At the Diabetes Professional Care conference held in November 2017, delegates were informed about the current state of diabetes care in England and how digital innovation, the optimisation of drug treatments and the early prevention of type 2 diabetes mellitus were key areas for future improvement.

Felix David here reports on some of the conference highlights.

Evidence-based commissioning of high-quality diabetes care

‘The UK is the worst at achieving its HbA1c target and we see that consistently when we compare to other similar countries – and this is not good enough,’ said Professor Kamlesh Khunti, Professor of Primary Care Diabetes and Vascular Medicine at the University of Leicester, on what needs to change in the treatment of diabetes in the UK.

In a 2013 study on which European countries achieved an HbA1c target of <7.0%, the UK was last, with only 40% of UK patients hitting an HbA1c target <7.0% despite having one of the highest checking rates in Europe.¹ ‘I show this data internationally and I am ashamed of it,’ said Prof Khunti. ‘The reason is QOF [Quality and Outcomes Framework indicators] set an HbA1c target of 7.5%, but if 50% of patients hit that target then there is no encouragement to do anything else.’

One solution is to encourage early intervention via the increased screening of people at high risk of diabetes. To save time and resources, screening should employ a two-stage approach, with a risk score used before a blood test to reduce the high numbers of people who currently have blood tests unnecessarily.

‘In South Asian populations this two-stage approach was estimated to be not only cost effective but cost saving, as this group has a high disease burden, with a twofold increased risk of diabetes,’ said Prof Khunti.

The problem, however, is getting people to engage. This issue is especially pronounced in ethnic minority groups as ‘they do not usually engage with the health care system through the usual route, like GP surgeries,’ said Prof Khunti. Potential avenues being explored to increase engagement in ethnic minority groups include extra information in pharmacies and communal areas like faith centres, and providing medical information in different languages. However, at present only 30% of all patients referred to a programme end up completing the course. ‘We therefore also need to start thinking about how to keep people engaged’, said Prof Khunti.

Metformin, insulin and de-intensification

Medication needs to be considered in those patients who do not positively respond to lifestyle interventions. A study in India showed that people at high risk of diabetes who did not respond to exercise targets at three months still achieved a 30–40% reduction in risk of developing diabetes at three years if they were given metformin.² ‘This is the kind of work that we should be starting to do [in the UK] which isn’t happening yet,’ said Prof Khunti. ‘Lifestyle change is our mantra, but if this fails then metformin needs to be quickly considered as people are not engaging.’

Likewise, patients need to be quickly given insulin if they consistently fail to reduce their HbA1c. In a survey of 10 countries, the mean pre-insulin initiation HbA1c in the UK was highest at 9.8%, a result it shares only with Turkey, while in China it was 8.5%.³ In the UK, patients can expect to wait a median of two years before starting a second drug after metformin, while if they are on two therapies they can wait a median of seven years before being put on a third drug and then a further six years before being given insulin. ‘NICE and the ADA guidelines say we should be more aggressive [in initiating insulin] after three to six months, yet we are waiting seven years here,’ said Prof Khunti.

‘What we should be doing is bringing HbA1c down from diagnosis and keeping it as low as possible – unless they start getting complications.’

Conversely, the de-intensification of medicine in older patients with diabetes also needs improvement. ‘These older patients have sarcopenia, they are not mobile, they are getting hypoglycaemia and having falls, but we don’t stop medications,’ said Prof Khunti.

A recent UK-based study demonstrated that, in diabetic patients >69 years of age, the rate of hospital admissions for hypoglycaemia significantly increases,⁴ showing treatment is not working sufficiently. If a patient with diabetes is >65 years old, they will have 5.5 other conditions, on average, so ‘we need to individualise targets,’ said Prof Khunti. ‘For example, in someone who is very young and who has not had diabetes for many years and no comorbidities, we should be aiming for tight glycaemic control, and for those who do have multiple comorbidities we should go for a less intensive approach.’

‘Overall, we need to start thinking about new models of care. People with diabetes don’t just have diabetes,’ concluded Prof Khunti.

Align, focus, deliver

‘As we know, money is tight in health care, but remarkably there have been some fantastic opportunities for us in the field of diabetes,’ said Professor Jonathan Valabhji, National Clinical Director for Obesity and Diabetes, NHS England, in his co-presentation with Dr Partha Kar, Associate National Clinical Director for Diabetes, NHS England, on where money is being spent on diabetes care in England.

‘We have a nice pot of money, though not a blank piece of paper,’ stated Prof Valabhji. £65 million has been allocated to NHS England for diabetes care this financial year and it will be divided into three broad workstreams: the prevention of type 2 diabetes, treatment and care of diabetes, and a diabetes digitilisation programme.

‘We are the first country in the world to roll out a comprehensive national type 2 diabetes prevention programme,’ said Prof Valabhji.

