

# The Derby insulin pump service: Achieving patient goals

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Following the publication of the 2008 NICE technology appraisal of continuous subcutaneous insulin infusion (CSII) therapy, the authors undertook an audit of the insulin pump service provided in Derby to identify benefits to people with diabetes using pumps and to ensure compliance with the NICE recommendations. The document recommends the use of insulin pump therapy in people with diabetes who:

- Have an HbA<sub>1c</sub> level >8.5% (>69 mmol/mol) despite the use of multiple daily injections of insulin.
- Have undergone a structured education programme.
- Experience disabling hypoglycaemia when attempting to reach their target HbA<sub>1c</sub> levels.

The audit was carried out on those individuals with diabetes who were managing their condition with CSII therapy in December 2007.

## Derby insulin pump service

The Derby insulin pump service was established in 1999. By the time of the audit, there were 44 individuals who had been referred to the service to receive CSII therapy.

Of these 44 individuals, 12 had been referred due to a persistently high

HbA<sub>1c</sub> level and 13 due to disabling hypoglycaemia. The remaining 19 individuals had been referred for various reasons, including patient choice, dawn phenomenon and highly variable blood glucose levels.

Only 31 of the 44 individuals had received structured education prior to commencing insulin pump therapy – 20 had participated in the Dose Adjustment for Normal Eating (DAFNE) programme and 11 had participated in other programmes. Most of the 13 individuals who had not received any education had been using insulin pump therapy since before NICE guidance on CSII therapy had been published (NICE, 2003).

## Results

The average HbA<sub>1c</sub> level of people attending the insulin pump therapy clinic before commencing the therapy was 9.0±0.27% (76±5.9 mmol/mol). When the audit was commenced, the average HbA<sub>1c</sub> level had fallen significantly to 8.2±0.27% (66±5.9 mmol/mol;  $P=0.02$ ).

## Follow-up

The results of the audit indicated that CSII therapy provided significant benefits to the people receiving it, despite only about three-quarters receiving

any formal structured type 1 diabetes education prior to starting insulin pump therapy. To improve this, a specific insulin pump DAFNE course was held during 2008, and other pump users were put on regular DAFNE courses.

The authors are planning on running another course and further DAFNE follow-up groups to ensure that all individuals receiving insulin pump therapy have sufficient knowledge and understanding of their condition to optimise their glycaemic control. The authors also recognise the importance of personalised healthcare, and have started piloting care planning in the insulin pump clinic with the aim of developing personalised care plans for all people with diabetes by 2010, in line with Department of Health (2008) policy. ■

Department of Health (2008b) *High Quality Care for All: NHS Next Stage Review Final Report*. DH, London. Available at: <http://tinyurl.com/Darzi08> (accessed 19.10.09)

NICE (2003) *NICE Technology Appraisal Guidance 57*. NICE, London

NICE (2008) *Continuous Subcutaneous Insulin Infusion for the Treatment of Diabetes Mellitus: Review of Technology Appraisal Guidance 57*. NICE, London. Available at: <http://www.nice.org.uk/TA151> (accessed 19.10.09)

## The IMPROVE™ Control Campaign

The Global Task Force on Glycaemic Control is a group of physicians and specialists in the field of diabetes from around the world that is working in collaboration with Novo Nordisk with the ultimate aim of identifying and developing practical solutions to the global problem of poor glycaemic control in people with diabetes. Since early 2008, the *Journal of Diabetes Nursing* has featured articles and submissions under the banner of IMPROVE™ Control – a global public awareness campaign focused on the need for improved control, which forms part of the Task Force's work. Throughout 2009, the journal will continue to bring you articles on the barriers to good glycaemic control, and submissions from *you*, our readers, outlining the strategies you have used to help people with diabetes improve their control.

For example, perhaps you have implemented a new educational session in your area that has helped break down barriers to control, or maybe you have set up a new referral pathway that has helped improve HbA<sub>1c</sub> levels. The *Journal of Diabetes Nursing* would like to help you share your practical solutions for improving control, no matter how big or small, with other nurses working in diabetes. We encourage you to take part in this global initiative by calling 020 7627 1510, or emailing [james@sbcommunicationsgroup.com](mailto:james@sbcommunicationsgroup.com).

