010</th>
<th>2025</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>40,229,000</td>
<td>63,907,000</td>
</tr>
<tr>
<td>Pre-diabetes</td>
<td>20,115,000</td>
<td>31,954,000</td>
</tr>
<tr>
<td>Diagnosed diabetes</td>
<td>7,901,000</td>
<td>12,551,300</td>
</tr>
<tr>
<td>Undiagnosed diabetes</td>
<td>2,920,600</td>
<td>4,639,700</td>
</tr>
<tr>
<td>Total with diabetes (diagnosed and undiagnosed)</td>
<td>10,821,600</td>
<td>17,191,000</td>
</tr>
<tr>
<td>Total with pre-diabetes or undiagnosed diabetes</td>
<td>23,035,600</td>
<td>36,593,700</td>
</tr>
<tr>
<td>Complications:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visual impairment</td>
<td>1,607,800</td>
<td>2,435,000</td>
</tr>
<tr>
<td>Renal failure</td>
<td>20,250</td>
<td>26,700</td>
</tr>
<tr>
<td>Leg amputations</td>
<td>27,180</td>
<td>31,400</td>
</tr>
<tr>
<td>Annual deaths attributable to diabetes</td>
<td>109,520</td>
<td>135,900</td>
</tr>
<tr>
<td>Total annual cost (2010 dollars)</td>
<td>$105.7 B</td>
<td>$168.0 B</td>
</tr>
<tr>
<td>Annual medical costs</td>
<td>$74.3 B</td>
<td>$118.1 B</td>
</tr>
<tr>
<td>Annual nonmedical costs</td>
<td>$31.4 B</td>
<td>$49.9 B</td>
</tr>
</tbody>
</table>

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[1] Pre-Diabetes and Diabetes Trends among Seniors in the United States

www.altfutures.org
Population getting older and older

Figure 1-1. Population Aged 65 and Over: 1900 to 2050
(For information on confidentiality protection, nonsampling error, and definitions, see www.census.gov/prod/cen2010/doc/sf1.pdf)

- 65+ population (left scale)
- 65+ as proportion of total population (right scale)

Figure 1-3.
Population Aged 85 and Over: 1900 to 2050
(For information on confidentiality protection, nonsampling error, and definitions, see www.census.gov/prod/cen2010/doc/sf1.pdf)

The older old have more chronic conditions that limit their activity

Figure 2-9.
Limitation of Activity Caused by Chronic Health Condition by Age: 2006–2007
(Per 1,000)

Self reported

Note: Data are combined from the 2006–2007 National Health Interview Surveys, which cover the civilian noninstitutionalized population. Source: National Center for Health Statistics, 2010.

The older old have more functional limitations

Figure 2-14.

Functional Limitations in the Population Aged 65 and Over by Age: 2010

(In percent. For information on confidentiality protection, sampling error, nonsampling error, and definitions, see www.census.gov/acs/www)


The older adults have less functional literacy

Objectively assessed

% with very low functional literacy*

Majority have very weak literacy skills

*Level 1 or 2 on NCES adult literacy survey’s 5-level scale Source: Tables 1.2 and 1.3 of *Literacy of Older Adults in America*, 1996, [http://nces.ed.gov/pubs97/97576.pdf](http://nces.ed.gov/pubs97/97576.pdf) (accessed 8/1/14)
Older adults with diabetes

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Patient-Centered Medical Home (PCMH)

*Whole person orientation:*
the personal physician is responsible for providing for all the patient’s health care needs or taking responsibility for appropriately arranging care with other qualified professionals. This includes care for

*all stages of life;*
acute care, chronic care, preventive services,
and end of life care.

*Care is coordinated and/or integrated:*

across all elements of the complex health care system (e.g., subspecialty care, hospitals, home health agencies, nursing homes) and the patient’s community (e.g., family, public and private community-based services). Care is facilitated by registries, information technology, health information exchange, and

*other means to assure that*

*patients get the indicated care when and where they need and want it*
in a culturally and linguistically appropriate manner.

Diabetes PCMH

The care of individuals with diabetes—in particular, those with diabetes mellitus (type 2 diabetes)—provides one of the best opportunities to illustrate the promise of the patient centered medical home.

The medical home offers patients a team-based model of care led by a provider that ensures high-quality, compassionate and coordinated care, superb access and communication, and is committed to quality and safety.

The evidence demonstrates that proper management of diabetes can reduce the risk of complications; well-designed care coordination interventions, delivered to the right individuals, can improve patient, provider and payer outcomes.

Patient-Centered Primary Care Collaborative

http://www.pcpcc.org/guide/practices-spotlight
Program of All-inclusive Care for the Elderly (PACE)

A team of health care professionals will give you the coordinated care you need. These professionals are also experts in working with older people. They will work together with you and your family (if appropriate) to develop your most effective plan of care.

http://www.medicare.gov/your-medicare-costs/help-paying-costs/pace/pace.html
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Geriatric syndromes

Biological syndromes unique to aging bodies:

Age-related biological declines across multiple organ systems which become increasingly vulnerable to dysregulation, yield altered diagnostic signs and symptoms, and often lead to a downward spiral in health & mobility.
Common elements in geriatric syndromes

**Physical Declines**
- Cognitive impairments
- Vision & hearing impairments
- Weakness & poor balance
- Fatigue
- Limited mobility
- Chewing & swallowing difficulties
- Poor wound healing
- Comorbidities

**Consequences**
- Falls & Fractures
- Infections
- Polypharmacy
- Social isolation
- Depression
- Poor nutrition
- Poor self-care
- Lack of physical activity
Frailty Syndrome

**Indicators**
- Loss of appetite
- Loss of muscle loss
- Loss of bone mass
- Loss of mobility
- Fatigue
- Poor balance
- Risk of falls
- Poor physical health
- Homeostenosis*

**Clinical diagnosis—3 of the following**
1. Unintentional weight loss (10 lbs. in past year)
2. Self-reported exhaustion
3. Weakness (Grip Strength)
4. Slow walking speed
5. Low physical activity

* Difficulty maintaining homeostasis under physiological stress
The older old have more functional limitations

**Figure 2-14.**

**Functional Limitations in the Population Aged 65 and Over by Age: 2010**

(In percent. For information on confidentiality protection, sampling error, nonsampling error, and definitions, see www.census.gov/acs/www)

Self reported

<table>
<thead>
<tr>
<th>Activity</th>
<th>65 and over</th>
<th>65 to 74</th>
<th>75 to 84</th>
<th>85 and over</th>
</tr>
</thead>
<tbody>
<tr>
<td>With any disability</td>
<td>38.6</td>
<td>26.2</td>
<td>18.3</td>
<td>15.6</td>
</tr>
<tr>
<td>Difficulty hearing</td>
<td>44.9</td>
<td>35.1</td>
<td>33.7</td>
<td>27.2</td>
</tr>
<tr>
<td>Difficulty seeing</td>
<td>44.9</td>
<td>35.1</td>
<td>33.7</td>
<td>27.2</td>
</tr>
<tr>
<td>Difficulty remembering/concentrating/making decisions</td>
<td>44.9</td>
<td>35.1</td>
<td>33.7</td>
<td>27.2</td>
</tr>
<tr>
<td>Difficulty dressing/bathing</td>
<td>44.9</td>
<td>35.1</td>
<td>33.7</td>
<td>27.2</td>
</tr>
<tr>
<td>Difficulty doing errands alone</td>
<td>44.9</td>
<td>35.1</td>
<td>33.7</td>
<td>27.2</td>
</tr>
<tr>
<td>Difficulty walking/climbing stairs</td>
<td>44.9</td>
<td>35.1</td>
<td>33.7</td>
<td>27.2</td>
</tr>
</tbody>
</table>

Functional Categories of Older People with Diabetes

Category 1: Functionally Independent

Category 2: Functionally Dependent
   Sub-category A: Frail
   Sub-category B: Dementia

Category 3: End of Life
Diabetes Disaster Averted series:

http://www.diabetesincontrol.com/articles/practicum
Diabetes Disaster Averted #51: Careful Listening Saves Lives

A few years ago, I was working as a Nurse Practitioner in an endocrinology practice. One of my longstanding elderly patients, age 82, called me to report that the paramedics had to come to her house because she passed out....

I scheduled her for an appointment the next day, and took her history. She'd had diabetes for about 15 years, and was taking a long acting insulin at bedtime and rapid acting insulin before her meals. I reviewed her activities of the day (meal times, insulin doses and times, and activity level). She reported that she had her dinner, and then next thing she knew she was passed out at the dinner table. I performed a complete physical exam, which was normal. I was ready to order a battery of lab tests, and considering testing her for gastroparesis since it appeared that she'd had a severe hypoglycemic reaction so soon after eating.

I reviewed her recent episode with her again, stating "so you ate your dinner, and then you passed out..." at which point she interrupted with "no, I did not eat my dinner, I HAD it, it was right in front of me on the table, and then I passed out...." The conclusion was that she had a severe hypoglycemic reaction because she delayed her dinner.

