



Llywodraeth Cymru
Welsh Government

Diabetes Delivery Plan for Wales 2016-2020

The best standard of care for everyone with diabetes

December 2016

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Foreword

In this refreshed diabetes delivery plan, the Welsh Government's commitment to giving all people in Wales with diabetes the best possible care and support is confirmed. This plan sets out how the health service and its partners will deliver that commitment.

Much progress has already been made under the first phase of the plan, including the creation of national leadership and delivery structures, refocusing of health board planning on diabetes, and improving transparency of performance. We have seen reductions in diabetes-related deaths and emergency admissions, as well as improvement in blood sugar control and preventing complications. There has also been improvement in completion of key care processes and referral to diabetes education programmes; as well as investment in health board services.

Yet there is still more to do and all stakeholders must continue to work together and build on the success to date and continue the improvement seen in recent years. Health boards have already embedded the delivery plan approach, so in this next phase of the plan we expect to see health boards delivering at greater pace and delivering improved outcomes for patients.

The best possible services need to be made available and this means health boards need to adequately resource their services to deliver in line with their population needs assessment. Local diabetes planning and delivery groups need to be supported in their leadership to transform local delivery. Using national resources, audit and peer review health board Diabetes Planning and Delivery Groups must ensure national standards are met and inappropriate variation is addressed. The cost of not doing so will be felt by the patient and by the service in terms of unnecessary demand for foot amputation, cardiovascular disease, kidney disease, retinopathy and emergency admissions for hypoglycaemia and diabetic ketoacidosis.

Our vision is for a fully integrated primary and specialist service, designed around the needs and ability of the patient to manage their condition. People spend a small amount of their lives in direct contact with healthcare professionals and so need to be supported to take personal responsibility to manage their condition. Primarily this involves lifestyle choices and participation in education programmes to minimise the risk of complications in the years to come. This concept is at the heart of the future of healthcare: co-responsibility for risk and co-production of care.

We will continue our efforts to tackle preventable disease, such as type II diabetes, which accounts for 9 out of 10 cases of diabetes. For the person with type I diabetes, which is wholly unavoidable, it is vital the signs and symptoms of type 1 to be identified early and for intensive support to be available to young people during their adolescence and then for them to transition seamlessly into adult services.

The aim of this plan is to reduce the rise in rates of type 2 diabetes and continue to improve key outcomes and complication rates for all people with diabetes. These population outcomes are listed in the performance chapter and are supported by a number of service process measures. The delivery plan will support and encourage this effort by providing national leadership, encouraging collaborative working and helping the service to plan ahead.

**Allison Williams, Chief Executive of Cwm Taf University Health Board
Chair of the Diabetes Implementation Group**

Introduction

Diabetes services in Wales

In Wales 7.3%¹ of the population aged 17 or over live with the diabetes (2015-16), the highest prevalence in the UK. Diabetes affects a wide cross section of society from babies to pregnant women to the elderly and may affect so many different body systems that it touches most areas of health and social care.

Preventing diabetes by reducing modifiable risk factors is a key goal for health and social care providers. Such interventions have the additional benefit of reducing the risk of various other chronic conditions such as cardiovascular and respiratory disease. Diabetes prevalence is higher in areas of greatest deprivation, and amongst minority ethnic communities. Services should be designed to reduce this health inequality. Effective self-management of diabetes is crucial. Information, structured education and empowerment are essential to enable this.

The National Diabetes Audits² have provided a wealth of information on the quality and variability of services. 55.5% of people with type 2 diabetes and 30.5% of people with type 1 diabetes received all eight essential care processes in 2014-15. Only 14.9% of people with type 1 diabetes and 38% of people with type 2 diabetes achieved the three key outcome targets for diabetes (blood glucose, blood pressure and cholesterol). The challenge is to find the means to improve these figures so that everyone living with diabetes has the best possible care. It is essential that community health services are equipped to provide this as this is where most people with diabetes receive their care. The restructuring of primary care into clusters provides a valuable opportunity to influence and improve local services.

However, nearly 17%³ of hospital inpatients in England and Wales have diabetes and hospitals need to be safe environments for people with diabetes, free from harm and disempowerment. More pregnancies are affected with diabetes than ever before and we must ensure services redesign to accommodate this. Children living with diabetes should receive the best

¹ StatsWales (2016) Illnesses by gender and year

² Healthcare Quality Improvement Partnership (2016) National Diabetes Audit (2013 - 2014 & 2014 - 2015) - Report 1 care processes and treatment targets

³ Healthcare Quality Improvement Partnership (2016) National Diabetes Inpatient Audit 2015

possible support and care in all environments, including schools. To ensure our services are among the best in the world, the peer review process has been implemented across Wales with an expectation that the best possible standards will be achieved. An electronic patient record that is accessible to all, including the person with diabetes, will be invaluable to support a service designed to provide the best care to the people of Wales. In addition, to provide these services we need a knowledgeable, educated workforce. We must ensure appropriate accessible education is available in medical and clinical undergraduate and postgraduate courses, as well as for staff working in social care settings.

