

# Type 2 diabetes prevention and care







Northern Ireland Audit Office

# Type 2 diabetes prevention and care

Published 06 March 2018



This report has been prepared under Article 8 of the Audit (Northern Ireland) Order 1987 for presentation to the Northern Ireland Assembly in accordance with Article 11 of the Order.

K J Donnelly  
Comptroller and Auditor General

Northern Ireland Audit Office  
06 March 2018

The Comptroller and Auditor General is the head of the Northern Ireland Audit Office. He, and the Northern Ireland Audit Office are totally independent of Government. He certifies the accounts of all Government Departments and a wide range of other public sector bodies; and he has statutory authority to report to the Assembly on the economy, efficiency and effectiveness with which departments and other bodies have used their resources.

For further information about the Northern Ireland Audit Office please contact:

Northern Ireland Audit Office  
106 University Street  
BELFAST  
BT7 1EU

Tel: 028 9025 1100  
email: [info@niauditoffice.gov.uk](mailto:info@niauditoffice.gov.uk)  
website: [www.niauditoffice.gov.uk](http://www.niauditoffice.gov.uk)

© Northern Ireland Audit Office 2018



# Contents

	<b>Page</b>
<b>Key Facts</b>	
<b>Case Studies</b>	
<b>Glossary</b>	
<b>Abbreviations</b>	
<b>Executive Summary</b>	<b>1</b>
<b>Part One</b>	
<b>Introduction and Background</b>	<b>5</b>
Local diabetes levels have risen by over 70 per cent since 2004-05	6
People who develop Type 2 diabetes can develop serious and even fatal complications	8
The local healthcare system spends an estimated £400 million annually in treating diabetes	9
Audit objective and scope	11
<b>Part Two</b>	
<b>Policy development for Type 2 diabetes care</b>	<b>13</b>
Timeline summary	14
2003 – A review concluded that significant improvements in Type 2 diabetes care were required, but its recommendations were not formally implemented	14
2009 – A Service Framework for Cardiovascular Health included three diabetes standards, but these were subsequently withdrawn	15
2012 – The Department established a Steering Group to reassess local diabetes care standards	16
2016 - The Department published a Diabetes Strategic Framework	17
The Department faces significant challenges in implementing and resourcing the Framework	18
Conclusions	19
<b>Part Three</b>	
<b>Improving Type 2 diabetes care</b>	<b>21</b>
The stakeholders face four key future challenges in delivering Type 2 diabetes care	22
Patient education is crucial in assisting self-management of Type 2 diabetes	22
Limited progress was achieved prior to 2013 in ensuring that Type 2 diabetes patients had access to patient education	24
Whilst education provision has recently increased, further improvements are still required	24
Conclusions	26
Initiatives have been introduced to address feet and eye complications	26
Bariatric surgery could be a viable option to treat obesity and Type 2 diabetes	28
There is no regional screening programme to identify people at high risk of developing Type 2 diabetes	28

# Contents

	Significant workforce shortfalls for diabetes care were identified in 2003	29
	There is evidence that significant workforce shortfalls remain, and that improvements to staff training are required	30
	The Framework proposes to improve workforce planning and staff training	32
	Prevention initiatives have not reversed the increases in obesity and Type 2 diabetes	33
	The Framework plans to develop a new prevention policy by 2018	35
	Successful primary prevention of Type 2 diabetes requires a mix of interventions and clear leadership	36
	Conclusions	37
<b>Part Four</b>	<b>The standard of Type 2 diabetes care</b>	<b>39</b>
	Two long-term outcome indicators have been established for obesity and diabetes	40
	Whilst an integrated patient record database helps support high quality Type 2 diabetes care, such a system has not been developed	40
	A proposed set of indicators for measuring diabetes care standards has been developed, but some key areas cannot be measured	41
	Conclusions	42
	The Quality of Outcomes Framework (QOF) measures primary care performance in delivering Type 2 diabetes care	43
	Primary care has consistently achieved the QOF performance targets	44
	There is scope for making the QOF Framework more challenging	45
	The National Diabetes Audit measures standards of diabetes care in England and Wales	46
	Local non-participation in the National Diabetes Audit has hindered measurement and benchmarking of care standards and outcomes	47
	Conclusion	49
<b>Appendices</b>		
	Appendix 1 Study Methodology	52
	Appendix 2 Areas identified for improvement by the Joint Taskforce report (2003)	54
	Appendix 3 Diabetes Strategic Framework – Proposed Improvement Measures	55
	Appendix 4 Views of Diabetes UK (Northern Ireland) on provision of structured education to local Type 2 diabetes patients	61
	Appendix 5 Pilot foot care project in the Northern Trust	62



# Type 2 diabetes in Northern Ireland

## Key facts



# Type 2 diabetes– The Human Impact

## Case Study 1

John (not his real name) landed on the floor when getting out of bed one morning in July 2012. Tests conducted by his local GP showed that he had lost the feeling in his toes (neuropathy), and had developed Type 2 diabetes. When John, then aged 53, told his employer, he had to leave his construction job as the employer's insurance would not cover someone with neuropathy.

John returned home to live with his mother. He sold his car and stopped driving to encourage himself to take more exercise. His local GP also referred him to a diabetes education course in the Belfast Trust.

***“The best two hours I ever spent. They were very honest and direct about how serious Type 2 diabetes is, explaining what I could do. I went on to websites and attended a further course to learn how to improve my own control. I listened to the advice on diet and complied with my medication and determined that diabetes would not control me or my life. I joined Diabetes UK and was interviewed to become a volunteer working, learning and mentoring along with others who had the condition.”***

By 2014 John lost sensation below both knees. At this stage, specialists advised he had probably developed diabetes five years before his 2012 diagnosis. A hole developed in one eye leading to leaking fluid which needed to be cauterised to prevent bleeding and his diabetic retinopathy is now regularly reviewed. In 2015 he developed skin issues on the soles of his feet requiring removal of dead skin by community podiatry services and home visits by a district nurse to change dressings to prevent infection.

In 2016, John developed foot ulcers on his heel and toes and was hospitalised for treatment. The ulcers were healed but within months, following a knock when not wearing footwear, John had

to have two toes amputated. On discharge from hospital, he received regular home visits from the community diabetes team to support recovery and help deal with the challenge of controlling his diabetes.

In 2017, as part of ongoing referral to hospital specialists, there was concern John would develop a Charcot foot, a significant complication of diabetes which may require the amputation of the rest of his toes or the whole foot.

In February 2017, John developed a leaking heart valve. At this stage, examinations showed that no further amputation could be undertaken on his foot for fear of an infection going to his heart. He was told the heart complication would be life limiting and a consequence of his Type 2 diabetes. In July 2017, John had the fifth anniversary of his Type 2 diagnosis and was on the last phase of diabetes medication before he would need to administer insulin permanently. If he experiences any shortness of breath or chest pain, he is directed to go straight to the Heart ward. ***“Diabetes has now become my constant life battle”.***

# Type 2 diabetes– The Human Impact

## Case Study 2

Michael (not his real name) often watched his sister, who had Type 2 diabetes, test her blood sugars at home with a glucose meter. Given the family history of diabetes, she asked to test him, and twice over a short period in 2004, found he had high blood sugars.

Tests by Michael's GP confirmed that he also had developed Type 2 diabetes. Michael was surprised but not shocked. Whilst he was five foot ten and a fit 12 stone, diabetes was prevalent in the family, with his sister Type 2 and a grandmother and aunt who were both Type 1.

Michael was referred to a dietician and a podiatrist by his GP and within four months a Diabetes Specialist Nurse (DSN) referred him to a DESMOND self-management course. He was provided with the necessary equipment to help him regularly measure his blood glucose. Michael was also prescribed a first line oral treatment (metformin) and an Ace Inhibitor to use for the rest of his life, as well as blood pressure tablets to protect his kidneys.

Whilst he attended annual eye and foot screening, a fear of needles hung over Michael when attending his annual blood sugar review. By 2008, Michael needed additional medication to manage his blood sugars, and by 2011 his daily regime of planning when and what to eat was causing him significant distress. As his blood sugars were constantly fluctuating, he was referred to a Diabetes Hospital Consultant who suggested moving to daily insulin injections. Acknowledging Michael's needle phobia, the consultant referred him to a specialist Trust team but he resisted meeting them for 12 months. Eventually, following five months specialist mental health support, he began to inject himself twice daily with insulin. However, he relapsed, and by the end of 2013 he had not injected his insulin for six weeks. Increasingly worried about his

diabetes control, Michael phoned the DSN at the hospital who immediately referred him back to the specialist team. Attending his annual flu injection had also become a challenging experience. Whilst flu jabs help reduce the risk of contracting seasonal influenza which can cause a deterioration in blood sugar management, Michael had to visit the local surgery three times before he could cope with having this injection.

In 2014, Michael again stopped injecting his daily insulin. When he contacted the hospital, he was told that there could be no further referral to that specialist team.

***“I realised I had to sort myself out with my phobia to beat the diabetes. I now have a mini routine that, if not broken, I can manage the two daily insulin injections. It can take ten minutes, sometimes an hour when I get out of bed in the morning.”***

Diabetes has never stopped Michael working and although he looks forward to retirement, he remains worried that he may again stop taking his injections, and about the possible consequences of missing future flu injections.

# Glossary

<b>Bariatric Surgery</b>	Modifying the gastrointestinal tract to reduce the intake and/or absorption of food.
<b>Blood Glucose</b>	The amount of a type of sugar (called glucose) in the blood.
<b>Blood Lipids</b>	Mainly fatty acids and cholesterol which are present in the blood.
<b>Blood Pressure</b>	The pressure of circulating blood on the walls of blood vessels.
<b>Diabetes Network</b>	A group led by the Health and Social Care Board in partnership with the Public Health Agency and Diabetes UK to take forward implementation of the 2016 Diabetes Strategic Framework.
<b>Diabetes Strategic Framework</b>	Policy document for diabetes care in Northern Ireland published by the Department of Health in November 2016.
<b>Diabetes UK</b>	The largest charity focused on diabetes research in the United Kingdom.
<b>National Diabetes Audit</b>	A comprehensive annual audit which measures the standards of diabetes care being delivered in England and Wales.
<b>The Steering Group</b>	The Diabetes Review Steering Group (the Steering Group) was established by the Department of Health in 2012 to undertake an updated review of local diabetes care provision.
<b>The Taskforce</b>	A group chaired by the Clinical Resource Efficiency Support Team (CREST) and Diabetes UK which reported on the standards of diabetes care in Northern Ireland in March 2003.
<b>Type 1 diabetes</b>	Type 1 diabetes is brought about by the destruction of the insulin-producing $\beta$ -cells of the pancreas by the body's own immune system. This results in an inability of the pancreas to produce insulin, allowing glucose to build up in the blood.
<b>Type 2 diabetes</b>	Type 2 diabetes is heavily linked to lifestyle factors such as being overweight or obese, lack of exercise and an unhealthy diet. Symptoms develop when the body does not respond properly to the presence of insulin (insulin resistance), sometimes combined with a deficiency in absolute insulin levels.
<b>Undiagnosed diabetes</b>	People who have developed the disease but have not yet been formally diagnosed by healthcare providers.

# Abbreviations

<b>CREST</b>	Clinical Resource Efficiency Support Team
<b>DESMOND</b>	Diabetes Education and Self-Management for Ongoing and Newly Diagnosed
<b>HSC</b>	Health and Social Care
<b>KPI</b>	Key Performance Indicators
<b>NAO</b>	National Audit Office
<b>NICE</b>	National Institute for Health and Care Excellence
<b>PCT</b>	Primary Care Trusts
<b>PfG</b>	Programme for Government
<b>PHA</b>	Public Health Agency
<b>QOF</b>	Quality and Outcomes Framework
<b>RQIA</b>	The Regulation and Quality Improvement Authority
<b>WTE</b>	Whole Time Equivalent





## Executive Summary

1. There are two main types of diabetes (Type 1 and Type 2). Once developed, Type 2 diabetes is a lifelong condition that causes a person's blood glucose level to become too high, either because the body does not produce enough insulin, or the body's cells do not react to insulin. Type 2 diabetes is more common in older people and is closely associated with obesity.
2. In Northern Ireland, available statistics indicate that 88,000 people, or around 5.7 per cent of the population, have been diagnosed with diabetes, and that around 90 per cent of these are Type 2 cases. The number of local people living with diabetes is increasing annually – and has risen by 71 per cent between 2004-05 and 2015-16. Type 2 diabetes can have a major impact on the physical and psychological well-being of individuals and their families. Moreover, when diabetes is not identified early and not well-managed, serious and even fatal complications can arise, such as heart disease, kidney disease, stroke, amputations, and blindness.
3. Whilst treatment costs of Type 2 diabetes have proved difficult to quantify with any precision, Diabetes UK (Northern Ireland) has estimated that, locally, they amount to around £400 million annually<sup>1</sup>. This equates to over £1 million per day, or 10 per cent of the local health and social care budget. The costs of treating diabetes-related complications are particularly high, and may account for up to 80 per cent of overall healthcare spend on the condition.
4. These costs will continue to rise significantly if the current situation remains unchecked. However, providing better support for people to manage their Type 2 diabetes offers an opportunity to delay, or avoid, significant numbers of complications and, over a sustained period, potentially provide patients with a better quality of life and save the local healthcare system tens of millions of pounds. One estimate by Diabetes UK has suggested that if 75 per cent of local diabetes patients were treated in accordance with best practice, health and social care could save £75.5 million by 2030.
5. Since the publication of an initial blueprint report on local diabetes services in 2003<sup>2</sup>, a range of local initiatives have not succeeded in reversing the increased prevalence of obesity and Type 2 diabetes. Whilst measures have also been taken to try and enhance Type 2 diabetes care, the absence of a specific framework for diabetes care until late 2016, and limited data and management information, means that we were unable to draw any clear conclusions on whether, and to what degree, the standard of patient care and outcomes for Type 2 diabetes have improved.
6. Moreover, the development of high quality services which align with best practice has been slow, and any improvements introduced have been insufficient to cope with the increased prevalence of the condition. In our view, more tangible progress could have been achieved had the strategic approach to

1 *Diabetes in Northern Ireland: The human, social and economic challenge*, Novo Nordisk, Diabetes UK and C3 Collaborating for Health, April 2012.

2 *'Blueprint for Diabetes Care in Northern Ireland in the 21<sup>st</sup> Century'* (CREST and Diabetes UK), March 2003.



delivering diabetes care, set out in the new Diabetes Strategic Framework<sup>3</sup>, been introduced much earlier.

