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ALL-WALES DIABETES REVIEW

Cross Party Group on Diabetes 2023

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Chair's Note

I want to express my sincere gratitude to all the individuals and organisations who have participated in our inquiry on the current state of diabetes care in Wales. Your valuable insights and evidence have greatly contributed to our understanding of the challenges and successes in diabetes care.

Throughout the inquiry, we have received a diverse range of positive and negative responses to the questions posed. This demonstrates the complexity of diabetes care and the need for comprehensive evaluation and improvement. Each response was carefully considered and vital in shaping our final report.

One of the key areas we have examined is the impact of current workforce pressures on diabetes care in Wales. We have received valuable input from healthcare professionals, individuals living with diabetes, and representatives of various organisations such as the All Wales Patient Reference Group. These contributions have shed light on the challenges healthcare providers face and the impact on the quality and accessibility of diabetes care. Equally importantly, we have also heard positive examples of dedicated healthcare professionals going above and beyond to provide excellent care despite the pressures they face.

The experiences shared regarding the support available for people living with diabetes have been enlightening. We have heard stories of both exemplary support and instances where improvements are needed. These insights will guide us in identifying areas of strength and areas requiring further attention and investment.

Technology's role in diabetes management has also been a significant focus of our inquiry. The experiences shared regarding accessing technology to support diabetes care in Wales highlighted successes and barriers. By understanding these experiences, we can work towards ensuring equitable access to technological advancements that can significantly improve the lives of individuals living with diabetes.

The impact of obesity on diabetes has also been a key aspect of our inquiry. We have examined the effectiveness of measures undertaken by the Welsh Government through the Healthy Weight Healthy Wales Strategy and Health Boards to reduce obesity levels. The responses have provided valuable perspectives on the progress made and the need for further initiatives to address the continuing rise of obesity in Wales.

The question of whether we are delivering adequate care for people with diabetes in Wales has evoked contrasting responses. While positive examples have been shared, areas for improvement have also been highlighted. As a Cross Party Group, we hope that these insights help drive positive change and ensure that all individuals with diabetes receive the care they deserve.

Lastly, the inquiry has explored the level of public understanding of diabetes and its impact. The responses have highlighted both successful efforts in delivering public information and areas where more can be done to improve awareness and education. By enhancing public understanding, we can reduce stigma and empower individuals to make informed choices regarding their health.

I want to extend my appreciation to everyone who has participated in this inquiry. Your contributions have been instrumental in shaping our understanding of the current state of diabetes care in Wales. With special mention to my fellow Senedd Members, Stakeholders, Health Care Professionals, People Living with Diabetes, Members of the Cross Party Group and our Secretariat, Diabetes UK Cymru.

As we share this report on World Diabetes Day 2023, I hope we reflect on the diverse experiences and needs of the people and communities affected by and living with diabetes.

Together, we can make a meaningful difference in diabetes care in Wales. Thank you once again for your invaluable support and engagement.



Jayne Bryant MS

Chair of the CPG on Diabetes

Member of the Senedd for Newport West

All-Wales Diabetes Review

The Cross-Party Group on Diabetes (CPG) successfully completed its inquiry into the current state of diabetes care in Wales. The inquiry commenced on the 18th of January 2023 and concluded on the 27th of September 2023 and aimed to review the status of diabetes care by collecting data and evidence from various sources.

The findings of this comprehensive inquiry have been collated into a report to be shared on World Diabetes Day, November 14, 2023. Throughout the inquiry, the CPG focused on several key areas, including the levels of diabetes services and care available in Wales, the impact of workforce pressures on diabetes services, and the experiences of people living with diabetes in accessing support and coping with the pressures associated with the condition. The inquiry also examined barriers to accessing technology for diabetes management, the prevalence of obesity and its impact on diabetes and the healthcare system, and the effectiveness of existing programs such as the All Wales Diabetes Prevention Programme and type 2 diabetes remission services. Additionally, the planning and priority for future diabetes care in Wales were carefully considered.

The CPG is grateful for the valuable contributions received from its members and external participants throughout the inquiry. The insights, experiences, and views shared by individuals from diverse backgrounds and communities have significantly informed the findings and recommendations of the report.

