A Diabetes Strategic Framework

November 2016

Contents

Ministerial Foreword

I am delighted to present a *Diabetes Strategic Framework* for the north of Ireland. Diabetes is a condition which we know affects at least 90,000 people living here. Every day here, on average, 10 people are newly diagnosed and £1 million is spent on services to meet the needs of people already living with the condition. The case for a fresh, coherent and sustainable approach to prevention, early intervention and to the design and delivery of services is now an absolute imperative for our Health and Social Care system. In light of this, we have listened to people living with diabetes and their representatives, and to our staff and other experts, and have produced a blueprint for the future which I believe will set the direction for achieving real and significant improvement in outcomes for people living with diabetes.

A Framework can only fulfil its ambitions, however, if it is underpinned by commitment, resources and leadership. That is why, in tandem with publication of this Framework document, I am establishing a new Diabetes Network to bring together people living with diabetes, their representatives and the clinical community to work in partnership on the design and delivery of better services. I believe this is a robust mechanism for ensuring that the Framework will be implemented and will make a real difference to people living with diabetes.

If we are to continue to provide an effective, modern Health and Social Care system for people, we must confront two major issues. The first is the ever growing challenge of responding to the needs of people living with chronic conditions, such as diabetes, particularly as the age profile of our population increases. The second is the importance of focusing our efforts 'upstream' to address the root causes of poor health and of inequalities in health across our society. This is why I welcome the focus on prevention and early intervention which this Framework represents.

I recently set out my vision for the future of health and social care in the north of Ireland. The implementation of the Diabetes Framework is a crucial element of that vision. I am delighted to be able to publish this document as part of the ongoing work to achieve radical and far-reaching transformation of our health and social care services through the implementation of *'Health and Wellbeing 2026: Delivering Together'.*

Michelle O'Neill MLA
Minister for Health

Section 1 Context and Background

1.1 In '*Health and Wellbeing 2026: Delivering Together'*, there is a clearly defined approach to achieving better outcomes for individuals and populations and transformation of the Health and Social Care system. The key elements of this approach are:

- Partnership working, including the co-production and co-design of services
- Focus on continuously improving the quality and safety of care
- Investing in staff
- Leadership and culture
- EHealth and technology in care

1.2 The Diabetes Strategic Framework is entirely consistent with the ethos of "*Delivering Together*" and complements its agenda for service transformation. All of the key elements are embodied in it. The Framework has been developed in partnership with people living with diabetes and their representatives and following a lengthy review of progress and challenges in diabetes care, led by the Chief Medical Officer[1]. A draft framework document was published for consultation in March 2016 and this final Strategic Framework takes account of the feedback in response to that consultation.

1.3 The aim of the Strategic Framework is to **realise a vision of care which improves outcomes for people living with diabetes, or at risk of developing diabetes, including services that are:**

- evidence-based and co-designed with people living with diabetes to achieve best clinical outcomes;
- person-centred and encouraging self-management; and
- seamless from the service user perspective, responsive and accessible.

1.4 The Framework establishes the strategic direction for services for people living with diabetes and for the prevention of diabetes over the next 10 years. Importantly, the Framework recognises that people living with diabetes who are empowered and knowledgeable about their condition, through self-management can optimise their personal health, well-being and quality of life.

1.5 The strategic objectives are framed as seven key themes, which we have identified as fundamental to achieving improvement in outcomes for people living with diabetes. These are set out in Box 1.

[1] https://www.health-ni.gov.uk/publications/report-diabetes-review-steering-group-reflecting-care-people-diabetes-2003-2013

Box 1: The Seven Key Themes

1. A Partnership Approach to Service Transformation - Clinical Leadership and User Involvement;

2. Supporting Self-management - Empowering People through Structured Diabetes Education;

3. Prevention, Early Detection and Delaying Complications;

4. Using information to Optimise Services and Improve Outcomes for People Living With Diabetes;

5. Services for People Living with Diabetes, Particularly Those Requiring Complex Treatment and Care;

6. Enhancing the Skills of Frontline Staff; and

7. Encouraging Innovation.

1.6 The Diabetes Strategic Framework has been influenced by:

- the changing demographics of diabetes and the economic case for change;
- the move to more person-centred care; and
- the move to a population-based approach to health and well-being.

1.7 Moreover, there has been a collaborative process of engagement with stakeholders in order to ensure that the Framework reflects the wider priorities of those who are living with the condition as well frontline staff who care for them.

Diabetes: key facts and figures

1.8 **Type 1 diabetes**, caused by the body's failure to produce the hormone insulin, usually develops in children and young people and requires regular insulin injections as a life saving treatment. Type 1 diabetes is not preventable. Genetic susceptibility, autoimmune factors and viruses are all considered to have a role in triggering Type 1 diabetes.

1.9 **Type 2 diabetes** is linked with obesity, lack of physical activity and increasing age and accounts for 90% of diabetes cases. It is caused by the body's failure to produce enough insulin or when the insulin produced does not work properly. As levels of obesity increase in the population, and the population ages, so the prevalence of Type 2 diabetes will increase. At a population level, the evidence suggests that up to 80% of Type 2 diabetes can be prevented or delayed. However, it should be acknowledged that, in a significant number of cases, genetic predisposition is also an important factor in the onset of the condition.

1.10 In the north of Ireland, at March 2016, there were 88,305 adults aged 17 and over living with Type 1 and Type 2 diabetes[2]. It would be reasonable to estimate that approximately 90% of these cases are Type 2.

1.11 There has been a 15-fold increase in gestational diabetes since the late 1990s, with the upward trend likely to continue. In 2015/2016, there were 1,533 women who had diabetes in pregnancy, making up 6.3% of all pregnancies.

1.12 Despite considerable advances in the management of pregnancy in women living with diabetes, this remains a high risk condition requiring particular care. Diabetes in pregnancy can result in higher rates of congenital malformations, perinatal and neonatal mortality and stillbirths than the background population. More than one third of women with diabetes in pregnancy have babies that are large for gestational age.

Diabetes in Children and Young People

1.13 Diabetes is one of the most common chronic medical conditions in children. There are more than 1,200 children with Type 1 diabetes attending paediatric diabetic clinics and sporadic cases of Type 2 diabetes are now being seen here. In 2014, there were 140 new cases of Type 1 diabetes diagnosed in children under the age of 15, the largest number of children diagnosed in the north to date.

The Economic and Human Cost of Diabetes

1.14 It has been estimated that the health economies in Britain and the north currently spend 10% of the Health and Social Care budget on the treatment of diabetes and its complications. This is equivalent to about £1 million daily in

[2] Quality & Outcomes Framework (QOF) register. The register records all those aged 17 and over with either Type 1 or Type 2 but does not distinguish between the types

the context of the north of Ireland. This expenditure is projected to rise to 17% of the total budget by 2035[3].

