Type 2 diabetes: Frailty, age and diabetic targets

Although NICE set targets for glycaemic control, it also makes clear that targets should be individualised.

In 2019, the American Diabetes Association suggested the following targets for those over 65y, summarised here (Diabetes Care 2019 doi.org/10.2337/dc19-S012). This was reinforced by a UK expert consensus statement from the Foundation for Diabetes Research in Older People (Diabetes Therapy https://doi.org/10.1007/s13300-021-01035-9):

Health status (for those over 65y)	Target HbA1c		Target BP	Lipid modification
	%	mmol/mol		
Healthy *Rationale: reasonable life expectancy.*	<7.5	<58	140/90	Statins indicated
Intermediate health • Several comorbidities. • Limited functional ability. • Mild to moderate cognitive impairment. *Rationale: intermediate life expectancy, high treatment burden (polypharmacy), vulnerable to hypoglycaemia and falls.*	<8	<64	140/90	Statins indicated
Poor health • End-stage chronic disease. • In long-term care/limited functional ability. • Moderate to severe cognitive impairment. *Rationale: limited life expectancy: benefits of treatment uncertain.*	<8.5	<69	150/90	Benefits less certain: greater benefit in secondary prevention

Stratification by health status makes sense. It is what we often do in primary care and it is good to see it as a consensus statement from a formal organisation. Do bear in mind, though, that QOF has no adjustment for age.

A BMJ review of diabetes in older people with comorbidities reminds us of (BMJ 2016;353:i2200):

- The seriousness of hypoglycaemia in all groups, but especially the elderly.
- The burden of daily tablet taking (and blood sugar measuring).
- The impact of diabetes and complications on quality of life.
- The lack of evidence base for many of the new drugs in older people or those with comorbidities.

An interesting article tried to assess the benefits of blood sugar control in terms of quality adjusted life years (QALYs). A lot of assumptions are made about how much any benefit or any harm affects quality of life, and you can adjust these assumptions and see what impact it has on QALY. This study looked at how burdensome treatment to lower blood sugar was (both tablets and insulin), and what benefits it gave (JAMA Intern Med 2014;174:1227).

- Not surprisingly, it found most benefit in lowering blood sugar in those who were younger.
- The benefit was minimal in those over 75y (unless HbA1c was above 9%).

However, it all depends on how burdensome the treatment is to the individual. A reminder that whatever trials show for whole populations, tailoring to an individual's wishes and their perceptions of benefits/burden is crucial – thankfully, that is what GPs and practice nurses are good at (even if QOF isn't!).

- **A BMJ editorial reminds us *'Treat the patient, not the HbA1c'* (BMJ 2013;346:f2625).**

The UK consensus statement also reminds us (Diabetes Therapy https://doi.org/10.1007/s13300-021-01035-9):

- As frailty advances, look carefully at all medications (not just diabetic medications) and think about what can be stopped.
- With ageing, there can be weight loss and sarcopenia (loss of muscle mass); adequate protein intake is essential.
- Comorbidities such as renal or hepatic impairment may alter drug pharmacology. As renal function dips, drugs such as metformin may need to be stopped.

- Driving: consider frailty and any impairments such as visual problems, drugs and the risk or loss of awareness of hypoglycaemic events.
- Assess ability to manage own medications and, in particular, manage insulin administration/monitoring.
- Hypoglycaemia may present more often with dizziness, confusion and visual disturbance. Adrenergic symptoms (palpitations, sweating and tremors) may be less prominent.
- Hypoglycaemia is more likely to result in falls, fractures, admission and cardiovascular events (thought to be related to conduction abnormalities). Use sulphonylureas and insulin with care as they are particularly likely to cause hypoglycaemia.
- Glitazones:
  - Increase the risk of heart failure and are contraindicated in those with heart failure.
  - Concerns about associations with bladder cancer. Contraindicated in those with a past history of bladder cancer.
  - Concerns about increased fracture risk with glitazones.
- Review the need for antihypertensive medication – de-escalate as BP drops.

How to de-escalate medication

A BMJ article suggested the following approach (BMJ 2021;375:e066061):