However it must be noted that this report has been written on the evidence presented to the Cross Party Group. Therefore, although an exhaustive inquiry has been undertaken, not every aspect of diabetes care will be covered in this report.

The report serves as a roadmap for future improvements in diabetes care in Wales, ensuring that the needs and experiences of individuals and communities affected by diabetes are at the forefront of decision-making. The CPG remains committed to ongoing efforts to enhance diabetes care and looks forward to continued collaboration with stakeholders and members in 2024 and beyond.

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Recommendations

Recommendation 1: Implement an awareness campaign highlighting the increased risk of diabetes associated with ethnicity.

Recommendation 2: Target programmes specifically to support less affluent communities facing food insecurity to support healthier diets and reduce the risk of type 2 diabetes.

Recommendation 3: Make NDA Core Audit accessible, updated quarterly and presented as a dashboard for local comparison, as is available in England.

Recommendation 4: Improve collaboration between primary and secondary care services to effectively manage diabetes during the increased waiting period for surgery.

Recommendation 5: Increase access to NDA data to local level to help drive improvement through highlighting areas of good practice and performance of the 8 care processes in Wales.

Recommendation 6: Implement strategies to reduce the mortality risk of people living with diabetes by improving DKA management, promoting better means to control HbA1c levels, and addressing cardiovascular risks such as angina and stroke.

Recommendation 7: Focus efforts on reducing obesity rates, monitoring trends, and implementing targeted interventions to improve the health and well-being of children.

Recommendation 8: Ensure support for diabetes specialist workforce growth when drafting the NHS workforce plan for Wales, including advancement in clinical practice and leadership roles.

Recommendation 9: Review the need for a Diabetes Implementation Plan to deliver the aims and objectives of the Quality Statement for Diabetes Care in Wales.

Recommendation 10: Ensure the current transformation of diabetic eye screening services is effective in improving access to eye screening, and take action to reduce waiting times for follow up treatments for those with diabetes-related eye conditions

Recommendation 11: Ensure continued funding for the DEIW tool to help improve care for people living with diabetes in care homes.

Recommendation 12: Implement the recommendations outlined in Dr Rose Stewart's report and the Guidance on Recognising T1DE to ensure that psychological care is integrated, accessible, and flexible, meeting the needs of people living with diabetes at all stages of their lifespan and improving overall health outcomes.

Recommendation 13: Continue to fund, and expand, the All Wales Diabetes Prevention Programme to reduce the levels of type 2 diabetes in Wales.

Recommendation 14: Fund programmes and initiatives to reduce obesity levels in Wales under Healthy Weight Healthy Wales.

Recommendation 15: Implement an All Wales Diabetes Remission Service to help increase type 2 diabetes remission in Wales.

Recommendation 16: Ensure equitable access to diabetes technology in Wales for type 1 and type 2 diabetes.

Recommendation 17: Review primary and secondary care information technology systems to support the increased use of diabetes technology.

Recommendation 18: Ensure the future sustainability of education programmes like SEREN for people and families living with diabetes in Wales.

Recommendation 19: Review the current implementation of the Additional Learning Needs (Wales) Tribunals 2018 Act and its impact on education for children living with type 1 diabetes.

Recommendation 20: Commit to continued funding for a coordinator for the SEREN education programme to enable the programme to continue.

Diabetes is Serious

Diabetes (otherwise known by the scientific name diabetes mellitus) is a complicated and serious medical condition with many different types. It is characterised by high blood glucose levels and occurs when the body either does not produce enough insulin or cannot effectively use the insulin it produces. There are two main types of diabetes: type 1 and type 2. In type 1 diabetes, the body cannot produce any insulin at all; type 2 diabetes occurs when the body cannot produce enough insulin or the insulin it produces is not effective.

The impact of diabetes on people's everyday lives can be significant. When glucose cannot enter the cells properly, it builds up in the blood, leading to various problems and symptoms. These symptoms include frequent urination, excessive thirst, fatigue, unexplained weight loss, genital itching or thrush, slow healing of cuts and wounds, and blurred vision. Over time, high glucose levels can lead to complications affecting the heart, eyes, feet, and kidneys.

