

Case Study: Obtaining PCT funding for a real-time insulin pump with continuous glucose sensing

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Presentation

PM is a 48-year-old woman with a 24-year history of type 1 diabetes. She had been on MDI for 15 years and on CSII for 7 years and was currently using a Paradigm® 712 insulin pump. She wished to be upgraded to a real-time insulin pump with continuous glucose sensing. Her HbA_{1c} had been 12% on MDI but was 9% on CSII.

In the previous year she was diagnosed with

diffuse cardiovascular disease with a 95% occlusion of the right coronary artery and a 65% occlusion of the left coronary artery. She required an angioplasty and TAXUS® drug-eluting stent to the right coronary artery. She also suffered from severe pre-proliferative retinopathy and maculopathy. Despite steadily increasing insulin dosage, she continued to have erratic glycaemic control and her HbA_{1c} was stuck at 9%. She attended cardiac rehabilitation

Article points

1. It was felt that using a real-time plus glucose sensors would enable the patient to tighten control through identifying trends as well as being able to act on falling blood glucose levels before she became hypoglycaemic.
2. Ultimately, the case for funding must be constructed so that there is no choice but to fund.

Key words

- Poor glycaemic control
- Obtaining funding

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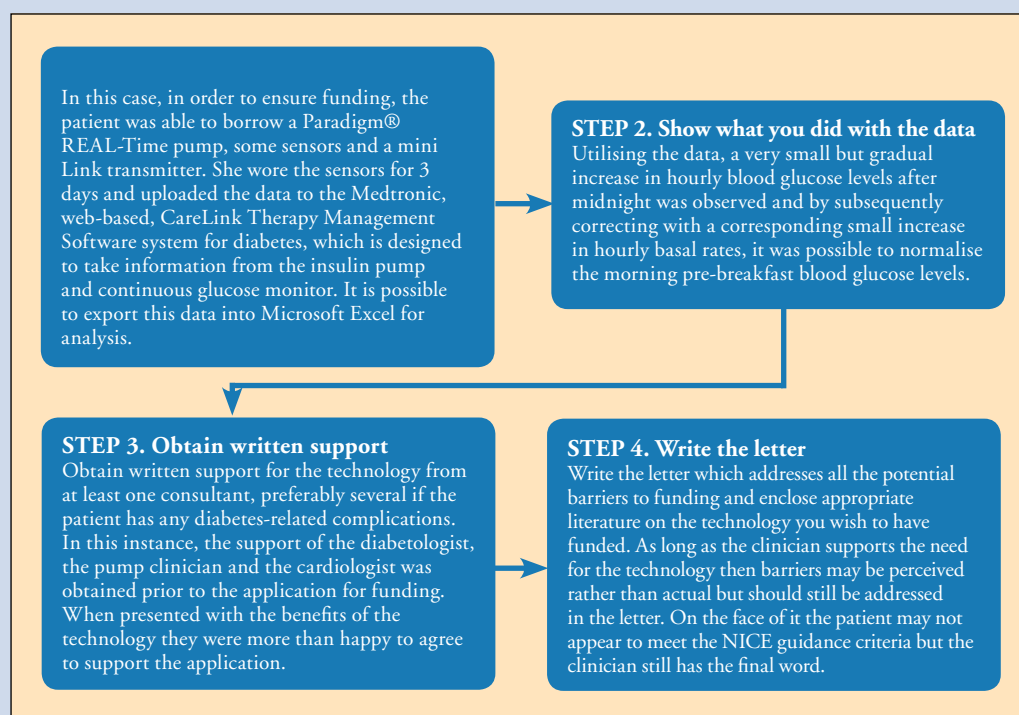


Figure 1. Four steps to obtaining funding from the PCT for a real-time system with continuous glucose sensor capability.

following her stent procedure but experienced frequent episodes of hypoglycaemia. She needed to intensify her control, exercise regularly and follow a low fat, calorie-controlled diet to aid with weight loss in order to reduce her risk of future cardiac incident or further intervention.

Why a real-time insulin pump with continuous glucose sensing?

PM felt that she was already doing her best to achieve tight control, but that it simply was not good enough. Her recurrent hypoglycaemia during exercise was acting as a barrier to carrying out the exercise she needed to improve her cardiac health. She also struggled with weight loss due to over correction during exercise-induced hypoglycaemia. Morning

blood glucose levels were very variable despite frequent monitoring. It was felt that using the Paradigm® REAL-Time plus glucose sensors would enable her to tighten control through identifying trends as well as being able to act on falling blood glucose levels before she became hypoglycaemic.

Presenting the case for funding

Obtaining unlimited funding for pumps, consumables and glucose sensing is not always easy and across the country there have been variable levels of success. To ensure the funding required for the patient was obtained, four steps illustrated in *Figure 1* were used.

Ultimately, the case for funding must be constructed so that there is no choice but to fund. Although it is best to adhere to the criteria laid down in NICE guidance (NICE, 2003), the one absolute requirement for funding is the opinion of the clinician. If possible, it is always best to get the patient to send the letter and supporting information to the PCT, as this has a more direct impact on the PCT panel members.

Example Letter

The ideal letter should look like the one shown in *Box 1*, where actual sections from the successful application are used to illustrate general principles.

Commentary

In this instance, the patient did improve her control and has benefited from improvement in her retinopathy, which has been downgraded from severe to moderate with no maculopathy present.

There is one crucial take home message here: If you want to ensure funding for CSII (with or without glucose sensing) then make sure you have thought of, addressed and answered any potential questions that might prevent funding. You should leave them with only one choice – to fund. ■

NICE (2003) Guidance on the use of continuous subcutaneous insulin infusion for diabetes. Technology Appraisal Guidance No. 57: NICE, London

Box 1. Example letter requesting funding from the PCT.

Dear Chair of PCT,

State what you want

I am seeking funding for a real-time insulin pump with continuous glucose monitoring capacity. I would like to receive funding for the pump and for the sensors for the continuous glucose monitoring function.

Give clinical reasons

I have recently had an angioplasty and a drug eluting coronary artery stent procedure. In order to tighten my glucose control to the level required to halt the progression of my coronary artery disease, I need to be able to monitor my glucose up to ten times a day or more. This is because I suffer from frequent hypoglycaemic events when my control is tightened. I have also taken on a strict regimen of cardiac rehabilitation exercise which also causes me frequent and severe hypoglycaemia.

Indicate why this type of therapy is the only solution

The Paradigm® REAL-Time not only allows for continuous glucose measurement but can also be programmed to alarm if the blood glucose should become too low or too high. This is invaluable as I have decreased hypoglycaemia awareness due to my intensified control. I have managed to lower my HbA_{1c} by 2 percentage points and reduce my cholesterol significantly but at the cost of nearly daily hypoglycaemic events.

Show that you have the clinical big guns on board

I have the support of my cardiologist (Dr X), my diabetologist (Dr Y) and my pump diabetologist (Prof Z) in my quest for funding for the Paradigm® REAL-Time. They are willing to supply letters of support if required.

Enclose company literature on your preferred pump or therapy (Remember that there may be many lay people or people with limited knowledge of CSII on the PCT)

I have taken the liberty of enclosing some information concerning a real-time insulin pump with continuous glucose monitoring capacity and am happy to answer any questions the panel may have. Please do not hesitate to contact me or the clinicians named above if you require further information.

Yours sincerely,
[the patient].