



Making Data Count

Measuring Diabetes and Obesity in the Indian Health System

December 18-20, 2007

IHS Division of Diabetes Treatment and Prevention

Using Data to Measure the Effectiveness of Your Diabetes Self-Management System

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Session: D3

Using Data to Measure the Effectiveness of DSME Programs

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Education Objectives

- Discuss how goals and objectives define the effectiveness of a DSME Program
- Describe population based outcome measurements which demonstrate DSME program effectiveness
- Describe the process to evaluate program effectiveness
- Discuss applications and methods for data collection and analysis
- Present examples of DSME evaluation reports

Concepts

- Goals
- Objectives
- Population based outcomes
- Data collection and analysis
- Reporting

Goal Statement

- Goal - the broad statement of what is to be accomplished
 - Written to include all aspects of a program
 - Provides overall direction for a program
 - More general in nature

DSME Example: Promote diabetes self management behavior to reduce the risk for DM related complications.

Objectives

- Objectives: Outline in measurable terms the changes that will occur in the target population as a result of program activities

Objective

- The key components to good objectives are **SMART**:

S – specific
M – measurable
A – attainable
R – realistic
T – time-bound

- **DSME Example:** 75% of persons with a new DM diagnosis will complete a 10 hour comprehensive DSME program in FY-08

Good Objectives Include

1. What will change: Outcome that will be achieved

DSME Example: 75% of persons with a new DM diagnosis will **complete a 10 hour comprehensive DSME program** in FY-08

2. When will it change: Conditions under which the outcomes will be observed

DSME Example: 75% of persons with a new DM diagnosis will complete a 10 hour comprehensive DSME program **in FY-08**

Good Objectives Include

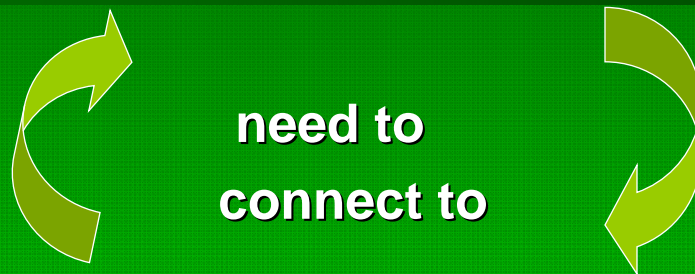
3. **How much change:** Criterion for deciding whether the outcomes has been achieved

DSME Example: 75% of persons with a new DM diagnosis will complete a 10 hour comprehensive DSME program in FY-08

4. **Who will change:** Target population

DSME Example: 75% of persons with a new DM diagnosis will complete a 10 hour comprehensive DSME program in FY-08

Outcomes



Goals and Objectives

Population Based Outcomes

- Informs the practice about the effectiveness of specific interventions
- Identifies processes or practice guidelines that will improve diabetes care
- Identifies high risk persons
- Informs stakeholders of the effectiveness of the program

Standards for Outcomes Measurement of DSME

- Behavior change is the unique outcome 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 after the education program

Standards for Outcomes Measurement of DSME

- The continuum of outcomes, including learning, behavioral, clinical, and health status, should be assessed to demonstrate the interrelationship between DSME and behavior change in the care of persons with diabetes
- Aggregate population outcomes are used to guide program services and CQI activities

Outcome Measurements

- Process
- Clinical
- Behavior
- Program

Evaluation Plan

Type of Objective	Program Outcomes	Possible Evaluation Measures	Type of Evaluation
Process Objectives	DSME Activities	Number of sessions, participation, completion rates, staff performance,	Process
Behavioral Objectives	DSM Behaviors	Change in behavior,	Outcome
Clinical Objectives	Lab values, biometric measurements	A1c, Lipids, B/P, BMI, Waist circumference	Outcome
Program Objectives	Health status, exams, quality of life, financial	Complication rates, exams, QOL indicators, reimbursement	Impact

Evaluation Process

- Develop the evaluation process at the same time as planning the program
 - What will be evaluated (consistent with goals and objectives)
 - Methods of evaluation (assessment tools, questionnaires and other data collection methods)
 - Frequency of evaluation (pre/post program)
 - Establish benchmarks (standardized)

Evaluation Process

- Integrate the evaluation into the ongoing activities of the program
 - Obtain baseline data
 - Collect data at specified intervals
- Involve as many team members as early as possible
 - Identify team members
 - Provide training

Evaluation Process

- Develop a structured and consistent method of collecting and analyzing data
 - Time frames
 - Interpretation (objective vs. subjective)

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
- MS Excel or other spreadsheet applications
- MS Access or other database applications

RPMS – Diabetes Audit

- Target Population
 - Template of DSME program participants
 - Template of DSME program participants who completed the program
 - Template of DSME program participants who did not complete the program

Behavior - SBGM

	Completed Program n = 78	Did Not Complete n = 72	All Participants n = 150
SBGM Documented			
YES	94%	74%	84%
NO	1%	26%	16%

Glycemic Control

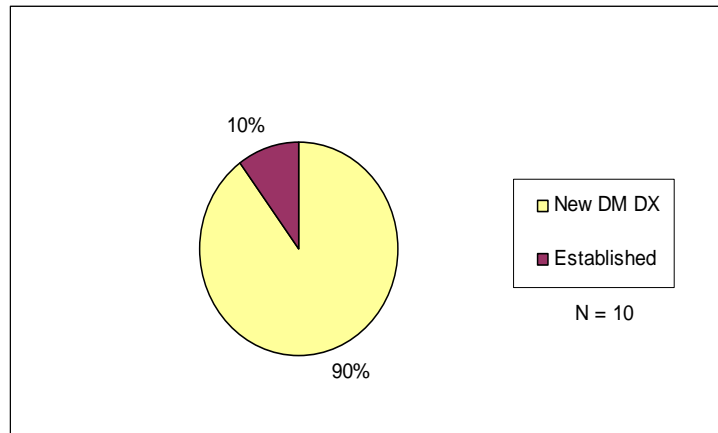
	Completed Program n = 78	Did Not Complete n = 72	All Participants n = 150
Most Recent A1c			
A1c < 7.0	88%	61%	75%
A1c 7.0 - 7.9	9%	4%	7%
A1c 8.0 - 8.9	1%	10%	5%
A1c 9.0 - 9.9	0%	7%	3%
A1c 10.0 - 10.9	0%	4%	2%
A1c > 11.0	1%	7%	4%
Undocumented	0%	7%	3%

Exam & Immunizations

	Completed Program n = 78	Did Not Complete n = 72	All Participants n = 150	All DM Patients n = 1798
Exams				
Foot Exams	88%	61%	81%	53%
Eye Exam - Dilated	82%	4%	79%	48%
Dental Exam	87%	10%	83%	36%
Immunizations				
Flu Vaccine	67%	60%	63%	47%
Pneumovax	21%	22%	21%	8%

Muskogee Creek Nation Program

Target Population



DSME Participation Rates Target Population