7. If the substantial human and cost burden of Type 2 diabetes is to be minimised, effective strategies to reduce incidence and patient complications must be implemented. The new Diabetes Strategic Framework recognises that community based services play a vital role in providing people with care and support, including support to care for themselves. For people with Type 2 diabetes, "self-care" is about dealing with the impact of the condition on their daily lives. A growing body of evidence demonstrates that supporting people with long term conditions to self-manage offers improved clinical and 'quality of life' outcomes. It can also minimise increases in healthcare costs.
8. All parts of the health and social care system need to make self-care a real priority, for the benefit of patients and to minimise the burden on the healthcare system. In this context, we found that the extent to which patients are supported to successfully self-manage their Type 2 diabetes could be significantly improved. This report, therefore, calls for a stronger focus on the provision of structured patient education.
9. We also found that there has been limited formal monitoring and measurement of care standards and patient outcomes for Type 2 diabetes. This report endorses the Framework's recognition that fully integrated patient information systems must be developed and calls for reliable baseline data to be established, in order to facilitate the measurement of care outcomes. In the absence of appropriate systems, Northern Ireland has been unable to participate in the National Diabetes Audit, which measures standards of care and outcomes across England and Wales. It aims to improve services through benchmarking performance across providers, identifying and sharing best practice and identifying areas in which improvement in the quality of treatment is required.
10. The performance of healthcare staff is also fundamental to the quality of care and outcomes delivered to Type 2 diabetes patients. Whilst some evidence exists that the resourcing devoted to specialist diabetes care has increased since the 2003 blueprint, this has been insufficient to keep pace with the rising prevalence of Type 2 diabetes, and in some instances, the numbers of specialists providing dedicated care has actually reduced. This report highlights the importance of a specific workforce plan for diabetes care which is scheduled to be completed by 2019.
11. As the prevalence of Type 2 diabetes increases, health and social care professionals come under increasing pressure to cope with the volume of cases, and it is very likely that the current model of care provision will become unsustainable. Responding to these challenges is at the core of improving care quality, improving health, and managing existing resources more effectively. However, significant

3 The Diabetes Strategic Framework was published by the Department of Health in November 2016.

## Executive Summary

additional up-front investment may also be required to increase the availability of structured patient education, and to address any significant staffing shortfalls which might be identified by future workforce planning.

12. The current Diabetes Strategic Framework has set the direction for local diabetes care until 2027. Based on current estimates, the local healthcare system is expected to incur expenditure of at least £4 billion in this period on treating diabetes. However, if the implementation of the Framework does not succeed in securing meaningful advances in preventing Type 2 diabetes and in minimising patient complications, the future cost burden on the healthcare system will almost certainly be significantly greater.
-



# Part One:

## Introduction and Background

### Introduction

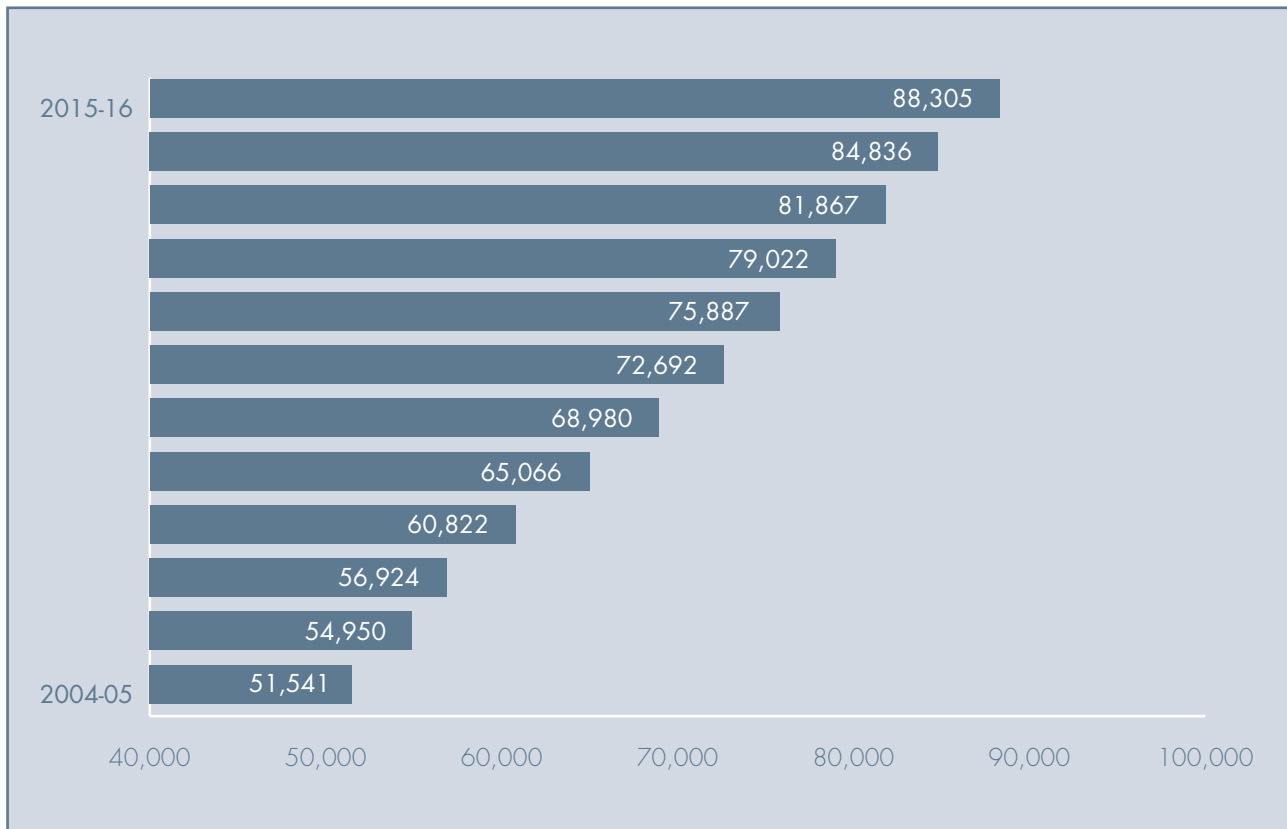
- 1.1 Diabetes is a chronic condition that occurs when the body is unable to sufficiently produce, or properly use, insulin to absorb sugar. The disease manifests itself in two forms:
- **Type 1** (the rarer of the two forms) is characterised by the destruction of the insulin-producing  $\beta$ -cells of the pancreas by the body's own immune system.  $\beta$ -cell destruction results in an inability of the pancreas to produce insulin, allowing glucose to build up in the blood. It mostly develops in children, young people, and young adults; and
  - **Type 2** is heavily linked to lifestyle factors such as being overweight or obese, lack of exercise and an unhealthy diet. Symptoms develop when the body does not respond properly to the presence of insulin (insulin resistance), sometimes combined with a deficiency in absolute insulin levels. It is most commonly diagnosed in adults over 40, although it is increasingly found in children and young adults. Family history and genetic predisposition are also significant risk factors for this condition. It is important to note that the aging population has also contributed to the rise in new cases of this variant of diabetes.

Whilst the management information held by the Department of Health (the Department) does not distinguish between the two types of diabetes, it estimates that approximately 90 per cent of local cases are Type 2 diabetes, which is the focus of this report.

### Local diabetes levels have risen by over 70 per cent since 2004-05

- 1.2 **Figure 1** shows that there has been a significant and consistent increase in the level of diagnosed diabetes cases in recent years. By 2015-16, over 88,000 adults had been diagnosed with the condition, a 71 per cent increase on 2004-05 levels. Key factors contributing to this increase include an ageing population and high levels of obesity (over a quarter of the adult population). A review conducted for the Department in 2014 concluded that the increase in diabetes was also attributable to improved detection and recording of people in primary care.
- 1.3 Whilst the local increase is in line with a global trend, the prevalence of diabetes here is slightly lower than in England and Wales, but slightly higher than in Scotland (**Figure 2**).

**Figure 1: Number of people aged 17 or over diagnosed with diabetes (Types 1 and 2) in Northern Ireland 2004-05 to 2015-16**



Source: Quality and Outcomes Framework (QOF)

**Figure 2: Number and % of people diagnosed with diabetes (England, Scotland, Wales, Northern Ireland and UK overall) 2012 to 2016**

Region	Number and % of people diagnosed with diabetes				
	2012	2013	2014	2015	2016
England	2,566,436 (5.8%)	2,703,044 (6.0%)	2,814,004 (6.2%)	2,913,538 (6.4%)	3,033,529 (6.5%)
Scotland(1)	234,871 (4.4%)	252,599 (5.6%)	259,986 (5.9%)	271,312 (4.8%)	280,023 (4.9%)
Wales	167,537 (5.3%)	173,299 (6.7%)	177,212 (6.9%)	183,348 (7.1%)	188,644 (7.3%)
Northern Ireland	75,837 (4.0%)	79,072 (5.3%)	81,867 (5.3%)	84,836 (5.6%)	88,305 (5.7%)
UK	3,044,681 (4.6%)	3,208,014 (6.0%)	3,333,069 (6.2%)	3,453,034 (6.2%)	3,590,501 (6.4%)

Source: Quality and Outcomes Framework (QOF)

**Note (1)** – Diabetes UK (Scotland) told us that the Scottish Diabetes Survey has produced different figures for the prevalence of diabetes in Scotland than identified by QOF – 4.9% (2012), 5.1% (2013), 5.2% (2014), 5.3% (2015) and 5.4% (2016).

## Part One: Introduction and Background

1.4 If recent trends continue, new cases of Type 2 diabetes and the number of people living with diabetes will continue to escalate significantly. Although the Department has not commissioned any future local projections, analysis of data gathered for the Quality and Outcomes (QOF) Framework suggests that, by 2020, just over 100,000 people in Northern Ireland will have been diagnosed with diabetes. However, in addition to the current 88,000 diagnosed cases, it is recognised that there are likely to be a significant number of undiagnosed cases locally. There are difficulties with robustly estimating numbers, but Diabetes UK estimates that there may currently be 13,000 such cases. Consequently, 100,000 people (6.6 per cent of the population) may already have developed the condition. Diabetes UK told us that an enhanced forecasting model for diabetes prevalence was introduced in England in September 2016, and that the introduction of a similar local model would deliver key benefits including, for example, assisting the Department's future workforce planning for diabetes care.

### People who develop Type 2 diabetes can develop serious and even fatal complications

1.5 Diabetes is a lifelong, progressive disease. It is typically a disease with slow progression and its early stages may be largely symptom free. However, its longer term consequences are extremely serious. Research has found that Type 2 diabetes reduces life expectancy by up to ten years<sup>4</sup>. Official statistics show that, between 2004 and 2015, 2,315 deaths in Northern Ireland (1.3 per cent of all recorded deaths) were attributed to diabetes, with the annual number of deaths ranging from 160 to 229<sup>5</sup>.

1.6 However, these statistics potentially understate the actual number of deaths directly related to diabetes. Diabetes UK told us that, whilst research<sup>6</sup> had found that the risk of stroke and cardiovascular disease was four times higher for people with diabetes than the general population, and that diabetes is the leading cause of end stage renal disease, deaths arising from these conditions are not always classified as being directly related to diabetes.

1.7 Serious long-term complications can also arise if Type 2 diabetes is not detected early and patients are not provided with treatment to maintain their blood

4 Diabetes in the UK 2010: Key Statistics on Diabetes.

5 NISRA data.

6 Research by the International Diabetes Federation.

glucose, blood pressure and blood lipids within recommended levels. For example:

- People with diabetes are 15 times more likely to require a lower limb amputation than the general population<sup>7</sup>.
- In 2014, 1,495 people with diabetes were admitted to hospital locally for limb amputations and end-stage renal disease<sup>8</sup>.
- Locally, between 150 and 200 limb amputations are carried out annually, 80 per cent of which could be prevented<sup>9</sup>.
- Diabetes patients have an increased rate of depression compared with the general population<sup>10</sup>.

## The local healthcare system spends an estimated £400 million annually in treating diabetes

1.8 The Department does not hold robust data on diabetes treatment costs<sup>11</sup>. In November 2015, in response to an Assembly question, it explained that *“the full costs of treating diabetes and diabetes related ailments cut across the acute and community sectors, as well as Family Health Services. As such, these*

*costs are not readily available and could only be provided at disproportionate cost”.*

1.9 Whilst treatment costs for Type 2 diabetes have proved difficult to quantify with any precision, it is widely acknowledged that they are significant. An estimate compiled in 2012 has suggested that, locally, costs for treating all types of diabetes amount to around £400 million annually<sup>12</sup>. This represents 10 per cent of the local health and social care budget or over £1 million spent on diabetes care every day.

1.10 Unchecked, these costs will continue to rise given the forecast increases in the future prevalence of diabetes (paragraph 1.4). In England, Diabetes UK has estimated that, by 2035, 17 per cent of the healthcare budget will be directed towards diabetes. Locally, a review completed for the Department in 2014 concluded that rising treatment costs will create *“considerable pressure for the Health and Social Care sector”*. Whilst it stated that specific economic analysis of the total costs of local diabetes care may be useful to help plan for future cost pressures, this research has not yet been commissioned.

1.11 The costs of treating diabetes-related complications are particularly high. In England, an estimated 80 per cent of the current NHS diabetes budget is

7 Monitoring Data report , Information Department, PMSID, HSC Board, February 2016.

8 Interim Impact Report 2016, Integrated Care Partnerships.

9 QOF Prevalence data in the Quality and Outcomes Framework, Department of Health, Social Services and Public Safety, 2011.

10 Diabetes Strategic Framework Consultation Document, Department of Health, Social Services and Public Safety, March 2016.

11 Diabetes: Policies, Service Commissioning and Costs, Dr Anne Black, Research and Information Service Briefing Paper, June 2012.

12 Diabetes in Northern Ireland: The human, social and economic challenge, Novo Nordisk, Diabetes UK and C3 Collaborating for Health, April 2012.

## Part One: Introduction and Background

spent on this area.<sup>13</sup> The Department has limited data on the local costs of treating complications, but it did estimate the costs of treating diabetes in an acute hospital setting in 2010-11 at £68.6 million (£57.9 million of which related to Type 2 diabetes). However, such costs are almost certainly significantly higher, as this analysis excluded a wide range of relevant expenditure<sup>14</sup>. In addition, as paragraph 1.7 indicated, there are between 150 and 200 lower limb amputations due to diabetes annually. Estimates suggest that these cost between £9,400 and £13,500 each, with individual hospital emergency admissions for diabetes related hypoglycaemic or hyperglycaemic events costing between £816 and £3,570<sup>15</sup>.