Implementation of the Diabetes Delivery Plan

The diabetes implementation group's role is to oversee the national plan and support health boards to deliver their service improvement plans for diabetes. The implementation group brings together the key stakeholders, including all the health boards, informatics and the third sector, primary care and secondary care, government and managers to work collaboratively. This delivery plan offers a great opportunity for Wales to forge ahead in diabetes care and support. In particular, our third sector partners make an invaluable contribution to discussions and service provision.

The diabetes implementation group decides its priority areas annually but three key strands are likely to endure over this phase of the plan. These include: meeting national standards in both primary and inpatient care; supporting people to manage their conditions through structured diabetes education programmes; and creating more integrated primary and specialist provision. We must make use of the clinical leaders in this field to drive system change and be responsive to audit and peer review findings. We must more proactively embed improvement programmes such as Think Glucose, Think Check Act and royal college quality improvement tools. Our paediatric diabetes network and diabetes research unit are highly valuable resources not available to all specialties and their potential must be realised.

We will consider how we can better engage with patients and gain an insight into their experience, both nationally and locally, to ensure services are genuinely co-produced with structured and broad input. We will do more as a group to work with primary and community care given the majority of diabetic care is delivered in these settings. We will consider the future approach to how primary and specialist care is fully integrated, with clearly set out responsibilities and support, which is appropriate to each health board's population. This will impact on cluster action plans, practice development plans and the GP contract. Relationships with clusters, directors of primary care and GPC Wales will be vital to ensuring we have a 21st century model of care which can cope with projected demand.

We also have an important project to integrate electronic information across specialist, primary, community and emergency care for better patient management; as well as a joint project with the heart disease and stroke groups targeted at deprived areas to reduce risk of diabetes and cardiovascular disease.

This refreshed delivery plan builds on its first phase and gives the service the vital continuity of approach it needs. The plan is set out in a similar structure, covering the need to prevent the preventable, diagnose diabetes early, support children and young people, provide fast and effective treatment, deliver person-centre care and support diabetes research. These chapters are underpinned throughout by the need for quality patient information and digital tools. It is vital the service pulls together and does everything possible to alleviate future demand and deliver the best outcomes for patients. We will do this by planning, integrating and collaborating.

Julia Platts
National Clinical Lead for Diabetes

Preventing Type 2 Diabetes

The impact on the health service of the increasing number of people developing type 2 diabetes, combined with the length of time for which people potentially live with the disease, is unlikely to be sustainable. Therefore, the evidence base for the effectiveness of diabetes prevention programmes is increasing significantly. Lifestyle interventions aimed at changing an individual's diet and increasing the amount of physical activity they do, can halve the number of people with impaired glucose tolerance who go on to develop type 2 diabetes.⁴

It is important to reinforce the need for people to take responsibility for their health and lifestyle in order to play their part in reducing their risk of ill health and alleviate an unsustainable level of demand on future health services. One element of this is for individuals to be knowledgeable about what the risk factors for diabetes are and how to reduce them. The approach requires commitment from all partners, including local government, schools, industry, employers, the third sector, health boards and most importantly the public.

Key messages for the public are:

- Be aware – know how to reduce your risk of type 2 diabetes
- Be active – achieve a good level of physical activity
- Be healthy – watch what you eat and what you weigh
- Be in control – make choices and take action to reduce your risk

Many of the risk factors for diabetes are common to other disease areas, such as heart disease, stroke and cancer; therefore it is clearly worthwhile having cross-cutting prevention strategies, as well as targeted approaches to diabetes where there is evidence to support this approach. Programmes aimed at obesity, physical inactivity, diet and harmful drinking will be led by Public Health Wales and local public health teams. Government, through measures such as primary legislation and regulation, will continue to help create the societal conditions to support healthier lifestyles.

The diabetes delivery plan continues to complement and enhance existing initiatives by supporting approaches such as Making Every Contact Count and signalling their relevance to the diabetes agenda. Public Health Wales, in collaboration with health boards, will have lead responsibility for these lifestyle interventions. It will be important for all clinicians to be aware and sufficiently skilled to support this agenda.

In particular, the Wales Cardiovascular, Stroke and Diabetes Prevention Programme is an important programme to help identify individuals at high risk of diabetes, undertake risk assessment and offer a suite of interventions designed to reduce the risk factors for these conditions. This programme is

⁴ National Institute for Health and Care Excellence (2016) Type 2 diabetes prevention: population and community-level interventions

targeted at more deprived areas and will also help to reduce the health inequalities associated with diabetes.

