

# Implementing Diabetes Education Programs – Clinical and Behavioral Outcomes

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# Agenda

- About American Association of Diabetes Educators (AADE) and Diabetes Self-Management Education/Training (DSME/T)
- Relevance of DSME/T to Disease Management
- Implementing DSME/T Programs – a Case Study
- Outcomes Measures - Clinical and Behavioral
- Conclusion



# AADE

- AADE is a multidisciplinary association of healthcare professionals dedicated to integrating **successful self-management** as a key outcome in the care of people with diabetes and related conditions.



# AADE

- **Vision:** Successful self-management for all people with diabetes and related conditions
- **Mission:** Driving professional practice to promote healthy living through self-management of diabetes and related conditions



# AADE's Strategic Goals



# Diabetes Self-Management Education

- DSME is a collaborative process through which people with or at risk for diabetes gain the knowledge and skills needed to modify behavior and successfully self-manage the disease and its related conditions
- Goals of education
  - achieve best health possible and a better quality of life
  - reduce the need for costly healthcare
- Diabetes Educators
  - use principles of teaching/learning/counseling
  - Facilitate behavior change to manage their diabetes





**Healthy eating**

**Being active**

**Monitoring**

**Taking medication**

**Problem-solving**

**Healthy coping**

**Reducing risks**



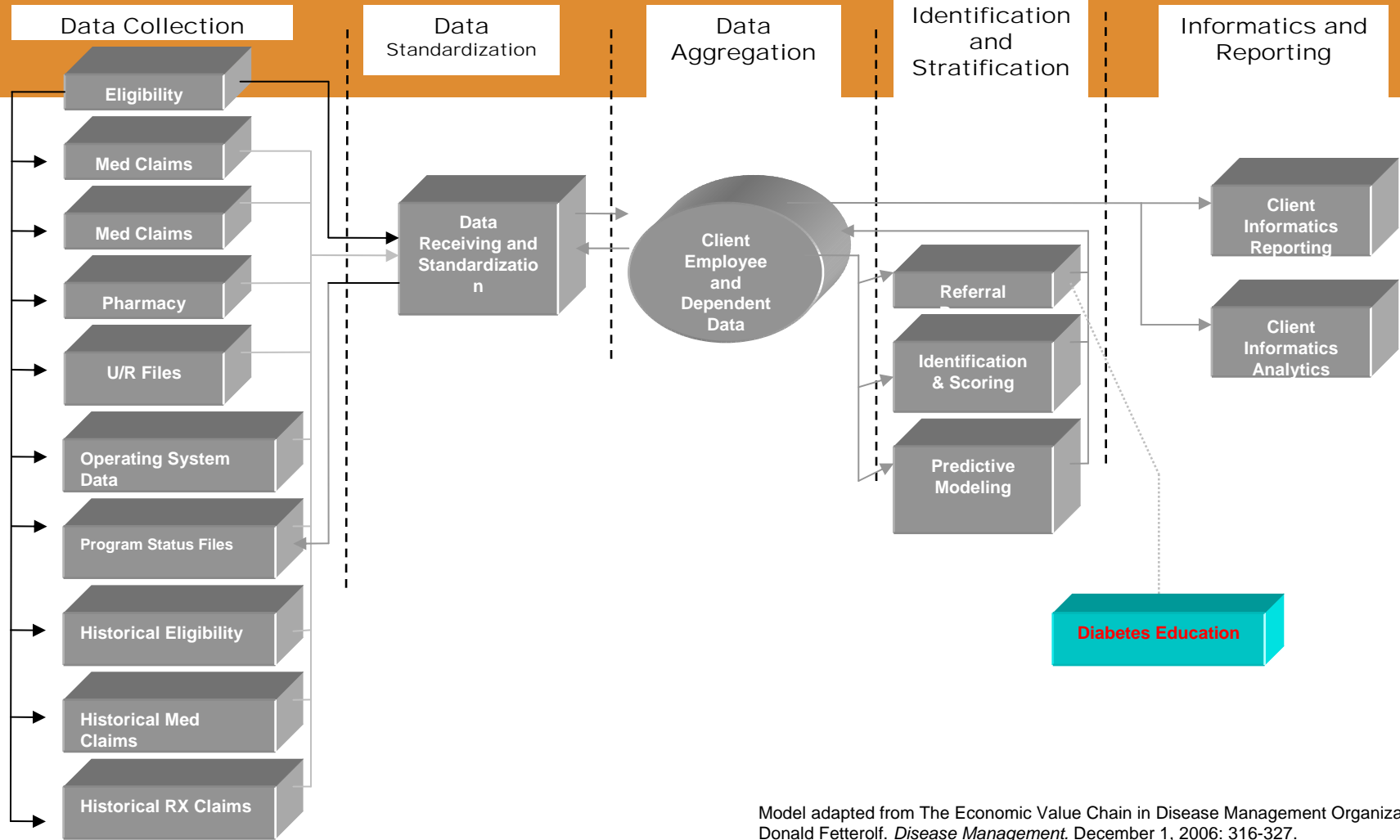
# Relevance of Diabetes Education to DM

- Diabetes DM increases patient adherence to treatment recommendations BUT...
- People with diabetes need to change their behavior and significantly change their lifestyle to achieve clinical results.
- Diabetes Educators help people with diabetes to effectively:
  - problem solve and cope with the disease,
  - learn how to monitor blood glucose,
  - take medications,
  - plan and eat healthy meals,
  - become physically active, and