1.12 Other available evidence further illustrates the impact of diabetes complications on the healthcare system. Our 2009 report<sup>16</sup> on obesity and Type 2 diabetes found that hospital treatment for such complications represented the largest single drain on direct healthcare costs, constituting 4,000 hospital admissions and 15,000 patient 'bed days' annually. In 2013, an audit of local in-patient care also revealed that, against a disease prevalence of around 4.5 per cent, patients with diabetes were occupying 14.5 per cent of hospital beds.

1.13 In addition to direct healthcare costs, significant indirect costs also arise from diabetes. These include lost productivity, early retirement and an increased requirement for social care support. Estimates suggest that, from a local perspective, these costs are also significant<sup>17</sup>:

- costs from lost working time and early death from diabetes in 2006 were £13 million, and are forecast to rise to £26 million by 2026; and
- annual costs incurred by local diabetes patients missing work, travelling for medical treatment, losing employment and retiring early were £12.4 million.

1.14 We acknowledge that disaggregating the costs associated with Type 2 diabetes is not straightforward. However, without an effective costing system, HSC Trusts will struggle to assess how resources can be allocated most effectively, or to evaluate the financial impact of their programmes for tackling the disease. The restricted ability to link cost to process improvements or outcomes could also potentially hinder them in making systemic and sustainable cost reductions.

1.15 Research<sup>18</sup> indicates that aligning costs with processes for identification, early

13 *The management of adult diabetes services in the NHS: progress review*, National Audit Office, HC 489, 21 October 2015.

14 This estimate did not take account of high cost drugs which may have been administered, or costs associated with critical care, rehabilitation, renal dialysis, A&E and outpatient, ambulance service, primary care services, screening services, prescribing and community and personal social services

15 National Institute for Health and Clinical Excellence research (2011).

16 *Obesity and Type 2 Diabetes*, NIAO, 2009.

17 *Diabetes in Northern Ireland: The human, social and economic challenge*, Novo Nordisk, Diabetes UK and C3 Collaborating for Health, April 2012.

18 *Estimating the current and future cost of Type 1 and Type 2 diabetes in the UK*, N. Hex et al, York Health Economics Consortium, Diabetic Medicine, 2012



intervention and treating complications can provide a baseline which may be used to examine how changes to the way Type 2 diabetes is treated might impact on overall costs. This model illustrates the potential for examining different scenarios and identifying cost savings which could be realisable from reducing or delaying complications. Such a model may demonstrate how investment in effective treatment can reduce the overall cost burden of Type 2 diabetes.

### Recommendation

**Enhanced information on Type 2 diabetes treatment costs would assist the Department in future financial planning and in establishing benchmarks to assess the scope for managing and minimising expenditure in the area. We recommend that the Department explores the feasibility of establishing a cost model, for measuring and managing treatment costs.**

## Audit objective and scope

1.16 This study assesses the extent to which the Department and its health and social care partners have strong policy, strategies and information systems in place to meet the needs of people living with Type 2 diabetes, or those at risk of developing the condition, whilst at the same time trying to minimise the significant cost burden which the condition is imposing on the local healthcare system.

1.17 Our report contains three main sections:

**Part 2** reviews the development of local policy on Type 2 diabetes care, and the extent to which current arrangements provide an effective basis for dealing with the escalating prevalence of the condition.

**Part 3** assesses progress against challenges presented by four key areas which are essential to the delivery of effective diabetes care:

- improving disease management for people with Type 2 diabetes to reduce complication rates;
- establishing effective monitoring systems to identify and support those at risk of developing Type 2 diabetes;
- building the workforce capacity and capability to meet the needs of those living with Type 2 diabetes; and
- introducing a range of interventions to help create an environment focused on prevention.

**Part 4** examines the performance of health care providers in delivering recommended care standards for Type 2 diabetes and the impact on patient outcomes.

1.18 A methodology for the report is contained at **Appendix 1**.





## Part Two:

### Policy development for Type 2 diabetes care

#### Timeline summary

2.1 This part of the report outlines how local policy for Type 2 diabetes care has developed from 2003 to date. At the outset, it is useful to briefly summarise the main developments during this period (**Figure 3**).

#### 2003 – A review concluded that significant improvements in Type 2 diabetes care were required, but its recommendations were not formally implemented

2.2 In March 2003, a Joint Taskforce (the Taskforce), chaired by CREST and Diabetes UK, published a ‘*Blueprint for Diabetes Care in Northern Ireland in the 21<sup>st</sup> Century*’. The Taskforce concluded that local diabetes patients should receive annual checks on retinopathy, blood pressure, neuropathy, urinary

albumin, and blood lipids. The introduction of similar checks had previously been recommended by CREST in 1996.

2.3 The Taskforce also identified scope for significant improvement in 18 individual aspects of local diabetes care (**Appendix 2**). It concluded that seven of these care aspects which related to Type 2 diabetes, required early improvement:

- empowering patients in their care;
- structured education to help patients self-manage their condition, and education for healthcare professionals;
- eye screening for diabetes patients;
- integration of services across primary and secondary care;

**Figure 3: Timeline of main policy developments in Type 2 diabetes care in Northern Ireland**

Date	Development
March 2003	A Joint Taskforce chaired by CREST <sup>19</sup> and Diabetes UK, publishes a ‘ <i>Blueprint for Diabetes Care in Northern Ireland in the 21<sup>st</sup> Century</i> ’.
June 2009	Three overarching standards for diabetes patients are included in the Department’s <i>Service Framework for Cardiovascular Health and Wellbeing</i> .
July 2012	The Department establishes a Diabetes Review Steering Group (the Steering Group) to carry out an updated review of local diabetes services.
June 2014	The Steering Group report is published.
March 2016	Responding to the Steering Group findings, the Department issues a draft Strategic Framework for diabetes care for public consultation.
November 2016	Following public consultation, the Department publishes a formal Diabetes Strategic Framework. This report refers to this document as ‘The Framework’.

Source: NIAO, based on Departmental records

- emotional and psychological support for diabetes patients;
- workforce planning; and
- improved patient management systems linking primary and secondary care.

2.4 In line with the other UK countries which had already introduced formal National Service Frameworks for diabetes care<sup>20</sup>, the Taskforce considered that the blueprint was an integrated service framework which would provide future local strategic direction for diabetes services. It recommended that a regional team be established to oversee the implementation of the required improvements.

2.5 Although an implementation team was established in 2004, limited progress was made in addressing the Taskforce's recommendations. When the implementation group reviewed progress in 2008, it highlighted that a range of initiatives to address the areas which required improvement were either ongoing or had been implemented. However, it did not definitively conclude on the degree to which the Taskforce's expectations had been achieved, nor on the action still required to fully implement its recommendations. Following this review, the group did not meet again.

## 2009 – A Service Framework for Cardiovascular Health included three diabetes standards, but these were subsequently withdrawn

2.6 Whilst the implementation of a formal framework for diabetes care had slowed after 2008, three overarching standards for diabetes patients were included in the Department's *Service Framework for Cardiovascular Health and Wellbeing* which was introduced in 2009. These standards, which reflected the fact that Type 2 diabetes presents a significant risk factor for the development of cardiovascular disease, required that all diabetes patients:

- should have the condition diagnosed;
- would have access to education about their condition, together with emotional and psychological support; and
- would be offered a review of their condition at least annually by a suitably qualified treatment team.

2.7 These standards had clear potential to deliver important benefits to Type 2 diabetes patients, and to help fill the void created by the ongoing absence of a specific diabetes framework. However, when the Cardiovascular Framework was reviewed in 2012<sup>21</sup>, it was apparent that a lack of data had resulted in an inability to measure some of the

20 England (2001); Wales (2003); and Scotland (progressively between 2002 and 2012).

21 Independent Review of the Implementation of the Cardiovascular Service Framework, November 2012.

## Part Two:

### Policy development for Type 2 diabetes care

Framework Key Performance Indicators (KPIs), including those related to diabetes. Consequently, the diabetes standards were withdrawn in late 2012.

2.8 During this period, the Department also launched two other policy initiatives which had implications for diabetes services:

- *Transforming Your Care* (2011) introduced a new model for delivering health and social care services, with greater emphasis on treating diabetes patients in a community setting, to try and reduce the time spent by patients in acute care.
- The *Living with Long Term Conditions Strategic Framework* (2012) outlined the need to ensure that people living with a long term condition like Type 2 diabetes are “able to maintain or enhance their quality of life through high quality services and supported self-management.” This Framework’s principles include working in partnership, self-management, and providing information to carers and patients. Similar to *Transforming Your Care*, this Framework hopes to improve patient outcomes, reduce unnecessary hospital admissions and move towards a community based care model, whilst maintaining value for money services.

### 2012 – The Department established a Steering Group to reassess local diabetes care standards

2.9 The 2003 Taskforce review had recommended that an updated review of local diabetes services should be undertaken in 2008. However, whilst the Taskforce did meet again in 2008 to review progress against its recommendations, it was not until 2012 that the Department established a Diabetes Review Steering Group (the Steering Group) to complete a full review of service provision. This Group subsequently reported in June 2014.

2.10 The Steering Group review acknowledged that strategies had been introduced since 2003 to encourage healthier lifestyles, and to try and prevent the spread of Type 2 diabetes<sup>22</sup>. It also outlined progress made in several aspects of Type 2 diabetes care, including:

- the introduction of a comprehensive eye screening programme;
- the establishment of multidisciplinary care teams to treat diabetes patients;
- the introduction of the Quality and Outcomes Framework (QOF), which aimed to ensure that diabetes patients received key regular checks within primary care; and
- the development of patient information systems and registers.

22 In 2005, *Fit Futures*, a cross-departmental strategy, was published to tackle obesity in young people. As previously mentioned, obesity is inextricably linked to Type 2 diabetes. This was followed more recently with the publication of “*A Fitter Future for All*” (2012-2022) - a ten year strategy to tackle the prevalence of obesity in Northern Ireland. The strategy adopts a “life course” approach to obesity –that is, focussing on all ages of the population. Its key aim is to “empower the population of Northern Ireland to make healthy choices, reduce the risk of overweight and obesity related diseases and improve health and wellbeing, by creating an environment that supports and promotes a physically active lifestyle and a healthy diet”.

2.11 Overall, the Steering Group concluded that local diabetes services had been given *"a certain degree of strategic priority in NI"*. However, it still considered that care provision remained inadequate and inequitable across the region. The Group stated that *"a greater degree of strategic focus would have led to a more coordinated and equitable evolution of services"*.

2.12 In addition to the lack of formal mechanisms to oversee the implementation of the recommendations flowing from the 2003 Taskforce report, the Steering Group highlighted a leadership deficit in the management and coordination of services for Type 2 diabetes. It proposed that the recommendations from the Steering Group's review of the Taskforce Report should serve as a *"roadmap for diabetes so that the gaps in services and emerging priorities identified by the Steering Group can provide the basis for a way forward for service development, enable priorities to be identified for commissioners and the formulation of appropriate standards for the provision of care for people with diabetes"*.

## 2016 - The Department published a Diabetes Strategic Framework

2.13 In response to the findings of the Steering Group and other stakeholders, the Department issued a draft Strategic Framework for diabetes care in March 2016. Following public consultation, the formal Framework document was

published in November 2016. This outlined a proposed strategic direction for diabetes care and the prevention of Type 2 diabetes for the next decade, with a vision to provide *"care which improves outcomes for people living with diabetes, or at risk of developing diabetes"*.

2.14 The Framework includes a draft implementation plan which contains 31 proposed improvement actions (**Appendix 3**) across seven key themes (**Figure 4**). These themes broadly reflect areas highlighted by the 2003 Taskforce and 2014 Steering Group reviews.

**Figure 4: Key themes of the Diabetes Framework**

- a partnership approach to service transformation – clinical leadership and user involvement;
- supporting self-management – empowering people through structured diabetes education;
- prevention, early detection and delaying complications;
- using information to optimise services and improve outcomes for people living with diabetes;
- services for people living with diabetes, particularly those requiring bespoke treatment and care;
- enhancing the skills of frontline staff; and
- encouraging innovation.

Source: *Diabetes Strategic Framework (2016)*

## Part Two:

### Policy development for Type 2 diabetes care

#### The Department faces significant challenges in implementing and resourcing the Framework

2.15 The introduction of a specific diabetes care framework does not necessarily guarantee successful implementation on the ground. Experience elsewhere in the UK demonstrates that the necessary care standards are not always delivered in practice (**Figure 5**). While the current Framework has more clearly defined the requirements for local diabetes care, the

onus for actually delivering these will lie with stakeholders across the health and social care system.

2.16 A Diabetes Network, led by the Health and Social Care Board (HSC Board) in partnership with the Public Health Agency (PHA) and Diabetes UK (Northern Ireland), and involving people living with diabetes, was launched in November 2016. It will have control over a specific budget and be responsible for allocating the resources

**Figure 5: Delivery of care processes to diabetes patients in the UK**

Source	Findings
National Diabetes Audit	<ul style="list-style-type: none"> <li>In 2009, only 49 per cent of people with diabetes in the UK had received all the care processes recommended for the monitoring of risk factors for tissue damage.</li> <li>In 2009-10, the percentage of diabetes patients in England receiving the nine National Framework checks varied from 6 per cent to 69 per cent across Primary Care Trusts (PCTs).</li> <li>In 2010-11, 60 per cent of patients in Wales had received all nine key checks within the region's National Service Framework, but there were variations across Health Boards and for individual checks carried out.</li> </ul>
National Audit Office	<ul style="list-style-type: none"> <li>In 2009-10, only 16 per cent of diabetes patients in England had received all the National Institute for Health and Care Excellence (NICE) treatment standards; 69 per cent had not received any of these; and 15 per cent were not tested at all.</li> <li>In 2012, the Department of Health (GB) had not exercised sufficient accountability over PCTs which had not delivered the recommended standards of care.</li> </ul>
Diabetes UK	<ul style="list-style-type: none"> <li>In England, only half of the recommended NHS health checks for diabetes had been carried out; a number of PCTs had not carried out any of the checks; and less than half of people with diabetes were receiving all nine of the care processes which NICE considered essential to reduce complications.</li> </ul>

Source: National Diabetes Audit, National Audit Office and Diabetes UK



required to implement, by specified dates, the Framework's proposed improvements<sup>23</sup>. Whilst the Diabetes Network has lead responsibility for overall implementation, responsibility for delivering the individual improvement actions has been allocated to individual stakeholders (including the Department, the Diabetes Network, the Public Health Agency (PHA) and the HSC Board).