Lesson learned: Obtain a complete history from the patient, choosing words carefully, and make sure you and your patient are speaking the same language and have the same meaning! The lesson learned from this case saved a lot of time and money from unnecessary testing and work up.

Louise DeRiso, MSN, CRNP, CCRC
Coordinator, Vascular Clinical & Translational Research Center
University of Pittsburgh
"Do Not Crush, Chew or Cut"

From the Institute for Safe Medication Practices (ISMP): When a patient is prescribed a timed release medication such as Glucotrol XL or Glucophage XR, clinicians need to ensure that the patients understand that they should not crush, chew or cut these pills. The medications must be swallowed whole.

In one case an elderly patient was prescribed Glucotrol XL to treat elevated blood sugars. This is a specially formulated medication that releases an entire day’s supply of the medication slowly over a 24-hour period. The pill was too large for the woman to swallow, so she chewed it. She soon complained of feeling dizzy, weak, listless, and lethargic. Chewing the drug caused it to be released all at once, causing dangerously low blood glucose levels, which could have been fatal....

In some cases pills are coated so the medication won’t be released in the stomach where it may cause irritation. In other cases, special coatings or other properties slow the delivery of the medication into the body so that the drug is delivered over a period of time. This is more convenient than having to take a drug several times a day, but if these pills are crushed or chewed, the way they are supposed to work will be destroyed and the medication may go into the body too fast. If that happens, then a large amount of the drug will be released all at once, which could cause side effects or serious harm.
The Power and Dangers of Advertising

Recently a 69 year old man returned to see me after being started on a single bedtime dose of Levemir via the Flex pen along with a long acting sulfonylurea. He had received education about basal insulin action from the start. On return his morning glucose was terrible but I noticed that the rest of the day his glucose was near goal. I began to wonder if his sulfonylurea was working better with the addition of basal insulin but was puzzled by the worsening overnight rise. I was considering lowering the oral dose and increasing the basal dosing to balance glucose control better when he volunteered a critical piece of information nonchalantly...

He proudly announced that he had been listening to NovoNordisk commercials on TV and realized that when you use the Flex pen you need to eat a meal right afterwards. Since he was getting his insulin at bedtime, he decided he should add a fourth meal to the day. This was occurring after his bedtime dose of insulin and AFTER his glucose check.

It was then obvious he did not need a basal rate increase but instruction in the action of Levemir and the difference to the Novolog Flex pen action. If adjustments had been made without changing the dietary cause, this individual may have needed a very high basal dose to control this problem and could have experienced increased hypoglycemia during the day.

Lesson Learned:

Many other sources of information through the media are now available and can be very confusing to a patient. Take time to re-evaluate a patient’s understanding of their medications at subsequent visits.

Lynn White MS, ENP, CDE, BC-ADM
All Insulins Not the Same

I recently had a home care patient who had been discharged from a skilled nursing facility with a prescription for regular insulin, and who was put on a sliding scale dosage. The patient was experiencing hypoglycemic reactions. I was called to see him to find out why he was having multiple hypoglycemic reactions. When I asked to see how he and his wife were calibrating and injecting his insulin, she brought out a bottle of Lantus insulin....

The patient’s wife had not filled the new prescription for the regular insulin because she thought that she already had insulin that her husband could use at home. She had the Lantus insulin which he was on prior to his hospitalization, and she wanted to use that insulin before purchasing any more. She was using Lantus for the sliding scale dosage instead of the regular insulin which was proving highly dangerous.

Lesson Learned:

Never take for granted that the patient is dosing properly or is using the insulin the doctor has prescribed.

Linda, RN, CDE
Patient's Method of Figuring Meal-time Insulin Doesn’t Quite Work

Recently I assessed an 84 year old inpatient with diabetes for his insulin usage at home. In reporting his dosing he stated that after he checked his glucose before each meal he took the “first two numbers of the result,” and made that his dosage for meal-time insulin. For example, if the glucose reading was 240, he would take 24 units of Humalog.

I asked him if this was his instruction per his provider and he said, “No, but it was the only thing that made sense to me that I could remember.”

A specific teaching plan with simple dosing was designed for him and a home health evaluation for medication administration safety was also made on his return home.

Lesson Learned:

This example once again reiterates the importance of having the patient give you a verbal and sometimes a practice demonstration of what they understand to be the practice for medication administration.

Janet Howard-Ducsay, RN, BA/BSN, CDE
Diabetes Nurse Educator
Most frail individuals have comorbidities, functional disabilities, or both

Figure 3. Venn diagram displaying extent of overlap of frailty with ADL disability and comorbidity (≥2 diseases). Total represented: 2,762 subjects who had comorbidity and/or disability and/or frailty. n of each subgroup indicated in parentheses. + Frail: overall n = 368 frail subjects (both cohorts). *Comorbidity: overall n = 2,576 with 2 or more out of the following 9 diseases: myocardial infarction, angina, congestive heart failure, claudication, arthritis, cancer, diabetes, hypertension, COPD. Of these, 249 were also frail. **Disabled: overall n = 363 with an ADL disability; of these, 100 were frail.

Relevance to DSME?
Critical tasks and complex burdens in self-care multiply with age.

Frailty in Older Adults: Evidence for a Phenotype
To summarize......

➢ Many of your patients/clients will:
  - have complex medical problems,
  - experience heavy burdens in self-care,
  - but have fewer physical and cognitive reserves for effective self-care.

➢ Patients’ physical and cognitive health trajectories will differ widely
Physical Health

Frailty

Cognitive Ability

Complexity of DSM
Older adults with diabetes

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Appropriate assessment is essential for individualizing DSME.

To do that, CDEs will need to:

1. screen older adults for most critical DSM tasks

2. assess patient’s major barriers to learning

(3. recognize the complexity levels of the DSM tasks: Bloom’s Taxonomy)
Examples of Assessment Tools and Procedures

Gait, balance & mobility
  ADL & IADL
  Cognition
  Mood Level
  Frailty Measures
  Hypoglycemia Risk
  Self-care Abilities
  Nutritional Assessment
  Pain
ASSessment and Evaluation Procedures for Older People with Diabetes

Assessment of older people with diabetes should be a multidimensional and multidisciplinary process designed to collect information on medical, psychosocial and functional capabilities and how these may limit activities.

These data are important for:

- Organizing treatment plans.
- Arranging rehabilitative services where available.
- Conducting an annual review which should include a medication review.
- Determining long-term care requirements.
- Planning end of life care.

The emphasis is on managing complexity and quality of life issues in older people. The assessment tools in Table 1 are designed to be routinely used in everyday clinical practice by nurses and doctors, require little training, and to be a basis for screening of functional deficits. It is not expected that most or all will be routinely undertaken but these tools should be considered part of the annual assessment and when clinically indicated. As a minimum, the consultation should include enquiring about functional capacity and cognitive and mental health.

Table 1. Examples of assessment tools and procedures

<table>
<thead>
<tr>
<th>Assessment domain</th>
<th>Examples of assessment tools and procedures</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gait, balance, and mobility</td>
<td>IDPF 3-stage package</td>
<td>Early adaptation to guideline increases certainty on assessing gait speed and balance ability</td>
</tr>
<tr>
<td>ADL and IADL</td>
<td>Barthel ADL and IADL</td>
<td>Universally used; minimal training required</td>
</tr>
<tr>
<td>Cognition</td>
<td>MiniCog or Montreal Cognitive Assessment Tool</td>
<td>Easy to use; good evidence as screening tool for cognitive impairment</td>
</tr>
<tr>
<td>Mood level</td>
<td>Geriatric Depression Scale</td>
<td>Widely used; little training required</td>
</tr>
<tr>
<td>Facility measures</td>
<td>Clinical Facility Scale or CSS-9 5-point Scale</td>
<td>Can be used as a quick assessment for future or frail patients</td>
</tr>
<tr>
<td>Hypoglycemia risk</td>
<td>A comprehensive history to identify risk factors (see Chapter 20: Hypoglycaemia)</td>
<td>Requires a positive commitment to control risk factors by the clinician</td>
</tr>
<tr>
<td>Self-care abilities</td>
<td>SD-2. 13-15 items self-administered questionnaire suitable for type 1 and type 2 diabetes</td>
<td>Well validated tools in widespread use; minimal training required</td>
</tr>
<tr>
<td>Nutritional assessment</td>
<td>MM-SF tool or MUST Tool</td>
<td>Well validated tools in widespread use; minimal training required</td>
</tr>
<tr>
<td>Pain</td>
<td>Pain thermometer</td>
<td>For people with diabetes who have moderate to severe cognitive communication disorders; easy to use but full validity has not yet been established</td>
</tr>
<tr>
<td>ADL</td>
<td>activities of daily living</td>
<td></td>
</tr>
<tr>
<td>CHAD</td>
<td>Community Health Status Assessment</td>
<td></td>
</tr>
<tr>
<td>IADL</td>
<td>Instrumental activities of daily living</td>
<td></td>
</tr>
<tr>
<td>IDPF</td>
<td>Institute for Diabetes in Older People</td>
<td></td>
</tr>
<tr>
<td>MM-5F</td>
<td>Mini Nutritional Assessment-Short Form</td>
<td></td>
</tr>
<tr>
<td>M-GPPI</td>
<td>Medical Research Unital Brief Physical Inquiry</td>
<td></td>
</tr>
<tr>
<td>MUST</td>
<td>Malnutrition Universal Screening Tool</td>
<td></td>
</tr>
<tr>
<td>SD-R</td>
<td>Self-Care Inventory</td>
<td></td>
</tr>
</tbody>
</table>

