

Insulin pump therapy: a postcode lottery?

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Introduction

Insulin pump therapy is a treatment for people with type 1 diabetes who have difficulty controlling their blood glucose levels. Pump therapy imitates the action of the pancreas and provides insulin according to individual requirements. It helps prevent erratic fluctuations in blood glucose levels and delays long-term complications of diabetes (Faras-Hirsch and Hirsch, 1994; Bode et al, 1996). The National Institute for Clinical Excellence recently stated that pump therapy should be available for those who meet the criteria and cannot control their diabetes by other methods. Despite this, some patients still do not have access to this treatment, or to a diabetes team trained in the use of pump therapy. This article outlines the contrasting availability of pump therapy in different areas of the country due to funding issues and the facilitation of patient education.

Insulin pump therapy is recommended by NICE (2002) as an option for people with type 1 diabetes provided that:

- Multiple dose insulin therapy has failed (including insulin glargine).
- Those receiving treatment are willing and able to use pump therapy effectively.
- Pump therapy should be initiated by a trained specialist team (comprising a physician who specialises in pump therapy, a diabetes nurse and a dietitian).
- Individuals beginning pump therapy should be provided with training in its use and ongoing support should be available to them.
- The recommendations are also valid for children, adolescents, pregnant women and women intending to become pregnant (under the care of a specialist team).
- Established pump users should have their insulin management reviewed as they may be suitable for a trial of insulin glargine.
- Insulin pump therapy is not recommended for people with type 2 diabetes who require insulin.
- NICE considers insulin therapy to have failed when careful management of diabetes has failed to keep blood glucose within recommended limits, resulting in disabling hypoglycaemia (repeated unpredictable hypoglycaemic episodes

that require help from others and affect quality of life).

NICE criteria for funded pump therapy

There are currently around 3000 pump users according to the Insulin Pump Therapy Group and 1.4 million people with type 1 diabetes in the UK (Diabetes UK website). Around 5–10% of the population with type 1 diabetes fulfil the criteria of unpredictable hypoglycaemia, including children (NICE, 2002a). If resources allow, hospital consultants may prescribe pump therapy as part of NHS treatment. Health authorities may provide equipment permanently or on a lending basis. As each PCT makes decisions about the best use of its own resources on the basis of clinical priorities and local need, there is no documented evidence of which trusts incorporate (or are planning to incorporate) pump therapy into their budget.

The individual's consultant must make a case for funding pump therapy as a necessary clinical need. If this is decided as the best course of action, it should be paid for from within the Health Authority's Service Level Agreement (SLA) which has been agreed with the provider (the hospital that the patient attends). The SLA is

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1 NICE guidance states pump therapy should be funded by the NHS if other treatments have failed to control diabetes successfully.

2 Of people with type 1 diabetes 5–10% fulfil the NICE criteria for unpredictable hypoglycaemia.

3 Insulin pump therapy allows the user to have a better quality of life.

4 If a person with diabetes would benefit from pump therapy, their consultant must make a case.

5 More diabetes teams who are trained in the use of pump therapy are needed in the UK.

KEY WORDS

- Pump therapy
- NICE guidelines
- Funding
- PUMP
- Postcode prescribing

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1 Despite the NICE recommendation that the NHS should fund treatments within 3 months of their guidelines, there is not sufficient funding available to provide pump therapy in all areas of the country.

2 Delivery plans for diabetes services are currently being established by trusts to implement the priorities of the NSF for Diabetes.

3 As pump therapy is not a current priority, budget resources may not have been allocated by some trusts.

4 Pump users need to attend a diabetes centre who are familiar with their treatment and can advise accordingly if the patient needs support or information.

5 There are currently 25 specialist teams across the country (diabetes centres with teams trained in pump therapy) who have more than 10 patients using insulin pump therapy.

adjusted each year to account for new treatment options. This cannot be predicted by the trust and can only be done when the patient presents with unpredictable hypoglycaemia. (DoH, 2003). Such an adjustment may not be in place when there is a need, meaning that funding is not available for pump therapy. This results in different availability from different PCT budgets causing a postcode lottery situation.

Quality of life issues for people who require pump therapy

Marcus (1996) stated that when pump therapy is used:

'...patients are no longer victims of their diabetes but masters of it.'

Chantelau et al (1997) reported pump users showed reduced problems with hypoglycaemia, improved HbA_{1c} levels, and greater treatment satisfaction due to attainable flexibility with their lifestyle. This supports the conclusions of the DCCT lifetime benefits and costs of intensive therapy study (1996) which stated:

'Over a lifetime, DCCT-defined intensive therapy reduces complications, improves quality of life, and can be expected to increase length of life.'

