BMJ

BMJ 2013;346:f2625 doi: 10.1136/bmj.f2625 (Published 24 April 2013)

EDITORIALS

Diabetes control in older people

Treat the patient not the HbA_{1c}

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Medical providers must prepare for two important demographic changes—the increase in life expectancy and the fact that we are getting fatter. As a consequence, the prevalence of diabetes is rising across the age spectrum, including among older people. People over the age of 65 years with diabetes experience higher rates of microvascular and macrovascular complications, which leads to increased hospital admissions, healthcare expenditure, and requirements for social care. Treating older people with diabetes is challenging, not least because the risks of hypoglycaemia and associated complications from overly aggressive treatment are also increased.

In recognition of this treatment paradox, the American Diabetes Association (ADA) and the American Geriatrics Society published a joint statement providing guidance for clinicians.[1] Previous American Geriatrics Society guidelines recommended treatment aimed at achieving a glycated haemoglobin (HbA_{1c}) of less than 53 mmol/mol (<7%) for all adults, regardless of age.[2] The new guidance, however, emphasises the need to tailor treatment in older people. This echoes statements from the British Geriatrics Society and the European Diabetes Working Party for Older People, which both supported this approach,[3 4] recommending that hypoglycaemia, ability to self manage, cognitive status, comorbidities, and life expectancy are taken into account when making decisions on treatment.

The new joint guidance goes further than other guidelines by offering explicit targets. For older people with little comorbidity and preserved cognitive and physical function, the HbA_{1c} target is less than 58.5 mmol/mol, but for those with multiple chronic illnesses and mild to moderate cognitive impairment who are at risk of falls and hypoglycaemia, the target is less than 64 mmol/mol. In those with end stage chronic illnesses, moderate to severe cognitive impairment, and those in long term care, the HbA_{1c} target is less than 69 mmol/mol. These guidelines could be applied to older adults with diabetes in the United Kingdom, where the prevalence of type 2 diabetes is 4.1%, with half of these patients over the age of 65 years.[5] Ten per cent of people in the UK aged over 75 years and 14% aged over 85 years have diabetes, and a substantial number may have undiagnosed disease.

Guidance suggesting a "sliding scale" for treatment according to age is open to criticism, but trial data to underpin treatment for older people with diabetes are lacking. Landmark trials such as the UK Prospective Diabetes Study excluded patients over 65 years, yet guidance has tended to extrapolate from evidence provided by such studies. Recently, a series of high profile studies was unable to show an improvement in cardiovascular outcomes with intensive glycaemic control, and in one study there was a suggestion that this approach may result in greater harm in older people.[6-8] These trial data align with observational data that suggest an association between hypoglycaemia and cognitive and physical decline, the underlying mechanism for which is unclear. In patients with a long duration of diabetes, cardiovascular disease, and other comorbidities, the risk of hypoglycaemia associated with intensive glycaemic control may outweigh any potential benefit.

For general practitioners in the UK, and clinicians in any healthcare system where reimbursement is driven by achieving specific HbA_{1c} targets, the new guidance has important implications. In the UK, Quality and Outcomes Framework targets for HbA_{1c} have recently been revised to reflect concerns that tight control can lead to harm. However, treatment is still target driven—clinicians must now aim for control along a range (less than 58.5 mmol/mol, less than 64 mmol/mol, and less than 75 mmol/mol) depending on the clinical situation. Although targets provide an important driver to improve glycaemic control, evidence that this approach improves outcomes is lacking, and in older people there is potential for harm. A system that focuses on HbA_{1c} targets is not compatible with individualised care because the emphasis is on treating a number rather than the patient. Clinicians should not be reassured that a pragmatic "target" HbA_{1c} precludes all risk of hypoglycaemia—evidence suggests that patients with "poor" glycaemic control (HbA_{1c} >8%) also experience hypoglycaemia.[9]

Recommendations on glycaemia control must take into account the increase in the number of drugs available for treating

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diabetes. Dipeptidyl peptidase 4 inhibitors, glucagon-like peptide 1 receptor analogues, and sodium/glucose cotransporter 2 inhibitors have been shown to reduce HbA_{1c} and have been marketed as having a lower risk of hypoglycaemia, except in combination with sulfonylureas.[10-12] These drugs may seem to be an attractive option for older people whose glycaemic control is suboptimal but who are at risk of hypoglycaemia. However, they are expensive and evidence that they improve patient outcomes on hard endpoints in any age group is lacking; for some of these drugs the glucose lowering effect is minimal. Although these concerns apply to all patients, iatrogenic risk will be greatest in older patients in whom comorbidity and polypharmacy are prevalent. Whether using established or newer drugs to treat diabetes in older people, the mantra must remain—treat the patient not the HbA_{1c} level.

The evidence for strict glycaemic control in older people is incomplete, and the potential for harm is substantial. The new guidance on revising HbA_{1c} targets in frail older adults is welcome only if taken in the context of individualised care. It should be used to stimulate discussion around removing Quality and Outcomes Framework targets for HbA_{1c} in older people because they form a heterogeneous group—from frail care home residents to those who are fit and independent, all with variable diabetes histories and associated comorbidities. A pragmatic approach—that aims to individualise treatment while balancing symptomatic and potential prognostic benefit against the potential for side effects—is needed in these patients.

We have read and understood the BMJ Group policy on declaration of interests and declare the following interests: LAM: none. TJQ has received fees for attending a symposium from Boehringer Ingelheim and Bristol Meyers Squibb; speaker's fees from Astra-Zeneca, Bayer, Bristol Meyers Squibb, Merck, Pfizer, and Sanofi Aventis; research funding from Pfizer; and consulting fees from Boehringer Ingelheim. GAM has received reimbursement for attending a symposium from Boehringer Ingelheim, Eli Lilly, and Sanofi; speaker's fees from Boehringer Ingelheim, Eli Lilly, Sanofi, Bristol Meyers Squibb, MSD, and Pfizer; and consulting fees from Boehringer Ingelheim, Eli Lilly, Sanofi, Bristol Myers Squibb, and UCB Pharma.

Provenance and peer review: Not commissioned; externally peer reviewed.

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Cite this as: *BMJ* 2013;346:f2625