* scales or procedures vary from country to country.
Diabetes in Older Adults: A Consensus Report

M. Sue Kirkman, MD, a Vanessa Jones Briscoe, PhD, NP, CDE, b Nathaniel Clark, MD, MS, RD, c Hermes Florez, MD, MPH, PhD, d Linda B. Haas, PHC, RN, CDE, e Jeffrey B. Halter, MD, f Elbert S. Huang, MD, MPH, g Mary T. Korytkowski, MD, h Medha N. Munshi, MD, i Peggy Soule Odegard, BS, PharmD, CDE, j Richard E. Pratley, MD, k and Carrie S. Swift, MS, RD, BC-ADM, CDE l

More than 25% of the U.S. population aged ≥ 65 years has diabetes mellitus (hereafter referred to as diabetes) and Consensus Development Conference on Diabetes and Older Adults (defined as those aged ≥ 65 years) in Feb-
Additional Consensus Recommendation for Care of Older Adults with Diabetes

“In order to develop and update an individualized treatment plan, screen older adults periodically for cognitive dysfunction, functional status and fall risk, using simple tools, such as those at

WHAT ISSUES NEED TO BE CONSIDERED IN INDIVIDUALIZING TREATMENT RECOMMENDATIONS FOR OLDER ADULTS?

Comorbidities and Geriatric Syndromes

Diabetes is associated with increased risk of multiple coexisting medical conditions in older adults. In addition to the classic cardiovascular and microvascular diseases, a group of conditions termed geriatric syndromes, described below, also occur at higher frequency in older adults with diabetes and may affect self-care abilities and health outcomes including quality of life.\(^58\)

Cognitive Dysfunction

Alzheimer’s-type and multi-infarct dementia are approximately twice as likely to occur in those with diabetes compared with age-matched nondiabetic control subjects.\(^59\) The
Consensus Recommendation

for Research Question

About Diabetes in Older Adults

“What is the impact of Geriatric Syndrome on the management of diabetes and the risk for adverse treatment effects and poor outcomes?”
High rates of unidentified cognitive deficits in older adults suggest that it is important to periodically screen for cognitive dysfunction. Simple assessment tools can be accessed at www.hospitalmedicine.org/geriresource/toolbox/howto.htm. Such dysfunction makes it difficult for patients to perform complex self-care tasks such as glucose monitoring, changing insulin doses, or appropriately maintaining timing and content of diet. In older patients with cognitive dysfunction, regimens should be simplified, care-
High rates of unidentified cognitive deficits in older adults suggest that it is important to periodically screen for cognitive dysfunction. Simple assessment tools can be accessed at www.hospitalmedicine.org/geriresource/toolbox/howto.htm. Such dysfunction makes it difficult for patients to perform complex self-care tasks such as glucose monitoring, changing insulin doses, or appropriately maintaining timing and content of diet. In older patients with cognitive dysfunction, regimens should be simplified, caregivers involved, and the occurrence of hypoglycemia carefully assessed.
interactions. A challenge in treating type 2 diabetes is that polypharmacy may be intentional and necessary to control related comorbidities and reduce the risk of diabetes complications. In one study, polypharmacy (defined as the use of 6 or more prescription medications) was associated with an increased risk of falling in older people. The costs of multiple medications can be substantial, especially when older patients fall into the “doughnut hole” of Medicare Part D coverage. Medication reconciliation, ongoing assessment of the indications for each medication, and the assessment of medication adherence and barriers are needed at each visit.
Depression

Diabetes is associated with a high prevalence of depression.\textsuperscript{76} Untreated depression can lead to difficulty with self-care and with implementing healthier lifestyle choices\textsuperscript{77} and is associated with a higher risk of mortality and dementia in patients with diabetes.\textsuperscript{78,79} In older adults, depression may remain undiagnosed if screening is not performed. Clinical tools such as the Geriatric Depression Scale\textsuperscript{80} can be used to periodically screen older patients with diabetes.
to standard assessments and treatments for incontinence, clinicians should remember that uncontrolled hyperglycemia can increase the amount and frequency of urination.

**Unique Nutrition Issues**

Nutrition is an integral part of diabetes care for all ages, but there are additional considerations for older adults with diabetes. Though energy needs decline with age, macronutrient needs are similar throughout adulthood. Meeting micronutrient needs with lower caloric intake is challenging; therefore older adults with diabetes are at higher risk for deficiencies. Older adults may be at risk for undernutrition due to anorexia, altered taste and smell, swallowing difficulties, oral/dental issues, and functional impairments leading to difficulties in preparing or consuming food. Overly restrictive eating patterns, either self-imposed or provider-directed, may contribute additional
risk for older adults with diabetes. The Mini-Nutritional Assessment, specifically designed for older adults, is simple to perform and may help determine whether referral to a registered dietitian for medical nutrition therapy (MNT) is needed (http://www.mna-elderly.com/).

MNT has proven to be beneficial in older adults with diabetes.\textsuperscript{84} Recommendations should take into account the patient’s culture, preferences, and personal goals and abilities. When nutrition needs are not being met with usual intake, additional interventions may include encouraging smaller more frequent meals, fortifying usual foods, changing food texture, or adding liquid nutrition supplements (either regular or diabetes-specific formulas) between meals. For nutritionally vulnerable older adults, identifying community resources such as Meals on Wheels, senior centers, and the U.S. Department of Agriculture’s Older Americans Nutrition Program may help maintain independent living status.
Vulnerability to Hypoglycemia

In the ACCORD trial, older participants in both glycemic intervention arms had \( \sim 50\% \) higher rates of severe hypoglycemia (hypoglycemia requiring third-party assistance) than participants under age 65 years (M. Miller, personal communication). In a population analysis of Medicaid enrollees treated with insulin or sulfonylureas, the incidence of serious hypoglycemia (defined as that leading to emergency department visit, hospitalization, or death) was approximately 2 per 100 person-years,\(^{103}\) but clearly studies based on administrative databases miss less catastrophic hypoglycemia.

The risk factors for hypoglycemia in diabetes in general (use of insulin or insulin secretagogues, duration of diabetes, antecedent hypoglycemia, erratic meals, exercise, renal insufficiency)\(^{104}\) presumably apply to older patients as well. In the Medicaid study cited above, independent risk factors included hospital discharge within the prior 30 days, advanced age, black race, and use of five or more concomitant medications.\(^{103}\) Assessment of risk factors for hypoglycemia is an important part of the clinical care of older adults with hypoglycemia. Education of both patient and caregiver on the prevention, detection, and treatment of hypoglycemia is paramount.
brain function. Cross-sectional studies have shown an association between hyperglycemia and cognitive dysfunction. Hypoglycemia is linked to cognitive dysfunction in a bidirectional fashion: cognitive impairment increases the subsequent risk of hypoglycemia, and a history of severe hypoglycemia is linked to the incidence of dementia.

High rates of unidentified cognitive deficits in older adults suggest that it is important to periodically screen for cognitive dysfunction. Simple assessment tools can be accessed at www.hospitalmedicine.org/geriresource/toolbox/howto.htm. Such dysfunction makes it difficult for patients to perform complex self-care tasks such as glucose monitoring, changing insulin doses, or appropriately maintaining timing and content of diet. In older patients with cognitive dysfunction, regimens should be simplified, care-
Hospital admissions for hyper- or hypoglycemia Medicare PWDs, ages 65+, 1999-2011

Retrospective observational study

- Both types of admission are relatively rare, so data capture most severe cases

- 279,937 patients had 302,095 hospitalizations for hyperglycemia

- 404,467 patients had 429,850 admissions for hypoglycemia

- Over the 12 years, rates of admission for:
  - hyperglycemia dropped by 38.6 percent
  - hypoglycemia rose by 11.7 percent
American Geriatrics Society

Guidelines for

Improving the Care of Older Adults

With Diabetes Mellitus

2013 Update
OBJECTIVES

- Incorporate high-quality new evidence with significant effect on diabetes mellitus (DM) care that has become available since the 2003 “Guidelines for Improving the Care of the Older Person with Diabetes Mellitus” into a new 2013 Guideline update.
- Improve the care of older people with DM by providing an updated set of evidence-based recommendations individualized to adults with DM aged 65 and older.

