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BOTTOM LINE:
A1c <8 was associated with higher risk of death & fxnl decline than A1c 8-8.9.

"Glycosylated Hemoglobin and Functional Decline in Community-Dwelling Nursing Home-Eligible Elderly Adults with Diabetes Mellitus"

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Type of Study: longitudinal cohort

Study Population: 367 members of On Lok studied between October 2002 & December 2008. All were NH eligible. TABLE 1: 67% female, 65% Asian, mean age 80. 20% 18% no meds; 32% oral meds; 50% Insulin. 44% had ADL score </=6, 79% had SPMSQ score </= 6 (MCI).

What is On Lok? First PACE model program located in San Francisco.

Controlled for: sex, race, age, type of meds, co-morbid conditions, year entered.

Exclusions:

1) End of life care, lacking 24 months of follow-up, missing fxnl measurements.

Background:

1) Older adults w/ DM have 2X the risk of disability & fxnl decline of those w/o DM.
2) A1c is used to target glycemic control in patients w/ DM.
3) No data available to show that A1c levels in older adults have an impact on fxnl decline or disability.
4) AGS recommends A1c <8% for frail elderly or those with limited life expectancy. VA recommends A1c<9%. ADA "less stringent" than <7% in frail elderly.

Study Measures:

1) A1c (<7, 7 to 7.9, 8 to 8.9 & >/= 9) in quartiles.

2) ADL Scale (on each measure for bathing, dressing, eating, transferring or toileting a score of 2 is given for independent, 1 for partially dependent & 0 for completely dependent, total score ranging from 0 to 10). This was done initially (within 6 months before first A1c score) & 24 +/- 3 months after. Intermediate values recorded at 6 & 12 months as well. Decline in fxnl status was a change in this score.

Statistical Analysis:

1) HbA1c: predictor

2) 2 year death or functional decline (outcome)

Results (TABLES 2 & 3):

1) 63% had decline in fxnl status & 75% had death or decline in fxnl status.

2) At 6 months, no clear relationship between A1c & death/fxnl decline. At 12 months each higher level of A1c was assoc w/ a lower rate of death/fxnl decline but it was not statistically significant (P for trend 0.24). By 24 months higher A1c was assoc with less fxnl decline or death w/ a sig P value of 0.006.

3) Best outcomes: A1c 8-8.9%

STRENGTHS:

1) Simple study, controlled population, first study to look at fxnl outcomes related to DM2 management in a frail elderly population.

2) Changes the way we look at A1c as an indicator of DM2 control in this group.

WEAKNESSES:

1) Observational study, confounding likely although they tried to control for several factors; others may have not been accounted for.

2) PACE participants are likely different from those not participating.