



## In Focus

### World Diabetes Day: Background on Diabetes

[World Diabetes Day](#) falls each year on 14 November, and is part of a global campaign led by the International Diabetes Federation to raise awareness of the issue. The National Institute for Clinical Excellence (NICE) states that diabetes is “one of the most common chronic diseases in the UK and its prevalence is increasing”.<sup>1</sup> Diabetes occurs when the body doesn’t respond correctly to the hormone insulin. Produced by the pancreas, insulin affects the way glucose and fat are metabolised; some people don’t produce any insulin, some don’t produce enough and some people produce insulin that does not work properly (insulin resistance). Insulin helps to regulate blood glucose levels, and if this fails it can lead to serious complications, including blindness, kidney failure, nerve damage and cardio-vascular disease.<sup>2</sup> There are two main types of diabetes:

In **type 1** diabetes (T1D) the cells that produce insulin are damaged by the body’s immune system. It usually manifests before the age of 40, and is managed with insulin injections. It is not currently possible to prevent T1D. Rarer forms of diabetes are caused by defects in a single gene. They are also not preventable, although if diagnosed correctly they can be managed with drugs. Together these forms account for around 10 percent of people with diabetes.

**Type 2** diabetes (T2D) accounts for most of the remaining 90 percent of cases. It occurs when the body cannot produce enough insulin, and/or the insulin produced does not work effectively. T2D is treated through diet and exercise, although drugs and insulin replacement are often needed. It is T2D that is responsible for the increases in the number of cases both globally and in the UK.<sup>3</sup>

The NHS Choices website lists some of the potential complications arising from [T1D](#) and [T2D](#), such as, heart disease and stroke; nerve damage; retinopathy; kidney disease; foot problems; sexual dysfunction; miscarriage and stillbirth. Diabetes UK state there are [15 essential checks](#) and services that every person with diabetes should receive.

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#### Prevalence of Diabetes

[Diabetes UK](#) report that “around 700 people a day are diagnosed with diabetes” in the UK. They state that, since 1996, “the number of people diagnosed with diabetes in the UK has more than doubled from 1.4 million to almost 3.5 million”. The National Audit Office (NAO) have stated the increase is “strongly linked to rising levels of obesity amongst the adult population” and that in England “obese adults are five times more likely to be diagnosed with diabetes than adults of a healthy weight”.<sup>4</sup> The NAO further state that “by 2030, the percentage of the adult population with diabetes is expected to rise to 8.8 percent (4.2 million people)”. The World Health Organisation, [Global Report on Diabetes](#) (2016), estimates that “422 million adults were living with diabetes in 2014, compared to 108 million in 1980” and “over the past decade, diabetes prevalence has risen faster in low- and middle-income countries than in high-income countries”.

## Health Policy

The NHS's [Five Year Forward View](#) (October 2014) “sets out a new shared vision for the future of the NHS based around the new models of care”. This includes the [NHS Diabetes Prevention Programme](#), which rolled out in 2016 (full coverage across the country is expected by 2020). The Programme [includes targets](#) requiring 10,000 people to be referred to the Diabetes Prevention Programme in 2016–17 (and 100,000 by 2020) and for there to be a “measurable reduction in variation in management and care for people with diabetes”.

As part of its progress review on adult diabetes services in 2015, the NAO highlighted that the Department of Health's National Service Framework for Diabetes included nine ‘care processes’ that people with diabetes should receive every year, such as blood pressure checks, eye screening, foot examinations and smoking advice.<sup>5</sup> NICE has also indicated three ‘treatment standards’ relating to blood glucose, pressure and cholesterol to help reduce the “risk” of complications.<sup>6</sup>

In light of the NAO report, the House of Commons Public Accounts Committee stated “international evidence now available also suggests that the UK performs well compared to other countries in terms of outcomes for diabetes patients”.<sup>7</sup> However, it also stated that “although an individual diabetes patient's prospects are getting better, the number of people with diabetes is rising by 4.8 percent a year, and performance in delivering the nine care processes and achieving the three treatment standards, which help to minimise the risk of diabetes patients developing complications in the future, has stalled. In addition, very few new diabetes patients are taking up education that could help them manage their condition, and the number of diabetes patients experiencing complications (which account for over two-thirds of the cost of diabetes to the NHS) continues to rise”. The Committee urged the Department of Health to take “significant action to improve prevention and treatment for diabetes patients”.

The NAO have stated that the estimated cost of diabetes to the NHS has been “widely reported as about £10 billion a year, based on a piece of work by York Health Economics Consortium in 2012”.<sup>8</sup> The Department of Health revisited this work in 2015 in relation to England and (using “more detailed estimates” and “updated methodology”) estimated that the cost to the NHS in England was “£5.6 billion in 2010–11”, with “complications account[ing] for 69 percent of these costs”.<sup>9</sup> In its 2016 report, [Prescribing for Diabetes, England, 2005/06 to 2015/16](#), the Health and Social Care Information Centre stated that in the financial year 2015/16 there were “49.7 million items prescribed for diabetes at a total net ingredient cost of £956.7 million” up from “27.1 million prescription items and £513.9 million in 2005/06”.

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<sup>1</sup> National Institute for Clinical Excellence, [Diabetes in Adults: Quality Standard 6](#), March 2011.

<sup>2</sup> Parliamentary Office of Science and Technology, [Preventing Diabetes](#), 16 July 2012.

<sup>3</sup> *ibid.*

<sup>4</sup> National Audit Office, [The Management of Adult Diabetes Services in the NHS: Progress Review](#), HC 489 of session 2015–16, 21 October 2015, p 13.

<sup>5</sup> *ibid.*, p 15.

<sup>6</sup> *ibid.*, pp 5, 7, 9.

<sup>7</sup> House of Commons Public Accounts Committee, [Management of Adult Diabetes Services in the NHS: Progress Review](#), HC 563 of session 2015–16, 22 January 2016, p 3.

<sup>8</sup> National Audit Office, [The Management of Adult Diabetes Services in the NHS: Progress Review](#), HC 489 of session 2015–16, 21 October 2015, p 16.

<sup>9</sup> *ibid.*, p 16.

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