1.15 In Britain and the north, over 100 amputations are carried out every week on people living with diabetes due to complications arising from their condition and up to 80% of these are deemed to be preventable[4].

1.16 Diabetes now accounts for more than a quarter of all newly diagnosed cases of end stage renal failure requiring dialysis in Britain and the north. More than one in eight kidney transplants are carried out in people with renal failure brought on by diabetes.

1.17 Primary care, community and hospital services are experiencing the impact on workload of the increasing numbers of people living with diabetes. For example, a recent audit of inpatient care in hospitals in the north of Ireland showed that people living with diabetes accounted for 16.5% of hospital inpatients on the day of the audit.

1.18 Once admitted to hospital, people living with diabetes stay longer than people without diabetes. The majority are admitted for reasons other than their diabetes and are usually not under the care of a specialist diabetes team. It is possible to reduce the excess length of stay by having specialist diabetes teams on duty that pro-actively seek out patients living with diabetes after they have been admitted and ensure that the support and care they need are in place[5].

1.19 People living with the complications of diabetes, such as foot ulcers, amputations and vision loss, may experience other adverse impacts such as lost working days, a reduced level of social independence, needing higher levels of social care and support, and mental health issues such as depression. A Diabetes UK report '*The Cost of Diabetes*' records that 24,000 people each year die prematurely as a result of diabetes.

The Move to More Person-centred Care

1.20 In recent years, the Health and Social Care system has begun to adopt a more person-centred approach to care, with a focus on working in partnership with service users to deliver better outcomes for patients, clients and carers.

[3] Estimating the current and future costs of Type 1 and Type 2 diabetes in the UK, Diabetes Med; 2012 Jul;29(7):855-62.
[4] The Cost of Diabetes, Diabetes UK 2014
[5] Inpatient Care for people with Diabetes: The Economic case for Change. Insight Health Economics. November 2011

"*Health and Wellbeing 2026: Delivering Together*" has emphasised a new model of care designed around the individual and with their active involvement in decision–making about how their treatment and care is provided. The model also looks to deliver more services in the community with access to specialist care where this is needed.

1.21 The meaningful involvement of people living with diabetes in how diabetes care is designed and delivered offers benefits to both individuals and to the community. In order to ensure meaningful involvement, partnership working as demonstrated by co-design and co-production is one of the themes underpinning the Strategic Framework.

A Population-based Approach to Health and Well-being

1.22 Understanding the wider context in which health and well-being is shaped is crucial if we are to effectively tackle the challenges of diabetes. Factors that play a part in determining our health and well-being include income, employment status, educational attainment, and our living, working and environmental conditions, all of which impact on the level of control people have in their lives and the choices they are in a position to make. The impact of lifestyle factors is a major contributor to the increasing prevalence of Type 2 diabetes.

1.23 The strategic framework for public health, *Making Life Better*, recognises the need to address health inequalities and create the conditions for individuals, families and communities to take greater control of their own lives, and be enabled and supported to lead healthy lives. It is imperative that, to achieve a healthier society with citizens more engaged with their health and well-being, the contribution of different sectors, including Local Government, will need to be enhanced through partnership working with Health and Social Care. The new draft Programme for Government also sets as an overarching ambition that the people in the north lead long, healthy active lives.

Section 2 Strategic Direction

What Are We Trying to Accomplish?

2.1 The aim of this Diabetes Strategic Framework is to **realise a vision of care which improves outcomes for people living with diabetes, or at risk of developing diabetes, including services that are**

- evidence-based and co-designed with people living with diabetes[6] to achieve best clinical outcomes;
- person-centred and encouraging self-management; and
- seamless from the service user perspective, responsive and accessible.

2.2 This vision for service design and delivery can only be realised if all partners commit to working together as described in "*Health and Well-being 2026: Delivering Together"*, that is *working across traditional organisational boundaries and developing an environment characterised by trust, partnership and collaboration* to offer holistic care that provides continuity. The Diabetes Network is designed to facilitate this and to make it easier for people living with diabetes and their representatives to be partners in co-design and co-production.

2.4 The focus on improving outcomes (for people, as a result of the care and services offered) is very consistent with the ambition in *Delivering Together* and in the new Programme for Government. At the time of publication of this Framework, it has not been possible to describe how much improvement and by when, because of the limitations of the information currently available. This is addressed under theme 4.

2.5 In general, while it is relatively easy to set targets around processes and activities, these on their own are unlikely to deliver better outcomes for people living with diabetes, or those at risk of developing diabetes, unless they are part of a whole system approach to delivering improvement. Organising a whole system to improve requires a strong focus on what we are trying to achieve together – in this case, our shared focus is on achieving **better outcomes for people living with diabetes, better care for individuals, better use of what resources we have and the necessary support for staff to deliver consistently excellent care.**

[6] In certain instances this would also include carers, for example in children with Type 1 diabetes or the frail elderly in nursing homes.

2.6 There will be an ongoing programme of work that will be reviewed and updated regularly as innovations and improvements are made and new priorities emerge.

How Should Diabetes Services Be Delivered?

2.7 The majority of people living with Type 2 diabetes in the north of Ireland are managed largely in primary care. General Practitioners (GPs) and practice nurses play a key role in supporting people to self-manage and helping them navigate a sometimes complicated health system. For some, specifically the frail elderly and housebound, the District Nursing Service will be the main provider of nursing care and support. Community and practice based Pharmacists will also be available to provide advice and support and to ensure that medication is both available and utilised optimally.

2.8 Where appropriate, for example when people have co-morbidities or more complex care needs, there should be ready access to multidisciplinary specialist diabetes teams for advice and patient referral. Specialist diabetes teams bring together clinicians, nurses, podiatrists, pharmacists, dieticians, social workers and clinical psychologists to provide direct care for people with more complex needs. Members of the specialist diabetes team can also provide advice and support for colleagues who are not specialists in diabetes.

2.9 Most people living with Type 1 and more complex Type 2 diabetes should be under the care of the specialist diabetes team. For people admitted to hospital, the input of specialist diabetes teams is an essential standard of care. The role of the team in supporting in-patient care is outlined at Theme 5.

2.10 People living with diabetes should have as a minimum an annual check up, including review of control of blood glucose, blood pressure, blood lipids (such as cholesterol), kidney function, body weight and smoking habit as well as checking foot condition. There is a regional programme for eye screening. These are indicators of health status for people living with diabetes.