Piloted in 2015/2016, the service uses health economies (usually a partnership between a CCG and a local authority) to engage with patients identified as being at high risk of diabetes, that is, people with non-diabetic hypoglycaemia or low-glucose regulation. The service currently covers 75% of England and
has just crossed the threshold of achieving 100,000 referrals into its care. The plan is to achieve 100% geographical coverage of England by April 2018, and early data show that the service is engaging people across the ethnic and socio-economic spectrums, ‘which is very encouraging in terms of equity of access,’ said Prof Valabhji.

The majority (£41m of the £65m funding) is being given to the treatment and care of patients with all types of diabetes, including rarer forms. After two rounds of bidding, the funding was split between the North (£11m), South (£9.7m), Midlands (£13.1m), and London (£7.2m). Divided between these areas, funding is to be spent on achieving treatment targets (£15m), improving access to structured education (£11m), multidisciplinary foot care teams (£10m), and access to inpatient specialist care (£5m).

**Self-management and digital education opportunities**

The intent is to create a clear treatment pathway, with individualised care programmes and structured education to improve self-management. ‘I cannot emphasise this enough. Diabetes is not one single entity. There are different types of diabetes and we need to have different strategies to deal with it,’ said Dr Kar. ‘One in 25 people with type 1 diabetes go into ketoacidosis inside a hospital. That is in a first-world country, and in most cases it is because someone is not given their insulin because there is not a coherent self-management policy.’

The diabetes digitalisation programme is an important tool to help achieve education targets. In 2018, the aim is to create a single digital service for people with type 1 diabetes to access all their information, including education courses and the ability to download blood glucose results. ‘We are currently working with patients to build that service so that, rather than a patient having to go to “Professor Google”, they will have access to one education platform,’ said Dr Kar.

Digitalisation also offers the potential to reduce waiting times and reach individuals reluctant to access the health care system. In the type 2 diabetes prevention programme, only 100,000 of the five million people identified with non-diabetic hypoglycaemia will be reached each year, ‘so what about everyone else?’ asked Prof Valabhji. ‘In this regard we are driving innovation in the digital space to offer digital consultations for people who are unable to commit to physically coming into the surgery.’ The scheme is currently being piloted in eight health economies across England and so evidence for its efficacy is not yet available.

**Population accountability for people with type 1 and 2**

A lack of data, huge regional variation, increased demand and the overuse of treatments are just some of the problems that Professor Sir Muir Gray, Director, Better Value Healthcare and Oxford University Hospitals NHS Trust, presented as endemic across diabetes care in England.

Although there are plenty of data on diabetes spending across England, ‘it is just random really, whether it is high or low, so what is going on?’ asked Prof Gray. In some cases there exists a 1.5 difference in diabetes spend between counties, resulting in millions of pounds of difference, without a discernible cause. This absence of coherent data makes it difficult to learn where the key areas of improvement are to be made, although it does reveal the underuse of high-value interventions. ‘For example, if we all managed atrial fibrillation as well as they do in Bradford, there would be 5000 fewer strokes and 10% less dementia – no more money, no more technology; they just got a grip of it.’

Other ways to get ‘a grip of it’ include optimising the treatment given to diabetic patients. It is unrealistic to expect sudden large increases in diabetes care funding, so any innovation needs to rely on excess generated by cost saving, which is raising difficult questions. ‘In the next 10 years, need and demand will increase by about 20%, so we are going to have to look at overuse to decide where the resources are coming from to be able to do different things,’ said Prof Gray.

**Optimising diabetes care**

As demonstrated by Avedis Donabedian, there exists a ‘point of optimality’ where an excess of treatment has no more value, and this point has been reached in some treatment areas. For example, ‘we probably spend a billion pounds at the last year of life doing more harm than good,’ said Prof Gray. ‘We have to start asking this of diabetes too. Prescribing for older people – is that really getting value?’

The level of change required is too complex for a bureaucratic solution. ‘You cannot tackle something like type 2 diabetes with a structural re-organisation,’ said Prof Gray. Instead, a dramatic culture shift is needed to optimise diabetes care. Rather than treating a patient’s comorbidities as separate conditions, and constantly moving them between primary and secondary care, Prof Gray used the metaphor of an ant colony to explain how ‘we all need to work together’ to treat the patient as an individual. One way is to re-establish the communication between specialists and GPs, which has been ‘completely destroyed in recent years but has to be brought back again’.

Obviously, the debate on how to optimise diabetes care is not new, but digital innovation offers opportunities not previously available. One common issue is that health professionals do not have enough time to deal with increased patient demand as the NHS still operates by face-to-face consultations. Now, though, as most patients own a smart phone, tablet and/or computer, the ability to have conversations with a health professional via digital services is being developed to make consultations easier and quicker.

At a smaller-scale, cost-saving benefits would also be achieved if the NHS furthered the development of a paper-free service. For example, 500 million lab reports are currently sent out each year that could be emailed instead. However, in digital innovation ‘we are 10 years, if not 20 years, off the pace, and we have got to move very quickly to catch up with that,’ warned Prof Gray.

**References**

References are available in *Practical Diabetes* online at www.practicaldiabetes.com.
References