- 2.17 Although the HSC Board has estimated that approximately £5.6 million will be required to implement the service changes envisaged by the Framework in 2017-18, the total cost of implementing all the Framework measures is not yet apparent. For instance, an updated workforce plan for diabetes care which may also identify a need for significant additional funds will not be completed until 2019.
- 2.18 The ongoing budget pressures could also create a lack of clarity over whether the significant investment which may be required to fully implement some proposed Framework measures will be available. Whilst we acknowledge and support the Framework's aspiration to make better use of existing resources through developing more innovative and effective approaches to diabetes care, we also consider that the nature and scale of the problem, with ten newly diagnosed cases daily, may inevitably create a need for some additional resources to deliver future services
- 2.19 It is therefore important that the costs of fully implementing the Framework are identified as soon as possible. This will help the Department and the Diabetes Network identify whether

the funding required will be available, or whether resources may have to be prioritised towards key areas. In taking future funding decisions, consideration should also be given to the potential of any up-front investment generating future savings through, for example, enhanced prevention and early detection reducing expensive and intensive treatment required to address patient complications. This will help demonstrate both the potential savings and long term value for money achievable.

## Conclusions

- 2.20 Despite the prolonged delay, the publication of the Diabetes Strategic Framework brings an important focus to the planning and management of local diabetes services. Given the Steering Group's view, acknowledged in the Framework, that key shortcomings in aspects of Type 2 diabetes care highlighted by the Taskforce in 2003 still required attention, it is difficult to understand why the development of the current Framework has taken such a long time. Whilst various policy initiatives introduced since 2003 will likely have contributed to improving diabetes care, it is questionable whether these have adequately addressed the 71 per cent increase in diabetes levels since that time. In our view, the earlier introduction of a core document defining strategic priorities, performance measures, timelines and expected outcomes would have better supported and strengthened the delivery of diabetes services.

23 The Department is also currently developing terms of reference and governance arrangements for the Diabetes Network, and identifying suitably qualified and inclusive membership.

## Part Two:

### Policy development for Type 2 diabetes care

- 2.21 Going forward, it is also important that lessons are learned from the experience with the 2003 blueprint, where the lack of robust implementation arrangements was a key factor behind the limited progress achieved in taking forward its recommended improvements. We consider it essential that the Diabetes Network exercises strong and sustained central oversight to ensure that overall progress in delivering the Diabetes Strategic Framework is in line with expectations.

#### **Recommendations**

**To ensure full implementation of the Diabetes Strategic Framework within the established timescales, we recommend that the process is supported by robust oversight, monitoring and review arrangements, and mechanisms to disseminate successful initiatives across the health and social care system.**

**We also recommend that the priorities identified are properly costed and reflected in the Department's financial plans, as securing funding for service improvements will be crucial in light of current financial constraints.**

---



## Part Three:

### Improving Type 2 diabetes care

#### The stakeholders face four key future challenges in delivering Type 2 diabetes care

- 3.1 Underlying the need for an effective strategy for addressing Type 2 diabetes, we consider that the Department and its partners face four crucial challenges if the incidence of the disease is to be controlled and the condition managed as effectively as possible:
- **reducing complication rates** among existing Type 2 diabetes patients;
  - establishing effective **screening** systems to identify earlier those at risk of developing Type 2 diabetes;
  - building the **workforce capacity and capability** to deliver effective care to people living with Type 2 diabetes; and
  - introducing a range of interventions that help to create an environment focused on the **prevention** of Type 2 diabetes.

This part of the report examines the impact of various interventions the Department and its partners have introduced to meet these challenges and to support local improvements in Type 2 diabetes care.

#### Challenge 1 - Reducing complication rates among Type 2 diabetes patients

- 3.2 The starting point for the Department and its partners is to ensure continuous improvement in disease management for those living with Type 2 diabetes. This can help patients avoid unnecessary complications, thereby minimising patient suffering, maximising life expectancy, easing pressure on the health and social care system and reducing treatment costs.

#### Patient education is crucial in assisting self-management of Type 2 diabetes

- 3.3 Self-management is the cornerstone of Type 2 diabetes care, since patients will spend the vast majority of their time away from the direct influence of the healthcare system. However, many people with Type 2 diabetes do not control their condition well. It is therefore important that people receive the right education and skills training to be able to self-manage their condition.
- 3.4 Since 2001, successive best practice initiatives in the UK have helped define the standards of patient education required to help people with diabetes successfully control the disease (**Figure 6**).
- 3.5 **Figure 7** describes one local initiative used by the Northern Trust in recent years to try and improve self-management of Type 2 diabetes.

**Figure 6: Structured education for diabetes patients - UK Policy developments**

Date	Policy Development
2001	The Diabetes National Service Framework in England required all diabetes patients to receive a service which encourages partnership and decision-making, supports self-management of diabetes and helps patients adopt and maintain a healthy lifestyle.
2003	NICE recommended that structured education be made available for all diabetes patients. NICE defined structured education as: <i>"a planned and graded programme that is comprehensive in scope, flexible in content, responsive to an individual's clinical and psychological needs, and adaptable to his or her educational and cultural background"</i> .
2005	The NICE principles were further developed by the Department of Health and Diabetes UK, requiring all structured education programmes to have a patient-centred philosophy, structured curriculum, trained educators, and to be quality-assured and audited.
2011	NICE clinical guidelines on Type 2 diabetes stated: <ul style="list-style-type: none"> <li>• "every person and/or carer should be offered structured diabetes education at and around the time of diagnosis with annual reinforcement and review";</li> <li>• "programmes should be integrated with the rest of the care pathway"; and</li> <li>• "patient education programmes provide the necessary resources to support educators who are properly trained and given time to maintain their skills".</li> </ul>

Source: Diabetes Review Steering Group (2014)

**Figure 7: Patient education programme delivered by the Northern Trust**

**DESMOND** (Diabetes Education and Self-Management for Ongoing and Newly Diagnosed) is a structured education programme for Type 2 diabetes patients aiming to provide education and support to 1,000 patients annually within the Northern Health and Social Care Trust area. The programme aims to educate 500 of the 800 newly diagnosed patients within the area annually, as well as a further 500 patients with established Type 2 diabetes with high risk complications.

Programme delivery is by registered healthcare professionals who have been formally trained within DESMOND, who have a working knowledge of diabetes, and an interest in, and experience of, working with diabetes patients.

Referrals to the programme are received from General Practitioners, Diabetic Specialist Nurses, Practice Nurses and secondary care professionals. Priority is given to newly diagnosed patients and to people with diabetes management problems that could result in long term complications or hospital admissions.

Source: Northern HSC Trust

## Part Three:

### Improving Type 2 diabetes care

#### Limited progress was achieved prior to 2013 in ensuring that Type 2 diabetes patients had access to patient education

3.6 Locally, the 2003 Taskforce review (see paragraph 2.2) recognised the potential benefits of structured patient education. However, despite several subsequent initiatives, limited progress was achieved up to 2013 in developing and sustaining a structured and quality assured patient education regime which addressed the needs of the rapidly escalating numbers of Type 2 diabetes patients **(Figure 8)**.

#### Whilst education provision has recently increased, further improvements are still required

3.7 Whilst the 2014 Steering Group review (see paragraph 2.10) found that education provision had increased over the previous decade, it acknowledged that disparity remained in its delivery across the region, with particularly poor provision in the primary care sector. The Group highlighted the need for a strategic approach to ensure a consistent, needs-based delivery of education, and for programmes to be commissioned and delivered to

**Figure 8: Developments in structured education provision for Type 2 diabetes patients in NI (2006 to 2013)**

Initiative / Research	Outcomes / Findings
A Departmental target required Boards and Trusts to develop proposals for structured education programmes by December 2006	The Department could not provide any specific details about the performance in meeting this target, but available evidence suggests that progress was limited. For example, in 2011, Diabetes UK estimated that only 15-20 per cent of local diabetes patients had received structured education.
An audit of local diabetes education was completed in 2007	Whilst this audit found that 26 structured education programmes were being delivered in NI, it concluded that there was <i>"a gross deficiency in the provision of structured diabetes education and that the majority of people with diabetes do not have access to the support they require to manage their condition."</i> It also found that none of the Type 2 diabetes programmes were achieving all the NICE and Diabetes UK standards.
The Cardiovascular Health and Well-being Framework was introduced in 2009. This required diabetes patients to have access to education, together with emotional and psychological support	The diabetes standards within this Framework were not measurable, and were withdrawn in 2012.
Research by Diabetes UK in 2013	Structured patient education was still not available in all Trust areas.

Source: NIAO, based on review of Departmental strategies and Diabetes UK research

pre-defined standards. In the absence of a regional education strategy, the Steering Group found that individual Trusts were making their own arrangements, and that provision was variable.

3.8 Available evidence suggests the provision of patient education increased following this review:

- monitoring of progress in delivering a 2011-15 Programme for Government (PfG) commitment to enrol people with a long term (chronic) condition and who wanted to be enrolled, in a dedicated condition management programme, showed that 13,394 people attended Type 2 diabetes education courses between 2011-12 and 2016-17, with the 3,223 attendees in 2016-17 representing a 93 per cent increase compared to 2011-12<sup>24</sup> (**Figure 9**); and
- total Trust spending on diabetes patient education rose from £230,000 in 2013-14 to £570,000 in 2015-16.

3.9 When the PfG commitment was established, the Department told us that no baseline data was available on levels of education provision, and consequently no targets were established to measure performance against the commitment. Given the consistent increases in provision and participation, the Department has concluded that the commitment was achieved. Despite this, the current Framework document comments that the availability of patient education remains “*variable and insufficient to meet demand*”, and, in late 2017, the Diabetes Network identified the DESMOND programme as being the most suitable form of education for people with Type 2 diabetes. The Framework has committed to establishing:

- a plan for all newly diagnosed patients to be offered education within 6-12 months of diagnosis (by 2018); and
- a ‘catch up’ plan for diagnosed patients who have not been offered education or who require refresher programmes (by 2019).

**Figure 9: Type 2 Diabetes Education and Self-Management Courses – number of courses and attendees 2011-12 to 2016-17**

Year	Number of courses	Number of attendees
2011-12	171	1,677
2012-13	230	1,834
2013-14	201	1,764
2014-15	280	2,228
2015-16	328	2,668
2016-17	438	3,223
<b>Total</b>	<b>1,648</b>	<b>13,394</b>

Source: Department of Health Information Analysis Directorate

24 This monitoring was based on attendees at all patient education courses, and did not specifically measure the numbers attending courses which met the NICE and Diabetes UK criteria.

## Part Three:

### Improving Type 2 diabetes care

3.10 The Framework also proposed that all diabetes patients should have a personalised care plan tailored to the information, treatment and support required to self-manage their condition. Although there are currently no plans to formally implement this proposal, the Department told us that it remains a 'concept' which may still be pursued.

### Conclusions

3.11 Whilst we acknowledge the efforts of the HSC Board and Trusts in increasing access to patient education, we still consider that, for a significant period: provision was patchy; was not always meeting the NICE and Diabetes UK standards; and no formal and robust systems were in place for gathering data on patient attendees. This is concerning, given the important role of structured education in helping Type 2 diabetes patients, particularly those newly diagnosed, to self-manage their condition.

3.12 A degree of uncertainty also exists over when the planned improvements can be introduced. Whilst the Framework aims to ensure that all newly diagnosed patients are offered structured education within 6-12 months by 2018, the current HSC Board and PHA Commissioning Plan (see paragraph 4.2) does not envisage this improvement being introduced until 2020. A lack of historical information on patient attendees also means that the Department may face difficulties in

delivering its 'catch up' plan of offering existing patients access to education. The Department told us that the Diabetes Network will be tasked with taking this plan forward.

3.13 In addition to our findings, Diabetes UK highlighted several issues relevant to the provision of Type 2 diabetes patient education (**Appendix 4**). In implementing the Framework proposals related to structured patient education, the Department should take account of these issues.

#### Recommendations

**Accessing structured education is a key element of effective Type 2 diabetes care and offers clear scope to minimise patient complications. We recommend that the Department works with other key stakeholders to ensure that the Framework improvement measures are fully embedded in practice, and that the availability of education is broadened.**

**Increased engagement and participation of patients is a key Framework theme. To achieve a planned, systematic approach to care, we recommend that patients are helped to manage their condition more effectively, through the development of personalised care plans.**

#### Initiatives have been introduced to address feet and eye complications

3.14 As paragraph 1.7 noted, an estimated 150 to 200 diabetes-related amputations are carried out annually.



- Research has suggested that 80 per cent of these may have been preventable through earlier detection and treatment. To address this area, the Framework proposes to introduce a foot care pathway by 2019. This development, if successfully implemented, offers scope to improve healthcare outcomes and achieve cost savings.
- 3.15 The successful outcomes achieved by a pilot project involving the establishment of a multi-disciplinary foot care team within the Northern Trust<sup>25</sup> demonstrates how focused care in this specialist area can help deliver key benefits to patients and also realise cost savings. The evidence suggests that this project has achieved a range of successful outcomes, including avoiding a number of hospital admissions and associated bed days (estimated as 344 days in 2015-16). Most significantly, the number of amputations within the area covered by the project has reduced from ten in 2014-15, to only one in 2015-16 (**Appendix 5**). Whilst the Diabetes Network has considered the benefits achieved by this model, the Department told us that the Network has developed its work further and is now likely to adopt a NICE formulated model of diabetic foot care, from screening through to tertiary care level support and intervention.
- 3.16 To counter the risk of eye complications, the PHA also introduced a regional screening programme for diabetic retinopathy in 2006. The programme aims to screen all people with diabetes aged 12 years and over using retinal digital photography, with the aim of reducing visual morbidity, through early diagnosis and treatment
- 3.17 The Regulation and Quality Improvement Authority (RQIA) reviewed the programme in 2015. The RQIA found that whilst the service had screened a considerable volume of people, a reliance on paper based administration systems had created fundamental problems, including an inability to maintain adequate oversight of the programme, limited implementation of further programme development, and an inconsistent comparison of achievements against required standards.
- 3.18 The RQIA also identified scope for reducing referral times of patients to ophthalmology, and for access to treatment. The review team found there was limited patient follow-up, and that patients' results were not being forwarded to GPs in a timely manner.
- 3.19 At the time of the review the Public Health Agency (PHA), which oversees the service, had already recognised the majority of concerns, and it has subsequently commenced developing a service modernisation project . As part of this project, the PHA is currently exploring options for delivering the screening programme, and intends to carry out public consultation on the recommended model.