2.11 Psychological issues are common and debilitating for people living with diabetes. There is a need therefore to arrive at a sustainable approach to developing and maintaining skills in the workforce with support and referral pathways to psychological expertise for those needing expert support.

2.12 The key challenge facing our health and social care system is that every day, on average, 10 people are newly diagnosed with diabetes. Both primary care and specialist teams describe being overwhelmed by the increase in demand and in the complexity of need. To meet this challenge, innovative approaches to service and workforce design, coupled with technological and other

enablers of better self-management, are essential. Imaginative thinking about new ways to support people who are currently hard to reach for traditional health and social care services is also necessary, for example through community and faith groups.

2.13 Diabetes care pathways should be designed to facilitate seamless transition between services and professionals and to maximise the outcomes for people living with diabetes. Setting to one side the personal cost to the individual faced with navigating a complicated system of care, significant efficiencies may be achievable by improving reliability and by reducing waste and duplication in care processes.

Section 3 The Drivers for Change

3.1 A New Diabetes Network

Key Theme 1 A Partnership Approach to Service Transformation – Clinical Leadership and User Involvement

Supporting Principle

The person living with diabetes, and their interests should be at the centre of all relationships, with individuals recognised as partners in the planning of services and how their care is provided. Services should **be integrated and based on collaborative working.**

3.1.1 The Diabetes Review recommended that an appropriate mechanism be put in place to enable service users, patient representatives and clinicians to participate in developing services for people living with diabetes and ensure that people living with diabetes are involved in decisions about their care at all levels.

3.1.2 A partnership approach is essential to the successful implementation of the Strategic Framework. Only by developing services in a partnership that is based on the tenets of co-production and co-design will we be able to achieve the vision of this Framework.

3.1.3 At a personal level, a partnership approach will ensure that the person living with diabetes is at the centre of the planning and delivery of their own care. Decisions made in partnership, between the individual and his or her care provider are more likely to achieve the desired outcome. The person's expertise and knowledge about how their condition affects them physically, emotionally and socially should be key to improving the quality and experience of their treatment and care and ensuring their needs are met.

How Can Improvement Be Achieved?

3.1.4 To underpin a partnership approach, a Diabetes Network will be established to support and enhance the involvement of service users and clinicians in decision-making about service redesign.

3.1.5 The Network has a clear purpose:- **"*to lead the improvement of care for all people with all types of diabetes and those at risk of developing diabetes*".** It will be responsible for the implementation of the Strategic Framework. Its work programme will span not just the design of treatment and care services for people living with diabetes but also primary and secondary prevention. It will concern itself with inequalities and variation in outcomes and experience amongst service users.

3.1.7 A group was established by the Chief Medical Officer, Dr Michael McBride, to provide advice on the functions and initial operational design for the network. The network will be organised in two interrelated spaces: an Innovation Collaborative, within which the approach to addressing each of the key themes will be developed and tested, and the Network Board, which will be responsible for implementation at scale across the region.

3.1.8 The Diabetes Network will be the means for planning and designing services into the future - designs which should be both ambitious and sustainable. Following the publication of "*Systems not Structures*" and "*Health and Wellbeing 2026: Delivering Together*", the Health and Social Care system in the north is on the cusp of great change in the way in which services will be delivered in the future. The Diabetes Network will be an innovative example of how things will be done within the new paradigm and an opportunity for system wide learning.

3.1.9 It is intended that the Diabetes Network will in future assume a role in allocating resources, based on its ability to design and implement innovative and improved services for people living with diabetes.

Our Initial Priorities Will Be

- **Establish a Diabetes Network to support the transformation of services for people living with diabetes through co-production and co-design.**
- **Identify priorities for a work programme, led by the Diabetes Network, that will lead to better outcomes for people living with diabetes.**
- **Through the Diabetes Network, ensure that clinicians and people living with diabetes are actively involved in decision-making about service development.**

3.2 Improving Access to Structured Diabetes Education

Key Theme 2 Supporting Self-management - Empowering People through Structured Diabetes Education

Supporting Principle

Structured education should provide people with the knowledge and skills they need to manage their diabetes more confidently and to maintain or enhance their health and wellbeing.

3.2.1 Supporting people to manage their condition is a fundamental element of good diabetes care and central to the building of relationships in which people living with diabetes can understand and take control of their condition more effectively.

3.2.2 Helping people to understand their diabetes, and recognise its effects and how these can be managed better, can help them develop the confidence to take increasing responsibility for managing their condition. For the individual this can lead to better informed lifestyle choices and diabetes control, reduced risk of complications, fewer GP visits and hospital admissions as well as an improvement in quality of life and general well-being.

3.2.3 Although Structured Diabetes Education (SDE) programmes are central to supporting self-management, the provision of such programmes remains variable and insufficient to meet demand.

3.2.4 Information to help people self-manage should be made available in a variety of media and formats to suit individual needs and preferences. The way in which information is provided should take account of the language, the level of understanding, capacity and the cultural and social background of individuals. Where necessary, assistance should be made available to help people access, understand and make sense of information and ensure it is applied correctly.

3.2.5 People will use different methods and strategies for managing their diabetes and should have a holistic and individual assessment which considers what information, treatment and health and social care support suit their personal needs and circumstances, including the timing of access to SDE. This information should inform the development of personalised care plans tailored to the assessed needs and ability of the individual. Such plans should

address general lifestyle and physical, social and mental health and well-being.

How Can Improvement Be Achieved?

3.2.6 People who have been newly diagnosed with diabetes should be offered access to Structured Diabetes Education programmes within 6-12 months of diagnosis. An essential element is to raise awareness of the importance of SDE.

3.2.7 The timing of the introduction of SDE can be crucial. Earlier access may be appropriate when a young child is newly diagnosed with Type 1 diabetes in order to support carers. In other cases it may be helpful to delay SDE until the newly diagnosed person has come to terms with their condition and is better able to assimilate the information.

3.2.8 The potential for digital technology to assist and support the provision of SDE merits exploration. Social media may have a more general role to play in supporting self-management by engaging, empowering and informing patients and carers, including through the provision of reliable, up to date information from recognised, validated sources. This too should be explored and, where appropriate, piloted and evaluated.

Our Initial Priorities Will Be

- **Agree a menu of quality assured Structured Diabetes Education (SDE) programmes, consistent with NICE criteria**
- **Establish a plan for the delivery of SDE programmes with the goal that all newly diagnosed people with diabetes can be offered SDE within 6-12 months of diagnosis or when appropriate to their circumstances**
- **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.**
- **Explore the role of digital technology to support delivery of SDE.**
- **Scope the role of social media in self-management.**

3.3 A Focus on Prevention

Key Theme 3 Prevention, Early Detection and Delaying Complications

Supporting Principle

Efforts to help people understand how to reduce their risk of diabetes should be increased. Public health interventions should complement and augment the clinical management of people living with diabetes to support secondary prevention of complications.