Ten years ago, the California Health Care Foundation (CHCF)/American Geriatrics Society (AGS) Panel published some of the first patient-centered clinical guidelines to assist clinicians with the complex and individualized care of older adults with DM. The abstracted set of recommendations presented here provides essential guidance in the care of older adults with DM and is based on the 2013 AGS Guidelines, which have incorporated new evidence available since 2003. The full version of the updated guidelines, American Geriatrics Society (AGS) Guidelines for Improving the Care of the Older Adult with Diabetes Mellitus: 2013 Update, is available at www.GeriatricsCareOnline.org.

COMPONENTS OF CARE

The components of the 2003 guidelines were aspirin, tobacco cessation, glucose control, blood pressure management, lipids management, eye care, foot care, and DM self-management education and support (DSME/S). Specific geriatric syndromes that have been included and emphasized in the updated 2013 guidelines are depression, polypharmacy, cognitive impairment, urinary incontinence, injurious falls, and persistent pain.

Clinical and functional heterogeneities in older adults with DM that were also addressed in the 2013 guidelines are differences in general health status, age and duration of disease at diagnosis, number of years of treatment, comorbidities and underlying chronic conditions, range of complications, degree of frailty, limits in physical or cognitive function, and differences in life expectancy (time horizon for benefit).

PATIENT-CENTERED CARE AND INDIVIDUALIZED GOALS

The 2013 guidelines update recommends DM care that is customized and prioritized to the individual person with DM, with attention to quality of life and personal and caregiver choices related to health care. The 2013 guidelines update:

- No longer recommends aspirin for the primary prevention of cardiovascular disease (CVD).
- Renews the emphasis on treating dyslipidemias with statins but not to target levels.
- Continues to support glycemic control recommendations customized to burden of comorbidity, functional status, and life expectancy.
- Presents stronger, more-prescriptive, patient-centered recommendations for lifestyle modification because of increased evidence of its importance for healthy older adults with DM.

EVIDENCE

The guidelines were updated by reviewing the existing peer-reviewed literature (2002-2012) and guidelines on each DM topic. PubMed was searched for relevant studies published in the peer-reviewed literature from 2002 to 2012. Randomized clinical trials and systematic reviews or meta-analyses were reviewed. When reasonable, the expert panel extrapolated findings to older adults with DM. Evidence tables (available at http://www.GeriatricsCareOnline.org) were constructed summarizing new evidence.

An expert panel consisting of general internists, family practitioners, geriatricians, clinical pharmacists, health services researchers, and certified DM educators was con-
Depression

1. Older adults with DM are at greater risk of major depression and should be screened for depression during the initial evaluation period (first 3 months) and if there is any unexplained decline in clinical status. (IIB)

On initial presentation of an older adult with DM, a healthcare professional should assess the individual for symptoms of depression using a standardized short screener, such as the Geriatric Depression Scale, Patient Heath Questionnaire (PHQ-9), or other available instruments. Expert opinion suggests screening for depression when there is new-onset cognitive decline.

Psychosocial problems other than depression, such as attitudes about DM, quality of life, DM-related distress, and lack of financial resources, are also important for older adults with type 2 DM.

2. Older adults with DM who present with new-onset
Cognitive Impairment

instrument during the initial evaluation period and with any significant decline in clinical status. Increased difficulty with self-care should be considered a change in clinical status. (IIIA)

Systematic review and meta-analyses of up to 15 studies found that dementia was more likely in persons with DM and suggested that DM was associated with faster cognitive decline in older adults. [24-26]

Simple tools are available to clinicians (http://www.hospitalmedicine.org/geriresource/toolbox/mental_status_page.htm). The Montreal Cognitive Assessment tool is available in several languages and is easily accessible for clinical and educational purposes (http://www.mocatest.org/).

2. If there is evidence of cognitive impairment in an older adult with DM and delirium has been excluded as a cause, then an initial evaluation designed to identify reversible conditions that may cause or exacerbate cognitive impairment should be performed within the first 3 months after diagnosis and with any significant change in clinical status. (IIIA)

The American Academy of Neurology guidelines recommend screening older adults with evidence of cognitive impairment for depression, B12 deficiency, and hypothyroidism; structural neuroimaging to identify lesions is also recommended for those recently diagnosed. [27] If the cognitive impairment is due to delirium, urgent assessment for etiology and management is indicated.
Guiding Principles for Diabetes Care

This evidence-based booklet outlines important patient-centered principles of diabetes care, helping health care professionals identify people with prediabetes and undiagnosed diabetes for treatment aimed at preventing long-term complications.

For the most recent diagnostic criteria for diabetes and prediabetes in non-pregnant adults, see NDEP’s Diabetes Numbers At-a-Glance 2011. This pocket guide is based on the American Diabetes Association Standards of Medical Care for Diabetes - 2011.

You are here: NDEP Home > Publications
Guiding Principles for Diabetes Care

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Last reviewed: 04/01/2009

Contents

- Goals
- Introduction
  - Principle 1: Identify People with Undiagnosed Diabetes
  - Principle 2: Manage Prediabetes to Prevent or Delay the Onset of Type 2 Diabetes and Its Complications
  - Principle 3: Provide Ongoing Self-Management Education and Support for People with Diabetes
  - Principle 4: Provide Comprehensive Patient-Centered Care to Prevent or Delay the Onset of Diabetes Complications and to Treat Diabetes and Existing Complications
  - Principle 5: Consider the Needs of Special Populations & Children, Women of Childbearing Age, Older Adults, and High-Risk Racial and Ethnic Groups
  - Principle 6: Provide Regular Assessments to Monitor Treatment Effectiveness and to Detect Diabetes Complications Early
- Resources
- References
Regular monitoring of diabetes management enables the diabetes team to assess achievement of treatment goals and to adjust therapy as necessary. Regular checking for long-term complications can help detect problems at a time when they can be treated and managed successfully. The physical examination, laboratory tests, and other assessments that the team conducts to monitor management and to identify complications early should be performed during routine diabetes visits, and at quarterly and annual visits.

**At each diabetes visit:**

- Measure weight, blood pressure, and calculate BMI.
- Inspect feet for lesions or abnormalities if one or more high-risk foot conditions are present.
- Review self-monitoring glucose record.
- Review/adjust medications to control glucose, lipids, blood pressure. Include regular use of low dose aspirin (if there are not contraindications) for cardiovascular disease prevention, as appropriate.
- Review self-management skills, progress toward behavior change goals, dietary needs, and physical activity as indicated.
- Assess for coping, depression, or other mood disorder.
- Counsel on smoking cessation and alcohol use.
- Review interventions for weight loss.
Older adults with diabetes

I. Trends in prevalence, costs, delivery of care

II. Current guidelines and tools for assessing their DSM* needs, challenges, resources

III. Likely sources of DSM errors and non-adherence

IV. Criteria for evaluating quality and relevance of assessments

V. Most useful assessments for older adults

*DSM=diabetes self-management
Single Item Literacy Screen (SILS)

“How often do you need to have someone help you when you read instructions, pamphlets, or other written material from your doctor or pharmacy?”

1-Never
2-Rarely
3-Sometimes
4-Often
5-Always

Difficulty reading and understanding printed health related material.

BMC Family Practice 2006, 7:21
### The Illness Perception Questionnaire

Research using a variety of different assessment techniques suggests patients differ in their ideas about illness (the illness perception) and in how they interpret their symptoms and the disease process. These components together constitute the patient's perception of their illness. The components provide a framework for patients to make sense of their symptoms, assess health risk, and direct action and coping. Each of these components reflects a perception about the nature of the illness and together they provide the individual's coherent view of an illness.

The major cognitive components identified from research are: **Identity** - which is comprised of the label of the illness and the symptoms the patient views as being part of the disease. **Cause** - personal ideas about etiology which may include single cause factors or more complex multiple cause models. **Timeline** - how long the patient believes the illness will last. **Consequences** - expected effects and outcome of the illness, and **Cure/control** - how one reacts from, or controls, the illness.

These components show logical interrelationships. For example, a strong belief that the illness can be cured or controlled is typically associated with short perceived illness duration and relatively minor consequences. In contrast, beliefs that an illness will last a long time and has a number of symptoms tends to be associated with more severe consequences perceptions and fewer beliefs about cure or control of the disease.

An important question that we have little information on at present is where do illness beliefs come from? It is likely that people build up knowledge and impressions of illness they observe and more exclusive views of particular diseases. It is not necessary to have had direct experience with an illness. The source of people’s perceptions of illness a diverse and range from first hand experiences with a family member who may suffer from an illness, to information from the media and friends as well as other health professionals. These perceptions may be dormant until they are activated by other illness or someone close to them.

Patient cognitive models of their illness are, by their nature, private. Patients are often reluctant to discuss their beliefs about their illness in medical consultations because they fear being seen as stupid or unwell. Until recently assessment of illness perceptions has been by open-ended interviews designed to encourage patients to articulate their own ideas of the illness. However, recently a questionnaire has been developed to measure illness perceptions in a variety of illnesses. The questionnaire assesses perceptions on each of the five dimensions by asking patients for their own beliefs about their condition. Example of the questions used to assess these components is shown below.