  - reduce the risk of complications.





# Linking Diabetes Education and DM



Model adapted from The Economic Value Chain in Disease Management Organizations, Donald Fetterolf. *Disease Management*. December 1, 2006: 316-327.  
[http://www.liebertonline.com/doi/pdfplus/10.1089/dis.2006.9.316APPENDIX\\_A](http://www.liebertonline.com/doi/pdfplus/10.1089/dis.2006.9.316APPENDIX_A) with permission of the author

# Implementing a Gestational Diabetes Education Program

- *Diabetes Education is outsourced to an expert educator*
- *Multiple sources of referrals help to ensure the right diabetes education services are provided*
- *Clinical indicators and lab results are used to achieve better patient compliance and outcomes*
- *Interrelationship of the care plan and diabetes education interventions*
- *Follow up is handled by telephone*
- *Centralized systems are used for data collection and reimbursement*



# Implementing a Gestational Diabetes Education Program

## **DM Program for High Risk Pregnant Women with Diabetes**

- The diabetes educator teaches glucose monitoring, healthy eating practices, self-management skills, coping strategies and problem solving techniques.
- Services include initial and ongoing patient education, home visits, medication therapies, and supply and equipment management.
- The duration of service is usually 21 days
  - 1 – 2 home visits if the patient is not on insulin.
  - if the patient is on insulin, the duration of service is extended to 28 days.



# Implementing a Gestational Diabetes Education Program – Patient Tools

## Informational Kit

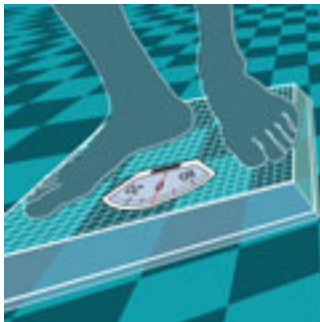
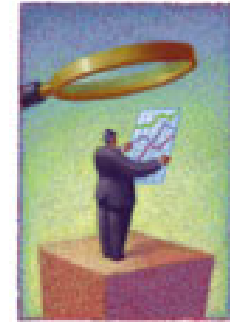
- sample diet from 1800 calories to 2500 calories
- infection control & home safety
- insulin and step by step instructions on insulin administration
- sharps disposal
- hypoglycemia, hyperglycemia, signs and symptoms to report
- glucose parameters
- exercise
- stages & phases of labor
- infant nutrition
- breastfeeding & bottle feeding tips
- postpartum care