3.3.1 This theme has a broad scope, including both primary prevention of diabetes, management of people at high risk, early detection of established diabetes and secondary prevention of complications for people already living with diabetes.

Primary Prevention and Early Detection

3.3.2 There is considerable evidence that the onset of Type 2 diabetes can be prevented or delayed by promoting healthy eating, physical activity and a healthy lifestyle.

3.3.3 These themes are also central to '*Making Life Better' (MLB)*, the Strategic Framework for Public Health, and '*A Fitter Future for All*', the obesity prevention framework. The Public Health Agency (PHA) has been actively leading the implementation of both of the public health frameworks, working in conjunction with a range of cross sector partners.

3.3.4 In the north of Ireland, the proportion of obese and overweight adults has changed only marginally from 59% in 2005/06 to 60% in 2014/15[7]. At a wider societal level, there is a greater appreciation of the effects of the "obesogenic" environment, not least widespread access to food and drinks with a high sugar content. To this end the British Government has consulted on the introduction of a Soft Drink Industry levy by 2018. This levy will apply to the north of Ireland. In addition, work is also underway to support food and drinks manufacturers to reformulate their products with less sugar.

3.3.5 Although much of the emphasis in primary prevention of diabetes has been on tackling obesity and promoting healthier lifestyle, there are other factors which are associated with an increased risk of developing diabetes. Elderly people

[7] Health Survey NI - First Results 2014/15; DHSSPS 2015

for example are more prone to develop diabetes associated with the ageing process. Diabetes is up to 6 times more likely to develop in people of South Asian descent and up to 3 times more likely in African and African Caribbean people[8]. Therefore family history and genetic predisposition are important contributory factors in the onset of diabetes in some people.

3.3.6 Whilst it seems sensible to direct prevention at those who, for whatever reason, are at increased risk in order to prevent them developing diabetes, the evidence for what interventions are effective at population level for individuals at increased risk is still emerging. NICE has published Public Health Guidance on interventions aimed at shifting the risk of developing Type 2 diabetes at population level, including interventions to raise awareness of risk factors[9] and guidance on identifying and intervening with people identified as being at increased risk to prevent or delay onset[10]. This Framework will give impetus for the implementation of evidence-based approaches most likely to be effective in our local context.

3.3.7 NICE has also assessed the range of options available to manage obesity in individuals including, lifestyle and behavioural interventions as well as pharmacological and surgical treatment.[11]

Secondary Prevention and Early Intervention

3.3.8 The primary care team has a key role in prevention and early detection of complications through the annual review offered to people living with diabetes. *Delivering Together* highlights the need for more services and support to be delivered in primary care to enable more preventive and proactive care as well as earlier detection and treatment.

3.3.9 Most of the care offered in primary care settings and by specialist teams to people living with diabetes is aimed at preventing or reducing harm to eyes, kidneys, blood vessels and nerves by optimising blood sugar control. Early and appropriately targeted interventions, based on complexity of need, can help ensure that those most at risk of developing complications receive the treatment, care and support they need to minimise those risks. NICE has developed guidelines for the treatment and care of people living with diabetes that explicitly address the prevention of additional complications. There is

[8] *Association of glycaemia with macrovascular and microvascular complications of Type 2 diabetes: prospective observational study*. British Medical Journal 2000; 321: 405-412.
[9] http://www.nice.org.uk/guidance/ph35 accessed February 2016
[10] http://www.nice.org.uk/guidance/ph38 access February 2016
[11] https://www.nice.org.uk/guidance/cg189

much evidence about what works. The challenge is one of ensuring that the evidence is translated into practice.

How Can Improvement Be Achieved?

3.3.10 Public health measures will continue to be focussed on preventing people develop diabetes and on preventing people living with diabetes developing complications. '*Making Life Better'*, the framework for improving the population's health and well-being, and '*A Fitter Future for All',* the obesity prevention framework, both promote the importance of a healthy lifestyle. The Diabetes Network will have a leadership role in diabetes prevention and will be represented on the implementation groups taking forward these strategies.

3.3.11 An NHS Diabetes Prevention Programme (DPP) has been developed and is currently being tested by NHS England, Public Health England and Diabetes UK. Approaches to early intervention for people at increased risk of developing diabetes are being tested in a number of HSC Trusts. We will take account of these and other initiatives that might inform how the prevention agenda might best be taken forward here.

3.3.12 People who are identified as being at increased risk should have access to timely information, advice and support to raise awareness of risk and help them take positive steps to minimise this. In the context of increasing demographic need and pressures, it is a priority to find ways to identify and respond to those people most at risk of developing complications, for example, by risk stratification.

3.3.13The need to address follow up services for women who experience Gestational Diabetes, for example, has been identified as a priority, because they are at increased risk of developing Diabetes subsequently (see further under Theme 5).

3.3.14 The Health and Social Care system in the north of Ireland employs more than 70,000 people, many of whom have regular contact with people living with diabetes. Advice about smoking cessation, healthy eating and physical activity should be part of routine practice to reinforce those public health interventions which have a role to play in secondary prevention of complications.

3.3.15 Many of those who would benefit most from measures aimed at secondary prevention fall within groups that are considered to be particularly vulnerable or at risk, for example people with severe mental health difficulties or people with learning disabilities. This is explored further under Theme 5 which addresses how those identified as being at greater risk of complications can have those risks better managed and controlled.

3.3.16 Secondary prevention should be underpinned by agreed, evidence-based pathways designed for people living with diabetes. With the support of Diabetes UK, an evidence-based Foot Care pathway has recently been developed. The pathway presents a secondary prevention approach that not only addresses foot care but can act to prevent deterioration of condition in others areas, such as the kidneys and the eyes. The implementation of this pathway, in terms of achieving better integration of services around the multitude of a person's needs, should be an exemplar for the Diabetes Network. The Diabetes Network will lead the development of further care pathways in order to improve outcomes for people living with diabetes.

3.3.17 At a regional level, a programme of work has been undertaken to enhance the eye screening programme. This work is being taken forward by its own Programme Board.

3.3.18 The importance of psychological and behavioural approaches in supporting people living with diabetes to optimise their care is also crucial as is our acknowledgement that poor psychological health is an important contributor to poor outcomes.

