Changing diabetes by improving control: Solutions

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changing diabetes

Call to action: Your response

The recent report '*The National service framework (NSF) for diabetes. Five years on... are we half way there?*' (Diabetes UK, 2008) has highlighted the fact that although a good standard of clinical care of adults with diabetes has been achieved, there is still room for improvement. For example, the report awarded Standard Four with 3 out of 5 stars.

In light of this report, the *Journal of Diabetes Nursing* would be delighted to receive details of any initiatives that have improved control in people with diabetes. For example, an initiative which helped to break down barriers to improving glycaemic control or improved education of people with diabetes.

Submissions could be short letters or articles of up to 2000 words. Contact the editorial team at the journal to discuss ideas on 0207 627 1510. *Or* send your submissions to: The Editor, *Journal of Diabetes Nursing*: editorial@sbcommunicationsgroup.com. Responses will be considered for publication in the *Journal of Diabetes Nursing*.

Diabetes UK (2008) *The National service framework (NSF) for diabetes. Five years on... are we half way there?* Diabetes UK, London

4-T – The evidence to help us

Ask around about the best option for insulin conversion in type 2 diabetes, and you will get personal opinions, conflicting responses and, perhaps, even some shrugging of shoulders. It is 10 years since the United Kingdom Prospective Diabetes Study showed that tight glycaemic control achieved improvements in some microvascular disease parameters; and the necessity for insulin treatment, after only a handful of years, to achieve it.[1]

During the late 1990s and early 2000s, a succession of comparative trials (which encompassed the Treat-To-Target algorithm approach) singularly failed to find a front-runner between prandial, twice-daily mixtures and basal (NPH and analogue) insulin regimens in intensively treated individuals. There were, of course, minor advantages to some regimens and some reasonable improvements in glycaemic control. These trials, however, came in for some criticism with respect to methodology and the application of results to the "real world" patients who populate our general practice clinics.

The 4-T Study (Treating-To-Target in Type 2 Diabetes) set out to compare the efficacy of three different insulin regimens (once- or twice-daily insulin detemir, twice-daily biphasic insulin aspart and prandial insulin aspart) in reaching the primary outcome measure of HbA_{1c} ≤6.5%.[2] The 4-T trial is of 3-years' duration, and is still ongoing. However, interim 1-year data have been published.[3] None of the regimens reached the primary outcome measure at 1 year. Prandial insulin aspart was marginally more effective than biphasic insulin aspart and insulin detemir (average HbA_{1c} levels in each group were: 7.2%, 7.3%, and 7.6%, respectively) but those on insulin detemir had less weight-gain and fewer hypoglycaemic episodes. This may improve adherence in certain individuals at the initiation stage. It is worth noting that the design of the trial may have led to inadvertent underdosing of insulin detemir.

So, where are we? My view is that these interim data do not provide an answer regarding the optimum insulin therapy in type 2 diabetes, and while we await the final 3-year results, we must continue to treat our patients on an individualised basis, listening to their needs and expectations. It is also worth considering that the range of therapeutic agents for type 2 diabetes has grown recently, and will continue to do so in the coming years.

I also think, generally, that clinical trial design increasingly has to evolve to reflect the important outcome measures for people with diabetes. HbA_{1c} is easy to measure, but blindness, renal failure, symptom control, quality of life, and inpatient admissions are points for discussion in my surgery and, I am sure, in yours.

1. United Kingdom Prospective Diabetes Study Group (1998) Intensive blood-glucose control with sulphonylureas or insulin compared with conventional treatment and risk of complications in patients with type 2 diabetes (UKPDS 33). *Lancet* **352**: 837–53
2. AJ Farmer, KA Thorne, IM Stratton et al (2006) Treating to target in type 2 diabetes (4-T) study of analogue insulin initiation and titration. *Diabetic Medicine* **23** (Suppl 2): 85
3. Holman RR, Thorne KI, Farmer AJ et al (2007) Addition of biphasic, prandial, or basal insulin to oral therapy in type 2 diabetes. *NEJM* **357**: 1716–30