## Self-Management Kit

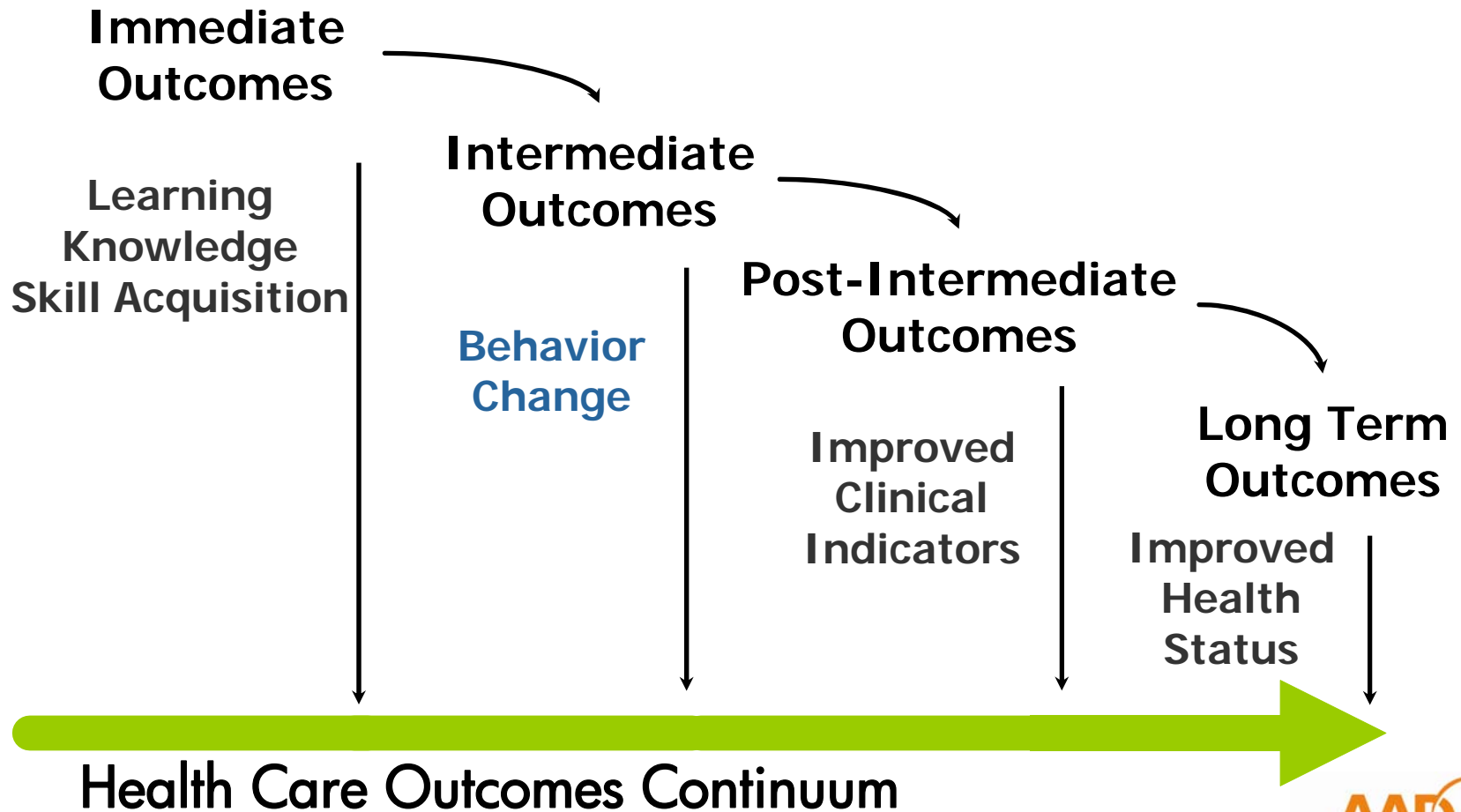
- blood glucose meter
- 200 test strips
- 100 lancets
- ketodiastix
- 1-measuring cup for food
- exchange list
- glucose tablets
- A1C kit with the binder



