

Health and Social care Committee
Access to medical technologies in Wales
MT ToR 11 JDRF



JDRF submission to the Health and Social Care Committee Inquiry into the access to medical technologies in Wales.

For more information regarding this response, please contact:

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1. About JDRF

JDRF is the world's leading charitable funder of type 1 diabetes research and exists to find a cure for type 1 diabetes and its complications. For 40 years we have been fundamentally involved in the delivery of advances in this field: seeking out, assessing and monitoring the best science to drive the breakthroughs that improve management of type 1 diabetes and will ultimately cure the condition.

2. Response to Inquiry

JDRF welcomes the Welsh Assembly's focus on medical technologies.

JDRF believes that people with type 1 diabetes should have greater access to insulin pumps and Continuous Glucose Monitors (CGMs) so that they are able to use the 'artificial pancreas' system when it goes into commercial use in the future. The National Assembly should ensure that the NICE benchmark of 12% of people with type 1 diabetes using an insulin pump is met. NICE approval of type 1 diabetes technology is robust and the guidance is well received.

The diffusion of insulin pumps and CGMs throughout the NHS needs to begin now if patients are to benefit from advances in medical technology that will provide cost savings and better treatments for patients.

Insulin pump therapy is well established as a treatment option for type 1 diabetes and has been proven to reduce all grades of hypoglycaemia when compared with multiple daily injections (MDI). Insulin pump therapy can also reduce severe disabling hypoglycaemia by up to 75 per cent¹ and on average, HbA1c results also improve when people with type 1

¹ [John C. Pickup](#) and [Eric Renard](#), Long-Acting Insulin Analogs Versus Insulin Pump Therapy for the Treatment of Type 1 and

diabetes switch from MDI to pump therapy² which reduces the risk of the costly long term complications of diabetes.

Despite this, however, only 3.9% per cent of people with type 1 diabetes in the UK use insulin pumps. This is one of the lowest rates of pump therapy in any developed nation worldwide. In Europe around 20% of people with type 1 diabetes use an insulin pump, and in the US some 35%. People with type 1 diabetes in Lithuania have a better access to insulin pumps than people in the UK.

JDRF would like to see everyone with type 1 diabetes who would benefit from using an insulin pump to have access to one. Suitability for insulin pump therapy should be determined by clinical need and patient choice – not on the basis of a postcode lottery or the ability to self-fund treatment. JDRF would like to see NICE guidance on the uptake of insulin pump therapy to be fully implemented across the UK.

The UK also has pitifully low access to CGMs. Less than 1% of people with type 1 in the UK use this technology. CGMs have not yet been reviewed by NICE.

Why is it important that people with type 1 diabetes in the UK have access to these technologies?

It is important because scientists are working on an artificial pancreas system that will revolutionise how type 1 diabetes is treated.

The 'artificial pancreas' or closed-loop insulin delivery system automatically regulates blood glucose levels by releasing insulin when alerted to high levels of glucose, and withholding it when levels are low. Currently people with type 1 diabetes have to either inject insulin several times a day or wear an insulin pump which releases the hormone via a cannula inserted under the skin.

As mentioned, a growing number of people around the world are already using these technologies to help them control their glucose levels. People who use both a CGM and an insulin pump can be said to use an 'open loop' system. By developing an artificial pancreas we aim to close this loop, allowing the devices to talk to each other without the need for human intervention.

In total, JDRF has spent over £50 million worldwide, including investing in the UK, on the development of the artificial pancreas. Our JDRF colleagues in the US have recently completed a study which calculates that by using the artificial pancreas, Medicare - the American health insurers - will save \$1.9 billion in healthcare costs over 25 years.³ The research team, led by Dr Michael J. O'Grady, modeled 25 years of medical costs for people between 30 and 60 years old.

Their analysis revealed the accumulated cost savings resulting from avoiding complications in this group. Poorly controlled blood glucose levels in type 1 diabetes can cause complications later in life, such as diabetic eye disease and cardiovascular disease. The artificial pancreas can significantly slow or stop the progression of these and has the potential to deliver substantial health and financial benefits. The artificial pancreas has the potential to save the NHS a considerable amount of money. Treating diabetes as a whole costs the NHS a massive 10% of its healthcare budget.⁴

Type 2 Diabetes, *Diabetes Care*, February 2008, vol. 31 no. Supplement 2

² Doyle EA, Weinzimer SA, Steffen AT, Ahern JAH, Vincent M, Tamborlane WV. A randomized prospective trial comparing the efficacy of insulin pump therapy with multiple daily injections using insulin glargine. *Diabetes Care*. 2004;27(7):1554-1558.

³ O'Grady, Michael J. Ph.D., Priya M. John MPH, Aaron Winn, MPP. "Changes in Medicare Spending for Type 1 Diabetes With the Introduction of the Artificial Pancreas." June 9, 2011.

⁴ Department of Health (2006). *Turning the corner improving diabetes care*

www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4136141

Patients with type 1 in the UK must not be left behind other countries in receiving access to this life transforming, cost saving device. JDRF would like to see everyone with type 1 diabetes who would benefit from these technologies to have access to them. The diffusion of insulin pumps and CGMs throughout the NHS needs to begin now. We are very concerned that if UK healthcare professionals are not prescribing technology that is currently available such as insulin pumps and CGMs, they will not be ready to adopt the new technology of the artificial pancreas when it becomes available. It would be a real shame if people in the UK do not have access to this life changing treatment.

Scotland has made significant steps forward into addressing the inequity of access to insulin pumps. JDRF would welcome a greater emphasis to access to medical technologies in Wales.

Variation in access to medical technologies can differ dramatically in rural communities, encouraging people to go on an insulin pump could be a problem for more rural areas across Wales. This could be overcome by the effective training of health care teams across Wales.