

Background

In 2011, an estimated 25.8 million people in the United States had a diagnosis of diabetes. Patients aged 65 years or older accounted for 43% of all cases, the largest percentage of any age group. In 2004, heart disease was noted on 68% and stroke was noted on 16% of diabetes-related death certificates among people aged 65 years and older. The greatest percentage increase in diabetes diagnoses over the next 40 years is projected to occur among people aged 75 years or older. The American Diabetes Association (ADA) Guidelines suggest that different goals are needed for the elderly or geriatric population defined as 65 years and older due to the dynamics of aging and disease progression. The American Geriatric Society (AGS) Guidelines provide more guidance for the care of ambulatory geriatric patients with diabetes mellitus.

Methods

Retrospective Chart Review for 70 geriatric patients with diabetes from January 2010 to September 2011

Inclusion: Patients with Type 1 or 2 Diabetes at the four Palmetto Senior Care PACE centers on an oral anti-hyperglycemic agent or insulin

Exclusion: Diabetes controlled with therapeutic lifestyle modifications (diet and exercise alone)

Care Environment: PACE (Program of All Inclusive Care for the Elderly) is a managed care program that provides comprehensive health services for frail elderly participants. A major goal of the program is to maintain frail elders in the community, and out of nursing homes and hospitals, as much as possible.

All Outcomes Assessed by Center	Center 1	Center 2	Center 3	Center 4
Total Patients/ Average Age	17 74	20 75	11 70	22 74
Average # Rx	11	10	7	7
CrCl 10-30ml/min	24%	10%	27%	27%
CrCl 30-50ml/min	47%	60%	36%	55%
Monthly Blood Glucose	24%	50%	73%	23%
Quarterly Blood Glucose	71%	55%	91%	55%
HgA1C<8	83%	70%	82%	55%
HgA1C<7	59%	45%	18%	23%
Hypoglycemic Events	12%	18%	40%	32%
Lipid Rx	41%	35%	27%	41%
LDL<100	12%	20%	36%	41%
ACEI or ARB	71%	50%	64%	77%
BP<140/90	59%	80%	91%	95%
BP<130/80	12%	10%	36%	68%
Aspirin	71%	50%	82%	77%
Geriatric Syndrome Disorders Assessed	100%	100%	100%	100%
Monthly Foot Care	29%	95%	100%	100%
Annual Eye Exam	100%	80%	91%	100%
Smoking Cessation Offered	100%	100%	20%	100%
Fall Risk Score Assessed	100%	100%	100%	100%
Persistent Pain Assessed	100%	100%	100%	100%
Polypharmacy Assessed	100%	100%	100%	100%
Polypharmacy: Rx>5	94%	95%	64%	77%
Smokers	18%	5%	45%	23%
Dialysis	12%	0%	0%	0%
Brittle	6%	25%	18%	9%

Objectives

The primary purpose of this cross-sectional retrospective chart review is to facilitate the generation of a feasible protocol for the care of geriatric patients with diabetes at all inclusive-care day facilities – PACE program.

To evaluate how well the care of frail geriatrics with diabetes complies with the American Geriatric Society (AGS) Guidelines as compared to American Diabetes Association (ADA) guidelines

To identify why frail elders often fail to use certain medications recommended by practice guidelines

To review the impact that brittle diabetes has on the ability of frail elderly patients to reach goals

Conclusion

The PACE program closely complies with the less stringent AGS guidelines. Thus, frail elders often cannot tolerate medications recommended in the ADS guidelines due to poly-pharmacy, co-morbidities, and other contraindications. These problems often affect treatment options in diabetic geriatric patient. Less stringent goals were associated with a 74% decrease in hypoglycemic events.

For example, 73% of the participants were successful at reaching an A1C goal of 8% compared to 36% of participants achieving an A1C of 7%. The ADA guidelines set a goal of A1C <6.5% in diabetics which would be even more difficult to achieve in frail elderly diabetics without the risk of significant hypoglycemia. Aspirin was contraindicated in 31% of patients. ACE-i/ARB therapy were not indicated in 34% of patients.

Finally, initiation of lipid therapy requires analysis of patient's renal function, side effects, drug-interactions, and life expectancy. In the geriatric population with diabetes the PACE program demonstrates that treatment choices should be individualized to meet goals of therapy