

## **Kids with type 1 diabetes almost 5 times as likely to be admitted to hospital**

*Pre-schoolers and those from disadvantaged backgrounds most at risk, Welsh data show*

Children with type 1 diabetes run almost five times the risk of being admitted to hospital for any reason as their peers, finds research published in the online journal **BMJ Open**.

Pre-schoolers and those from disadvantaged backgrounds are most at risk, the findings indicate.

The number of new cases of childhood type 1 diabetes has been rising steadily by around 3-4% a year, the evidence shows, and the risk of death among those with the condition under the age of 30 is nine times that of the general public.

The researchers analysed the causes of hospital admission after a diagnosis of type 1 diabetes among 1577 Welsh children up to the age of 15.

All these children had been diagnosed with type 1 diabetes between 1999 and 2009, and their details entered into the Brecon Group Register—a network of healthcare professionals caring for children and young people with diabetes normally resident in Wales.

Around one in five children had been diagnosed with type 1 diabetes before the age of 5; two in five had been diagnosed after the age of 10.

Their hospital records were compared with those of 7800 children admitted to hospital up to May 2012, who had been randomly selected from the Patient Episode Database for Wales (PEDW), and matched for birth date, sex, and residential area.

The results showed that children with type 1 diabetes were almost five times as likely to be admitted to hospital for any cause as their peers.

Pre-schoolers were at highest risk of admission. After the age of 5 the risk fell by more than 15% for every five year rise in age at diagnosis.

Although there was no gender difference in risk, coming from a disadvantaged background was associated with an increased risk of hospital admission.

And those whose outpatient care was delivered at large centres were 16% less likely to be admitted to hospital as those treated in small centres. Most (78%) of those treated at large centres lived in urban areas.

“It is unsurprising that complications of suboptimal management, such as hypoglycaemia [low blood sugar] and ketoacidosis [excess sugar and acid in the blood] occur, leading to hospitalisation,” write the researchers.

But the personal costs to the individual and their families, and the financial toll on the NHS are considerable, they say.

They add: “This is an area of great clinical importance as patients admitted to hospital with diabetes aged under 30 years have a death rate nine times that of the general population.”