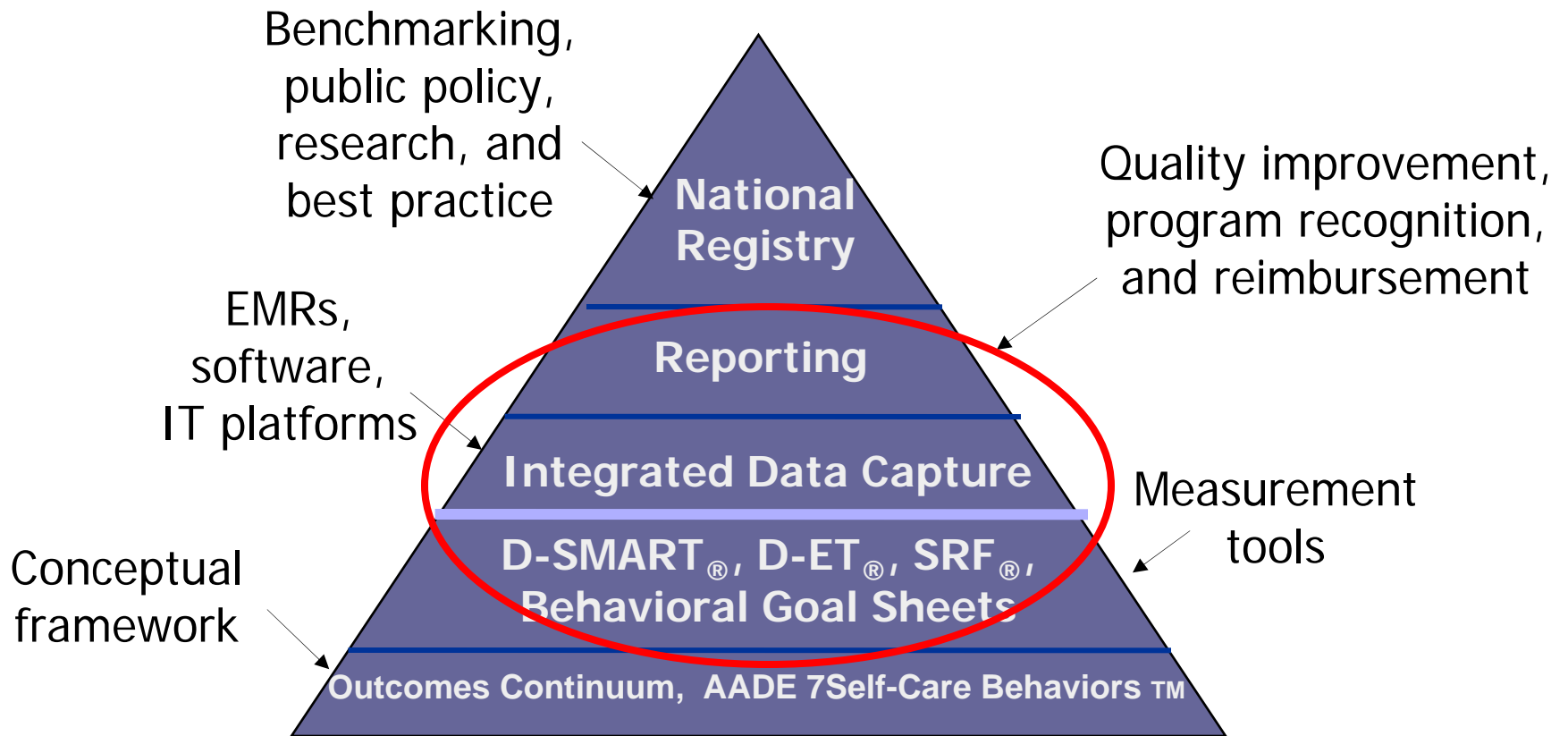
# Advancing Behavioral and Clinical Outcomes Measurement