Key service actions:

1. Public Health Wales to lead a comprehensive prevention programme to minimise population-level risk of disease, including diabetes.
2. Public Health Wales to promote a holistic approach to motivational interviewing across providers, under the umbrella of Making Every Contact Count.
3. Health boards to continue to roll out the cardiovascular disease risk assessment programme to support those at high risk of developing diabetes.
4. Health boards to implement the Wales Obesity Pathway at all levels, for both adults and children.
5. Health boards to support community pharmacy campaigns to encourage people to consider the risk of diabetes and to undertake testing where appropriate.
6. Health boards to ensure women with previous gestational diabetes receive appropriate advice and support on lifestyle change and, where necessary, weight reduction.
7. Health boards to continue to work with the third sector to provide high quality, reliable advice on reducing the risks of diabetes
8. The Diabetes Implementation Group to develop resources to support primary care, community care and those in social care settings on preventing type 2 diabetes.
9. Progress on tackling risk factors for diabetes will be monitored and reported through the public health outcomes framework.

Detecting Diabetes

The benefits of a prompt diagnosis of type 2 diabetes are significant. Increased public awareness of the symptoms of diabetes and the risks posed by delayed diagnosis and treatment is needed. Local public health analyses should model the expected prevalence of diabetes utilising complete primary care Quality Outcomes Framework (QOF) registers. Health boards should develop guidance, or share good practice strategies, to ensure they effectively plan for and identify those at risk.

Certain factors are associated with an increased risk of type 2 diabetes; including: a family history of diabetes, central obesity, age, ethnic groups with a high risk of diabetes and a past history of gestational diabetes. Risk stratification should be undertaken in primary care and testing offered to those who are at moderate to high risk. Opportunistic risk assessment and testing should be encouraged in areas such as community pharmacies. Diagnostic

testing and diagnostic criteria should accord with World Health Organisation criteria.

Type 1 diabetes requires prompt diagnosis and treatment to reduce the harm associated with diabetic ketoacidosis. This is imperative for children with possible type 1 diabetes; any child who is unwell and has any features of diabetes should have an urgent capillary blood glucose check and should be referred urgently (to be seen the same day) to specialist services if diabetes is suspected.

Women with a raised body mass index, previous gestational diabetes or at high risk for diabetes who are considering a pregnancy should be tested for diabetes. Pregnant women with appropriate risk factors should be tested for gestational diabetes in accordance with the National Institute for Health and Care Excellence (NICE) guideline. Women who have had previous gestational diabetes should be screened annually for type 2 diabetes, in accordance with the guideline.

Key service actions:

10. Public Health Wales to support a campaign of opportunistic testing for diabetes in community locations such as community pharmacies.
11. Health boards to ensure all key staff members have the knowledge to identify the risk factors and clinical features of diabetes and to undertake the appropriate diagnostic tests.
12. Health boards to ensure women with previous gestational diabetes are testing annually for the development of diabetes.
13. The Diabetes Implementation Group to develop educational tools for healthcare professionals to support the detection and classification of diabetes.
14. The Diabetes Implementation Group, in partnership with Diabetes UK, to develop an awareness campaign to facilitate the early diagnosis of type 1 diabetes in children.
15. The Diabetes Implementation Group, working with the National Obstetric and Quality Improvement Network, to develop pathways to detect diabetes early in pregnancy and to detect gestational diabetes in accordance with NICE guidance.

Supporting Children and Young People with Diabetes

Type 1 diabetes is one of the most common chronic diseases in childhood and is not preventable. However, a key factor in reducing the impact of diabetes is good control of blood sugar levels without frequent or disabling hypoglycaemic events. All healthcare professionals should understand the symptoms of type 1 diabetes and be able to identify when a child or young person should be tested using a blood capillary glucose test. Primary care

staff must refer suspected cases of diabetes immediately (same day) to appropriate paediatric inpatient centres.

As part of ongoing care, children and young people (CYP) with diabetes should receive support from a multidisciplinary paediatric diabetes team as defined by NICE; including specialist consultants, paediatric diabetes specialist nurses, dietitians with specialist training and paediatric psychologists. Dietitians and psychologists should have protected time to devote to CYP with diabetes. Health boards should ensure they have appropriate numbers of staff with the right skills set in relation to population health needs assessment.

All CYP with newly diagnosed diabetes need a care pathway, which includes delivery of the structured education programme (Seren) developed by the Children and Young People's Wales Diabetes Network (& Brecon Group) = **'the Network'**. This provides the foundation for co-produced health outcomes between clinicians and patients. All CYP with diabetes must receive all key care process as recommended by NICE. Compliance and performance is measured by submission of data to the National Paediatric Diabetes Audit (NPDA) and units should aim for 100% compliance in order to reduce harm and variation; as well as reduce the potential for long-term complications associated with diabetes.