25 The pilot project covered the Causeway and Mid Ulster hospitals.

## Part Three:

### Improving Type 2 diabetes care

#### Bariatric surgery could be a viable option to treat obesity and Type 2 diabetes

- 3.20 In instances where a dietary approach has been unsuccessful in controlling obesity and Type 2 diabetes, bariatric surgery may be an effective option for helping to minimise patient complications. Bariatric surgery involves modifying the gastrointestinal tract to reduce the intake and/or absorption of food, most commonly using a gastric band or gastric bypassing.
- 3.21 In 2008, the Department endorsed NICE clinical guidelines which recommended bariatric surgery as a treatment option for patients with morbid obesity and Type 2 diabetes. However, responsibility for implementing these guidelines lies with the HSC Board and the PHA, and to date the guidelines have not been adopted locally.
- 3.22 Although the local Trusts have estimated that more than 50,000 people in Northern Ireland may meet the NICE criteria for bariatric surgery, NICE considers that only 2-4 per cent of these would actually seek surgery. The Department has estimated<sup>26</sup> that treating 2 per cent of those eligible would cost approximately £20 million.
- 3.23 In the absence of a comprehensive local bariatric surgery service, over 120 local patients have been referred for the procedure to specialist units in England. In the 2018-19 financial year, £1.5 million has been set aside for such referrals.

- 3.24 At £5,000 to £15,000, the initial cost of bariatric surgery is high. Whilst research<sup>27</sup> demonstrates that the benefits delivered may make the process cost-effective over a patient's lifetime, current budget restrictions and the significant up-front costs may limit more widespread local adoption of the procedure for Type 2 diabetes patients. Another practical limitation to providing the surgery is a possible imbalance between patient demand and workforce supply. The Department highlighted that bariatric surgery may only have a peripheral impact on the overall local scale of obesity and Type 2 diabetes. However, it also acknowledges that the issue remains to be resolved in terms of regional commissioning, including the development of appropriate care pathways for those who may be assessed as suitable for this treatment.

#### Challenge 2 - Early identification of people at risk of developing Type 2 diabetes

#### There is no regional screening programme to identify people at high risk of developing Type 2 diabetes

- 3.25 Assessing people for their risk of developing Type 2 diabetes is crucial in trying to prevent the condition occurring, and in helping to curtail its continued growth. Identifying people before they have fully developed the disease can prevent or minimise serious, and potentially fatal, complications and costly treatments. While not recognised as a medical term, clinicians have acknowledged that some patients

26 Evidence to DHSSPS Health Committee Inquiry on obesity, February 2009.

27 Cost-effectiveness of bariatric surgery for severely obese adults with diabetes. *Diabetes Care* Hoerger TJ, Zhang P, Segel JE, Kahn HS, Barker LE, Couper S, 2010.

develop “pre-diabetes” (i.e. impaired glucose tolerance), where their blood glucose levels are high and rising but not yet at the level where complications are likely.

- 3.26 Locally, there are also an estimated 13,000 cases (see paragraph 1.4) of undiagnosed diabetes (i.e. people who have developed the disease but have not yet been formally diagnosed by healthcare providers). These people can remain without symptoms for up to 10 years, and at the time of diagnosis it is estimated that 20 to 30 per cent of patients will have already developed complications. Undiagnosed diabetes, therefore, can place more long-term costly burdens on the healthcare system.
- 3.27 Currently, GPs are not incentivised within the QOF Framework (see paragraph 2.10) to formally screen high risk patients who have not yet been diagnosed with diabetes. Since 2006, funding has been provided, by way of a Directed Enhanced Service, to GP practices to enhance their role in early detection and provision of necessary follow-up of patients for a range of conditions, including those at high risk of developing Type 2 diabetes. However, this support has been relatively small, amounting to only £800,000 since 2006 for the identification of all conditions.
- 3.28 Apart from this initiative, no centralised regional programme for screening high risk individuals for symptoms of pre-diabetes or impaired glucose tolerance has been established. The Department

told us that the UK National Screening Committee, from which it takes advice, does not recommend universal screening for Type 2 diabetes<sup>28</sup>. However, the Department also stated that it is supportive of a system of identifying individuals at high risk of developing the condition, as part of an overall risk stratification process, and the development of evidence based interventions to prevent the condition manifesting in this group, in line with recommendations in NICE Public Health Guidance<sup>29</sup>.

- 3.29 Going forward, it will be crucially important that acknowledged and evolving good practice strategies in dealing with the identification of high risk patients, both locally and wider afield, are shared across Trusts in a timely way.

#### Recommendation

**To address this challenge, we recommend the Department takes steps to ensure that the Diabetes Network develops a strategy for sharing good practice, particularly with regard to the identification of patients at high risk of developing Type 2 diabetes.**

#### Challenge 3 - Workforce planning and training for healthcare professionals

#### Significant workforce shortfalls for diabetes care were identified in 2003

- 3.30 The quality of care provided by the workforce is fundamental in helping to minimise patient complications among Type 2 diabetes patients. However,

28 [www.screening.nhs.uk/diabetes](http://www.screening.nhs.uk/diabetes)

29 <https://www.nice.org.uk/guidance/ph38>

## Part Three:

### Improving Type 2 diabetes care

in delivering effective workforce planning in this area, the Department and its partners face several complex challenges. In addition to addressing the continually increasing prevalence of the condition, the right mix of specialist and experienced staff needs to be put in place across primary and secondary care, and staff need to be equipped with the necessary skills and training to cope with the complexities of treating Type 2 diabetes.

3.31 In 2003, the Taskforce identified significant staffing shortfalls within the key disciplines delivering diabetes care in both hospital and community settings. **Figure 10** demonstrates that, at that time, in comparison to levels recommended by the Taskforce, patients had insufficient access to key professional services from practitioners such as dieticians and podiatrists. The number of hospital consultants and specialist nurses delivering diabetes care was also less than half the estimated requirement.

3.32 The review also identified access to psychological support for Type 2 diabetes patients as a major problem,

with less than one whole time equivalent available to provide care across Northern Ireland. Although psychological support is an important aspect of diabetes care, most Trusts would have found it virtually impossible, at that time, to refer patients for such treatment.

3.33 The Taskforce concluded that using multidisciplinary care teams was the most effective future option for delivering diabetes care. At that time it estimated that £6.8 million investment was required to address the identified resourcing deficits<sup>30</sup>. Between 2003 and 2008, the Department allocated £3 million of additional funding, less than half the Taskforce's identified requirement.

**There is evidence that significant workforce shortfalls remain, and that improvements to staff training are required**

3.34 When the Steering Group re-examined workforce planning for diabetes care in 2014, it found that there had been significant investment in the area since

**Figure 10: Taskforce estimates of staffing shortfalls for diabetes care in 2003**

Specialist Discipline	Estimated Required Staff	Estimated Staffing Levels	Shortfall in staffing numbers
Dieticians	37	8.2	28.8
Podiatrists	76	36	40
Diabetes Specialist Nurses	61	20	41
Clinical Psychologists	7	0.7	6.3
Consultants	25	10	15

Source: Joint Taskforce Report (2003)

30 This estimate did not take account of any additional GP resourcing required.

the Taskforce review, and that the use of multidisciplinary care teams had increased. Nonetheless, it concluded that effective workforce planning “remained a challenge”, and that regional provision was still inequitable. While the review did not provide updated estimates of workforce shortfalls, or investment needed to address these, its findings indicated ongoing shortages in the numbers of dieticians and psychologists in post (**Figure 11**).

3.35 The Steering Group also identified a need to improve education and training available for healthcare staff delivering diabetes care. It concluded that:

- current training varied markedly between disciplines;
- a lack of interdisciplinary and multidisciplinary education was

undermining the delivery of the preferred team approach to diabetes care; and

- no strategic regional approach existed to assessing training needs for healthcare professionals delivering diabetes care.

3.36 **Figure 12** outlines our estimate of the potential workforce requirements to meet current demand for diabetes care, given the increase in prevalence from 3 per cent in 2003 to 5.7 per cent. This indicates that significant gaps and shortfalls may remain in current provision. For example:

- whilst the numbers of dieticians, diabetes specialist nurses and psychologists have increased since 2003, the increase has not kept pace with the rising prevalence

**Figure 11: Number of dieticians and psychologists delivering diabetes care - Taskforce and Steering Group findings**

Speciality	2003 Taskforce Findings	Evidence from 2014 Steering Group Review
Dieticians	37 whole time equivalent (WTE) dieticians were required to treat the 3 per cent prevalence of diabetes.	There were only 27.5 WTE dieticians providing diabetes care for the increased 5 per cent prevalence of diabetes. To meet the Taskforce’s recommended levels, 67 WTE dieticians would be required.
Psychologists	The 0.7 WTE psychologists providing dedicated diabetes care represented only 10 per cent of provision recommended by a Diabetes UK and British Psychological Society benchmark.	3.6 WTE psychologists were providing diabetes care. However, given the rising prevalence of diabetes, 14 WTEs would have been required to meet the recommended benchmarks.  There was minimal psychologist provision in the Southern and South Eastern Trusts.

Source: NIAO, based on information in Joint Taskforce Report and Diabetes Steering Group Review

## Part Three:

### Improving Type 2 diabetes care

**Figure 12: Comparison of workforce delivering diabetes care at December 2016 with 2003 levels and with estimated current requirement**

Healthcare Discipline	Estimated requirement for 3 per cent prevalence of diabetes-2003 (WTEs)	Actual staffing - 2003 (WTEs)	Estimated requirement for 5.6 per cent prevalence of diabetes in 2016 (WTEs)	Actual staffing - December 2016 (WTEs)	Potential Current Shortfall (WTEs)
Dieticians	37	8.2	69	32.8	36.2
Podiatrists	76	36	141	23.7	117.3
Diabetes Specialist Nurses	61	20	114	70.8	43.2
Psychologists	7	0.7	13	2.5	10.5
Consultants	25	10	46	9.2	36.8

Source: NIAO, based on Joint Taskforce Review data and data provided by Trusts

of diabetes and the numbers of podiatrists and consultants have actually reduced; and

- the Northern, South Eastern and Western Trusts had no dedicated podiatrist provision, while the Belfast Trust had no psychology support.

3.37 We acknowledge that there are some limitations with our estimates. For example, there is little certainty over the validity of the 2003 calculations, and the simple application of a multiplier to reflect the increase in Type 2 diabetes levels does not take account of how care models have changed in the intervening years. The promotion of patient and self-management and technological advances may also have reduced the need for direct patient contact with

certain disciplines. However, in the longstanding absence of any robust workforce analysis, we consider it important that some attempt be made to highlight the potential workforce shortfalls, and the scale of the challenge facing the Department in addressing these.

### The Framework proposes to improve workforce planning and staff training

3.38 Whatever the true extent of the current workforce shortfalls in supporting the management of Type 2 diabetes, it is acknowledged by the Department that it is an issue of significance. It told us that its workforce planning for diabetes has a number of strands, including individual professional workforce

reviews for podiatry and dietetics. In addition, sub-groups established by the Diabetes Network have been tasked with developing new models of care for diabetes and these will also include the development of associated workforce plans.

- 3.39 According to the Framework, the intention is to produce an overall workforce plan for diabetes care by 2019. This plan will aim to address the changing epidemiology of diabetes; the need for an integrated and multidisciplinary approach to care; and the skills required to deliver high quality care. The Framework also anticipates that, by 2018, non-specialist primary care nurses will be up-skilled to deliver appropriate patient support, and that diabetes specialist staff will be provided with basic psychological training.
- 3.40 In addition to the need for improved workforce planning and staff training, the Steering Group considered that clear clinical leadership was essential to provide a coherent regional voice for diabetes. A report by the Welsh Assembly Health Committee highlights the importance of such leadership, concluding that the absence of a national clinical lead was a key factor behind the failure to fully implement its National Service Framework by the target date of 2013.
- 3.41 Whilst a clinical lead for local diabetes care has not yet been appointed, the Department told us that the Diabetes Network which has been established to

oversee the Framework's implementation, will have strong representation from front line clinicians from a variety of diabetes specialisms.

### Recommendation

**The absence of a comprehensive, long-term strategy to secure an appropriately skilled and trained workforce represents a key threat to ensuring the effective management of Type 2 diabetes, particularly in trying to help patients avoid complications, or in treating these where they occur. We recommend, therefore, that the Department takes all necessary steps to ensure there is no slippage in producing the proposed workforce plan by 2019. Moreover, it is essential that this plan includes a robust analysis of supply and demand for diabetes services, and clearly quantifies the additional resources required to meet staffing shortfalls and deliver appropriate patient care. It should also be subject to regular review in conjunction with financial planning to ensure that, as far as possible, appropriate funding is made available to meet recognised needs.**

### Challenge 4 - Creating an environment focused on the prevention of Type 2 diabetes

#### Prevention initiatives have not reversed the increases in obesity and Type 2 diabetes

- 3.42 To slow, or even reverse, the increased prevalence of Type 2 diabetes, measures are required which successfully encourage the wider population to adopt healthy behaviours. Being overweight or obese is the most significant risk factor for Type 2 diabetes,

## Part Three:

### Improving Type 2 diabetes care

accounting for over 80 per cent of the risk of developing the condition. Maintaining a healthy weight, eating a balanced diet and being active are therefore key to preventing the condition. Consequently, the Department needs to commit to creating an environment which supports and encourages healthy choices and behaviours.

3.43 In 2003, the Taskforce report recognised the importance of addressing the key risk factors behind Type 2 diabetes, through initiatives aimed at improving diet and nutrition, increasing physical activity, tackling obesity and helping people maintain weight loss. The Taskforce concluded that this would require concerted efforts from the Department and other relevant agencies.

3.44 Several local initiatives were subsequently introduced to try and encourage healthier lifestyles, including:

- Fit Futures – published in 2006 by the Ministerial Group on Public Health, this cross-sectoral approach between health and education was the first local strategy to directly tackle obesity;
- A Fitter Future for All - this ten year policy document, published in 2012 by the PHA as a follow up to Fit Futures, is employing a life course approach to preventing obesity across all age groups; and
- Making Life Better – again published in 2012 by the PHA, this Framework covers the period up to 2023, and

provides direction for policies and actions to improve local health and wellbeing.

3.45 Despite these initiatives, **Figure 13** shows that progress in reducing local obesity and Type 2 diabetes levels, and in encouraging healthier lifestyles, has been limited. The Steering Group review acknowledged that the upward trend in obesity and Type 2 diabetes had not been reversed, and that it remained to be seen whether current public health strategies would have the desired effect.

