Diabetes Self-Management Education and Training – Cost and Comparative Effectiveness

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American Association of Diabetes Educators (AADE)

- Mission - *Driving practice to promote healthy living through self-management of diabetes and related chronic conditions.*

- *Founded in 1973, AADE is a multidisciplinary association of healthcare professionals dedicated to integrating self-management as a key outcome in the care of people with diabetes and related chronic conditions.*
Diabetes Self-Management Education and Training (DSME/T)

• Diabetes education 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.
  – Interactive, ongoing and involves the person with diabetes (or the caregiver or family) and a diabetes educator or team of educators.
  – Aims to achieve optimal health status, better quality of life and reduce the need for costly health care.
  – Provided by diabetes educators who are qualified healthcare professionals.
DSME/T

- Focuses on seven self-care behaviors that are essential for improved health status and greater quality of life.
- The AADE7™ Self-Care Behaviors are:
  • Healthy eating
  • Being active
  • Monitoring
  • Taking medication
  • Problem solving
  • Healthy coping
  • Reducing risks
Cost Effectiveness

• Cost effectiveness is an economic tool that compares the relative expenditure and outcomes of two or more courses of action; comparative effectiveness means understanding the costs and benefits of different treatment options through research on the relative effectiveness of those options.
Cost Effectiveness

• Understanding of the cost/comparative effectiveness of something should lead to better (or at least the same) outcomes for reduced health care spending.
• The problem is that there are gaps in knowledge.
Comparative Effectiveness

- Comparative effectiveness is the direct comparison of existing healthcare interventions to determine which work best for which patients and which pose the greatest benefits and harms. \((\text{Wikipedia})\)
- As applied in the health care sector, an analysis of comparative effectiveness is simply a rigorous evaluation of the impact of different options that are available for treating a given medical condition for a particular set of patients. \((\text{CBO})\)
Comparative Effectiveness

• Rigorous cost and comparative effectiveness studies help our understanding of whether certain treatment approaches provide benefits that are worth the cost, providing an indication of total value of an intervention.

• The studies evaluate different approaches to the same basic treatment
  – For example, compare usual care for a person with diabetes to usual care accompanied by DSME/T
Methods

- Using cost-effectiveness and comparative-effectiveness frameworks, AADE examined quantitative data and findings from recently published studies on DSME/T.
Methods - Assessment of Studies

• Systematic Literature Review of Published Cost-effectiveness Literature on DSME/T

• Actuarial Study of more than 6 million people with private insurance or Medicare assessed whether:
  – People with diabetes who participate in diabetes education have better clinical outcomes than those of similar risk profile who do not participate in education, and
  – Cost of claims for patients who participate in diabetes education are lower than those of a matched cohort of patients who do not participate in diabetes education.
Findings: Review of the Literature

• More than half (18) of the 26 papers identified by the literature review reported findings that associated DSME/T with decreased cost, cost saving, cost-effectiveness, or positive return on investment.
  – Four studies reported neutral results; 1 older study reported costs increases.

• Benefits associated with education on self-management and lifestyle modification for people with diabetes are positive and outweigh the costs associated with the intervention.

Source: Boren et al, TDE, Jan 2009.
Findings: Actuarial Study Comparing DSME/T to “Usual Care”/no DSME/T

Commercial Insured Per Member Per Month

PMPM Cost Average (Adjusted)

Year 1
$919.58
$865.18
$947.24

Year 2
$1,000.46
$888.06
$1,030.51

Year 3
$1,072.36
$923.26
$1,096.68

Medicare PMPM Cost Average (Adjusted)

Year 1
$919.58
$946.81

Year 2
$1,000.46
$1,030.51

Year 3
$1,072.36
$1,096.68

Findings from Actuarial Study – DSME/T is associated with High Quality

Patients seen by physicians who were least likely to “use” DSME/T are shown in red; Those seen by physicians who were high “users”, are shown in gold.

Summary

• Self-management education and training is highly effective for some populations with diabetes.
  – A systematic review of published literature shows that DSME/T is cost-effective.
  – A recent actuarial study provides comprehensive information about the value of DSME/T.
    • The intervention is cost saving when compared to usual care
    • Pharmaceutical expenditures are higher for those receiving DSME/T, indicating good compliance with recommendations, but these costs are offset by less intensive use of costly inpatient care.
Conclusion

• Using a comparative effectiveness framework to the relative merits of two active therapeutic approaches, indicates that diabetes self-management education and training saves money and is associated with high quality.