Our Initial Priorities Will Be

- **Give leadership in preventing diabetes, contributing to the implementation groups taking forward '*Making Life Better'* and the obesity prevention framework, '*A Fitter Future for All'.***
- **Establish an approach to the prevention of Type 2 diabetes for the north of Ireland which is compatible with emerging evidence.**
- **Provide better information, advice and support to help people at increased risk minimise and manage those.**
- **Implement a foot care pathway that improves outcomes at individual and population level**
- **Agree appropriate risk stratification in diabetes care.**

3.4 Using Information to Achieve Better Outcomes

Key Theme 4 Using Information to Optimise Services and Improve Outcomes for People Living with Diabetes

Supporting Principle

Integration of information systems should underpin the development of diabetes services that are person-centred, flexible, timely and integrated across all sectors, with a focus on optimising outcomes for people living with diabetes.

3.4.1 The integration of clinical information systems is fundamental to good communication between, and co-ordination of, diabetes services across care sectors and to ensuring an outcome-focused approach to improving diabetes care and treatment.

3.4.2 A number of clinical information systems are in place for capturing data about people living with diabetes in order to support individual treatment and care plans, as well as the planning and delivery of services at a more strategic level. However, the integration of datasets, particularly between secondary and primary care, remains problematic, making it difficult to join up data and optimise patient outcomes.

Clinical information systems currently in place include:
GP based systems;
Diamond.net;
Twinkle.net;
PARIS - community information system;
Optimise (Eye Screening programme);
Northern Ireland Electronic Care Record (NIECR);
Renal Electronic Care Record (ECR); and
Queen's University Belfast database for children living with diabetes.

3.4.3 It is not possible to improve without some measurement of the current state. Some work has already been undertaken at regional level to audit outcomes of hospital-based diabetes care and outcomes of pregnancy for women living with diabetes. Audits have also been conducted at local Trust and general practice level. However, there is limited information available on an ongoing basis at the point of care to help staff to focus their efforts to make services better.

How Can Improvement Be Achieved?

3.4.4. Developing an integrated care record for people living with diabetes and establishing accessible clinical data to inform outcome measurement and reduction in variations in care should continue as a matter of urgency under the direction of the Diabetes Network.

3.4.5 Planning new services and monitoring the effectiveness of existing services needs to become more data driven. This will enable more transparent decision-making based on a combination of outcomes, quality and value for money. Whilst the Framework does not seek to suggest a mechanism to do this, the Diabetes Network should be charged with developing this area as a matter of priority to support all its work. Member organisations should contribute to making this happen across all sectors of health care.

3.4.6 The NIECR Team will continue to implement and test a diabetes care pathway embedded in the Electronic Care Record (ECR).

3.4.7 People living with diabetes should be able to track their own health information and clinical progress by means of a patient portal linked to the clinical information systems. The development of a patient portal is one of the key opportunities for self directed support and a shift away from traditional health care services and should be a focus for the Diabetes Network. The Network must also consider ways of engaging patients not able to use this kind of technology, for example, disadvantaged social groups and those with significant co-morbidities in both physical and mental illness.

3.4.8 The utilisation and effectiveness of current Patient Portals, for example in Scotland under the SCI Gateway system, should be considered by the Network. Local developments should be consistent with the aspirations of the current e-health agenda in the north of Ireland.

3.4.9 To allow for a more comprehensive picture to inform service improvements, the north of Ireland will commence participation in the National Diabetes Audits[12] from 2016.

[12] https://www.diabetes.org.uk/Professionals/Resources/National-Diabetes-Audit/ accessed February 2016

Our Initial Priorities Will Be

- **Agree an initial suite of indicators against which to measure improvement in care at local and regional level**

- **Participation in National Diabetes Audits will commence in 2016.**

- **Formalise the relationship between the Diabetes Network and the NI eHealth Strategy Group with the goal of having:**
  - **a diabetes care pathway within the electronic care record; and**
  - **a portal through which people living with diabetes can manage their own health information and interact with clinicians.**

- **Influence regional work to achieve integration of clinical information systems relevant for the care of people living with diabetes**

3.5 Meeting Complex Needs

Key Theme 5 Services for People Living with Diabetes, Particularly Those Requiring Complex Treatment and Care

Supporting Principle

Services should meet the needs of people living with diabetes. Where groups have been identified as vulnerable or at risk, services should be developed to address their specific needs.

3.5.1 Care for people living with diabetes should be seamless, accessible and effective, with services that are joined up and co-ordinated. Everyone living with diabetes has a complex condition to manage and this is recognised throughout this Strategic Framework. There are nevertheless particular groups who may be deemed to be more 'vulnerable' or 'at risk', and who may inherently find it more difficult to manage their condition or access appropriate services or expertise.

3.5.2 The specific priorities identified under this theme are:

- Transition to adult services for children and young people with Type 1;
- Pregnant women and those contemplating pregnancy;
- Inpatient care for people with diabetes; and
- Exploring how best to meet the needs of people at particular risk, for example people with mental illness or addiction, frail older people and ethnic groups known to have increased risk of diabetes.

Children and Young People with Type 1 Diabetes

3.5.3 In 2014 in the north of Ireland, 140 children under 15 were diagnosed with Type 1 diabetes[13]. Childhood and adolescence are particularly complex and challenging times for managing diabetes. There is particular concern about risks associated with transitions of care where young people move to adult services.

3.5.4 In 2015, recurrent funding was allocated to HSC Trusts to ensure that all children diagnosed with diabetes receive the CHOICE Structured Diabetes Education programme within 6-12 months of diagnosis and are offered refresher courses as required.

[13] QUB Paediatric Diabetes Register

3.5.6 A key priority for improvement is the transition for young people to adult services. Expanding access to Continuous Subcutaneous Insulin Infusion (CSII) via insulin pumps is also a priority.

Pre-pregnancy and Pregnant Women

3.5.7 In 2015/16, there were 1,533 pregnant women with diabetes (6.3% of all pregnancies). An increase in the levels of obesity amongst women of child-bearing age and more women delaying pregnancy and having babies at an older age have resulted in a higher rate of gestational diabetes and increases in the number of women with Type 2 diabetes who require insulin during pregnancy. Unlike Type 1 diabetes, whose management largely resides within specialist diabetes teams, many women with Type 2 diabetes will be managed exclusively in the community prior to pregnancy. Ensuring those women who might become pregnant have the right education and support requires staff in primary and community settings to be well-trained and alert to the possibility of pregnancy occurring. Pre pregnancy counselling which can improve pregnancy outcomes and reduce the risk of congenital malformations is now available in all 5 HSC Trusts.

3.5.8 The need for services for pregnant women living with diabetes to be co-ordinated is essential to improving outcomes for both mother and baby, including for example the role of the diabetes specialist nurse and dieticians within the context of joint antenatal diabetes clinics within each Health and Social Care Trust.