Technological advances in insulin delivery and blood glucose monitoring have become integral to the treatment and management of diabetes in CYP. Variability in provision of such technologies across Wales needs reducing by making insulin pumps and continuous glucose monitoring (CGM) available to all CYP with diabetes according to NICE criteria.

Policies need to be co-produced and put in place to support the management of diabetes in educational settings to ensure that CYP have the best possible opportunity to fulfil their potential. Educational settings need to be supported to train staff to support CYP with diabetes to avoid hypoglycaemic episodes and perform carbohydrate counting and administration of insulin for young children. Young people with diabetes must be supported to participate in all educational activities, including residential trips.

Transition from paediatric to adult diabetes services requires a flexible approach which meets the needs of the individual patient. The benefits of a successful transition are seen in increased clinic attendance and better health outcomes in the long-term. Young adults should be invited to co-produce transition services to ensure they work effectively for both service users and staff. An all-Wales standard for transition services is being developed to support adult and paediatric teams to work together and smooth the transition for CYP between age-based specialist care.

Key service actions:

16. The CYP Diabetes Network to work through primary care clusters to raise awareness and support identification of symptoms of type 1 diabetes.

17. Health boards to use population needs assessment to determine the appropriate number of specialist paediatric nurses and dedicated time for allied health professionals to meet population need.
18. Health boards to ensure referral pathways are in place for children and young people newly diagnosed with diabetes to be seen within 24 hours by a paediatric specialist and their ongoing care is delivered by a properly constituted multi-disciplinary team as defined by NICE.

Harm, waste and variation

19. Health board paediatric diabetes units to participate and support the work of the Network; specifically efforts to tackle variation, adoption of national guidelines and policies.
20. Health board paediatric diabetes units to achieve 100% compliance with key care process completion.
21. Health board paediatric diabetes units to deliver the one Wales structured education programme 'Seren' and work with the Network to enhance the programme.
22. Health boards, working with the Network, to develop and deliver a national solution for out-of-hours phone advice services to support children and young people in line with NICE guidance.
23. Health boards, working with the Network, to participate in national clinical audit and data submission to the Brecon register to support research.
24. Health boards, working with the Network, to participate in peer review programme and instigate action in response to findings.
25. Health board paediatric units to ensure provision of insulin pumps and continuous glucose monitoring (CGM) devices and training in line with NICE guidance to a universal standard adopted throughout Wales.
26. Health boards, working with the Network, to develop and implement an all-Wales standard for transition services.
27. Health boards to provide appropriate separate services within adult care for those up to the age of 25.
28. The Diabetes Implementation Group to develop a structured education programme to be delivered as part of transitional care.

Working with education services and families

29. Health boards to consider developing the role of schools educator within the MDT to work with school staff and local education authorities to improve the management of diabetes in schools.
30. The Network to develop a mechanism for peer support and mentorship, working with young people, volunteers and third sector organisations and include opportunities to meet with others on a local level.

31. The Network to work with the third sector to develop resources to school staff and families to ensure children and young people with diabetes are properly supported during education.
32. The Network to develop mechanisms to gain greater input from children and young people, their parents or carers, in the design and delivery of services; including the use of patient reported experience measures.
33. The Welsh Government to revise guidance on supporting learners with healthcare needs in education settings.

Delivering Fast Effective Diabetes Care

The majority of diabetes care takes place in primary care, led by GPs and practice nurses. People with diabetes who require more specialist care may be managed in secondary care or present as an emergency. In addition, nearly 17%⁵ of the general inpatient population in England and Wales has diabetes. Therefore it is vital healthcare professionals are sufficiently knowledgeable to identify, refer and manage, as appropriate, people with diabetes.

The diabetes in primary care audit sheds light on the quality of care and variation in practice across Wales. 100% of practices in Wales participate in the audit which is a tremendous demonstration of primary care's commitment to service quality. There has been vast improvement in referral to structured education programmes, but variability in completion of key care processes and achievement of target outcomes. Health boards must use primary care cluster level working to address variation in care and support practices with improvement tools such as the RCGP's National Quality Improvement Project.

Secondary care services are covered by a number of audit modules covering inpatient care, insulin pumps, paediatric care and foot care. Similarly these audits find variability in compliance with NICE guidelines and structured improvement approaches have been put in place, such as the Think Glucose and Think Check Act programmes. All health boards must fully participate in the clinical audit and paediatric peer review programmes, as well as review their data to support service planning. Greater focus needs to be made on full completion and recording of the key care processes as defined by NICE, and achievement, in a personalised way, of key care outcomes as defined by NICE.

It has been estimated that 41% of people with diabetes have poor psychological well-being, with eating disorders as well as depression and anxiety as presenting difficulties.⁶ Assessment of psychological difficulties that may pose a barrier to effective self-care and medical management of diabetes is essential. Health boards must ensure sufficient psychological input into the management of patients in line with national standards. All members of the care team should be supported to provide an element of psychological

⁵ Healthcare Quality Improvement Partnership (2016) National Diabetes Inpatient Audit 2015

⁶ Mayou et al (1991), Peyrot et al (2005)

support, in line with the pyramid of psychological need⁷, to target clinical psychologist support at those with the greatest need.