**Figure 13: Trends in Northern Ireland for obesity, Type 2 diabetes and physical exercise**

- Locally diagnosed diabetes cases increased by 71.3 per cent between 2004-05 and 2015-16, and adult obesity levels increased from 24 per cent in 2005-06 to 26 per cent in 2015-16.
- In 2015-16, 60 per cent of those aged 16 and over were either overweight or obese. Some 65 per cent of men were more likely to be obese or overweight, compared to 57 per cent of women.
- Nine per cent of children aged between 2 and 15 were obese, and 16 per cent overweight.
- In 2014, only half (53 per cent) of adults undertook the current recommended minimum level of physical activity. Some 60 per cent of males met this level, compared to only 47 per cent of females. Only 43 per cent of individuals from the most deprived areas of Northern Ireland met the recommended levels, compared with 60 per cent living in the least deprived areas.

Source: Department of Health

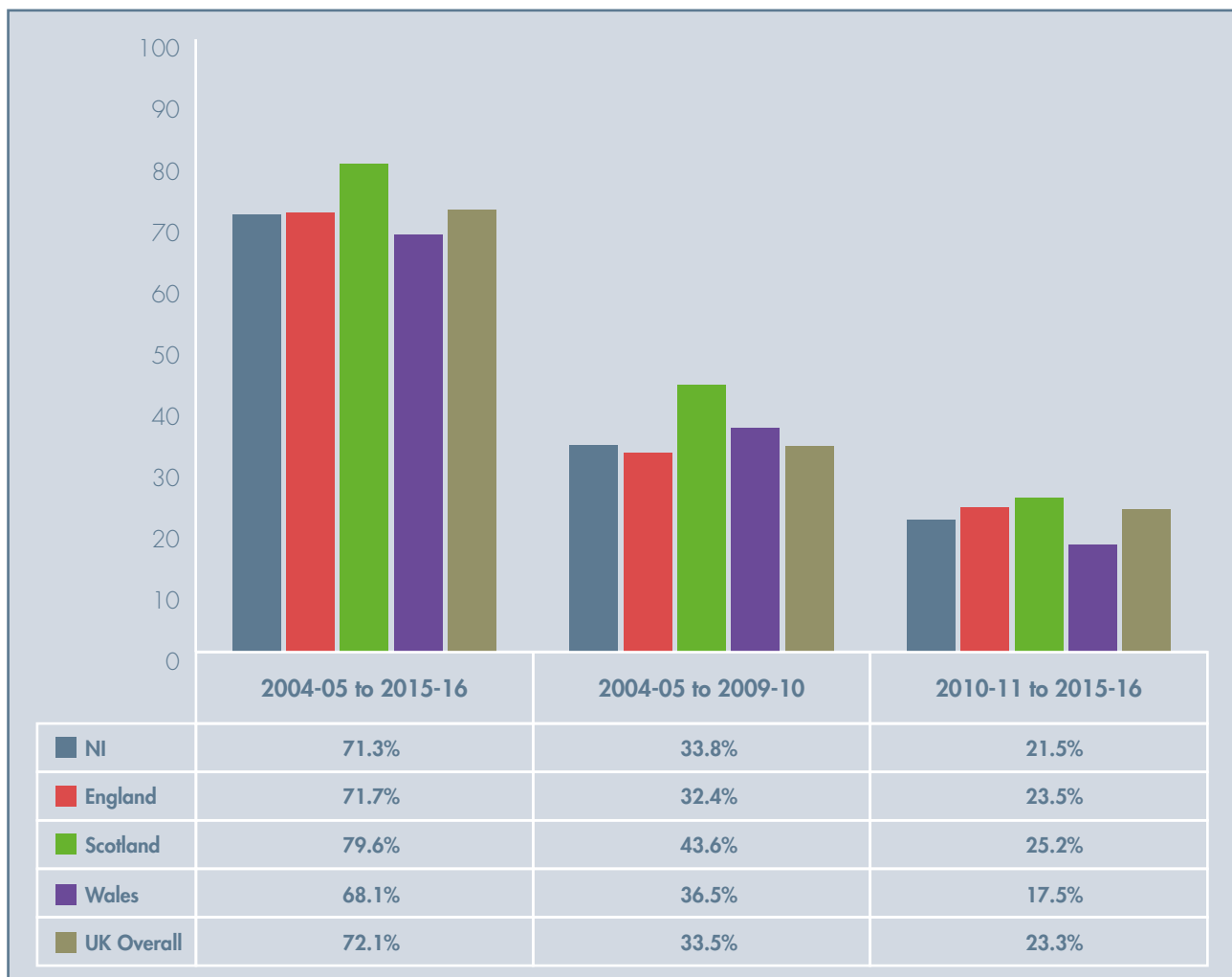


3.46 More positively, and reflecting a UK wide trend, local increases in diabetes levels have recently slowed, with a 21.5 per cent rise between 2010-11 and 2015-16, compared to 33.8 per cent between 2004-05 and 2009-10 (**Figure 14**). However, further research on other areas including undiagnosed diabetes levels would be required to determine the extent to which prevention initiatives have contributed to this slowing trend.

### The Framework plans to develop a new prevention policy by 2018

3.47 In addition to local initiatives, the Steering Group recommended that Public Health Guidance on the prevention of Type 2 diabetes which had been issued by NICE in 2011 and 2012 should be formally adopted to inform local policy and practice. As well as re-emphasising the lifestyle measures required to prevent the condition, this guidance also advocated interventions and measures to assist early detection of high risk groups.

**Figure 14: Percentage increases in diagnosed diabetes cases (UK: 2004-05 to 2015-16)**



Source: Quality of Outcomes (QOF) data.

## Part Three:

### Improving Type 2 diabetes care

3.48 In 2015 and 2016, the Department endorsed a range of NICE guidelines on diabetes care, including those relating to prevention<sup>31</sup>. However, similar to the NICE guidelines for bariatric surgery (see paragraph 3.21), these have not been formally adopted by the HSC Board and the PHA. The current Framework document did not recommend that the NICE guidelines should be immediately implemented, citing inadequate evidence about which interventions are effective for high risk individuals. Instead, it has committed to establishing a new policy on prevention by 2018.

3.49 This work is to be taken forward by the Diabetes Network in conjunction with the PHA and is intended to complement work being undertaken by the existing Obesity Prevention Steering Group. As a result, its aim is to augment current approaches to identifying those at risk of developing diabetes and providing evidence based interventions for preventing Type 2 diabetes amongst this group.

### Successful primary prevention of Type 2 diabetes requires a mix of interventions and clear leadership

3.50 Experience in other fields, including road safety, control of HIV / AIDS and control of tobacco use, shows that primary prevention initiatives can be successfully implemented. These initiatives have typically demonstrated the value of multiple interventions: for example, from

public information to influencing people's choices, and legislation that restricts or eliminates choices.

3.51 However, in applying approaches such as this to Type 2 diabetes, it will be important to acknowledge that many significant factors associated with the increasing prevalence of the condition lie outside the control of the healthcare system. Consequently, responsibility for prevention requires effective and sustainable action at both individual and societal level, and by a range of statutory stakeholders.

3.52 Internationally, another approach which aims to drive improved disease prevention has been to appoint a "champion" to take the lead in trying to secure changes in policy and social behaviour. Paragraph 3.41 points out that, while the Department does not intend to appoint a clinical lead for local diabetes care, the Diabetes Network will have strong representation from front line clinicians. Diabetes UK also operates a clinical champions programme, under which health care professionals with the requisite clinical expertise, leadership skills and passion, work voluntarily to improve local diabetes care. In our view, scope exists for the Diabetes UK clinical champions and the Diabetes Network to work together to help further develop and enhance local policies and strategies for diabetes care.

31 In addition to the NICE guidelines on prevention of Type 2 diabetes, the Department has endorsed NICE guidance relating to: diabetes in pregnancy; Type 1 diabetes in adults; diabetes in children and young people; Diabetic foot problems; and Type 2 diabetes in adults (management).

## Conclusions

- 3.53 Whilst effective measures to prevent Type 2 diabetes can deliver significant healthcare benefits to individuals and help ease the cost and workforce burden on the healthcare sector, evidence suggests that local initiatives which have been introduced since 2003 have, at best, only slowed the increases in obesity and Type 2 diabetes. The proposed development of a revised primary prevention policy by 2018 offers potential to introduce new approaches and thinking. However, the Department and its partners must now move at pace to try and stem the rising tide of people who are developing Type 2 diabetes. Given the limited headway achieved in this area to date, the relevant stakeholders may also need to assess whether a primary focus on minimising patient complications may offer the greatest scope for return on investment.
-





## Part Four:

### The standard of Type 2 diabetes care

- 4.1 This part of the report examines the performance of health care providers in delivering recommended care standards for Type 2 diabetes, and the impact on patient outcomes

#### Two long-term outcome indicators have been established for obesity and diabetes

- 4.2 The HSC Board's Commissioning Plan for 2016-17 states that, along with the PHA, it will continue to seek to improve availability, accessibility and patient experience in relation to diabetes care. The Plan includes two long-term outcome indicators for diabetes developed by the HSC Board:

- In line with the Departmental strategy *A Fitter Future For All*, by March 2022, reduce obesity levels and overweight and obesity for adults by four per cent and three per cent, and by three per cent and two per cent for children.
- In line with the Department's policy framework, *Living with Long Term Conditions*, continue to support people to self-manage their condition through increasing access to structured patient education programmes. In 2016-17, the focus was to commence implementation of the Diabetes Strategic Framework, with the aim of offering all newly diagnosed diabetes patients access to structured patient education within 6-12 months of diagnosis by 2020.

#### Whilst an integrated patient record database helps support high quality Type 2 diabetes care, such a system has not been developed

- 4.3 Another key aspiration of the Diabetes Framework is to facilitate the development of more effective mechanisms for monitoring service delivery. To date, activity in this area has been limited and characterised by inadequate information for monitoring the quality of patient care and outcomes. For example, as paragraph 2.7 outlined, the three diabetes standards within the 2009 Service Framework for Cardiovascular Health and Well-being, were withdrawn in 2012, as there was insufficient data to measure their delivery.

- 4.4 Accurate registers and information systems which readily identify diabetes patients to GPs, and which make patient information accessible to both primary and secondary care also play an important role in delivering effective Type 2 diabetes care. An integrated system can facilitate systematic monitoring of patients, and help healthcare professionals identify the most appropriate treatment. It can also help ensure that care is delivered in a suitably co-ordinated manner which avoids duplication of provision.

- 4.5 The need for a fully integrated and centralised clinical database of local diabetes patients was acknowledged by the 2003 Taskforce review. The

Taskforce highlighted that this would facilitate:

- clinical management of diabetes patients;
- delivery of patient centred care;
- targeted screening and interventions for patients at high risk of developing complications;
- regular audit and collection of epidemiological data; and
- effective planning of services.

4.6 By 2008, separate patient record systems had been introduced in primary and secondary care, but the systems had not been integrated. At that time, the Department had concluded that a full business case would be required to justify the costs associated with such integration.

4.7 As an integrated system had still not been developed when the Steering Group reported in 2014, it concluded that patient needs could not be adequately assessed, and the quality of care and patient outcomes could not be measured. The Group stated that *"if it were possible to 'close the loop' in respect of clinical information systems then it would enhance the ability to set measurable quality standards, measure performance and audit quality of care and outcomes in a consistent way across the region"*.

4.8 Whilst an integrated information system would significantly assist the delivery of high standards of diabetes care, experience elsewhere has highlighted the potential difficulties with such a project. In Scotland, an option appraisal for an integrated system was initially completed in 2001, but its development was subsequently hampered by evolving technological issues and changing user requirements, and was not fully introduced across primary and secondary care until January 2014.

4.9 Locally, work commenced in late 2014 to develop systems which could provide an integrated diabetes patient care database. However, there is currently little certainty over whether these systems will be fully integrated. Although enhanced systems are expected to be operating across secondary care by March 2018, a target date has not yet been established for implementation within primary care, and the difficulties experienced in Scotland suggest that full integration may not be achieved for some time yet. Furthermore, the funding required to develop these systems has not yet been identified.

### **A proposed set of indicators for measuring diabetes care standards has been developed, but some key areas cannot be measured**

4.10 Despite the lack of clarity over when integrated patient systems will be introduced, the Framework still proposes to establish an enhanced outcome-focused approach aimed at helping

## Part Four:

### The standard of Type 2 diabetes care

healthcare staff monitor existing care standards; plan and deliver new and improved services; and assess future outcomes. It has identified 27 Key Performance Indicators (KPIs) covering key areas, which include:

- the prevalence of Type 2 diabetes;
- mortality rates linked to diabetes;
- delivery of key care processes and provision of structured education to diabetes patients;
- measurement of key risk factors, including control of blood pressure, blood lipids and blood glucose;
- levels of patient complications; and
- hospital admission data.

4.11 Currently, it is unclear if, or when, a number of the proposed indicators can be fully measured. These include indicators to assess mortality rates linked to diabetes, the percentage of patients attending structured education, and the percentage who develop foot ulcers or who have had a lower limb amputation.

### Conclusions

4.12 Progress in developing arrangements to properly track patient care and outcomes has been slow, and current systems are still not capable of measuring several key proposed indicators. Without the ability to fully report on these, limited scope exists to measure the degree of success

and progress being achieved, and the extent of future improvement.

4.13 The limited data has also hindered the Department in properly holding the HSC Trusts and HSC Board to account for delivering the recommended standards of care to Type 2 diabetes patients. The Department does not know the level of complications being developed by local Type 2 diabetes patients, nor the degree to which such complications, including lower limb amputations, may be avoidable.

#### Recommendations

**The longstanding absence of a fully integrated patient database has impeded the introduction of wider enhancements to local diabetes care, and measurement and benchmarking of services and patient outcomes. We recommend that the Department and its partners urgently focus on overcoming the barriers to integrating systems and establishes a clear timetable for implementing a fully functional patient record database.**

**Having established a proposed performance measurement framework, the Department should improve the tracking of outcomes so that results in delivering Type 2 diabetes care can be properly assessed and publicly reported. We recommend that the Department establish reliable performance baselines and, where necessary, set targets for improvements across the key aspects of diabetes care.**



## The Quality of Outcomes Framework (QOF) measures primary care performance in delivering Type 2 diabetes care

4.14 GP practices have a key role in delivering ongoing care to Type 2 diabetes patients. Since its UK-wide introduction in 2004, the Quality and Outcomes Framework (QOF), has provided financial incentives to GPs for undertaking specified clinical activities and achieving set clinical indicators closely related to nine key diabetes care processes recommended by NICE. Whilst the NICE care processes and QOF both aim to promote continuing improvements in diabetes care, they have different purposes:

- the **nine NICE care processes** measure the quality of care at individual patient level; and
- **QOF** seeks to incentivise and resource GPs to deliver high standards of patient care and uses aggregated data from general practices.

