Two new studies show that both clinical and psychosocial outcomes in young adults with Type 1 diabetes leave much to be desired, and that those diagnosed before the age of 35 run an increased risk of depression. The findings should help focus more attention on this vulnerable group.

Setting the scene
Participants for the Sheffield study were drawn from two clinics dedicated to the care of young adults with diabetes, based at Royal Hallamshire and Northern General Hospitals. Patients come into the clinic from paediatric care at the age of 16 and move into adult services at the age of 21. They are cared for by a multidisciplinary team that includes consultants and district specialist nurses, from both paediatric and adult diabetes services, as well as a dietitian. Psychological support is also available, by referral. The patients would typically have an appointment every three months.

A retrospective audit of young adults (16–25 years) with Type 1 diabetes that was carried out in 2003 revealed suboptimal glycaemic control, poor attendance at clinic and high rates of microvascular complications. The authors came to the conclusion that we are failing to achieve high standards of care for young adults with diabetes. Ten years on, there have been many technical improvements in diabetes care, such as analogue insulins and new delivery devices. Have these been accompanied by a corresponding improvement in outcomes among young adults with Type 1? A new study, by researchers in Sheffield, seeks to answer this question, looking at current medical and psychosocial outcomes among patients attending one of the clinics that was featured in the 2003 audit.

A related study, from Northern Ireland, reveals that depression is nearly twice as common among young people with Type 1, when compared with their peers who do not have diabetes. The findings from these studies show why Diabetes UK’s Children and Young Person’s campaign, which is soon to enter its next phase, is so important.

Clinical and psychosocial data
The following information was extracted from participants’ records:
- mean HbA1c
- non-attendance (percentage of missed appointments from total appointments)
- hypertension (blood pressure ≥135/85mmHg)
- elevated urinal albumin:creatinine (≥2.5mg/mmol[male]; ≥3.5mg/mmol[female])
- retinopathy.

The young people self-reported their symptoms of depression and anxiety by using the Hospital Anxiety and Depression Scale, and scored their eating problems with the Diabetes Eating Problem Survey Revised.

Comparison with 2003
Statistical analysis of the above data allowed comparison with that from the 2003 audit and other studies. Thereby, the researchers were able to assess how Type 1 diabetes care and management in young adults has changed over the last 10 years.

Only 9.4 per cent of the group achieved the recommended HbA1c level of ≤58mmol/mol (≤7.5 per cent). Mean HbA1c was 86mmol/mol (10.0 per cent) compared with 79mmol/mol (9.4 per cent) in 2003. Mean HbA1c in this study was significantly higher among female patients than among male patients. In conclusion, the researchers were able to access how Type 1 diabetes care and management in young adults has changed over the last 10 years.

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In conclusion, the paper’s authors say that while new technologies do offer the potential for better diabetes control, this will not happen unless young people are better supported in taking more responsibility for their self-management. There may also be much to learn from other European clinics, which have better outcomes with young people and higher rates of insulin pump use. It is also important to improve the transition from paediatric care (an issue which Diabetes UK is focusing on with its national programme of systematic photographic screening, which is more sensitive in detecting retinopathy).

There are also high rates of anxiety, depression and disordered eating behaviour among young people with Type 1 diabetes, and depression goes with higher HbA1c levels. However, there were at least some positives emerging from this new study in that screening rates are up for hypertension, nephropathy and retinopathy.

The researchers point out a few limitations in their study as a comparison with 2003. Only one of the original centres took part in this study. There have also been changes in diabetes technology, such as the introduction of digital retinopathy screening, which makes some direct comparisons difficult. However, the new study also has some notable strengths. Response rate was good and the similarities between the responders and the non-responders suggests that the findings can be generalised, at least to an extent. The research focuses upon a specific age group with unique needs, and poor outcomes, measuring psychosocial health as well as a wide range of physical health outcomes.

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Children and Young Person’s campaign and with targeted research funding). Finally, healthcare professionals should work towards better integration of mental health support with diabetes care and, of course, take careful note of young people’s own views about their diabetes clinic.

**Depression in diabetes study**

The second study, from the UK Clinical Research Collaboration Centre of Excellence for Public Health, Northern Ireland, and Queen’s University, Belfast, assessed depression rates in newly diagnosed young people with Type 1 diabetes, recording GP diagnoses and antidepressant use. The secondary outcome was to determine whether those with diabetes complications had higher rates of depression than those without complications. This is the first study to investigate long-term depression from time of diagnosis, as other studies have looked at selected short-term time intervals after diagnosis.

Patient data was drawn from the Clinical Practice Research Datalink, which is the world’s largest dataset of longitudinal primary care patient records. It covers 8 per cent of the UK population and contains both diagnosis codes and prescription records. The researchers extracted data on a group of 5,548 patients aged under 35 who had a diagnosis of Type 1 diabetes and were receiving insulin prescriptions. Each was matched with up to two controls (10,657 in total) of the same age, sex and general practice without diabetes.

Diagnoses of depression and antidepressant prescriptions among the subjects and their controls were recorded. They were followed from the date of the first insulin prescription until a depression outcome or death or leaving the practice. The mean follow-up time was 4.8 years and mean age at diagnosis was 17.7 years.

Analysis of this data showed that young people with diabetes were twice as likely to have depression as were controls. As many as 19.8 per cent of subjects were taking antidepressants within 10 years of diagnosis. Those with a history of retinal or renal complications did have a slightly increased risk of depression compared with those without complications. However, this increased risk did not reach statistical significance. Time from diagnosis also had an impact on risk of depression, with a higher risk in the first five years.

In conclusion, the authors note that transition to adulthood is challenging enough for young people, without the added stress of Type 1 diabetes. These findings suggest that this age group is especially vulnerable to depression and the diabetes team should be sure to monitor psychological health among these young adults. Further research into the factors underlying depression among people with Type 1 diabetes would be welcome. Together, these two studies suggest that the physical and psychological wellbeing of young people with Type 1 diabetes is less than optimal. The findings should prompt healthcare professionals and policy makers to pay special attention to this group of patients.