Diabetes increases the risk of developing periodontitis (severe / advanced gum disease) and may also impair the treatment response of periodontitis. For people with poorly controlled diabetes periodontitis does not improve even when patients are following advice from the dental team. Dental teams are advised to assume an increased risk for periodontal (gum) disease for anyone who has diabetes and to contact the patient's physician if the periodontal condition suggests less than optimal control of diabetes. Both adults and CYP with diabetes should be advised to visit a dentist for mouth checks and advice on prevention of gum disease.

In order to support non-diabetes specialists to support people with diabetes, the Diabetes Implementation Group has commissioned e-learning modules for healthcare professionals and nursing homes. In addition, health boards need to work through primary care clusters to develop more integrated pathways of care and support more routine liaison between care settings; this will be supported by the development of an all-Wales diabetes patient management system. The Diabetes Implementation Group will work with health boards, GPC Wales and other stakeholders to develop an all-Wales approach to more integrated pathways and enhanced services.

Key service actions:

34. Health boards, working with the Diabetes Implementation Group, to provide educational resources for healthcare professionals to help ensure staff have sufficient knowledge to care for people with diabetes. This will include the development of the healthcare support worker role.
35. Health boards to use population needs assessment and inpatient audit findings to ensure there are appropriate numbers of diabetes specialist nurses to support service delivery in hospitals and the community.
36. Health boards to participate in National Diabetes Audit and all its modules to inform service planning and improvement; including delivering the recommendations of the 2015 inpatient audit report and providing a dedicated diabetes inpatient team.
37. Health boards to work through cluster arrangements, using primary care audit data, to ensure all people with diabetes are offered the eight essential care processes and people are supported to achieve NICE essential targets.
38. Health boards, working with the Diabetes Implementation Group and through clusters, to work to develop more integrated pathways of care.
39. Health boards to implement Welsh Government's hospital nutrition standards to reduce hypoglycaemia.

⁷ Investing in emotional and psychological wellbeing for patients with long-term conditions; Mental Health Network, NHS Confederation

40. Health boards to ensure severe hypoglycaemia or hospital onset DKA / HHS are recorded on DATIX, investigated and reported as necessary as serious incidents.

Audit has highlighted a number of areas of specific concern; including medication, insulin pumps, foot care and pregnancy.

Medication

Medication should be considered in conjunction with structured diabetes education, to ensure lifestyle approaches are prioritised as the first line of diabetes management. When used, medication for diabetes must be individualised, safe, effective and without undesirable side effects. If these essential prerequisites are met medication should then be chosen by the lowest acquisition cost (including the cost for testing capillary glucose with some medication). Health boards will consider examples of prescribing pathways for diabetes in order to realise cost-benefits for the whole healthcare system. Health boards should also consider the All Wales Medicines Strategy Group's national prescribing indicator target to reduce the prescribing of long-acting insulin analogues.

Key service actions:

41. Health boards, working with the Diabetes Implementation Group, to consider adopting prescribing pathways and additional support for clinicians which ensure access to medication is individualised, safe, effective and without undesirable side effects, and which promote the effective use of resources.

Insulin Pumps

An insulin pump may help a person with type 1 diabetes to achieve their long-term glucose target, result in reduction of hypoglycaemia and enhance quality of life when living with type 1 diabetes. In 2012, the rate of use among adults in the UK was estimated at around 6%⁸ but NICE benchmarking suggests 12% of people with type 1 diabetes should attain the criteria to have insulin pump therapy. The main barrier to expanding insulin pump availability in Wales is a lack of skilled staff to deliver the service. A National Insulin Pump Coordinator has been appointed by the Diabetes Implementation Group to help to address this.

Key service actions:

42. Health boards, working with the Diabetes Implementation Group, to increase the availability and efficacy of insulin pump therapy through the education of staff, and offer of structured education (such as DAFNE) to patients.

⁸ http://www.diabetologists-abcd.org.uk/Audits/UK_Pump_Audit_data.pdf

43. Health boards, working with the Diabetes Implementation Group, to implement national standards to improve safety and maximise benefit of insulin pumps.
44. Health boards, working with the Diabetes Implementation Group, to provide educational resources and patient awareness campaign on insulin pumps.

Foot Disease

Preventing and managing diabetic foot disease is a key priority to reduce the significant burden of diabetic foot problems which may cause distressing and disabling ulceration and amputation. A diabetes foot service should include a screening service, a foot protection service for those identified as having a higher risk to ulceration and a multidisciplinary foot service for managing active foot problems, working within agreed pathways to provide integrated seamless delivery of care. A National Diabetes Foot Coordinator has been appointed by the Diabetes Implementation Group to oversee the implementation of foot services.