4.15 NICE guidance on clinical excellence and the effective use of NHS resources is designed for use in England and, as such, does not automatically apply here. Although the Department established formal links with NICE in 2006 under which NICE guidance was to be reviewed for local applicability and, where appropriate, endorsed for implementation by health and social care services, the nine care processes for diabetes advocated by NICE have not been yet been formally adopted locally.

4.16 **Figure 15** demonstrates how the QOF framework operates in practice, focusing particularly on the diabetes indicators.

**Figure 15: How the QOF Framework operates in practice**

- Each part of the UK decides which individual indicators are included in their QOF frameworks. To date, the same diabetes indicators have largely been adopted across Northern Ireland, England and Wales<sup>32</sup>.
- Each individual QOF indicator is allocated a number of points by NICE. For example, the key diabetes indicator measuring patient blood glucose scores 17 points. Each point has a set financial value (£162.12 in Northern Ireland in 2015-16, compared to £158.62 in Wales and £160.12 in England).
- NICE establishes achievement thresholds for each QOF indicator which GPs must meet to receive payment. For example, payment for the key blood glucose indicator is made on a sliding scale when 40 to 50 per cent of a practice's diabetes patients achieve the recommended reading – if 50 per cent of patients met this reading, a local practice would have achieved all 17 points in 2015-16, and earned £2,756 (£162.12 x 17).

*Source: NIAO, based on QOF Framework*

## Part Four:

### The standard of Type 2 diabetes care

#### Primary care has consistently achieved the QOF performance targets

4.17 Overall, local GPs have achieved a very high percentage of the QOF points available for diabetes care. Aside from 2004-05, when 95.7 per cent of available points were achieved, annual attainment has been approximately 98 per cent. Between 2006-07 and 2015-16, local GPs received £42.2 million of the £43 million of available QOF payments for diabetes care.

4.18 The Department does not routinely assess local performance trends for QOF, or benchmark achievement with the rest of the UK. **Figure 16** compares local outcomes in 2015-16 with those

4.19 In 2015-16, local performance was either close to, or above, the upper achievement threshold for most indicators. Performance was largely similar to England, with the exception of patient outcomes for blood glucose and kidney function, where England performed slightly better.

4.20 Prior to 2015-16, Northern Ireland and England also achieved the required performance levels for the vast majority of key diabetes indicators, although more recently achievement for some measures had plateaued.

**Figure 16: Performance for key QOF diabetes checks (2015-16)**

Area	Indicator and Measurement	Patient Achievement thresholds	Actual achievement	
			Northern Ireland	England
Blood Glucose	HbA1c59 mmol/mol or less	40-50%	65.4%	70.2%
	HbA1c64 mmol/mol or less	55-70%	75.2%	78.0%
	HbA1c75 mmol/mol or less	50-90%	87.9%	87.5%
Blood Pressure	150/90 or less	65-75%	91.5%	91.3%
	140/80 or less	40-65%	76.8%	77.6%
Cholesterol	5mmol/l or less	60-80%	85.5%	80.2%
Foot	Completion of foot risk score	50-90%	87.2%	88.5%
Kidney Function	With a diagnosis of nephropathy or micro-albuminuria who are currently treated with an ACE-1	57-97%	86.7%	92.4%
Patient Education	Newly diagnosed patient referred to structured education	40-90%	Retired	92.4%
Erectile dysfunction	Discussion, followed by advice/investigation/treatment	40-90%	94.2%	97.8%

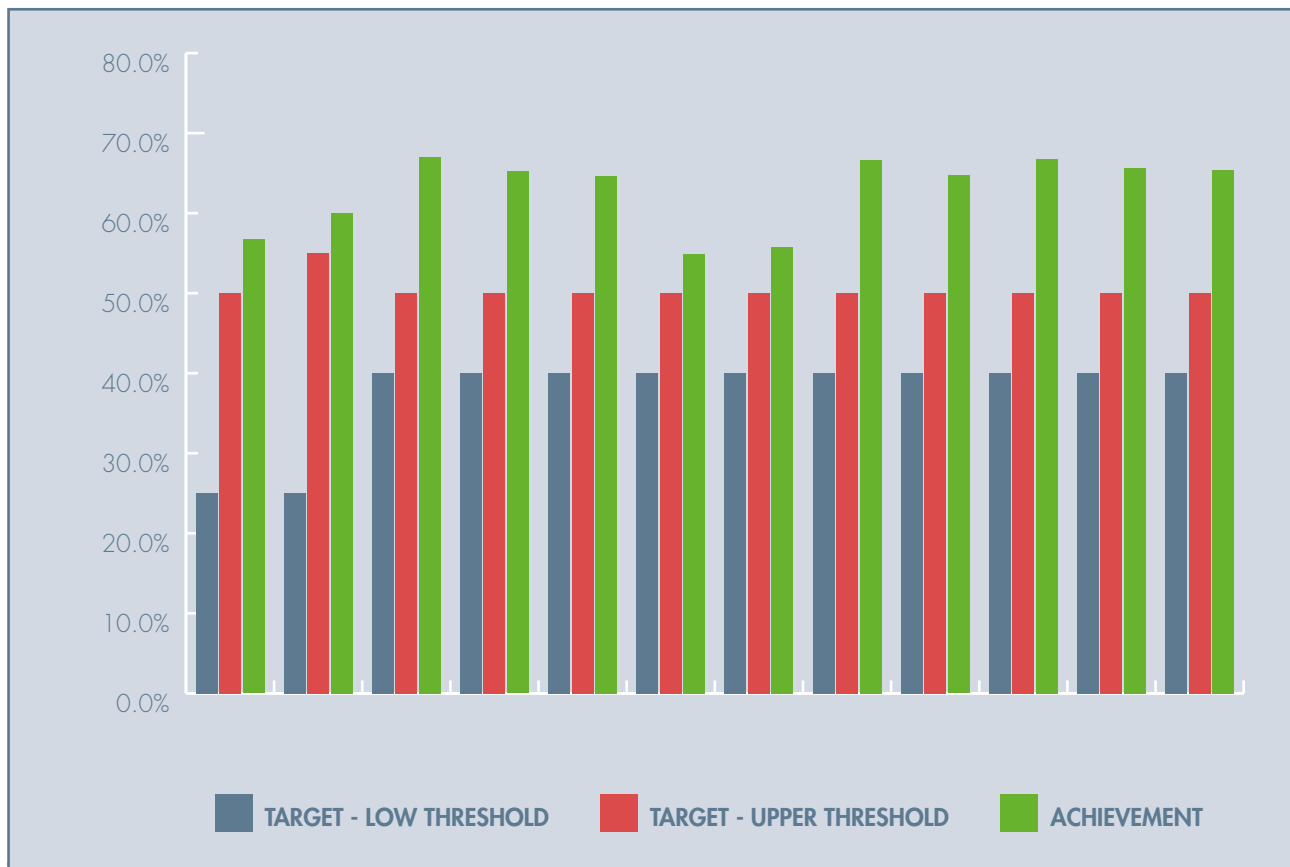
Source: Departments of Health (Northern Ireland and England)

4.21 A Diabetes UK review of local QOF performance in 2013-14 found high achievement levels, but highlighted that a substantial proportion of people still had exceptionally high blood glucose readings, and that variable performance between individual practices needed to be investigated and addressed, to help drive improved care standards. It emphasised how a small proportion of persons failing to achieve recommended measurements can still represent significant patient numbers. For example, in 2013-14, the cholesterol of almost 20 per cent of local diabetes patients (around 16,000 people), exceeded the recommended levels.

### There is scope for making the QOF Framework more challenging

4.22 Since QOF's introduction, the performance which GPs need to achieve for the diabetes indicators in order to receive payment have largely remained unchanged. For example, since 2006-07, 40 to 50 per cent of patients have been required to meet the recommended readings for the key blood glucose indicator<sup>33</sup>. Local GPs have always significantly exceeded the upper achievement threshold for this indicator, resulting in most practices claiming the full payment available (**Figure 17**).

**Figure 17: Key blood glucose QOF indicator – required threshold range and average performance achieved by GPs in Northern Ireland (2004-05 to 2015-16)**



Source: Quality and Outcomes Framework

33 HbA1c 59 mmol/mol or less.

## Part Four:

### The standard of Type 2 diabetes care

- 4.23 Although the QOF Framework provides no measurement of complication levels among Type 2 diabetes patients, this performance provides assurance that, for a sizeable proportion of local diabetes patients, GPs have been performing key checks, and achieving recommended clinical thresholds. Whilst the Department told us that QOF indicators and targets are reviewed annually across the UK health departments, consideration may now have to be given to raising the performance thresholds for the diabetes indicators to incentivise further improvement. The Department highlighted an alternative view held by some practitioners that, rather than amending the QOF system, priority should be given to increasing resourcing of the diabetes function within primary care.
- 4.24 In 2015, the National Audit Office (NAO)<sup>34</sup> also identified scope for improving how QOF was incentivising GP practices in England. In particular, NAO highlighted how QOF rewarded the delivery of individual care processes rather than the completion of all recommended checks.
- 4.25 In 2013-14, NICE advocated the introduction of a new QOF indicator, measuring the percentage of newly diagnosed adults with Type 2 diabetes being referred by GPs to a structured patient education programme.
- 4.26 However, this indicator was withdrawn from the local QOF Framework by the HSC Board in 2015-16, as it did not consider it merited the 11 points being awarded for simply making a referral. The Board told us that the Department had not objected to this decision. The Department told us that it had supported the withdrawal of the indicator because it did not provide direct measurement of patient health or wellbeing and only measured a process rather than an actual outcome. Whilst we acknowledge that this indicator has limitations in that it does not measure actual patient attendance, referral of newly diagnosed patients to education is still critical in guiding patients towards this key service. Furthermore, we note that this indicator remains in place in England and Wales.

#### Recommendations

**Given that local GPs have consistently surpassed the upper performance thresholds for almost all the QOF diabetes indicators, we recommend that the framework mechanisms and related thresholds are reviewed and, where necessary, strengthened.**

#### The National Diabetes Audit measures standards of diabetes care in England and Wales

- 4.27 To measure the standards of diabetes care being delivered by the NHS in England and Wales, the Department of Health in England established the National Diabetes Audit in 2002-03. This annual audit comprises four discrete components across primary and secondary care, and measures whether care standards are meeting the NICE Clinical Guidelines and Quality Standards, through addressing four questions (**Figure 18**).

Figure 18: Outline of the National Diabetes Audit

Component of National Diabetes Audit	Questions Addressed by National Diabetes Audit
<b>National Diabetes Core Audit</b> – An annual audit of primary care and specialist diabetes services covering care processes, treatment targets, complications and mortality.	<ul style="list-style-type: none"> <li>• Is everyone with diabetes diagnosed and recorded on a patient register?</li> <li>• What percentage of people registered with diabetes have received the nine NICE care processes?</li> <li>• What percentage of people registered with diabetes achieved NICE defined treatment targets for glucose control, blood pressure and blood cholesterol?</li> <li>• What are the rates of acute and long term complications among people registered with diabetes?</li> </ul>
<b>National Diabetes Inpatient Audit</b> – A snapshot audit of every hospital which assesses the quality of inpatient care of diabetes patients.	
<b>National Pregnancy in Diabetes Audit</b> – Examines antenatal services for women with pre-gestational diabetes.	
<b>National Diabetes Footcare Audit</b> – Collects data about specialist foot care services for people with diabetes.	

Note: In addition, the Royal College of Paediatrics and Child Health manage a paediatric component of the NDA.

Source: *National Diabetes Audit*

## Local non-participation in the National Diabetes Audit has hindered measurement and benchmarking of care standards and outcomes

4.28 Prior to 2016, Northern Ireland had not participated in any element of the National Diabetes Audit. Diabetes UK told us that this has hindered the identification of best practice and poor performance across local healthcare providers, and benchmarking of this with elsewhere in the UK. In particular, very limited local information has been gathered on patient complications.

4.29 The Chief Medical Officer has advocated that Northern Ireland should seek to participate in the National Diabetes Audit. However, whilst the information generated by local clinical management systems has allowed Trusts to audit diabetes care standards in some hospitals, and the HSC Board has produced partial data on the

percentage of local patients receiving the NICE recommended care processes<sup>35</sup>, the systems cannot currently generate the specific data required for full participation in the National Diabetes Audit. For such participation, Diabetes UK has highlighted the need for a more systematic and robust method of local data collection.

4.30 The Department told us that the Diabetes Project Board (an interim group established to take forward local diabetes policy until the Diabetes Network becomes fully operational), is currently exploring options for generating the data which would enable local participation in the National Diabetes Audit. However, it acknowledged that some logistical issues remain to be resolved with these options.

35 This data only takes account of care processes delivered by primary care.

## Part Four:

### The standard of Type 2 diabetes care

4.31 A local inpatient audit of diabetes care was completed in December 2013<sup>36</sup>. This found that 92 per cent of local inpatients were satisfied with the standard of their care. Less positively, it showed that, compared to England and Wales, local patients experienced higher levels of medication and insulin errors and were less likely to receive a foot care check. Whilst 35 per cent of patients in England and Wales received care from a specialist diabetes care team, only 27 per cent of local patients received such treatment (**Figure 19**). Local concerns were also identified over staffing issues.

4.32 The Department has also funded a further inpatient care audit in 12 local acute hospitals, which was completed in November 2016. The results, which are currently being analysed, will be benchmarked with outcomes for 2016-17 in England and Wales by the National Diabetes Inpatient Audit, a component element of the National Diabetes Audit, which measures whether:

- hospital care minimised the risk of avoidable complications;

**Figure 19: Key findings of local audit of diabetes inpatient care (2013)**

Aspect of Care / Performance	Outcomes in NI	Outcomes in England and Wales
Percentage of hospitals with no Diabetes Inpatient Specialist Nurse time directed towards inpatient care	66.0%	31.7%
Percentage of patients seen by a member of a specialist diabetes care team	27.2%	34.7%
Percentage of inpatients with diabetes management problems which warranted referral to the specialist diabetes team who were seen by a team member	50.3%	63.0%
Percentage of patients with at least one medication error	46.3%	37.0%
Percentage of patients with at least one prescription error	34.6%	21.9%
Percentage of patients with at least one medication management error	25.6%	22.3%
Percentage of patients with at least one insulin error	27.2%	20.6%
NICE guidelines – all patients with diabetes to receive a foot assessment within 24 hours of admission	17.1%	37.6%

Source: Northern Ireland Diabetes Care Inpatient Audit (December 2013)

36 The audit was commissioned by the Northern Ireland Diabetes Consultant Group and assessed care standards in 11 local acute hospitals.

