

National Diabetes Transition Audit highlights variability in services



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There is still considerable variability in the provision of care given to young adults undergoing transition from paediatric to adult diabetes services in England and Wales, according to the recently published National Diabetes Transition Audit (NDTA) (NHS Digital and Royal College of Paediatrics and Child Health [RCPCH], 2019). Many young people experience a deterioration in control of their diabetes during transition, however this is not universal. The data therefore provide an opportunity to identify key factors in positive outcomes.

The audit

The latest NDTA for England and Wales has brought together data from the 2011–12 and 2015–16 National Paediatric Diabetes Audits (RCPCH, 2013; 2017) and the 2011–12 and 2016–17 National Diabetes Audits (NHS Digital, 2013; 2018). It includes data from a cohort of 3,800 young people with type 1 diabetes and 120 young people with type 2 diabetes as they move up from paediatric to adult services. The report was able to identify young people with a continuous record through transition and into adult care.

Key findings

Key findings from the report demonstrate that, on average, young people with type 1 diabetes experience deteriorations in annual care process completion, achievement of treatment target for HbA_{1c} and higher rates of diabetic ketoacidosis during transition. The treatment target of HbA_{1c} <58 mmol/mol (<7.5%) was achieved in a higher percentage of young people in the year before transition than in subsequent years. A wide variability was noted from different centres. Interestingly, diabetic ketoacidosis data showed a higher admission rate in the year of transition compared to the following years, when admission rates settled.

The audit showed considerable local service variations. Looking at the time to transition from paediatric to adult diabetes service:

- 65% of transitions occur at 17–18 years
- 25% between 15 and 16 years
- 5% at age 19–20.

Most services showed adverse trends in some areas, but other services or teams were able to show the opposite, and so improvements in their outcomes. Care processes, see *Box 1*, were shown to be similar or better in the year before transition. This gap trailed off by 5–10% in the first year after transition and this downward continued into the subsequent second and third years.

Tackling variability between services

One of the points made throughout the report was the variability between different services. Understanding the causes of this variation may help to drive improvements overall. The NDTA team is keen to support improvements in transition and has set up the NDTA Quality Improvement Collaborative to work with various providers to develop skills and share learning, starting this year. In addition to this, Diabetes UK's ChangeLabs in Wessex, East Midlands and Ireland are focussing on improving patient experience of transition and driving service development in 2019 (<https://bit.ly/2AdXVss>). ChangeLabs are platforms for addressing complex challenges in diabetes care and they bring together a diverse group of people to work collectively on a shared challenge. They are ongoing, taking an iterative and systemic approach, prototyping a range of solutions and testing them in the 'lab' of the real world.

It is clear from the data that deterioration during transition is not universal. Paediatric, adult and community services that work closely together and maintain engagement with young people into adulthood may be a key factor in these positive audit data.

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Cardiovascular risk factors

The NDTA also reported on cardiovascular risk factors – in particular, blood pressure and urine albumin-to-creatinine ratio. There was a reduction in the number of young people achieving the target blood pressure of 140/80 mmHg post transition. This is an area of concern, as 20% of young people had blood pressure readings above this level before transition. Raised urine albumin-to-creatinine ratio of 2.5 mg/mmol in males and 3.5 mg/mmol in females was reported in 10% of young people both before and after transition into adult care. These results highlight a need for improvement in both of these care processes.

Insulin pumps

The final section of the NDTA reviewed insulin pump treatment before, during and after transition. It found care process completion to be higher for pump users, although numbers are relatively small at only 12%. Part of the reason for this could be related to the movement of funding for pump therapy from paediatric to adult service budgets, and the potentially greater patient responsibility to attend clinics to ensure maintenance for pump consumables.

The audit also showed that achievement of target HbA_{1c} was no different between pump and non-pump users. This seems to indicate that pump use in young people is not a reliable indicator that the device is being used to its greatest potential. This may be partly due to parents and carers taking a step back and shifting greater responsibility for managing pump therapy, and all this entails, to the young person. Greater use of ‘pump holidays’ and using newer very-rapid-acting insulins and extended basal insulin options may free up potential pump funding for other newer technologies, such as continuous glucose monitoring systems or flash glucose sensors, in adult services.

Using data to improve services

The NDTA offers useful data to present to commissioners and, as the results now stretch for 8 years, allows for local benchmarking of services. Transition services for diabetes may not previously have had the opportunity to formulate a list of all the young people who should be included in

their service to determine the size of the transition population and work out who has become lost to follow up. It takes time to perform this vital work but may allow a healthcare organisation to highlight the key findings from the NDTA in order to help develop a business case for future resources. Working collaboratively to develop a system that works locally and including peer review information will hopefully help both paediatric and adult services find solutions for their population.

Geography, demographics and access to local resources highly influence how any transition service is able to develop and progress. The NDTA recommends specialist services consider whether improvements may be accelerated through participation in the RCPCH and National Diabetes Audit Quality Improvement Collaborative programmes. The report asks clinical commissioning groups and local health boards to review their current service provision and compare their findings to other services in England and Wales. It also urges them to support local paediatric and adult services to improve transition arrangements.

Supporting lifelong management of the condition is essential in achieving the most positive outcomes for individual young people. It is acknowledged that there can be a disruption in care as young people move away from paediatric services and towards adult services; this has been shown to have both short- and long-term effects on health. The report supports a more formalised handover of care to minimise the risks of disruption.

Some areas of the UK have separate and dedicated diabetes transition teams who liaise closely with both adult and paediatric colleagues, so continuity of care is supported throughout the journey. Ensuring any transition process includes medical, educational and psychological services should help young people to gain the confidence to continue managing their own diabetes self-care needs that persist into adulthood. ■

NHS Digital (2013) National Diabetes Audit 2011–2012. Report 1: Care Processes and Treatment Targets. Available at: <https://files.digital.nhs.uk/publicationimport/pub12xxx/pub12421/nati-diab-audi-11-12-care-proc-rep.pdf> (accessed 7 March 2019)

NHS Digital (2018) National Diabetes Audit, 2016–17. Report 1: Care Processes and Treatment Targets. Available at: <https://bit.ly/2NNSLcV> (accessed 7 March 2019)

NHS Digital, Royal College of Paediatrics and Child Health (2019) National Diabetes Transition Audit, 2011–2017. Available at: <https://bit.ly/2EFvp5m> (accessed 7 March 2019)

Box 1. Annual care processes for people aged 12 and over.

- HbA_{1c} for glucose control
- Blood pressure for cardiovascular risk
- Serum cholesterol for cardiovascular risk
- Body mass index for cardiovascular risk
- Smoking status for cardiovascular risk
- Serum creatinine for kidney function
- Urine albumin for kidney function
- Foot check for foot ulcer risk

RCPCH (2013) National Paediatric Diabetes Audit Report 2011–12: Care processes and outcomes. Available at: www.rcpch.ac.uk/sites/default/files/2018-03/npda_national_report_2011-12.pdf (accessed 7 March 2019)

RCPCH (2017) National Paediatric Diabetes Audit Report 2015–2016. Part 1: Care processes and outcomes. Available at: www.rcpch.ac.uk/sites/default/files/NPDA_2015-16_audit_report.pdf (accessed 7 March 2019)