Key service actions:

45. Health boards to provide a diabetes foot service which consists of a screening service, a foot protection service and a multi-disciplinary foot service; as well as embedding the principles of the Putting Feet First pathway and providing annual foot screening and education.
46. Health boards to ensure all people with diabetes have a foot assessment within 24 hours of hospital admission with protective action taken as needed.
47. Health boards to ensure all patients at moderate risk and above are referred into the Foot Protection Service (FPS), for annual assessment, education and agreed tailored treatment plans.
48. Health boards to refer active foot disease within one working day and triaged within one further working day to the multidisciplinary foot service or foot protection service.
49. Health boards to ensure those undertaking diabetic foot screening are competent (e.g. completed "FRAME" or diabetes e-modules) and refer on an agreed pathways
50. The Diabetes Implementation Group to develop educational resources and national guidelines on the management of diabetic foot disease.
51. The Diabetes Implementation Group to advise on the development and accreditation of the role of Healthcare Support Workers in foot screening
52. Health boards to ensure succession planning is in place in the management of diabetic foot disease; including rotation of podiatry staff and competency training using TRIEPodD-UK
53. Health boards to adopt root cause analysis for each major amputation.

54. Health boards to introduce a diabetic foot-screening tool in all inpatient settings to aid identification of existing problems and support the pressure score risks.
55. Health boards to implement a discharge system to notify the FPS/MDFS of patients with active wound imminent discharge.
56. Health board to identify a lead clinician to work with the National Diabetic Foot Coordinator and ensuring key processes and structures are in place.

Pregnancy

Women with pre-existing diabetes have more risks to themselves and their babies during a pregnancy. These risks can be reduced by good preconception care and good care during pregnancy. In Wales, 39% of women with diabetes in pregnancy have type 2 diabetes⁹ so it is essential that good preconception care is available in the community. Gestational diabetes is a form of diabetes that arises during pregnancy. Early identification by testing in pregnancy in high risk groups and good care can minimise risks of harm to the baby. Post partum care may help to reduce the risk of maternal type 2 diabetes in later life.

Key service actions:

57. The Diabetes Implementation Group to develop a preconception awareness campaign for all women with diabetes and educational resources for health care professionals on diabetes and pregnancy.
58. The Diabetes Implementation Group to work with partners in the obstetric services to develop new pathways to manage gestational diabetes and women with pre-existing diabetes.
59. The Diabetes Implementation Group to develop education tools to support women with gestational diabetes (multiple languages)
60. Health boards to provide preconception training for healthcare professionals caring for women with diabetes
61. Health boards to adopt standards of care from NICE guideline 2015.
62. Health boards to adopt the testing, diagnosis and treatment criteria for gestational diabetes from NICE Guideline 2015.

Eye Care

Detecting and treating diabetes eye disease early is proving successful at reducing diabetes as a cause of blindness. The Diabetes Retinopathy Screening Service Wales (DRSSW) has been rebranded as Diabetes Eye Screening Wales (DESW) and transferred to Public Health Wales (PHW).

Key service actions:

⁹ Healthcare Quality Improvement Partnership (2016) *National pregnancy in diabetes audit report 2015* (Online) Available from: <http://www.hqip.org.uk/resources/pregnancy-in-diabetes-audit-report-2015/>

- 63. The Diabetes Implementation Group to provide an awareness campaign in multiple languages on the importance of eye screening.
- 64. Health boards, working with DESW, to ensure 100% referral to eye screening at diagnosis of diabetes.
- 65. Health boards to support DESW to introduce a new clinic model to improve access and uptake.
- 66. DESW to develop a plan to implement the UK National Screening Committee recommendation to extend the screening interval for people with diabetes at low risk of sight loss from retinopathy.
- 67. Health boards to standardise and measure time from referral to hospital eye service assessment and treatment.

Kidney care

Preventing kidney damage is essential to maintain good health in diabetes. Testing for early kidney disease is done by measuring a urine sample for microalbuminuria. This use of this measurement has fallen among both type 1 and type 2 diabetes patients as it is no longer a QOF target. Once microalbuminuria is detected a treatment pathway should be implemented.

Key service actions:

- 68. Health boards to work with primary care to increase urinary microalbumin measurement to 100% and ensure appropriate treatment for those with microalbuminuria
- 69. Health boards to implement guidelines for those with established kidney disease.

Genetic Forms of Diabetes

Approximately 1-2% of diabetes is due to specific genetic diabetes¹⁰, often misclassified as type 1 or type 2 diabetes. Correct diagnosis may result in different forms of treatment for the person and for family members.