- harm resulted from the inpatient stay;
- patient experience of the inpatient stay was favourable; and
- there has been any change in the quality of care and patient feedback compared with previous years.

4.33 While this initial, but limited, participation in the National Diabetes Audit is welcome, local involvement in the wider Audit would provide much more comprehensive measurement of local care standards and patient outcomes across primary and secondary care, and enable meaningful benchmarking to be undertaken with England and Wales.

## Conclusion

4.34 As well as providing an overview of the quality of diabetes care, the National Diabetes Audit aims to improve care standards by enabling individual providers to benchmark performance with each other, identify and share best practice, and identify areas in which improvement in the quality of treatment is required. In our view, the lack of full participation in the National Diabetes Audit has restricted the ability of the Department and its partners to comprehensively monitor the delivery of Type 2 diabetes services and to promote the exchange of best practice in supporting their improvement.

### Recommendation

**We recommend full local participation in the National Diabetes Audit. This will provide evidence-based assurance that local patients are receiving the key annual health checks applied elsewhere in the UK, identify the extent of compliance with best practice in delivering care, and highlight specific areas requiring improvement.**







## Appendix 1: Study Methodology

*(paragraph 1.18)*

1. Our review of local arrangements for Type 2 diabetes prevention and care was completed through analysing evidence gathered between November 2016 and July 2017. Specifically, we:
    - analysed available data on:
      - the prevalence of diabetes in Northern Ireland;
      - costs incurred locally in treating diabetes; and
      - the societal impacts of diabetes;
    - reviewed key policy documents for local diabetes care, most significantly the Joint Taskforce Review (2003), and the Diabetes Review Steering Group (2014);
    - reviewed documentation related to key aspects of Type 2 diabetes care, including:
      - patient education;
      - development of integrated patient record systems;
      - treatment of diabetes related complications;
      - workforce planning; and
      - initiatives for preventing Type 2 diabetes;
    - assessed local performance for the Quality and Outcomes Framework (QOF) diabetes care indicators, and how this compares with England and Wales;
    - compared outcomes from local diabetes inpatient care audits with results of the National Diabetes Audit in England and Wales;
    - liaised with key Department of Health staff; and
    - liaised with Diabetes UK to obtain their views on local standards of Type 2 diabetes care.
  2. The evidence gathered helped us to form conclusions on:
    - local trends and future projections for the prevalence of diabetes, and compare these with the rest of the UK;
-

- the costs currently being incurred by the local healthcare system in providing diabetes care, and the extent to which these may increase;
  - whether local policy for Type 2 diabetes care aligns with best practice;
  - how the local healthcare system has reacted to four key challenges it faces in delivering effective Type 2 diabetes care:
    - reducing complication rates among Type 2 diabetes patients;
    - early identification of those at high risk of developing Type 2 diabetes;
    - building workforce capacity and capability to deliver effective Type 2 diabetes care; and
    - creating a focus on the prevention of Type 2 diabetes; and
  - the extent to which complications among Type 2 diabetes patients are being minimised, and whether local healthcare providers are delivering recommended care standards.
-

## Appendix 2: (paragraph 2.3) Areas identified for improvement by the Joint Taskforce Report (2003)

### Areas identified for improvement by the Joint Taskforce Report (2003)

#### Prevention and early detection

- Health promotion
- Public education
- Screening high-risk groups
- Community issues and inter-agency working

#### Care monitoring and treatment

- Education for people with diabetes and professionals
- Eye screening
- Integrated diabetes care and guidelines
- Emotional and psychological support

#### Targeting vulnerable groups

- Children and young people
- Ethnic minority communities
- Pregnancy and sexual health
- Other vulnerable groups

#### Planning and managing services

- Strategy, leadership and team working
- Workforce planning
- Information management and diabetes registers
- User forum and empowerment
- Audit, research and development

#### Implementation

- Implementation and monitoring
-

## Appendix 3: (paragraph 2.14)

### Diabetes Strategic Framework – Proposed Improvement Measures

Key Theme	Action	Lead Responsibility	Timescale
Theme 1: A Partnership Approach to Service Transformation - Clinical leadership and User Involvement	Establish a Diabetes Network to enable stakeholders to be fully engaged in transforming services for people living with diabetes.	DHSSPS	Immediate
	Establish a work programme designed to measurably improve outcomes.	Diabetes Network	Within 12 months
	Define and test operational principles for achieving sustainable improvement.	Diabetes Network	Within 12 months

Key Theme	Action	Lead Responsibility	Timescale
Theme 2: Supporting Self-management	Agree a menu of quality assured Structured Diabetes Education programmes (SDE), consistent with NICE guidance, for Northern Ireland.	Diabetes Network	Within 12 months
	Establish a plan for delivery of Structured Diabetes Education in Northern Ireland with the goal that all newly diagnosed people with diabetes can be offered SDE within 6-12 months of diagnosis.	Diabetes Network (programme plan) Trusts (programme delivery)	Within 24 months
	Establish a 'catch up' plan to meet the needs of those already diagnosed who have not already been offered SDE and to meet the need for refresher programmes.		Within 3 years
	Explore whether digital technology can be used to support delivery of SDE.	Diabetes Network	Within 24 months
	Scope the role of social media in supporting self-management.	With Public Health Agency (PHA)	

## Appendix 3:

(paragraph 2.14)

## Diabetes Strategic Framework – Proposed Improvement Measures

Key Theme	Action	Lead Responsibility	Timescale
Theme 3: Prevention, Early Detection and Delaying Complications	The Diabetes Network will be represented on the implementation groups taking forward 'Making Life Better', the framework for improving the population's health and well-being, and the obesity prevention framework, ' <i>A Fitter Future for All</i> '.	Public Health Agency	Immediate
	Establish an approach to the prevention of Type 2 diabetes for Northern Ireland which is congruent with emerging evidence.	Public Health Agency	Within 24 months
	Provide information, advice and support for people who are identified as being at increased risk.	Public Health Agency	Within 24 months
	Implement a foot care pathway that improves outcomes at individual and population level.	Primary care teams and HSC Trusts supported by the Diabetes Network	Within 3 years
	Agree appropriate risk stratification in diabetes care.	HSCB, Primary Care	Within 24 months

## Appendix 3 *(continued)*:

Key Theme	Action	Lead Responsibility	Timescale
Theme 4: Using Information to Optimise Services and improve Outcomes for People Living with Diabetes	Agree an initial suite of indicators against which to measure improvement in care at local and regional level.	Diabetes Network	Within 12 months
	Participation in National Diabetes Audits will commence in 2016.	HSCB and Trusts	Immediate
	Formalise the relationship between the Diabetes Network and the Northern Ireland eHealth Strategy Group with the goal of having a diabetes care pathway within the electronic care pathway and a portal through which people living with diabetes can manage their own health information and interact with clinicians.	Diabetes Network supported by HSCB/PHA	Immediate
	Influence regional work to achieve integration of clinical information systems relevant for the care of people living with diabetes.	Diabetes Network	Immediate

## Appendix 3:

*(paragraph 2.14)*

## Diabetes Strategic Framework – Proposed Improvement Measures

Key Theme	Action	Lead Responsibility	Timescale
Theme 5: Designing Services for People Living with Diabetes, Particularly Those Requiring Bespoke Treatment and Care	Develop a plan to achieve measurable improvement in access to insulin pumps for young people.	Diabetes and Paediatric Diabetes Networks with HSCB and HSC Trusts	Within 3 years
	Develop a plan to improve experience of transition to adult services for young people.		
	Achieve measurable improvement in service capacity to meet the needs of pregnant women with diabetes.	HSCB and HSC Trusts	Within 12 months
	Test and implement reliable systems to support early detection and follow up for women with Gestational Diabetes.	Diabetes Network and HSC Trusts	Within 3 years
	Achieve measurable increase in the number of women who are pre-pregnancy and at risk who avail of pre-pregnancy counselling services.	Public Health Agency	Within 24 months
	Improve the experience of care in-hospital for people living with diabetes but admitted for other reasons by enhancing the capacity for Specialist Diabetes Teams to provide care, advice and support.	Diabetes Network and HSC Trusts	Within 3 years
	Conduct formal needs assessment for particularly vulnerable people in order to inform future service models and improve outcomes.	PHA	Within 3 years



## Appendix 3 *(continued)*:

Key Theme	Action	Lead Responsibility	Timescale
Theme 6: Enhancing the skills of frontline staff	Develop a workforce plan for diabetes services, which takes into account: the changing epidemiology of the condition; the need for an integrated, multidisciplinary approach to care; future reconfiguration of services; and the skills required to deliver a high quality service for people living with diabetes.	Regional Workforce Planning Group with support from the Diabetes Network	Within 3 years
	Prioritise training in diabetes care for nurses and Allied Health Professionals who are not specialists in diabetes but regularly come into contact with people with diabetes.  For specialists in diabetes, a programme for basic training in psychological skills will be designed.	CNO/PHA	Within 24 months
	At least 10 per cent of staff who are specialist in diabetes care will be trained to level 1 in the Attributes Framework for Quality Improvement.	HSC Trusts	Within 12 months
	Expert advice in improvement science will be provided to the Diabetes Network.	DHSSPS	Immediate

## Appendix 3: (paragraph 2.14) Diabetes Strategic Framework – Proposed Improvement Measures

Key Theme	Action	Lead Responsibility	Timescale
Theme 7: Encouraging Innovation	Establish formal links with the Diabetes Clinical Interest Group within the Northern Ireland Clinical Research Network, the HSC R&D Division, the Improvement Network for Northern Ireland and HSC Clinical Innovations. One measure of success will be the number of peer reviewed publications from the Diabetes Network.	Diabetes Network	Within 12 months
	Scope opportunities to support individuals and teams to innovate.	Diabetes Network with HSC Innovations	
	Establish processes to ensure that the introduction of new drugs and devices is supported by appropriate infrastructure including training for staff.	HSCB	
	Assess outcome of evaluation of d-Navsystem to establish viability of further roll-out.	HSCB	Within 12 months

## Appendix 4: (paragraph 3.13) Views of Diabetes UK (Northern Ireland) on provision of structured education to local Type 2 diabetes patients

In addition to our findings on the provision of structured education for Type 2 diabetes patients, Diabetes UK (Northern Ireland) highlighted several additional issues which are outlined below. In taking forward the Framework proposals for the provision of structured education, we recommend that the Department and the Diabetes Network take account of these areas.

Diabetes UK told us that:

**Patient non-attendance** - Diabetes UK highlighted research which shows that patients were not being adequately made aware of the benefits of patient education and were more likely to attend structured diabetes education when they are directly referred by their GP, who was able to explain the seriousness of Type 2 diabetes and the importance of attending education. Available data shows that levels of non-attendance for Type 2 diabetes education programmes can be as high as 50 per cent in some Trust areas, and Diabetes UK has funded research which found that greater flexibility, such as evening sessions, can improve uptake.

**Quality of education provision** - Currently DESMOND and X-PERT are the only diabetes education courses which meet NICE stipulated criteria. Staff in the Belfast, Northern, South Eastern and Western Trusts deliver the DESMOND programme and the Southern Trust provides X-PERT. This programme requires twice the resources of DESMOND and dietitians have raised concerns that its dietary recommendations do not meet national guidance.

**Waiting lists and waiting times for patient education** – A waiting list for the DESMOND programme of almost 1,000 patients currently exists in the Northern Trust. Across other Trusts, there is a lack of robust data available to measure waiting lists and waiting times.

## Appendix 5: Pilot foot care project in the Northern Trust

*(paragraph 3.15)*

Prior to 2014, there were no formal foot care pathways within any area of the Northern Trust. In 2014, the local Integrated Care Partnership (ICP) Diabetes Multidisciplinary Group identified gaps within diabetes foot care, by mapping existing service provision and designing a pathway which would meet patient needs and align with the NICE guidelines. Following widespread stakeholder engagement, a foot care sub-group was established comprising GP, Podiatrist, Diabetic Nurse Specialist, Medics, service users and the voluntary and community sector.

In February 2015, the local Commissioning Group approved a bid from the Northern Trust for a pilot project covering the Causeway Coast and Mid-Ulster areas, aimed at improving local diabetes foot care. An implementation group was subsequently established to deliver the project. A multi-disciplinary foot team was then established to coordinate podiatry care and to ensure that diabetes patients would have access to the right person, in the right place, at the right time.

Through this pilot project, patients can now be referred directly by their GP, nurse, emergency department or hospital to the multidisciplinary service. Analysis shows that 80 per cent are currently being seen within the 48 hours target, with 49 per cent being seen within 24 hours. Previously the average wait for an urgent referral to commence treatment was 72 hours. The project has achieved a range of successful outcomes:

- 87 per cent of patients received care in a local setting by the enhanced foot protection team, thereby avoiding referral to tertiary services;
  - 5 per cent of patients were referred onwards to the Hospital Diversion Team for the administration of intravenous antibiotics, avoiding a number of admissions and associated bed days (estimated as 344 days in 2015-16);
  - the blood glucose results of 10 randomly selected patients showed that the condition of nine of these had improved. Improvement in glycaemic control is paramount to promote wound healing and prevent spread of existing infection; and
  - the numbers of minor amputations carried out on patients in the Causeway and Mid Ulster ICP areas have reduced by 90 per cent, from 10 in 2014-15 to only 1 in 2015-16.
-

# NIAO Reports 2017 and 2018

Title	Date Published
<b>2017</b>	
Continuous improvement arrangements in policing	04 April 2017
Management of the Transforming Your Care Reform Programme	11 April 2017
Special Educational Needs	27 June 2017
Local Government Auditor's Report	05 July 2017
Managing children who offend	06 July 2017
Access to finance for small and medium-sized enterprises (SME's) in Northern Ireland	26 September 2017
Managing the Risk of Bribery and Corruption: A Good Practice Guide for the Northern Ireland Public Sector	14 November 2017
Homelessness in Northern Ireland	21 November 2017
Managing the Central Government Estate	30 November 2017
<b>2018</b>	
Continuous improvement arrangements in policing	27 February 2018

---





Published and printed by CDS

CDS 186681

ISBN 978-1-911003-97-7



9 781911 003977