<table>
<thead>
<tr>
<th>Component</th>
<th>Theme</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identity</td>
<td>A number of symptoms that the patient sees as part of the illness.</td>
</tr>
<tr>
<td>Cause</td>
<td>A disease or illness caused by:</td>
</tr>
<tr>
<td>Consequences</td>
<td>My illness has major consequences on my life.</td>
</tr>
<tr>
<td>TimeLine</td>
<td>My illness will last for a long time.</td>
</tr>
<tr>
<td>Cure/Control</td>
<td>There is little that can be done to improve my illness.</td>
</tr>
</tbody>
</table>

Illness perceptions have a wide variety of uses in the health psychology area. Illness perceptions have been used to explain behaviour following heart attacks, response to cancer screening, disability in chronic fatigue syndrome, how patients cope with cancer treatment, and a variety of illnesses such as diabetes and rheumatoid arthritis.
### The Illness Perception Questionnaire

**Research**
Using a variety of different assessment techniques, patients express their experiences of an illness around five central themes: outcome, stress, causal attributions, consequences, and control. Each of these themes elicits a perception about one aspect of illness.

**Central Themes**
- **Outcome**: The presence or absence of a perceived change in health status.
- **Stress**: The extent to which illness is perceived as stressful.
- **Causal Attributions**: The perceived cause of the illness.
- **Consequences**: The perceived consequences of the illness.
- **Control**: The perceived control over the illness.

**Example Components**
- **Outcome**: Perceived change in health status.
- **Stress**: Extent of stress associated with illness.
- **Causal Attributions**: Perceived cause of illness.
- **Consequences**: Perceived consequences of illness.
- **Control**: Perceived control over illness.

**Number of Items**
- **Outcome**: 5 Items
- **Stress**: 4 Items
- **Causal Attributions**: 3 Items
- **Consequences**: 4 Items
- **Control**: 6 Items

**Example Items**
- **Outcome**: My illness is getting better.
- **Stress**: I find my illness stressful.
- **Causal Attributions**: My illness is caused by a virus.
- **Consequences**: My illness affects my work.
- **Control**: I have control over my illness.

**Related Studies**
- **Outcome**: Association with health outcomes.
- **Stress**: Influence on psychological well-being.
- **Causal Attributions**: Impact on disease severity.
- **Consequences**: Relationship with social support.
- **Control**: Effect on treatment adherence.

**Implications**
Understanding these components can help in the development of interventions to improve patient outcomes in various health conditions.
Illness Perception Questionnaire (IPQ-R)

YOUR VIEWS ABOUT YOUR ILLNESS
Listed below are a number of symptoms that you may or may not have experienced since your illness. Please indicate by circling Yes or No, whether you have experienced any of these symptoms since your illness, and whether you believe that these symptoms are related to your illness.

I have experienced this symptom since my illness

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Yes No</th>
<th>This symptom is related to my illness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain</td>
<td>Yes No</td>
<td>Yes No</td>
</tr>
<tr>
<td>Sore Throat</td>
<td>Yes No</td>
<td>Yes No</td>
</tr>
<tr>
<td>Nausea</td>
<td>Yes No</td>
<td>Yes No</td>
</tr>
</tbody>
</table>
### Brief Illness Perception Questionnaire (Brief-IPQ)

For the following questions, please circle the number that best corresponds to your views:

<table>
<thead>
<tr>
<th>Question</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>How much does your illness affect your life?</td>
<td>0 (no effect at all) to 10 (severely affects my life)</td>
</tr>
<tr>
<td>How long do you think your illness will continue?</td>
<td>0 (very short time) to 10 (forever)</td>
</tr>
<tr>
<td>How much control do you feel you have over your illness?</td>
<td>0 (no control) to 10 (extreme amount of control)</td>
</tr>
<tr>
<td>How much do you think your treatment can help your illness?</td>
<td>0 (not at all) to 10 (extremely helpful)</td>
</tr>
<tr>
<td>How much do you experience symptoms from your illness?</td>
<td>0 (no symptoms at all) to 10 (many severe symptoms)</td>
</tr>
<tr>
<td>How concerned are you about your illness?</td>
<td>0 (not at all concerned) to 10 (extremely concerned)</td>
</tr>
<tr>
<td>How well do you feel you understand your illness?</td>
<td>0 (don't understand at all) to 10 (understand very clearly)</td>
</tr>
<tr>
<td>How much does your illness affect you emotionally? (e.g., does it make you angry, scared, upset or depressed?)</td>
<td>0 (not at all affected emotionally) to 10 (extremely affected emotionally)</td>
</tr>
</tbody>
</table>

Please list in rank order the three most important factors that caused your illness.

1. 
2. 
3. 

© All rights reserved. For permission to use the scale, please contact: lab@bent.peec.net.nz
IPQ-R-DM
Listed below are a number of symptoms that you may or may not have experienced since your diabetes. Please indicate by circling Yes or No, whether you have experienced any of these symptoms since your diabetes, and whether you believe that these symptoms are related to your diabetes.

<table>
<thead>
<tr>
<th>Pain</th>
<th>Yes</th>
<th>No</th>
<th>________</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sore Throat</td>
<td>Yes</td>
<td>No</td>
<td>________</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Nausea</td>
<td>Yes</td>
<td>No</td>
<td>________</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Breathlessness</td>
<td>Yes</td>
<td>No</td>
<td>________</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Weight Loss</td>
<td>Yes</td>
<td>No</td>
<td>________</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Fatigue</td>
<td>Yes</td>
<td>No</td>
<td>________</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Stiff Joints</td>
<td>Yes</td>
<td>No</td>
<td>________</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Sore Eyes</td>
<td>Yes</td>
<td>No</td>
<td>________</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Wheeziness</td>
<td>Yes</td>
<td>No</td>
<td>________</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Headaches</td>
<td>Yes</td>
<td>No</td>
<td>________</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Upset Stomach</td>
<td>Yes</td>
<td>No</td>
<td>________</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Sleep Difficulties</td>
<td>Yes</td>
<td>No</td>
<td>________</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Dizziness</td>
<td>Yes</td>
<td>No</td>
<td>________</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Loss of Strength</td>
<td>Yes</td>
<td>No</td>
<td>________</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

We are interested in your own personal views of how you now see your current diabetes.

Please indicate how much you agree or disagree with the following statements about your diabetes by ticking the appropriate box.

<table>
<thead>
<tr>
<th>VIEWS ABOUT YOUR DIABETES</th>
<th>STRONGLY DISAGREE</th>
<th>DISAGREE</th>
<th>NEITHER AGREE NOR DISAGREE</th>
<th>AGREE</th>
<th>STRONGLY AGREE</th>
</tr>
</thead>
<tbody>
<tr>
<td>IP1</td>
<td>My diabetes will last a short time</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>IP2</td>
<td>My diabetes is likely to be permanent rather than temporary</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>IP3</td>
<td>My diabetes will last for a long time</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VIEWS ABOUT YOUR DIABETES</td>
<td>IMPORTANT TO ME</td>
<td>IMPORTANT TO ME</td>
<td>IMPORTANT TO ME</td>
<td>IMPORTANT TO ME</td>
<td></td>
</tr>
<tr>
<td>---------------------------</td>
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<tr>
<td>This diabetes will...</td>
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<tr>
<td>I expect to have this...</td>
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<tr>
<td>My diabetes is a...</td>
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<tr>
<td>My diabetes has...</td>
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<tr>
<td>My diabetes does not...</td>
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<tr>
<td>My diabetes strongly...</td>
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<tr>
<td>My diabetes has...</td>
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<td>My diabetes causes...</td>
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<tr>
<td>There is...</td>
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<tr>
<td>When I...</td>
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<tr>
<td>The course of my...</td>
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<tr>
<td>Nothing I do will...</td>
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<tr>
<td>I have the power to...</td>
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<tr>
<td>My actions may...</td>
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</tr>
<tr>
<td>My diabetes will...</td>
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<td>There is little that...</td>
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<td>My treatment may...</td>
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<tr>
<td>The negative...</td>
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<tr>
<td>My treatment can...</td>
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<tr>
<td>There is nothing...</td>
<td></td>
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</tr>
<tr>
<td>The symptoms...</td>
<td></td>
<td></td>
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<tr>
<td>My diabetes is a...</td>
<td></td>
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</tr>
<tr>
<td>Item</td>
<td>Description</td>
<td></td>
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<td>------</td>
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</tr>
<tr>
<td>IP20</td>
<td>I don't understand my diabetes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IP27</td>
<td>My diabetes doesn't make any sense to me</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>IP30</td>
<td>I have a clear picture or understanding of my condition</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IP30</td>
<td>The symptoms of my diabetes change a great deal from day to day</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>IP30</td>
<td>My symptoms come and go in cycles</td>
<td></td>
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<tr>
<td>IP34</td>
<td>My diabetes is very unpredictable</td>
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<tr>
<td>IP34</td>
<td>I go through cycles in which my diabetes gets better and worse.</td>
<td></td>
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<tr>
<td>IP34</td>
<td>I get depressed when I think about my diabetes</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>IP34</td>
<td>When I think about my diabetes I get upset</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IP34</td>
<td>My diabetes makes me feel angry</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IP37</td>
<td>My diabetes does not worry me</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>IP37</td>
<td>Having this diabetes makes me feel anxious</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IP38</td>
<td>My diabetes makes me feel afraid</td>
<td></td>
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</tr>
</tbody>
</table>
### Causes of My Diabetes

We are interested in what you consider may have been the cause of your diabetes. As people are very different, there is no correct answer for all questions. We are most interested in your own ideas about the factors that caused your diabetes rather than what others, including doctors, or family may have suggested to you. Below is a list of possible causes for your diabetes. Please indicate how much you agree or disagree that these were causes for you by ticking the appropriate box.