Key service actions:

- 70. The Diabetes Implementation Group to advise on the structure of a genetic diabetes service and ensure access to appropriate genetic counselling and testing

Delivering Person Centred Diabetes Care

A core requirement for person-centred care is a personalised care plan. It should be a clear, simple overview of what the person with diabetes is trying to achieve, with short and long term goals clearly defined for both the patient and the healthcare professional. This is the basis of a partnership approach to

¹⁰ <http://www.bmj.com/content/343/bmj.d6044>

care and should be reflected a hand held record available to the patient and be available across care settings electronically. Information prescriptions are available in primary care settings and may help in the development of a personalised care plan. Telehealth has been shown to help people with diabetes self-manage their condition and stay at home whilst reducing the need to travel to access specialist advice and should be an important element of the care pathway

Information, structured education and empowerment are essential for self-management of diabetes. Take up, accessibility, availability and inconsistency of structured education has been a problem and health boards need to improve uptake. The Diabetes Implementation Group is developing new educational options to better meet the needs of the individual. It is likely that those already diagnosed with diabetes would benefit from use of prescribable information and group support. However, it is essential that all people newly diagnosed with type 2 diabetes should be offered structured diabetes education within 12 months of diagnosis, in line with NICE guidance. Consideration needs to be given to providing diabetes education for specific minority ethnic communities who have a high prevalence of diabetes. The complete support 'offer' from the NHS and third sector will include:

- Structured diabetes education meeting NICE guidelines
- Peer support arrangements
- Online and group support
- Hard copy and electronic guide to being diagnosed with diabetes
- Video prescriptions
- Referral to other programmes such as exercise referral and expert patient.

Those with type 1 diabetes should have individualised education from a diabetes specialist nurse and specialist dietitian at diagnosis with appropriate follow up. They should be offered a DAFNE (Dose Adjustment For Normal Eating) course, or equivalent, six months after diagnosis, with appropriate updates at a time that best meets the needs of that individual.

Key service actions:

71. Health boards to ensure an individualised person-centred care plan is at the centre of each person's care.
72. Health boards to ensure appropriate educational choices, starting with formal structured education, are offered to all people living with diabetes.
73. The Diabetes Implementation Group to develop additional educational resources and packages for health boards to offer people living with diabetes.
74. Diabetes UK, working with health boards, to develop mechanisms of peer and group support.

Researching Diabetes

Participating in a high-quality clinical research study can provide people with additional treatment options. The evidence suggests that people who receive care in research-active institutions have better health outcomes than those who are treated in non-research environments. People who participate in research have a better understanding and better management of their condition through additional contact and a partnership relationship with their health professionals. Well conducted research has a major impact on the development and modification of clinical guidelines.

The Diabetes Research Unit Cymru (DRU Cymru) was established in April 2015 and its mission is to undertake and support a comprehensive, integrated, translational, research programme across Wales to advance the development and implementation of therapeutic strategies for prevention, treatment and self-management of diabetes. Health and Care Research Wales have pledged funding of up to £1,500,000 over a three year period to support the work of the Unit.

Specifically, the Unit aims to develop and support UK Clinical Research Network (UKCRN) Portfolio studies across Wales and assist in grant capture. Collaboration with industry is also important in order to develop new treatments and therapies which have benefits for people with diabetes, and the potential to reduce the burden of disease by better management and prevention or delay of complications. These activities will be complemented by knowledge mobilisation and public involvement and engagement.

In addition to working with the pharmaceutical and devices industries, DRU Cymru works closely with healthcare professionals, academics and the third sector (Diabetes UK, JDRF). In the period between April 2015 and March 2016, a total of 76 UKCRN diabetes portfolio studies were open to recruitment or following up participants. Of the 76 studies, 44 (58%) were commercially funded studies whilst the remainder were non-commercially funded. Forty nine studies (64%) involved an intervention whilst the remainder were observational studies. All health boards in Wales participated in diabetes research, although the type of study varied. In total, 712 people in Wales agreed to take part in new diabetes studies in the 12 months from April 2015.

A key objective for DRU Cymru is to involve members of the public in all aspects of research work. Eight members of the public have volunteered to work with the unit as public contributors and have formed the DRU Cymru Public Reference Panel. The Reference Panel has been established to share knowledge and experience of the issues faced by those living with diabetes with the Unit and wider research community. The Panel provides a lay opinion, advice and support to diabetes researchers across Wales. The panel meet quarterly and can also provide reviews and advice for researchers in between meetings. Public contributor involvement has been essential in providing an insight into what it is like living with diabetes. It provides another perspective on the work and helps to prioritise issues important to those with diabetes. Further expansion of the Public Reference Panel is planned to include parents of those with diabetes and also to establish a younger persons' group.