Managing diabetes requires careful treatment and care. Individuals with diabetes may need to monitor their blood glucose levels, make dietary changes, engage in regular physical activity, and, in some cases, take medication or insulin. Everyone with type 1 diabetes will need to inject insulin. People with diabetes need specialist support and guidance from qualified healthcare professionals about managing their condition. That said, diabetes is largely self-managed, meaning the person living with the condition (or their carer) will take responsibility for the day-to-day management of their condition, including monitoring blood glucose and administering medication where needed. Education, emotional support and guidance are crucial for individuals living with diabetes to cope with the challenges of the condition.

Diabetes research is ongoing, intending to improve the lives of millions of people affected by the condition. Funding for research projects aims to find innovative ways to prevent, manage, and ultimately find a cure for diabetes. This research helps develop new treatments, improve understanding of the condition, and enhance the quality of care provided to individuals with diabetes.

Overall, diabetes is a complex and chronic condition that requires ongoing management and support. By raising awareness, promoting research, and providing resources, it is possible to improve the lives of individuals living with diabetes and reduce the impact of this condition on their everyday lives.

The Various Types of Diabetes

In Wales, like in other parts of the world, various types of diabetes mellitus affect individuals. While the most common types are type 1 and type 2 diabetes, there are also several various less common forms that can have an impact on people's lives.

One of these less common types is gestational diabetes, which occurs during pregnancy and typically resolves after childbirth. It is important for pregnant women in Wales to be aware of the risks and symptoms associated with gestational diabetes to ensure proper management and a healthy pregnancy. Women who have had gestational diabetes are also at increased risk of going on to develop type 2 diabetes.

Maturity onset diabetes of the young (MODY) is a rare form of diabetes that runs strongly in families. This genetic disorder affects individuals at a young age and requires specific management strategies. Similarly, neonatal diabetes is a form of diabetes that can be diagnosed in infants below the age of six months, highlighting the need for early detection and treatment.

Wolfram Syndrome and Alström Syndrome are both rare genetic disorders that can result in diabetes. These syndromes have distinct characteristics and may require specialised care to manage the associated diabetes and other related health issues.

Latent autoimmune diabetes in adults (LADA) is a type of diabetes that shares features of both type 1 and type 2 diabetes. Sometimes referred to as type 1.5 diabetes, LADA requires careful monitoring and treatment strategies that are tailored to its unique nature.

Type 3c diabetes is a form of diabetes that develops when another disease causes damage to the pancreas. This can include conditions such as pancreatitis or pancreatic cancer. Individuals with type 3c diabetes may require specific interventions to manage both the underlying condition and the associated diabetes.

Steroid-induced diabetes is a type of diabetes that can develop as a result of taking steroids. This can be a concern for individuals in Wales who require steroid medications for various medical conditions. Close monitoring and management of blood sugar levels are essential in these cases.

Lastly, cystic fibrosis diabetes is a specific type of diabetes that affects individuals with cystic fibrosis. The build-up of mucus in the pancreas leads to impaired insulin production and requires specialised care for both diabetes and cystic fibrosis.

Understanding the different types of diabetes is crucial for healthcare professionals in Wales in order to provide appropriate care and support to individuals with these conditions. By recognising and addressing the unique challenges associated with each type of diabetes, healthcare providers can help individuals manage their diabetes

effectively and improve their overall quality of life.

Complications of Diabetes

Diabetes complications are serious health issues that occur due to prolonged high blood sugar levels. These complications can affect various parts of the body, including feet and eyes, and are categorised into two types: chronic and acute complications. Chronic complications are long-term problems that can cause severe damage if left unchecked and untreated. Acute complications, however, can occur at any time and potentially lead to chronic issues if not addressed promptly.

Chronic complications of diabetes encompass a range of conditions. Diabetic retinopathy, for instance, is an eye disease that may develop in some diabetes patients, affecting their eyesight. However, with early detection via an eye screening test, treatment can prevent sight loss. Diabetes can also lead to severe foot problems, which can result in amputation if untreated. High blood sugar can damage circulation and nerve sensation in the feet, slowing the healing of sores and cuts. Heart attacks and strokes can also occur due to damaged blood vessels from sustained high blood sugar levels. Chronic complications also include kidney problems, or diabetic nephropathy, making it harder to clear extra fluid and waste from your body. Other issues like nerve damage, gum disease, related conditions like cancer, and sexual problems can also develop in both women and men.