<table>
<thead>
<tr>
<th>POSSIBLE CAUSES</th>
<th>DEPENDENT</th>
<th>AGREE</th>
<th>DISAGREE</th>
<th>NEUTRAL</th>
<th>CORRELATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change in weight</td>
<td></td>
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<tr>
<td>Tobacco - it runs in my family</td>
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<tr>
<td>A CSM or virus</td>
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<tr>
<td>Diet or eating habits</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Change or bed habit</td>
<td></td>
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<tr>
<td>Poor medical care in my area</td>
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<tr>
<td>Pollution in the environment</td>
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<td>My own behavior</td>
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<tr>
<td>My mental attitude e.g. thinking about life negatively</td>
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<td>Family problems or stresses</td>
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<tr>
<td>Over eating</td>
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<tr>
<td>My emotional state e.g. feeling down, lonely, sad, angry</td>
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<tr>
<td>Ageing</td>
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<tr>
<td>Alcohol</td>
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<td>Smoking</td>
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<tr>
<td>Accident or injury</td>
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<tr>
<td>My personality</td>
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<tr>
<td>Altered hormones</td>
<td></td>
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</tbody>
</table>

In the table below, please list in order the three most important factors that you now believe caused your diabetes. You may use any of the items from the box above, or you may have additional ideas of your own.

1. ____________________________________________
2. ____________________________________________
Beacon Patient-Reported Outcome Quality-of-Life Tool

- Providers in 11 southeast Minnesota counties have their patients with diabetes complete a real-time, easy-to-use assessment tool that helps in identifying and addressing their biggest quality-of-life concerns.
- Completed just before each visit, the tool asks patients to identify their biggest concern, complete a checklist that helps define specific aspects of that concern, and rank various aspects of their perceived well-being.
- Based on the patient’s responses, the tool generates a list of interventions that could help the patient (tailored to the site using the tool), including treatment modifications and referrals to locally available resources.
- The electronic version also generates a graphic depiction of trends in patient responses over time. Although a formal, survey-based evaluation of the program is not yet complete, it has generated overwhelmingly positive feedback from patients and clinicians.
- **Evidence Rating**: Suggestive: The evidence consists of anecdotal feedback from patients and clinicians who have used the assessment tool.

Cited by AHRQ
http://www.innovations.ahrq.gov/content.aspx?id=3760
On the next few screens please tell us about a concern that you would like to discuss with your diabetes care team today and answer a few questions about how you are feeling.

This information will become part of your medical chart. This will not replace your regular discussion with your health care team. They will still talk to you today about test results or other health-related issues.

Not only will this allow your health care team to assist you, but it will also help us identify areas where more community resources are needed.

Please click the button below to get started. It will take about 5 minutes to complete.
which of the following, if any, represents your single biggest concern right now...

- personal relationships
  - Family
  - Friends

- monitoring health
  - Testing blood sugars
  - Checking feet

- emotional health
  - Sad
  - Anxious
  - Other emotional concerns

- money
  - Cost of medicine or supplies
  - Paying for care

- health behaviors
  - Diet
  - Exercise
  - Sleep

- medicine
  - Taking medication
  - Managing side effects

- getting health care
  - Finding a provider to talk to
  - Scheduling appointments

- work
  - Schedule
  - Environment
  - Managing your health condition at work

- physical health
  - Pain
  - Fatigue
  - Physical difficulties

- something else
Have you recently had any of the following problems or concerns? (Check all that apply)

- Difficulty testing your blood sugar (glucose) levels
- Feeling bothered by the time and energy required to test your blood sugar levels
- Difficulty keeping a record of your blood sugar levels
- Feeling bothered taking medical instruments (such as a glucose monitor, insulin syringes) wherever you go
- Difficulty finding a place to check blood sugar or take insulin when you are away from home
- Difficulty checking your feet
- Difficulty checking your blood pressure
- Difficulty monitoring weight, calories or carbs
- Something else
Have you recently had any of the following problems or concerns? (Check all that apply)

- Eating too much or too little
- Not sticking to your meal plan
- Not exercising the right amount
- Difficulty doing everyday physical activities such as walking, climbing stairs, carrying groceries
- Not sleeping enough to feel well-rested
- Feeling you should cut down on the amount of alcohol you drink
- Feeling you should quit smoking or using tobacco
- Something else
Have you recently had any of the following problems or concerns? (Check all that apply)

- Difficulty taking your medicine the way you should (at the right time and in the right amount)
- Feeling bothered by the time and energy needed to take your medicine
- Difficulty paying for your medicine
- Experiencing side effects from your medicine
- Difficulty adjusting your medicine based on sugar levels, meals or changing body weight
- Difficulty administering insulin
- Difficulty understanding what medicines you should be taking
- Something else
physical health

Have you recently had any of the following problems or concerns?
(Check all that apply)

- Pain
- Fatigue
- Vision problems
- Sleep problems
- Difficulty walking
- Shortness of breath
- Skin changes or infections
- Sexual problems
- Numbness or tingling in your hands and feet
- Something else
Resources

Grantees of the Diabetes Initiative have adapted and developed materials useful for project implementation. Training, education and assessment activities. We are making them available on this Website for others to use or adapt in their own organizations. If you use or adapt these please give credit to the developing organization.

* Materials By Type
  - Assessment Materials, Forms & Instruments
  - Patient Education Materials
  - Presentations
  - Program Management & Implementation
  - Spanish Materials
  - Staff Training Materials & Methods
  - Template Recruitment & Marketing Materials

* Materials By Topic
  - Community Health Workers (including Lay Health Workers & Educators, Coaches & Promotores)
  - Follow-up and Support
  - General Administration
  - Goal Setting
  - Healthy Coping
  - Healthy Eating
  - Individual Assessment
  - Linking to Quality Clinical Care
  - Multiple Self Management Behaviors
Resources

Individual Assessment

This section includes individual assessment materials related to various topics including goal setting, depression, action planning and more. It also includes provider documentation forms for individual patients or program participants. Materials are organized by the nature of their use.

Assessment Materials, Forms & Instruments

- Action Plan Form English
- Action Plan Form Spanish
- Attitudes Survey
- BCS Patient Questionnaire
- Behavioral Health Assessment Tool
- Behavioral Health Assessment Tool Spanish
- Behavior Worksheet
- Case Management Assessment and Follow Up Form
- Case Management Intake Form
- Diabetes Clinical Form
- Diabetes Group Visit Form
- Diabetes Provider Visit Form
- Goal Follow up Form
- Goal Setting Assessment Tool
- Goal Setting Form and Tips English/Spanish
- Goal Setting Support Tool
- Health Belief Questionnaire English/Spanish
- Lifestyle Survey
- Mental Health Progress Report Form
- Nutrition Goal Setting Form
- Patient Assessment Form
- Patient Assessment Form Spanish
- Patient Diabetes Knowledge Questionnaire English
- Patient Diabetes Knowledge Questionnaire Spanish
- Patient Information Sheet English/Spanish
- Program Evaluation
- Program Evaluation Telephone Survey
- Program Intake Form
- Program Intake Form Spanish
- Project Participant Assessment
- Project Participant Post-test
- Project Participant Pre-test
- Project Participant Questionnaire
- Questions for People with Diabetes
- Ready for Change Assessment Form
- Self Efficacy Assessment Tool
- Self Management Goal Follow Up Form
- Self Management Goal Form
- Self Management Goal Form English
- Self Management Goal Form Spanish
- Short Depression Screening Tool English/Spanish
- Social Support Assessment Tool
- Social Support Assessment Tool Spanish
- Stages of Change Questions
- Type 2 Diabetes Standing Orders (MA Planned Visit)
- Weekly Action Plan Form
- Whisking Your Way to Health Program Evaluation
**Appendix B: Health Belief Questionnaire**

**Scale:** 5 = Strongly Agree; 4 = Agree; 3 = Not Sure; 2 = Disagree; 1 = Strongly Disagree
3 = Totalemente de acuerdo; 4 = de acuerdo; 2 = de acuerdo; 1 = totalmente en desacuerdo

