



Making Data Count

Measuring Diabetes and Obesity in the Indian Health System

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IHS Division of Diabetes Treatment and Prevention

Diabetes Self-Management Education Participant Outcome Management

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Session: D2

DO PATIENTS BENEFIT FROM YOUR DSME PROGRAM

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PROGRAM OBJECTIVES

- Discuss standards for DSME outcomes
- Describe measurements which evaluate DSME patient outcomes
- Discuss methods and processes for outcomes measurement
- Describe available applications that can be used to manage data
- Discuss examples of how to report patient outcomes

**Accountability is now a priority
in health care.**

OUTCOMES are defined as “a measurable product and is the changed state or condition of an individual as a consequence of health care” over time

Donabedian, 1980

STANDARDS FOR OUTCOMES MEASUREMENT OF DIABETES SELF MANAGEMENT EDUCATION

- Behavior change is the unique outcome measurement for DSME
- Seven diabetes self-care behavior measures determine the effectiveness of DSME
- Diabetes self-care behaviors should be evaluated at baseline and then at regular intervals during and after the education intervention

Technical Review DSME Core Outcomes, Diabetes Educator Sept/Oct 2003 pp 768 -803

OUTCOMES MEASUREMENT OF DIABETES SELF MANAGEMENT EDUCATION

- Knowledge is an outcome to the degree that is actionable
- Effective self-management behavior is one contributor to longer-term, higher order outcomes such as clinical status, health status and subjective quality of life

ADA National Standards for Diabetes Self-Management Education; 2007

2007 ADA NATIONAL STANDARDS FOR DSME

- Outcomes Standard
 - *Standard 9: The DSME entity will measure attainment of patient-defined goals and patient outcomes at regular intervals using appropriate measurement techniques to evaluate the effectiveness of the educational intervention*

DSME OUTCOMES

- Diabetes self-management behavior
- Knowledge
- Clinical status
- Health status
- Quality of life



DIABETES SELF MANAGEMENT BEHAVIORS

- Healthy eating
- Physical activity
- Monitoring blood glucose
- Medication taking
- Problem solving
- Reducing complication risks
- Effective coping

DIABETES KNOWLEDGE

- Diabetes disease process
- Nutritional management
- Physical activity
- Medications
- Monitoring blood glucose
- Acute complications
- Chronic complications
- Stress and coping
- Behavior change and goal setting

CLINICAL STATUS

- Glycemic control
- Blood pressure control
- Lipid management
 - Total cholesterol
 - HDL
 - LDL
 - Triglycerides
- Weight loss

HEALTH STATUS

- **Complication Risks**
 - Cardiovascular disease
 - Chronic kidney disease
 - Eye disease
 - High risk feet
 - Periodontal disease

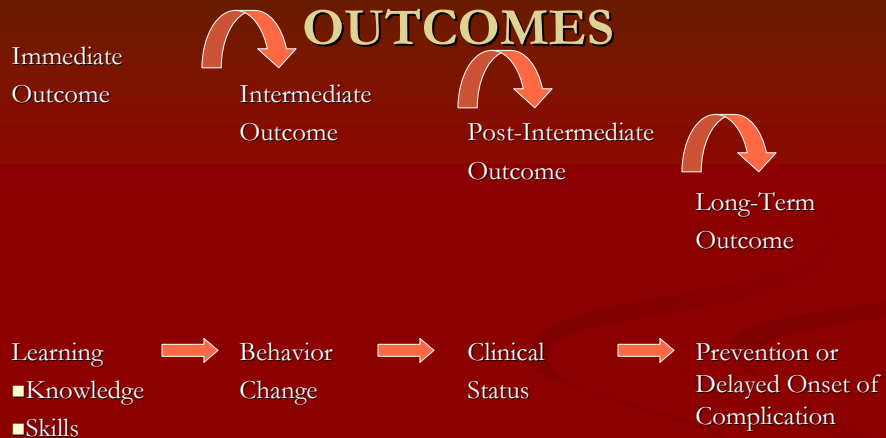
QUALITY OF LIFE

- Frequency of symptoms
- Level of functioning
 - Mobility
 - Physical activity
 - Social activity

DSME OUTCOMES

- Diabetes self-management behavior
- Knowledge
- Clinical status
- Health status
- Quality of life

CONTINUUM OF DSME OUTCOMES



AADE Position Statement: Standards for Outcomes Measurement of Diabetes Self Management Education; Diabetes Educator, Sept/Oct 2003 pp 804-816

Immediate Outcomes

■ Learning

- Knowledge
- Skills

Can be measured at the time of the intervention

- Pre & post test
- Return skills demonstration

Intermediate Outcomes

■ Behavior Change

- Healthy Eating
- Physical Activity
- Monitoring
- Medications
- Problem Solving
- Risk Reduction
- Coping

■ Result over time

- Require baseline information
- Evaluate at specified intervals

■ Methods of Measurement

- Self report
- Logs, diaries
- Questionnaires

Post Intermediate Outcomes

- **Clinical Status**
 - A1c
 - Blood pressure
 - Lipids
 - Weight
 - BMI
 - Waist circumference
- **Result over time**
 - Obtain baseline results
 - Evaluate at specified intervals
- **Methods of Measurement**
 - Lab tests
 - Meter/lab comparison
 - Pre & post weight, BMI, waist circumference

Long Term Outcomes

- **Prevent or Delay Complications**
 - Complication Stage
 - High risk behavior
 - High risk factors
- **Result over time**
 - Obtain baseline results
 - Evaluate at specified intervals
- **Methods of Measurement**
 - Eye and foot exams
 - Chart audit
 - Complication stage

Outcomes Measurement Process

- Identify current behavior, knowledge and skills
 - Baseline measurement
- Develop educational and behavioral goals
 - Identify challenges and barriers
- Intervention
 - Education plan
 - Patient selected self-care plan
 - Include problem solving strategies

Outcomes Measurement Process

- Determine the interval between measurements
- Evaluate progress toward goals
 - Review challenges and barriers
- Revise plan as needed
- Continued follow up to maintain behavior change, clinical status and health status

Available Applications

- Commercial software specific for DSME programs:
 - Chiron – DiaMed: Diabetes management software for diabetes education www.chirondata.com
 - Harbor Software International: Diabetes Management System www.harborsoft.com
 - Tiara: Diabetes Education Tracking Software www.tiara-mas.com
 - ADA Diabetes Education Database <http://store.diabetes.org/products>

Available Applications

- Web Based Applications
 - AADE™7 www.diabeteseducator.org
 - Blood Glucose Meter Companies
 - Abbott
 - Lifescan
 - Roche

Other Applications

- RPMS – Diabetes Management System
- RPMS – Case Management System
- Filemaker Pro – used by Muskogee Creek Nation Diabetes Program

Muskogee Creek Nation
DSME Program