Hospital In-patients' Care

3.5.9 Patient feedback consistently shows that patients with diabetes feel disempowered and helpless in hospital and this can often adversely affect their management of a condition they often manage expertly at home. People with diabetes spend longer in hospital when they are admitted compared to their peers and at any one point in time, at least 15% of hospital in-patients are people living with diabetes. In the majority of cases, diabetes is not the direct reason for admission.

3.5.10 From the time of admission a person with diabetes should, when medically fit, be actively involved with clinical staff in ensuring that their diabetes is managed effectively through, for example, blood glucose monitoring and appropriate diet and access to medication.

3.5.11 There is consistent evidence that care can be improved in hospital settings by involving Specialist Diabetes Teams, that beds are freed up for the use of

others because length of stay is reduced and that care is less expensive because complications of poor care are avoided. Economic analyses show that the staffing costs for the Specialist Team are quickly recovered through greater efficiency and effectiveness of care for people with diabetes.

Other at Risk and Vulnerable Groups

3.5.12 People living with mental health or addiction issues or learning disabilities, frail older people, black and ethnic minorities, travellers, immigrants and homeless people are at increased risk.

3.5.13 The prevalence of Type 2 diabetes among people over 75 is high, and is often associated with other conditions. There is also an increasing number of older people living with Type 1 diabetes who may also have other co-morbidity.

3.5.14 There is widespread evidence that those living with long term conditions who also have serious mental illness, addictions and learning disabilities are at risk of poorer outcomes. It will be a strategic priority for the Diabetes Network to work with other stakeholders to gather such information and experience as is necessary to understand better how to meet, prioritise and address the needs of these vulnerable groups. There are a number of models of care that have been developed to support these vulnerable client groups and the Diabetes Network should also explore how these models could enable better diabetes care.

How Can Improvement Be Achieved?

3.5.16 For young people, access to insulin pumps must be improved and better approaches to supporting transition to adult services need to be developed.

3.5.17 Given the risk of poor pregnancy outcomes in women with diabetes, continuously improving the model of care to meet identified need is important. More rigorous antenatal screening is required. The early detection of Gestational Diabetes and the development of an agreed pathway for follow up of women who develop Gestational Diabetes would have important benefits for pregnancy outcomes and for a group identifiably at increased risk of developing Type 2 diabetes; the majority of women with Gestational Diabetes respond to dietary advice and modification.

3.5.18 Specialist diabetes teams should provide diabetes care for people with complex needs, including people in hospital settings. Specialist teams should also support primary care colleagues in providing care in the community, including appropriate social care, to keep people out of hospital.

3.5.19 Further information, including appropriate research evidence, will be sought to assess the experience and outcomes of care for vulnerable and at risk groups in order to identify their needs, prioritise and ensure services are tailored to their particular requirements.

3.5.20 The importance of providing good psychosocial support to people living with diabetes and having robust referral pathways for those with more specialist psychological needs, has been addressed in theme 6 in the Framework.

Our Initial Priorities Will Be

- **Develop a plan to achieve measurable improvement in access to insulin pumps for young people**
- **Develop a plan to improve the experience of transition to adult services for young people**
- **Achieve measurable improvement in service capacity to meet the needs of pregnant women with diabetes**
- **Test and implement reliable systems to support early detection and follow up for women with Gestational Diabetes**
- **Achieve measureable increase in the number of women who are pre-pregnancy and at risk who avail of pre-pregnancy counselling services**
- **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.**
- **Conduct formal needs assessments for particularly vulnerable people in order to inform future service models and improve outcomes.**

3.6 A Workforce Plan for Diabetes Services

Key Theme 6 Enhancing the Skills of Frontline Staff

Supporting Principle

Staff who come into contact with people living with diabetes should have the skills and competence to understand their needs and to ensure that these needs are met in a way that is person-centred.

3.6.1 Health and Social Care staff should have the knowledge and skills necessary to offer high quality care for people living with diabetes. Access to high quality multidisciplinary training is required. This training should encompass appropriate opportunities for both those who are specialists in diabetes as well as those who come into contact with people living with diabetes on occasion as part of their job.

3.6.2 Understanding the psychological needs of people living with diabetes is essential to supporting better care. Up to three quarters of people living with diabetes do not make the necessary behaviour change to optimise control[14]. As an integral part of a multidisciplinary team, the Clinical Psychologist has the dual benefit of providing expert psychological support to individuals and providing opportunities for development of skills within the team.

3.6.3 The primary care team, along with district and community nursing services, and where appropriate social care, is pivotal to good management and support for people living with diabetes, as it is for every person living with a long term condition. Most people spend their first 10 years with Type 2 diabetes being managed in primary care. All staff involved in the diagnosis and management of people living with diabetes must be offered support to remain up to date and current in their practice.

3.6.4 In line with the vision for health and social care set out in *Delivering Together*, the strategic direction of this Framework is to ensure that even more people are cared for as close to home as possible. There is evidence of good practice in diabetes care within primary care settings. In addition to this there is a growing number of frail elderly with complex co-morbidities many of whom are in group residential settings and their care is increasingly complex to manage. Having both the right capacity and the right skills in primary care and

[14] Report of the Diabetes Steering Group (2014), paragraph 2, Page 33.

community settings to meet this demand are essential for the successful implementation of this Framework.

3.6.5 As noted elsewhere in the Framework, an audit of acute hospital in-patient care has identified significant workforce training and education needs in in-patient settings.

3.6.6 A more effective and informed approach to workforce planning, training and development is required based on a refined needs assessment. That will include support for people to develop skills in co-production and in improvement so as to accelerate learning, implementation of improved diabetes care and spread of improvement and innovation.

How Can Improvement Be Achieved?

3.6.7 A workforce plan will be necessary to support the implementation of this Framework. It should take account of changing demographics and reflect models of care that are focussed on the needs of people living with diabetes. It should provide for adequately staffed specialist diabetes teams to meet local needs. The Department of Health Workforce Policy Group will be asked to provide expert advice and leadership to meet this strategic objective.

3.6.8 The need for staff who are not specialists in diabetes to have the skills to support people living with diabetes is also recognised, including for example, GPs, district, practice and community nurses and pharmacists. There are established mechanisms for assessing the training needs for different professional groups and diabetes care should be given priority. There are competency frameworks for specialist diabetes nurses, dieticians, podiatrists and other staff which are relevant to diabetes care and to physical activity and nutrition for people living with diabetes. These should be considered for use in the North.