# DSME Outcomes Measures



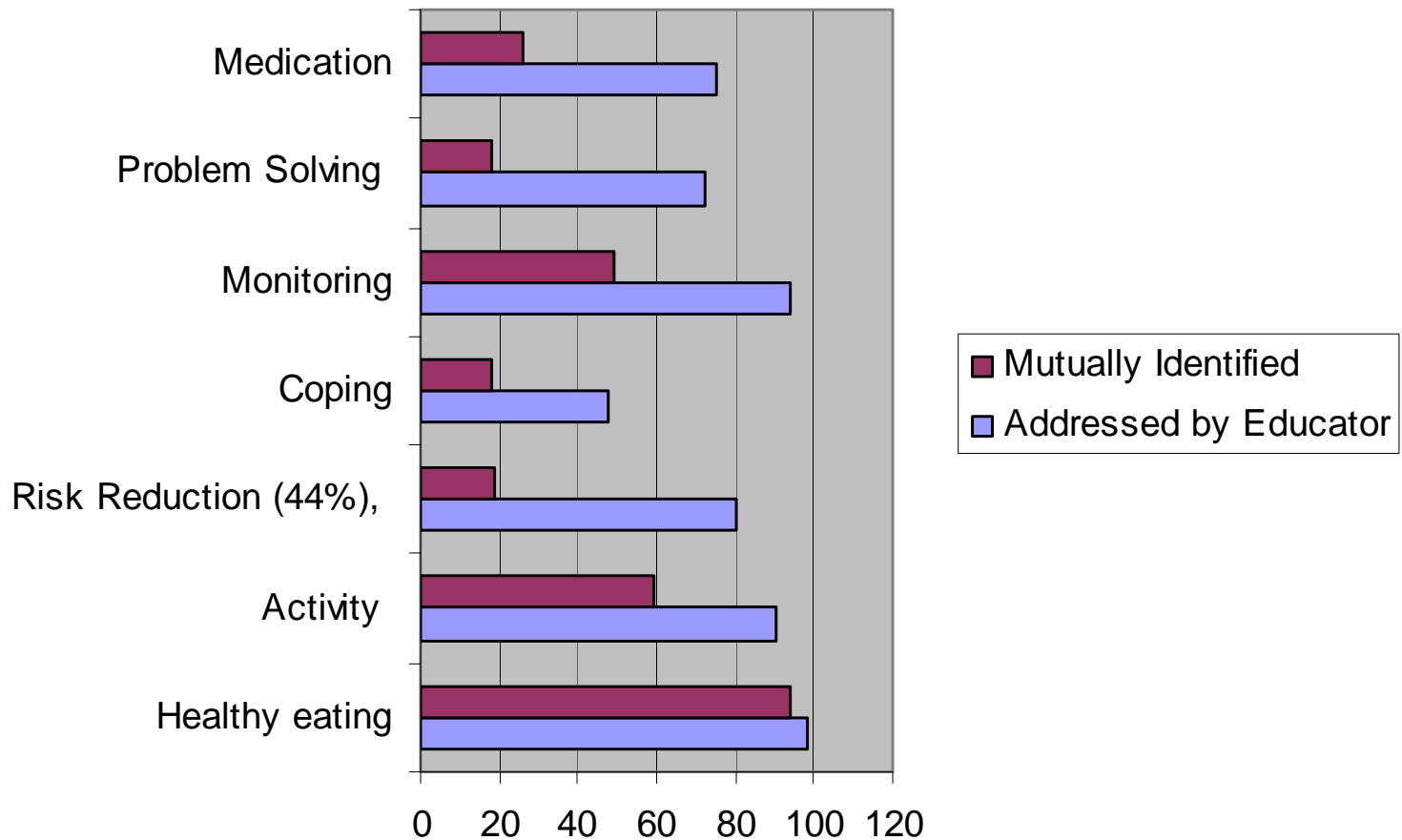
# DSME Outcomes Measures



**AADE Outcomes System Framework**

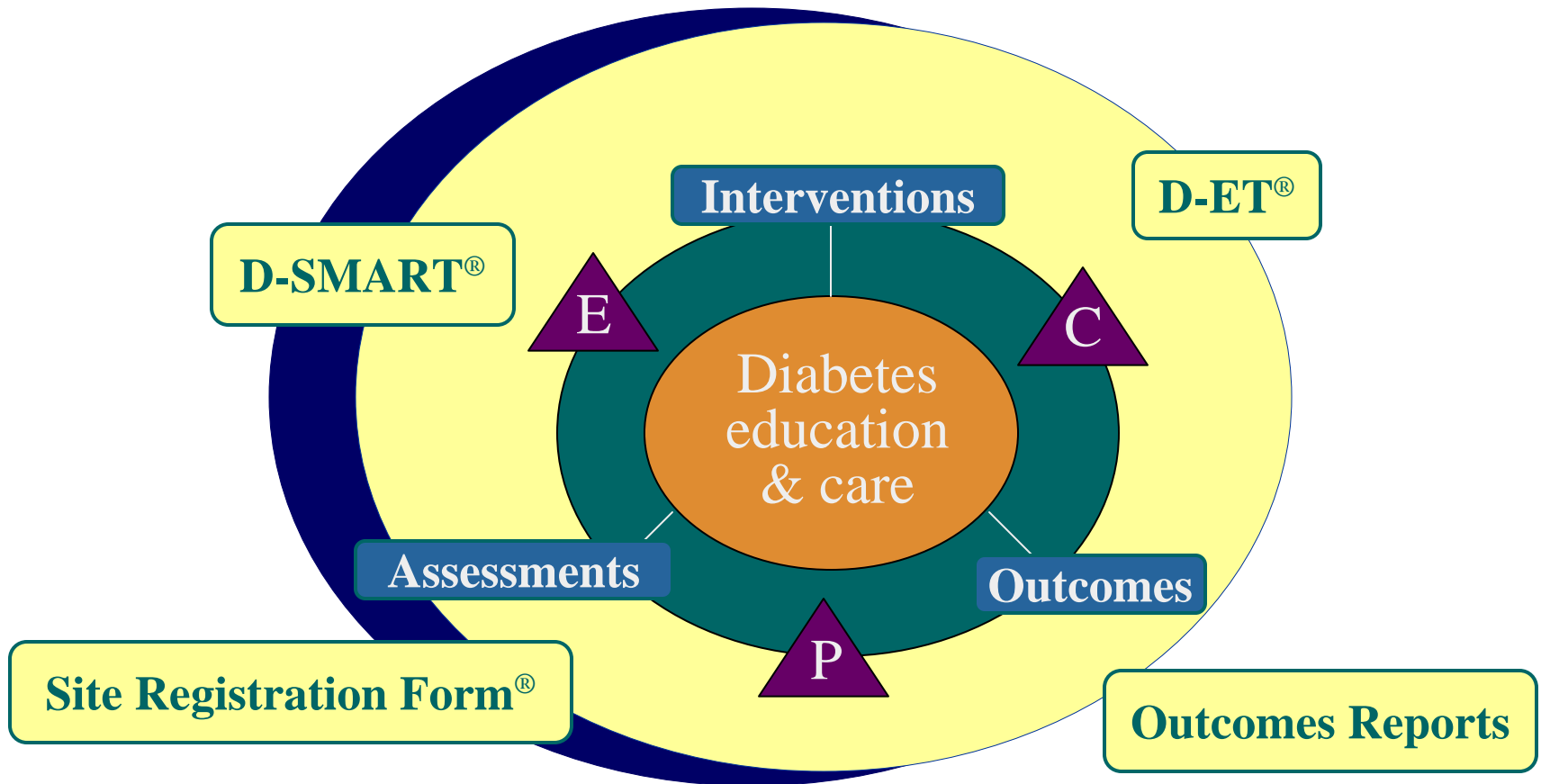
# AADE7 Outcomes - Pilot Study Findings

## Mutually Agreed upon Goals & Frequency in which Educators Address the Goals





# Data Input and Report Tools



Adapted from Peoples M, Mulcahy K, Tomky D, Weaver T. The Conceptual Framework of the National Diabetes Education Outcomes System (NDEOS). The Diabetes Educator 2001; 547-562.

# Outcomes: Integration of Diabetes Education and Disease Management

- Friedman et al: Programs with comprehensive, diabetes disease management can result in substantially improved patient outcomes. (American College of Physicians Online; [http://www.acponline.org/clinical\\_information/journals\\_publications/ecp/augsep98/diabmgmt.htm](http://www.acponline.org/clinical_information/journals_publications/ecp/augsep98/diabmgmt.htm))
- Sidorov et al: Incorporating diabetes education into disease management programs can, in the short-term, yield significant improvements in glycemic control in patients being treated for diabetes. (Am J Manag Care. 2000 Nov;6(11):1217-26. )