Acute complications include conditions such as hypos (low blood sugar levels), hypers (high blood sugar levels), Hyperosmolar Hyperglycaemic State (HHS), and Diabetic ketoacidosis (DKA). These can happen suddenly and may lead to chronic complications if not treated promptly.

To prevent or delay these complications, it's crucial to manage diabetes effectively. This involves controlling blood sugar, blood pressure, and fats. Regular health checks and consultations with the healthcare team can also help monitor the condition and guide people living with diabetes to manage their condition between appointments. Additionally, lifestyle changes such as quitting smoking, eating healthily, and keeping active play a crucial role in reducing the risk of complications. It's also important to attend all medical appointments and check-ups to monitor the condition, seek out any complications, and refer to extra support, such as new technologies to help better manage the condition.

Research - Immunotherapy Treatments

Immunotherapy has emerged as a promising approach in managing, delaying and preventing type 1 diabetes. In type 1 diabetes, the immune system mistakenly targets and destroys insulin-producing beta cells in the pancreas. Through decades of research, scientists have gained insights into the immune system's actions leading up to type 1 diabetes development.

By identifying specific signs, known as autoantibodies, through a simple blood test, researchers can screen individuals who are likely to develop type 1 diabetes in the future. This screening process opens up opportunities for the use of immunotherapies, which aim to reprogram the immune system and delay or prevent the onset of type 1 diabetes.

In the UK, the ELSA study, supported by Diabetes UK and JDRF, is the first research program to screen children from the general population for their risk of type 1 diabetes.ⁱ This study, which seeks to include 20,000 children aged 3-13 years, aims to determine the effectiveness of mass screening and inform the

implementation of a nationwide screening program.

The benefits of screening for type 1 diabetes are significant. Early diagnosis allows for close monitoring and education for children and their parents about the symptoms of type 1 diabetes, enabling early intervention and prevention of dangerous complications. Screening also allows families to prepare for living with type 1 diabetes and access pioneering immunotherapy treatments through clinical trials.

Immunotherapies designed to reprogram the immune system have shown promise in halting the destruction of beta cells and delaying the diagnosis of type 1 diabetes. The Type 1 Diabetes Immunotherapy Consortium, led by Cardiff University and funded by Diabetes UK, has been crucial in advancing research and clinical trials for immunotherapies in the UK. This consortium has positioned the UK as a leader in running and recruiting for immunotherapy trials, generating the evidence needed for the approval and availability of immunotherapies in the future.

One such immunotherapy, teplizumab, received approval for use in the United States in November 2022.ⁱⁱ Clinical trials have demonstrated that teplizumab can delay the diagnosis of type 1 diabetes by up to three years in high-risk individuals. While not yet available in the UK, teplizumab is under review by the Medicines and Healthcare Products Regulatory Agency (MHRA). If approved, screening for type 1 diabetes will be crucial in identifying individuals who could benefit from this groundbreaking immunotherapy.

Diabetes UK continues to invest in research to develop a pipeline of effective immunotherapies beyond

teplizumab. Through initiatives like the Type 1 Diabetes Grand Challenge, Diabetes UK, JDRF, and the Steve Morgan Foundation are investing £50 million in the search for a cure and more advanced immunotherapies for type 1 diabetes. Additionally, Diabetes UK is actively facilitating collaboration between key stakeholders in the scientific and healthcare communities to develop an implementation plan that ensures the progress in screening, and immunotherapy translates into tangible benefits for individuals with or at risk of type 1 diabetes.

Impact of Diabetes on Different Communities

The impact of diabetes on individuals from ethnic and deprived backgrounds, specifically type 2 diabetes, is a significant concern. People from Black African, African Caribbean, and South Asian backgrounds are at a higher risk of developing type 2 diabetes at a younger age.ⁱⁱⁱ Several risk factors contribute to this, including age, weight, ethnicity, and having a close relative with diabetes.

There are various reasons why certain ethnic backgrounds are associated with an increased risk of type 2 diabetes. For example, individuals from South Asian backgrounds are more likely to experience insulin resistance at a younger age, which can lead to higher levels of visceral fat around organs like the liver and pancreas.^{iv} Adopting healthier habits, such as regular physical activity and making nutritious food choices, can help reduce the risk of type 2 diabetes.