3.6.9 All team members should have basic psychological skills and be able to draw on those as a routine to reach and benefit all clients, with the specialist input of Clinical Psychologists reserved for those with greatest psychological need.

3.6.10 Consideration should be given to exploring the balance between e-learning, blended learning and face-to-face learning, optimising the role of technology to support the development of knowledge and skills. Project Echo is an example of how technology can be used in training and development in a pivotal way.

3.6.11 The ***Diabetes- think, check, act*** project has developed 5 eLearning modules

http://www.qihub.scot.nhs.uk/media/697238/flash%20report_dec_final3.pdf
These provide practical advice to improve the care and management of people admitted to hospital with diabetes as a secondary condition (see Theme 5). These engaging interactive modules are designed to be accessible to busy staff in hospital settings who do not have specialist diabetes training but who regularly care for people with diabetes.

3.6.12 ***Diabetes – think, check act*** is a Quality Improvement initiative. Over the last decade, Scotland has invested in developing improvement skills in the workplace with the intention of building a workforce that not only delivers care but also can improve care. Patient safety indicators show a downward trend in harm during that time period. In order to accelerate the spread of improvement and innovation in the north of Ireland, the Department has set a target to have 10% of the workforce trained to level 1 in the Quality 2020 Attributes Framework for Leadership in Quality Improvement.

3.6.13 In this document there are references to 'co-production' and 'improvement'. For many people, there is not yet a shared understanding of what these terms mean in practice. The Diabetes Network will develop a shared understanding, common language and approach.

Our Initial Priorities Will Be

- **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;**
  - **the future reconfiguration of services; and**
  - **the skills required to deliver a high quality service for people living with diabetes.**

- **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.**

- **Develop a shared approach to co-production and improvement. At least 10% of staff who are specialists in diabetes care will be trained to level 1 in the Attributes Framework for Leadership in Quality Improvement.**

3.7 Encouraging Innovation

Key Theme 7 Encouraging Innovation

Supporting Principle

New interventions and technologies, where appropriate and effective, will be used to support treatment and care for people living with diabetes.

3.7.1 Over the last decade, there has been considerable innovation in the drugs and technology available to support people living with diabetes. The challenge is to ensure that innovation is encouraged and that the introduction of new technology is managed in a structured and considered way.

3.7.2 There are formal approval mechanisms in place to ensure that people across the north of Ireland have access to new interventions, such as drugs and devices, in an equitable way with a clear focus on ensuring that such interventions result in better outcomes. Through the National Institute for Health and Care Excellence (NICE) process, Technology Appraisals, clinical and public health guidance are endorsed and implemented as appropriate for the region.

3.7.3 Progress has been made across the North in the design of patient pathways and of service models necessary to deliver high quality care flexibly and responsively. Integrated Care Partnerships have been playing a key role in this.

3.7.4 There is a vibrant community of academics and clinicians associated with diabetes research and innovation in the north of Ireland that has contributed to improvement in person-centred diabetes care, including using innovative technology to support self management. However, the pace at which successful innovations are enabled to scale and spread regionally could be improved.

3.7.5 There are a number of avenues open to support innovation in the public sector. For example, the Small Business Research Initiative (SBRI) is a well established process to address public sector challenges[15] through generating innovative product solutions from industry. This generates new business opportunities for companies, provides Small and Medium Sized Enterprises

[15] In the HSC context, public sector challenges are defined as unmet clinical needs for which there is no product, technology or solution in existence.

(SMEs) with a route to market for their ideas and bridges the seed funding needed by many early stage companies.

How Can Improvement Be Achieved?

3.7.6 The Diabetes Network should tap into the resources already available such as the Diabetes Clinical Interest Group within the NI Clinical Research Network, the Improvement Network for NI and HSC Clinical Innovations in order to be at the cutting edge.

3.7.7 The Diabetes Network should act as a hub for sharing innovative thinking and practice and to facilitate and accelerate scale and spread across the region and should be appropriately skilled to undertake this role.

3.7.8 All opportunities to benefit from partnership working to co-produce and co-design lasting change that improves outcomes for people living with diabetes should be considered. Innovations in care for diabetes could be developed through the SBRI which also promotes growth in the NI economy[16]. The Diabetes Network is a forum through which these can be shared and scoped.

3.7.9 Where new technology is introduced, supporting infrastructure, including training and updating for staff, must be in place.

Our Initial Priorities Will Be

- **Establish formal links with research, improvement and innovation partners.**
- **Scope opportunities to support individuals and teams to innovate.**
- **Establish processes to ensure that the introduction of new drugs and devices is supported by appropriate infrastructure including training for staff.**
- **Assess new systems and processes to establish viability of further roll-out.**
- **Provide expert advice in improvement science to the Diabetes Network to support co-production.**

[16] https://sbri.innovateuk.org/ accessed February 2016

Section 4 Making It Happen

4.1 "How we plan, design, support and implement service transformation is as important as the changes we wish to make"

Health and Wellbeing 2026: Delivering Together, October 2016

4.2 The Department will take the lead in implementing the strategic framework within the overall transformation of the Health and Social Care system as set out in *Health and Wellbeing 2026: Delivering Together*; working with people living with diabetes and their representatives, primary care practitioners, voluntary sector providers, Health and Social Care Trusts, Integrated Care Partnerships and Local Commissioning Groups (LCGs), the Health and Social Care Board (and its successor) and the Public Health Agency to transform outcomes for people living with diabetes.

4.3 The Department, in partnership with people living with diabetes and their representatives, will establish a Diabetes Network, initially in shadow format, with the intention of having it fully up and running by April 2017. The Network will take forward the implementation of the specific aims and objectives outlined in the implementation plan and will refresh and update that plan over time.

4.4 The Network will have two interconnected spaces: one focusing on innovation and the other focusing on improvement. In the innovation space, people living with diabetes, clinicians and others from within the health and care system will have the opportunity to contribute in a solution-focused way. In the improvement space, the focus will be on implementation and delivery. The Network Board will enable implementation and delivery of improvements at scale across the system of care and will work through local arrangements, designed to ensure the local context is recognised and local needs addressed.

4.5 The Diabetes Network will belong to the whole system rather than to a single organisation. It will be co-chaired to reflect the partnership approach that will be an intrinsic underpinning principle for how it will operate. The membership will include service users and their representatives, representatives of the clinical and professional disciplines and other senior managers and leaders who can facilitate and support transformative change.

4.6 The Diabetes Network will support all its members to develop appropriate knowledge and skills in co-production and improvement science.

4.7 In practice, the Diabetes Network will be responsible for:

- driving improvement in outcomes by reducing variation;
- encouraging innovation: giving space for transformative redesign and reform;
- enabling co-production,; and
- co-ordinating how learning is shared across the health and social care system.