<table>
<thead>
<tr>
<th>Question</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. My diabetes is well controlled</td>
<td></td>
</tr>
<tr>
<td>2. I would have to change too many habits to follow my diet (diabetic foods)</td>
<td></td>
</tr>
<tr>
<td>3. It has been difficult following the diet (diabetic foods) the doctor ordered for me</td>
<td></td>
</tr>
<tr>
<td>4. I am confused by all the medication the doctor has given me</td>
<td></td>
</tr>
<tr>
<td>5. I would have to change too many habits to take my medication</td>
<td></td>
</tr>
<tr>
<td>6. Taking my medication interferes with my normal daily activities</td>
<td></td>
</tr>
<tr>
<td>7. I have others around me who remind me to eat the right foods</td>
<td></td>
</tr>
<tr>
<td>8. I can count on my family when I need help following my diet (diabetic foods)</td>
<td></td>
</tr>
<tr>
<td>9. My spouse/spouse is easy to follow my diet (diabetic foods)</td>
<td></td>
</tr>
<tr>
<td>10. If I changed &quot;job,&quot; I would be easier to follow my diet (diabetic foods)</td>
<td></td>
</tr>
<tr>
<td>11. My work makes me so tired that it’s hard to follow my diet (diabetic foods)</td>
<td></td>
</tr>
<tr>
<td>12. I could control my weight if the pressures of my job weren’t so great</td>
<td></td>
</tr>
<tr>
<td>13. It was difficult to follow the diet (diabetic foods) the doctor ordered for me</td>
<td></td>
</tr>
<tr>
<td>14. I am confused by all the medication the doctor has given me</td>
<td></td>
</tr>
<tr>
<td>15. My spouse/spouse is easy to follow my diet (diabetic foods)</td>
<td></td>
</tr>
<tr>
<td>16. If I changed &quot;job,&quot; I would be easier to follow my diet (diabetic foods)</td>
<td></td>
</tr>
<tr>
<td>17. My work makes me so tired that it’s hard to follow my diet (diabetic foods)</td>
<td></td>
</tr>
<tr>
<td>18. I could control my weight if the pressures of my job weren’t so great</td>
<td></td>
</tr>
</tbody>
</table>
How do CDEs prioritize?

Much to teach.

- DSM behaviors
- Test BG
- Feet
- Eyes
- Etc.
- Diet
- Meds

Many standards to meet:

American Guidelines: DSME &/or Elderly

- ADA/Endo Soc 2013
- ACOG 2011
- ADA/AGS 2012
- AAFP 2009
- ADA 2014
- APA 2004, 2012
- AGS 2012 2013
- AACE/ACE/OS 2011
- ADA/EASD 2012
- Joslin 2007 2009
- AACE 2013
- IDF 2013

Others
Older adults with diabetes

I. Trends in prevalence, costs, delivery of care

II. Current guidelines and tools for assessing their DSM* needs, challenges, resources

III. Likely sources of DSM errors and non-adherence

IV. Criteria for evaluating quality and relevance of assessments

V. Most useful assessments for older adults

*DSM=diabetes self-management
Patient's Method of Figuring Meal-time Insulin Doesn't Quite Work

Recently I assessed an 84 year old inpatient with diabetes for his insulin usage at home. In reporting his dosing he stated that after he checked his glucose before each meal he took the "first two numbers of the result," and made that his dosage for meal-time insulin. For example, if the glucose reading was 240, he would take 24 units of Humalog.

I asked him if this was his instruction per his provider and he said, "No, but it was the only thing that made sense to me that I could remember."...

A specific teaching plan with simple dosing was designed for him and a home health evaluation for medication administration safely was also made on his return home.

Lesson Learned:

This example once again reiterates the importance of having the patient give you a verbal and sometimes a practice demonstration of what they understand to be the practice for medication administration.

Janet Howard-Dusay, RN, BA/BSN, CDE
Diabetes Nurse Educator
Diabetes Disaster Averted #51: Careful Listening Saves Lives

A few years ago, I was working as a Nurse Practitioner in an endocrinology practice. One of my longstanding elderly patients, age 82, called me to report that the paramedics had to come to her house because she passed out....

I scheduled her for an appointment the next day, and took her history. She'd had diabetes for about 15 years, and was taking a long acting insulin at bedtime and rapid acting insulin before her meals. I reviewed her activities of the day (meal times, insulin doses and times, and activity level). She reported that she had her dinner, and then next thing she knew she was passed out at the dinner table. I performed a complete physical exam, which was normal. I was ready to order a battery of lab tests, and considering testing her for gastroparesis since it appeared that she'd had a severe hypoglycemic reaction so soon after eating.

I reviewed her recent episode with her again, stating "so you ate your dinner, and then you passed out..." at which point she interrupted with "no, I did not eat my dinner, I HAD it, it was right in front of me on the table, and then I passed out...." The conclusion was that she had a severe hypoglycemic reaction because she delayed her dinner.

Lesson learned: Obtain a complete history from the patient, choosing words carefully, and make sure you and your patient are speaking the same language and have the same meaning! The lesson learned from this case saved a lot of time and money from unnecessary testing and work up.

Louise DeRiso, MSN, CRNP, CCRN
Coordinator, Vascular Clinical & Translational Research Center
University of Pittsburgh
Normal age-related cognitive decline

How important?

<table>
<thead>
<tr>
<th>Cognitive ability</th>
<th>≈ ability to learn &amp; reason well</th>
<th>≈ functional literacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive ability</td>
<td>➡ better DSM</td>
<td></td>
</tr>
<tr>
<td>Functional literacy</td>
<td>➡ better adherence</td>
<td></td>
</tr>
</tbody>
</table>

Learning & reasoning ability

Basic cultural Knowledge ($G_C$)

$g$ - Basic information processing ($G_F$)
Recall: older adults have less functional literacy

How handicapping? VERY!

% with very low functional literacy*

*Level 1 or 2 on NCES adult literacy survey’s 5-level scale  Source: Tables 1.2 and 1.3 of Literacy of Older Adults in America, 1996, http://nces.ed.gov/pubs97/97576.pdf (accessed 8/1/14)
## Typical literacy items, by difficulty level

### National Adult Literacy Survey (NALS), 1993

**Community dwelling**

<table>
<thead>
<tr>
<th>NALS difficulty level</th>
<th>% US adults peaking at this level: Prose scale</th>
<th>Simulated everyday tasks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Age</td>
<td>Daily self-maintenance in modern literate societies</td>
</tr>
<tr>
<td></td>
<td>16-59 60-69 70-79 80+</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>4 1 1 0</td>
<td>- Use calculator to determine cost of carpet for a room</td>
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<tr>
<td></td>
<td></td>
<td>- Use table of information to compare 2 credit cards</td>
</tr>
<tr>
<td>4</td>
<td>20 8 5 1</td>
<td>- Use eligibility pamphlet to calculate SSI benefits</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Explain difference between 2 types of employee benefits</td>
</tr>
<tr>
<td>3</td>
<td>35 27 19 6</td>
<td>- Calculate miles per gallon from mileage record chart</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Write brief letter explaining error on credit card bill</td>
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<tr>
<td>2</td>
<td>25 33 22 27</td>
<td>- Determine difference in price between 2 show tickets</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Locate intersection on street map</td>
</tr>
<tr>
<td>1</td>
<td>16 30 42 66</td>
<td>- Total bank deposit entry</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Locate expiration date on driver’s license</td>
</tr>
</tbody>
</table>

Includes normal cognitive decline
## Typical literacy items, by difficulty level

**National Adult Literacy Survey (NALS), 1993**

<table>
<thead>
<tr>
<th>NALS difficulty level</th>
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<td></td>
<td>16-59</td>
<td>60-69</td>
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<tr>
<td>5</td>
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<td>4</td>
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</table>
## Typical literacy items, by difficulty level

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<td>16-59</td>
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<td>35</td>
<td>27</td>
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<td>25</td>
<td>33</td>
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<td>16</td>
<td>30</td>
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</table>

The “simple” becomes harder or impossible to do
Typical literacy items, by difficulty level
National Adult Literacy Survey (NALS), 1993

<table>
<thead>
<tr>
<th>NALS difficulty level</th>
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<td>16</td>
<td>30</td>
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</tbody>
</table>

Elements of “process complexity”
- number of features to match
- level of inference
- abstractness of info
- distracting info
Readability doesn’t make a complex task easy.

To be or not to be, that is the question.

Ingredients of readability:
ASW: Average syllables per word
ASL: Average words per sentence

\[
\text{Flesch-Kincaid Grade Level} = 100.0 - \frac{(84.6 \times \text{ASW}) - (1.015 \times \text{ASL})}{206.835 - (11.8 \times \text{ASW}) - (0.39 \times \text{ASL})} - 15.59
\]
Appropriate assessment is essential for individualizing DSME.