It is noteworthy that people from Black African, African Caribbean, and South Asian backgrounds are at risk of developing type 2 diabetes from the age of 25, compared to 40 for the white population.^v This highlights the importance

of leading a healthier lifestyle from a younger age to lower the risk of diabetes.

Simple changes can make a significant difference in reducing the risk of type 2 diabetes, such as increasing physical activity, making healthier food choices, maintaining a healthy weight, and cooking meals at home instead of relying on takeaways.

Ongoing research is being conducted to understand why certain ethnic minorities have a higher risk of developing type 2 diabetes. In the meantime, individuals are encouraged to stay informed about risk reduction strategies while research progresses.

The impact of diabetes on individuals from deprived backgrounds is also a significant concern. Living in poverty can have both psychological and physiological effects, increasing the risk of being diagnosed with type 2 or gestational diabetes.^{vi}

Currently, over 1 in 5 people in the UK live in poverty, and for children, this number rises to almost 1 in 3.^{vii} Healthy life expectancy at birth is significantly lower in the most deprived quintile compared to the most affluent quintile.^{viii}

The risk of type 2 diabetes is significantly higher for individuals living in poverty, even after adjusting for factors such as BMI and physical activity levels.^{ix} Research has shown a clear link between chronic stress, often experienced due to living in poverty, and insulin resistance, which can contribute to the development of diabetes.^x Additionally, poverty itself affects sugar intake and insulin resistance through physiological and behavioural mechanisms.^{xi}

Food insecurity is another issue faced by individuals from deprived backgrounds,

especially during colder winter months, with 16% of people in the UK reporting very low or low food security.^{xii} Poverty and inequality can lead to a higher attraction to calorie-dense foods, which are often nutrient-poor and heavily processed.^{xiii} Limited resources and energy costs can also hinder individuals from spending time cooking and increase their reliance on convenience foods, which are often less healthy.^{xiv}

To address the impact of diabetes on deprived backgrounds, it is crucial to address the underlying factors contributing to this disparity. This includes addressing poverty, improving access to affordable and nutritious food, and providing support and education on healthy lifestyle choices. Additionally, raising awareness of the link between poverty, stress, and diabetes can help drive policy changes and interventions to reduce the burden of diabetes in deprived communities.

In conclusion, addressing the impact of diabetes on those from diverse and low socio-economic backgrounds requires a comprehensive approach that includes risk assessment, lifestyle changes, and access to information and resources. By taking proactive steps to reduce risk factors and promote healthier habits, individuals can mitigate the impact of diabetes and improve their overall well-being.

Understanding the Basics

In this report, several acronyms and descriptions for diabetes care will be referenced to help a less familiar reader; here are some explanations of what will be referenced in this report:

HbA1c, or glycated haemoglobin, is a crucial marker in diabetes care. It represents the average blood glucose levels over the past two to three months. For individuals with diabetes, it is recommended to maintain an HbA1c level of 48mmol/mol (6.5%) or below.

If an individual is at risk of developing type 2 diabetes, it is recommended that the target HbA1c level should be below 42mmol/mol (6%).

HbA1c is formed when glucose in the body attaches to red blood cells. When blood sugar levels are high, more glucose sticks to the blood cells, leading to an increased level of HbA1c. This indicates elevated blood sugar levels and a higher risk of developing complications associated with diabetes, such as problems with eyes and feet.

Regular monitoring of HbA1c is essential to manage diabetes and reduce the risk of complications. The HbA1c test provides an average reading of blood sugar levels over a few months, unlike finger-prick tests that provide a snapshot of blood sugar levels at a specific time. It is recommended to have the HbA1c test at least once a year or more frequently, depending on individual circumstances.

The HbA1c test is performed by healthcare professionals, who measure the amount of blood sugar attached to haemoglobin. Haemoglobin carries oxygen from the lungs to the rest of the body. The test helps assess how well diabetes is being controlled and guides treatment decisions.

Understanding HbA1c results and working towards maintaining them within the target range is vital. Even a slightly raised HbA1c level increases the risk of complications. Factors such as illness, medication, lifestyle changes, and stress can influence HbA1c levels, so working closely with the healthcare team to achieve and maintain a target level is important.

Anyone with any concerns or questions about HbA1c, its significance, or how to interpret their results should consult their healthcare team for personalised guidance.