4.9 Over time, the Network should have autonomy over a specific budget for delivery of key elements of the implementation plan.

Measuring Progress and Impact

4.8 The effectiveness and impact of this Strategic Framework will be measured by improvement in outcomes that matter to people living with diabetes, by their experience of care and by more efficient use of resources. It will be measured by reductions in, and delay to, the onset of complications in those most at risk. It will also be measured by the extent to which unwarranted variation within and between services is reduced. Participation in the National Diabetes Audit is seen as an important early action which will help identify where to focus improvement effort.

4.9 We have identified a number of draft indicators to enable us to track progress (Annex A). Although some indicators are not readily available yet, and further ones may have to be developed, we will develop systems and processes to enable us to reliably report progress against these key indicators in the future.

4.10 In *Health and Wellbeing 2026: Delivering Together*, the Minister has given immediate priority to implementation of the Diabetes Strategic Framework. Therefore, progress on the objectives identified in the implementation plan will be monitored closely through the new accountability arrangements that the Minister will establish. Some of these objectives can be achieved relatively easily, others will take longer to achieve as they will require co-production and detailed planning. Implementation of the objectives will also be subject to available resources against the background of competing priorities for new investment across health and social care.

Section 5 Implementation Plan

5.1 The implementation plan reflects the recommendations in the Strategic Framework and represents our current understanding of the initial priorities to be address in the first years of implementation. The Diabetes Network will bring together decision-makers who are key to ensuring that services are fully responsive to the changing needs of people living with diabetes as well as influencing the actions and interventions that are most likely to constitute a successful approach to primary and secondary prevention. This implementation plan provides the starting point for the work of the Diabetes Network.

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[17], 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 With Public Health Agency (PHA)	Within 24 months
	Scope the role of social media in supporting self-management		

[17] NICE Quality Standard 6

Key Theme	Action	Lead Responsibility	Timescale
Theme 3: Prevention, Early Detention 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, '*A Fitter Future for All'*	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[18]
	Agree appropriate risk stratification in diabetes care	HSCB, Primary Care	Within 24 months

[18] Trend showing process improvement likely to result in improvement in outcomes is expected

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

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 Develop a plan to improve experience of transition to adult services for young people	Diabetes and Paediatric Diabetes Networks with HSCB and HSC Trusts	Within 3 years
	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 (see page 38) in order to inform future service models and improve outcomes.	PHA	Within 3 years

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% 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

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-Nav system to establish viability of further roll-out	HSCB	Within 12 months

Annex A Diabetes Indicators

In order to measure whether the Framework is effective, a number of indicators are presented here. Some of these measures are currently available; others will require further development.

Population based measures
Incidence of type 2 Diabetes per 100,000 population.
Circulatory disease mortality rate under age 75 per 100,000 population.
Age group specific diabetes morality rate per 100,000 population.

Processes of Care
Basic processes of care include on an annual basis:
Measurement of HbA1c, BMI, smoking status, urinary albumin, serum creatinine, blood lipids, foot assessment and retinopathy screening.
The percentage of people receiving some and all of these processes should be measured.
% persons who have attended structured diabetes education within 12 months of diagnosis.
% persons disengaged from diabetes care (see care processes above)

Glycaemic, Lipid and Blood pressure Control
% persons with HbA1c < 58mmol
% persons with a systolic blood pressure < 140mmHg
% persons with a cholesterol < 5mmol/l

Children and Young People
% in defined age groups with HbA1c < 58mmol/l
% Children achieving normal growth
% Children and young people receiving Diabetes Structured Education within 12 months of diagnosis.

Pregnant women with diabetes
% of successful pregnancy outcomes in women with diabetes.
% of pregnant women with diabetes who were in receipt of pre pregnancy counselling.

Secondary Complications
% of people with diabetes with sight threatening retinopathy or blindness
% of people with diabetes with a new foot ulcer
% of people with diabetes related limb amputation.

% of people with diabetes reaching end stage renal failure or requiring renal replacement therapy

Hospital Admission
People living with diabetes; compared to non diabetic population
Number of emergency admissions to hospital
Readmission rate
Average length of stay

Other useful measures
% of people with diabetes who are current smokers
% of people with diabetes using an insulin pump
% of people using other assistive technology (eg d-Nav, continuous glucose monitoring)
% of people with diabetes who experienced a glycaemic emergency
% of people with diabetes who are satisfied with their care

Glossary

Anomalies	A *deviation from the common rule, type, arrangement, or form.*
Congenital Malformation	A condition existing at or before *birth* regardless of cause.
CREST/Diabetes UK Taskforce	Established in 2001. The Taskforce published a framework for the development of services for people with diabetes in 2003. The framework contains a wide range of recommendations covering the full spectrum from screening for people with a high risk of developing diabetes to the prevention and treatment of the condition.
Demography	The study of statistics such as births, deaths, income, or the incidence of disease, which illustrate the changing structure of human populations.
Gestational Age	*The age* of a *foetus* or a *newborn, usually expressed* in *weeks dating from the first day* of *the mother's last menstrual cycle.*
Gestational Diabetes	A type of diabetes that affects pregnant women, usually during the second or third trimester. Women with Gestational Diabetes don't have diabetes before their pregnancy, and after giving birth it usually goes away. In some women diabetes may be diagnosed in the first trimester, and in these cases the condition most likely existed before pregnancy.
Health Inequalities	Disparities in health outcomes between individuals or groups. They arise from differences in social and economic conditions that influence people's behaviours and lifestyle choices, their risk of illness and actions taken to deal with illness when it occurs
Neo-Natal Deaths	*The death* of a *young, liveborn infant.*
Patient Empowerment	A *generic term popular* in *the* UK *for encouraging the active participation* of *patients and carers* in *choosing management options, including eliciting quality-of-life utilities and preferences* by *discussion, viewing* of *interactive videos, etc.*
Perinatal Mortality Rates	*Refers to the death of a foetus or neonate and is the basis to calculate the perinatal mortality rate*
Podiatry	*A branch of medicine devoted to the study of, diagnosis, and medical and surgical treatment of disorders of the foot, ankle, and lower extremity.*
Secondary Prevention	Secondary prevention deals with latent diseases and aims to detect and treat a disease early on. Secondary prevention

	consists of "early diagnosis and prompt treatment" to contain the disease and prevent its spread to other individuals, and "disability limitation" to prevent potential future complications and disabilities from the disease.
Self-Management	A term used to support people living with long-term health conditions
Stillbirths	A baby born with no signs of life at or after 28 weeks' gestation.
Structured Diabetes Education	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