There can be little doubt about the benefits of insulin pump therapy for those who fulfil the criteria for its use. These three studies alone show that non-attainable treatment (due to lack of available funding) means individuals may not have the opportunity to use insulin pump therapy and enjoy an improved quality of life as a result.

Availability of funding and trained health professionals

Despite the NICE recommendation that the NHS should fund treatments within 3 months of their guidelines, there is not sufficient funding available to provide pump therapy in all areas of the country. This is partly due to NICE recommendations extending the time period to implement funding of pump therapy from 3–12 months. This extension was to allow sufficient time for healthcare

professionals to train in the use of pump therapy (NICE, 2002b).

Delivery plans for diabetes services are currently being established by trusts to implement the standards of the NSF for Diabetes. The NSF standards for trusts within Strategic Health Authorities are to establish a diabetes register and retinal screening programme by 2004. The NSF priorities document (DoH, 2000) states that:

'Resources need to be put into researching quality of life, e.g. pump therapy, effects of using glitazones, and the impact of race and ethnicity.'

This suggests that while research should be funded to examine the use of pump therapy, individuals who meet the criteria and have a clinical need will not actually have the treatment provided. As pump therapy is not a current priority, budget resources may not have been allocated by some trusts. It is not known which trusts have and have not made this provision as it is dependent on a patient presenting with a need and funds being made available – perhaps from other budgets if resources allow.

If funds are not available and there is no allocation of monies established by other patients using pumps in the area (creating a need) the individual may be told to wait until the following tax year as budgets have already been allocated. This lack of availability and access to treatment according to the time of year funds are applied for is highlighted by the Department of Health, the Patient's Association, and the Insulin Pump Therapy Group.

Specialist teams trained in the use of insulin pump therapy

Pump users need to attend a diabetes centre who are familiar with their treatment and can advise accordingly if the patient needs support or information. Trained teams may also initiate pump therapy in suitable patients, allowing healthcare professionals to gain experience and knowledge of this treatment. This also means that training for the patient can be via the diabetes team rather than the pump manufacturer.

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1 Even with 25 teams trained in the use of pumps, this does not equate to one team for each of the 28 strategic health authorities.

2 People with diabetes who are suitable for pump use or who currently use them may have to travel to where consultants are familiar with the treatment.

3 A national organisation has been set up to provide information and education for healthcare professionals wishing to find out more about pump therapy.

4 Individuals who may benefit from the use of pump therapy could prevent or delay debilitating complications of diabetes due to erratic diabetes management and high HbA_{1c} levels.

5 NICE guidance is currently leading to a decline in the number of new pump users.

across the country (diabetes centres with teams trained in pump therapy) who have more than 10 patients using insulin pump therapy. The pump manufacturers have carried out intensive training with healthcare professionals in the south of England which will help more diabetes teams become pump centres.

Even with 25 teams trained in the use of pumps, this does not equate to one team for each of the 28 strategic health authorities. People with diabetes who are suitable for pump use or who currently use them may have to travel to where consultants are familiar with the treatment. Referral to other hospitals may not be possible because the referring PCT funds the treatment and may not have made provision for pump therapy in their budget. This means that even if a clinician in another part of the country is willing to take a patient and initiate this treatment, availability of funding becomes a barrier. Again, this poses a case of postcode prescribing regarding availability of funding and patient education.

A national organisation has been set up to provide information and education for healthcare professionals wishing to find out more about pump therapy. The Chairman of Pump Management for Professionals (PUMP) has stated that pump funding varies in different areas of the country, as do training opportunities for healthcare professionals (Hammond, 2000).

Cost savings with the use of pump therapy

Individuals who may benefit from the use of pump therapy could prevent or delay debilitating complications of diabetes due to erratic diabetes management and high HbA_{1c} levels. Investment in treatment options which improve diabetes management may therefore benefit both the patient and service providers (Gilmer et al, 1997). The DCCT Research Group (1996) showed that outcomes and costs would be improved due to a reduced risk of complications for 5–10% of the population with type I diabetes using intensive treatment. Gilmer et al (1997) demonstrated a strong association between baseline glycaemic control and the

subsequent cost of healthcare. Rather than the preventive model of health, treating complications once they occur costs both the health service and the patient greatly.

Conclusion

NICE guidance is currently leading to a decline in the number of new pump users. Preventing or delaying complications of diabetes means tremendous savings for the health service which far outweigh the cost of providing this treatment option for those it will benefit. Non-concordance with NICE guidelines regarding NHS assistance for PCTs to fund pump therapy exacerbates the situation of postcode prescribing by the NHS in different areas of the country. ■

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USEFUL WEBSITES/EMAIL ADDRESSES

Diabetes UK: www.diabetes.org

The Patient's Association: www.patients-association.com

The Insulin Pump Therapy organisation: www.webshowcase.net/input

Pump Management for Professionals: joan.everett@virgin.net