Key service actions:

75. Health boards to ensure a R&D lead is identified and provides visible R&D leadership for the Delivery Plan.
76. Health boards to encourage more people with diabetes across Wales to participate in diabetes research activity.
77. Health boards to work with the DRU Cymru, researchers and the Health and Care Research Wales Support and Delivery Service to increase the number of diabetes research studies undertaken in Wales.
78. Health boards to create more opportunities for people with, and affected by, diabetes across Wales to be involved and engaged in research activity.
79. Health boards and research teams to ensure arrangements are in place to feed diabetes research outcomes into organisations' mechanisms for uptake of best practice and service change to improve clinical practice and patient outcomes.
80. Health boards to promote the importance of R&D through participation in studies, including HealthWise Wales, and recognition and understanding by all NHS and other staff of the role that research plays in increasing and delivering good quality care, including staff recruitment, retention and development.
81. Key performance indicators set out in the Delivery Framework for the Performance Management of NHS Research and Development (R&D) will report relevant measures.

Performance managing the Diabetes Delivery Plan

This delivery plan has set out our vision and ambitions for diabetes services within Wales. The plan aims to reduce the rise in rates of type 2 diabetes and continue to improve key outcomes and complication rates for people with diabetes. Doing this will involve joint working between all those responsible for diabetes care. The plan includes the population outcome measures and the key service measures, which will be underpinned by more detailed performance monitoring arrangements. Implementation will be supported by an annual £1m annual allocation to the Diabetes Implementation Group.

Locally, the Diabetes Planning and Delivery Groups (DPDGs) will lead the implementation of their local service plans, in line with the vision and actions set out in this plan, for each health board. Increasingly DPDGs need to engage with primary care clusters and ensure service plans are reflected in health board integrated medium term plans. DPDGs will report progress to the Diabetes Implementation Group annually and the chair will provide assurance to the NHS Wales Chief Executive of overall national progress against the delivery plan. The Diabetes Implementation Group will continue to support health boards to deliver their plans with national work programmes, such as addressing variation in national standards through the appointment of national leads for pumps, structured education, foot care and transition. The paediatric

Network also has a key role in facilitating quality improvement and supporting national working among paediatric diabetes units.

The Diabetes Implementation Group has brought together a leadership group, including several national posts, to help drive improvement and implementation across Wales. National roles have been appointed to support health boards to develop transition arrangements, insulin pump provision, structured education and foot care services. There is also an all-Wales diabetes research lead and the implementation group continues to rely on the advice of the diabetes National Specialist Advisory Group. The diabetes National Clinical Lead will continue to oversee the plan and focus on the consistent achievement of national standards. The Chair of the implementation group will also provide a key link to the NHS collaborative, all-Wales chief executives forum and Welsh Government.

A key result of extending the current delivery plan approach will be the consistency for services provided between 2013 and 2020 and beyond as the approach and actions become embedded across Wales. It is highly likely the main themes of the plan, such as standards, pathway integration and person-centred care, will endure beyond even that timeframe. The importance of a consistent and long-term approach to improving diabetes outcomes will be key to achieving the aims of the plan.

82. The Diabetes Implementation Group to steer the role of national clinical leads and national coordinator, as well as the work of the diabetes NSAG and paediatric diabetes network.
83. The Diabetes Implementation Group to allocate, oversee and report on the use of the £1m annual funding in support of the plan priorities.
84. Health boards, through Diabetes Planning and Performance Groups, to develop local service improvement plans with stakeholders and ensure plans are linked to health board integrated medium term plans.
85. Health boards to monitor their performance against the diabetes delivery plan through a set of nationally specified performance measures and report them to the Diabetes Implementation Group annually.
86. The Diabetes Implementation Group to facilitate the sharing and implementation of best practice, with support from the Network.
87. The Diabetes Implementation Group to identify constraints and develop national solutions to common issues where a strategic approach is needed
88. The Diabetes Implementation Group to review and feedback on health board delivery plan actions.
89. Welsh Government to support and enable liaison between the Implementation Group and Welsh Ministers.

Key Population Outcomes

- Prevalence and social gradient of prevalence.
- Quality of life measured through PROMs (in development).

- Quality of care measured through PREMs (in development).
- Diabetes related mortality.
- Complication rate for heart attack, stroke, blindness, amputation and kidney failure.

Key Service Performance Indicators:

Prevention	Public Health Outcome Framework
Detection	<ul style="list-style-type: none"> • TBC • Number of opportunistic tests completed
Children and Young People	<ul style="list-style-type: none"> • Emergency admissions for hypoglycaemia and DKA. • PDU appointment attendance (aged 16-25). • Insulin pump rates
Treatment	<ul style="list-style-type: none"> • Hospital length of stay • Medication errors • Compliance with the key care processes • Population level glycaemic control
Person-centred care	<ul style="list-style-type: none"> • Number of admissions as an emergency • Attendance at transition clinics. • Neonatal care admissions • Referral for structured education services • Attendance at structured education sessions
Research	<ul style="list-style-type: none"> • Number of people participating in clinical trials • Number of clinical trials