

absence of longer term data on performance of the two regimens, together with complexities such as the possibility of using three injections of pre-mix, or of adding mealtime insulin to basal glargine, meant that the GDG was unable to identify overall advantage to one approach or the other.

The previous NICE guidance in relation to a single daily injection of insulin glargine not having to be given at any precise time was noted to be useful for those whose injections are given by others.

The GDG found the health economic modelling problematic in the area of insulin therapy. Major problems seem to relate to the difficulties of including fear of hypoglycaemia and its effect on everyday lifestyle, restrictions on lifestyle with insulin injections, and the present day educational costs associated with intensive insulin dose adjustment to achieve good target control. While some attempts had been made to incorporate some of these in sensitivity analyses, it was not possible to be sure of their validity, though the face value results all suggested that human insulin regimens were the only cost-effective approach.

RECOMMENDATIONS

- R50** When other measures no longer achieve adequate blood glucose control to $\text{HbA}_{1\text{C}} < 7.5\%$ or other higher level agreed with the individual, discuss the benefits and risks of insulin therapy. Start insulin therapy if the person agrees.
- R51** When starting insulin therapy, use a structured programme employing active insulin dose titration that encompasses:
- structured education
 - continuing telephone support
 - frequent self-monitoring
 - dose titration to target
 - dietary understanding
 - management of hypoglycaemia
 - management of acute changes in plasma glucose control
 - support from an appropriately trained and experienced healthcare professional.
- R52** Insulin therapy should be initiated from a choice of a number of insulin types and regimens.
- Preferably begin with human NPH insulin, taken at bedtime or twice daily according to need.
 - Consider, as an alternative, using a long-acting insulin analogue (insulin glargine) for a person who falls into one of the following categories:
 - those who require assistance from a carer or healthcare professional to administer their insulin injections
 - those whose lifestyle is significantly restricted by recurrent symptomatic hypoglycaemic episodes
 - those who would otherwise need twice daily basal insulin injections in combination with oral glucose-lowering medications.
 - Consider twice-daily biphasic human insulin (pre-mix) regimens in particular where $\text{HbA}_{1\text{C}}$ is elevated above 9.0 %. A once-daily regimen may be an option when initiating this therapy.