To do that, CDEs will need to:

1. screen older adults for most critical DSM tasks

2. assess patient’s major barriers to learning

3. recognize the complexity levels of the DSM tasks (Bloom’s Taxonomy)
Bloom’s Taxonomy of Learning Objectives (2001 revision)

Bloom’s levels = continuum of cognitive complexity

<table>
<thead>
<tr>
<th>Lower Order Thinking Skills</th>
<th>Cognitive Processes Dimension</th>
<th>Higher Order Thinking Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Remember</em></td>
<td><em>Understand</em></td>
<td><em>Apply</em></td>
</tr>
<tr>
<td>Recognizing (identifying)</td>
<td>Interpreting (clarifying, paraphrasing, representing, translating)</td>
<td>Executing (carrying out)</td>
</tr>
<tr>
<td>Recalling (retrieving)</td>
<td>Exemplifying (illustrating, instantiating)</td>
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</tr>
<tr>
<td>Classifying (categorizing, subsuming)</td>
<td>Summarizing (abstracting, generalizing)</td>
<td>Differentiating (discriminating, distinguishing, focusing, selecting)</td>
</tr>
<tr>
<td>Inferring (concluding, extrapolating, interpolating, predicting)</td>
<td>Comparing (contrasting, mapping, matching)</td>
<td>Checking (coordinating, detecting, monitoring, testing)</td>
</tr>
<tr>
<td>Explaining (constructing models)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*(Table 1 adapted from Anderson and Krathwohl, 2001, pp. 67–68.)*

Cognitive complexity

Learning objectives

Assessment of learning

Learning activities & materials
DSM tasks differ in complexity

Bloom’s taxonomy of educational objectives (cognitive domain)*

Simplest tasks
1. Remember
   recognize, recall, Identify, retrieve

2. Understand
   paraphrase, summarize, compare, predict, infer

3. Apply
   execute familiar task, apply procedure to unfamiliar task

4. Analyze
   distinguish, focus, select, integrate, coordinate

5. Evaluate
   check, monitor, detect inconsistencies, judge effectiveness

6. Create
   hypothesize, plan, invent, devise, design

Most complex tasks

Anticipate effect of exercise & foods on blood glucose.

Coordinate meds, diet, and exercise.

Manage sick days.

Determine when & why blood glucose is out of control.

Monitor symptoms; assess whether action needed; evaluate effectiveness of actions.

Create daily and contingency plans that control blood glucose.

Recall effects of exercise on glucose.

Remember to measure foods, drinks & read labels.

Remember to take BGs & Rx.

Bloom's taxonomy of educational objectives (cognitive domain)*

**Simplest tasks**

1. **Remember**
   - recognize, recall, identify, retrieve

2. **Understand**
   - paraphrase, summarize, compare, predict, infer

3. **Apply**
   - execute familiar task, apply procedure to unfamiliar task

4. **Analyze**
   - distinguish, focus, select, integrate, coordinate

5. **Evaluate**
   - check, monitor, detect inconsistencies, judge effectiveness

6. **Create**
   - hypothesize, plan, invent, devise, design


Risk of cognitive overload!

Especially when cognitive resources are weak or declining

DSM is complex job
Anticipate effect of exercise & foods on blood glucose. Coordinate meds, diet, and exercise. Manage sick days. Determine when & why blood glucose is out of control. Monitor symptoms; assess whether action needed; evaluate effectiveness of actions. Create daily and contingency plans that control blood glucose.

Recall effects of exercise on glucose. Remember to take BGs & Rx. Remember to measure foods, drinks & read labels. Remember to take BGs & Rx. Recall effects of exercise on glucose.

**DSM tasks differ in complexity**

---

**Diabetes Disaster Averted #11: Label Literacy**

I am a dietitian working as a diabetes educator. I often work with patients on insulin, and teach insulin to carb ratios and correction factors...

Patients need to be able to read food labels and know portion size in order to dose their mealtime insulin correctly. I often get referred patients who have had some education about food choices and carbs and I help them determine these ratios.

I was reviewing a patient's food logs and insulin dose, and I questioned the amount of carbohydrate he had stated for a particular food item, as it seemed high. I quickly found out the patient was actually looking at the weight of the food item in grams instead of looking at Total Carbohydrates grams on the food label.

The patient had erroneously calculated a higher insulin dose based on weight grams not carb grams. Luckily, he experienced no hypoglycemia.

Now I make sure to point out to patients the difference in serving weight and Total Carbohydrates, and to use only the value next to Total Carbohydrates (adjusting for serving size).

He has not been the only patient who gets confused by this.

*Marilyn Baker, MS, RD, CDE*

Take home message:

In addition to looking at weight grams patients often use the % of daily allowance as the amount of carbs they eat. And even the most experienced counter can make a big mistake. It is always good to remind your patients exactly what they should be looking for on the label each time you see them.

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**Bloom's taxonomy of educational objectives (cognitive domain)**

**Simplest tasks**

1. **Remember**
   - recognize, recall, identify, retrieve

2. **Understand**
   - paraphrase, summarize, compare, predict, infer

3. **Apply**
   - execute familiar task, apply procedure to unfamiliar task

4. **Analyze**
   - distinguish, focus, select, integrate, coordinate

5. **Evaluate**
   - check, monitor, detect inconsistencies, judge effectiveness

6. **Create**
   - hypothesize, plan, invent, devise, design

**Most complex tasks**


She did not accurately remember ("eat dinner") the DM ed,
She did not understand ("eat vs had meal"),
Could not apply instructions appropriately,
Could not analyze her situation
Could not evaluate what she did wrong
Older adults with diabetes

I. Trends in prevalence, costs, delivery of care

II. Current guidelines and tools for assessing their DSM* needs, challenges, resources

III. Likely sources of DSM errors and non-adherence

IV. Criteria for evaluating quality and relevance of assessments

V. Most useful assessments for older adults

*DSM=diabetes self-management
What is most important to know

• about this patient
• right now
• and *why*?
Is the assessment tool

Clinically relevant ?
Valid ?
Reliable ?
Useful ?

For your elderly patient ?
Criteria for evaluating assessment tools

• **Clinical relevance:** Is what you intend to measure, really worth measuring?
  – In *this* population*
  – For *my* purposes

• **Validity:** Does this tool really measure it?
  – In *this* population

• **Reliability:** Does it provide results precise and consistent enough for *my* purposes?
  • In *this* population

• **Utility:** Do the benefits of using it outweigh the costs/harm?
  – In *this* population

*Here, older adults with diabetes*
Single Item Literacy Screen (SILS)

“How often do you need to have someone help you when you read instructions, pamphlets, or other written material from your doctor or pharmacy?”

1-Never
2-Rarely
3-Sometimes
4-Often
5-Always

Difficulty reading and understanding printed health related material.
1. Clinical relevance

Is what you intend to measure, really worth measuring?

- High priority patient behavior or outcome?
- A big causal influence?
- Malleable? (fixable)
- In my intended population?
- Results would guide instructional decisions

How do you know that?
Good evidence, or mostly supposition?
2. Validity

Does the tool really measure what it claims to?

- Am I really clear about what I want to measure?
- Does this tool really measure it?
  - Solid *evidence*?
  - Label is poor guide
    - Same label often means different things (e.g., “quality of life”)
    - Different labels often mean same thing (e.g., “literacy” & “cognitive ability”)
  - Testimonials are poor guide
- Any validation for older adults?
3. Reliability

How precise and consistent are the results this tool provides?

- Margin of error (if “continuous” variable)?
- Or, rate of false positives and false negatives (if categorical)?
- Accurate enough for my intended use?
- Any evidence for older adults?

_Evidence matters, popularity does not._
4. Utility

Do the benefits outweigh the costs/harm of using this tool?

- Acceptable to patients & providers?
- Comprehensible to users?
- Feasible for practical use?
  - Expense; time to administer, score and record; flow of work; staff
- Consequences of collecting and using the info?
  - Benefits of true positives and negatives
  - Harm of false positives and negatives

_Evidence matters, wishful thinking does not_
Older adults with diabetes

I. Trends in prevalence, costs, delivery of care

II. Current guidelines and tools for assessing their DSM* needs, challenges, resources

III. Likely sources of DSM errors and non-adherence

IV. Criteria for evaluating quality and relevance of assessments

V. Most useful assessments for older adults

*DSM=diabetes self-management
Assessment Realities

- Myriad assessments, but few validated for older adults

- Older adults have a more complicated DSM job

- Older adults tend to have fewer cognitive resources for learning and doing DSM well

- But they differ enormously—one size does not fit all
The most useful assessment tools for the elderly answer these questions:

1. What is most important, right now, for this patient to *learn to do DSM*

2. What are the *major barriers* to this patient learning to *do DSM*?

3. What is the most effective way to *teach* this patient?

*And meet these criteria:*

- Clinically relevant
- Valid
- Reliable
- Useful
Recall........

- Many of your patients/clients will:
  - have complex medical problems,
  - experience heavy burdens in self-care,
  - but have fewer physical and cognitive reserves for effective self-care.

- Patients’ physical and cognitive health trajectories will differ widely

Good Assessment Matters!
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