- McCullough et al: Patient and provider satisfaction improved as did rates of retinal eye screening, documented foot examinations, testing for microalbuminuria and hemoglobin A1C. (American College of Physicians Online; [http://www.acponline.org/clinical\\_information/journals\\_publications/ecp/augsep98/population.htm](http://www.acponline.org/clinical_information/journals_publications/ecp/augsep98/population.htm))
- Rothman et al: Diabetes education led to improvement in diabetes knowledge and satisfaction. The American Journal of Medicine® (Am J Med. 2005 Dec;118(12):1444-5; author reply 1445-6)
- Greisinger et al: Diabetes education sessions reduced risk of hospitalization risk in patients with controlled blood glucose levels. (Dis Manag. 2004 Winter;7(4):325-32)



# Tips for Implementing Diabetes Education in DM

- The role of the diabetes educator can be assumed by professionals from a variety of health disciplines, including, but not limited to:
  - registered nurses, nurse practitioners, registered dietitians, pharmacists, physicians, mental health professionals, podiatrists, optometrists and exercise physiologists.
  - services, such as nutrition counseling, medication counseling and psychological support services, may be provided in collaboration with a professional who is licensed or registered in the relevant field.
- *Find a Diabetes Educator*
  - <http://www.diabeteseducator.org/>



# Conclusion

## Diabetes education (DSME/T)

- Like disease management, is guided by the best available science-based evidence and incorporates the needs, goals and life experiences of the person with or at risk for diabetes.
- Focuses on behavior change.
- Diabetes educators
  - Are experts at fostering positive behavior change in people with diabetes, and the interventions they use are effective. ([Balamurugan et al.](#) Diabetes self-management education program for Medicaid recipients: a continuous quality improvement process. Diabetes Educ. 2006 Nov-Dec;32(6):893-900.)




# Conclusion

- Disease management
  - Offers much to people with diabetes but is enhanced by DSME Full integration and implementation of Diabetes Education (DSME/T) in DM programs .....
- Future Outcomes Tracking and Assessment will be enhanced by the availability of the AADE7 tools:
  - track goal setting, patient behavior change and outcomes
  - help set benchmarks
  - demonstrate the influence of DSME on diabetes control
  - advance best practices in linking DM and DSME



# Thank You



For more information, please go to  
[www.diabeteseducator.org](http://www.diabeteseducator.org)