

Validity and Reliability Testing of the Diabetes Self-Management Assessment Report tool (D-SMART), Diabetes Educator (D-ET) Tools and Diabetes Outcomes Intervention Tool (DO-IT)

As reported by Kathy Mulcahy, RN, MSN, CDE, Past President AADE, at the AADE 2000 Annual Meeting in San Diego, the tools that comprise the National Diabetes Education Outcomes System have been tested for validity and reliability. Together, these tools support best practices for program development and patient intervention.

D-SMART: This tool is a self-report instrument that captures: 1) current behavior, 2) intent to change, 3) skills/skills confidence, and 4) barriers. More than 1,400 D-SMARTs were tested in 29 diabetes education centers nationwide.

Validity:

- Face validity
 - Expert panel convened, defined outcomes and developed the D-SMART
- Content Validity
 - Content validity index was high with >90% of the panel agreeing to survey questions
- Concurrent Validity
 - Ongoing assessment.

Reliability

- High test-retest reliability
 - Patients completed the D-SMART twice within a two week period prior to an intervention.
 - There was no significant difference in 97% of responses
- High inter-item consistence
 - Questions related to certain domains (e.g., coping with diabetes, barriers to change) were highly correlated

Responsiveness

- Questions and response categories in the D-SMART were sensitive enough to quantify behavior changes for each of the outcome areas

D-ET: This tool is based on the AADE7™ and integrates educational, behavioral and clinical aspects of care utilized at each intervention. D-ET focuses on educator report of assessment, interventions and outcomes. It promotes learning, behavioral and clinical measures as well as patient outcomes vs. content. D-ET replaces Assessment, Education Checklist and Outcomes Tracking documentation forms.

The D-ET prototype was tested at 11 sites to assess which data entries within 22 data fields were missing or not needed and why. Testing for reliability and validity of the refined tool is ongoing.

DO-IT: This tool integrates educational processes with clinical care. DO-IT replaces assessment, education checklist and outcomes tracking documentation forms. Based on the AADE7™, it considers site characteristics, educator profiles, service delivery methods and program design. The prototype Do-IT was assessed prior to 2000; testing for reliability and validity of the current instrument is ongoing.