Diabetic ketoacidosis (DKA) is a severe condition that can occur in individuals with diabetes when there is a significant lack of insulin in the body. Without insulin, the body cannot use sugar for energy and starts to break down fat instead. This process releases chemicals called ketones. If left untreated, ketones can accumulate and make the blood acidic, resulting in a condition called acidosis.

DKA primarily affects people with type 1 diabetes, but it can also occur in individuals with type 2 diabetes, although it is less common. Sometimes, individuals who are unaware they have type 1 diabetes may only get diagnosed when they become seriously ill with DKA. It is crucial to recognise the signs and symptoms of DKA to ensure prompt treatment.

The signs of DKA include high blood sugar levels, excessive thirst, frequent urination, fatigue, confusion, blurred vision, stomach pain, nausea or vomiting, sweet or fruity-smelling breath, and potential loss of consciousness. These symptoms can develop over 24 hours or progress rapidly, especially in children or individuals using an insulin pump. If high blood sugar levels and any of these signs are noticed, urgent medical help should be sought.

To diagnose DKA, blood sugar levels should be checked immediately if any symptoms are present. If blood sugar is high, it is important to check for ketones. Ketone levels can be measured in the blood or urine. It is recommended that individuals with type 1 diabetes have access to blood ketone monitors or urine testing strips, which the NHS usually provides.

DKA requires urgent medical treatment in a hospital setting, as it can be life-threatening if left untreated. Treatment involves administering insulin intravenously

to normalise blood sugar levels, providing fluids intravenously to rehydrate the body, and supplying nutrients intravenously to replace any loss. Close monitoring is necessary to ensure no serious complications affect the brain, kidneys, or lungs. Hospital discharge occurs once the individual is well enough to eat and drink and tests show safe ketone levels in the body.

To prevent DKA, it is crucial to regularly monitor blood sugar levels and adjust insulin doses accordingly. During illness, blood sugar levels may be higher than normal, and additional precautions may be necessary, such as increased fluid intake, more frequent blood sugar checks, and potential adjustments to insulin doses. It is advisable to work with healthcare teams to develop specific sick day rules for managing diabetes during illness.

While DKA can have various causes, some common triggers include chest infections, flu, urinary tract infections, high blood sugar levels due to growth spurts or puberty, missed insulin doses, surgery or injury, and high blood sugar during menstruation. In some cases, there may not be an obvious trigger for DKA, which can be concerning. However, if DKA is suspected, seeking immediate medical help is essential.

Overall, being aware of the signs and symptoms of DKA, regularly monitoring blood sugar and ketone levels, and promptly seeking medical assistance when necessary are key to management and prevention.

Carbohydrate counting, also known as carb counting, is a method used by individuals with type 1 diabetes to effectively manage their blood sugar levels. It involves matching the insulin dose to the amount of carbohydrates consumed. Awareness of the

carbohydrate content in food and drinks is essential for everyone with diabetes, but carb counting is particularly helpful for those using basal and bolus insulin. While it requires time and effort to learn, carb counting can lead to better blood sugar control and more flexibility in meal timings.

You can use grams or carbohydrate portions (CP) to count carbs. One CP is typically equal to 10g of carbohydrates. It is important to determine the insulin-to-carbohydrate ratio, as it varies from person to person based on factors such as age, weight, activity levels, and insulin sensitivity. The diabetes healthcare team can help individuals establish this ratio, which may differ for each meal. By knowing the grams of carbohydrates in a meal and the insulin-to-carb ratio, an individual can calculate the number of units of bolus insulin needed.

There are various ways to count carbs, including using food labels that provide carbohydrate per portion or 100g values, reference lists and visual guides, recipe nutrition information, and restaurant and cafe nutrition information. Starting carb counting involves understanding which foods and drinks contain carbohydrates, becoming familiar with nutrition labels, and practising estimating the carbohydrate content of meals using reference lists.

Insulin is an essential hormone that helps manage blood sugar levels in the body. It is produced naturally in the body, but some people with diabetes need to take insulin as a medication because their body either doesn't produce enough insulin or the insulin it produces doesn't work properly. This includes people with type 1 diabetes, some with type 2 diabetes, and those with other types of diabetes. Insulin works by acting as a key that unlocks cells, allowing glucose (sugar) in the blood to enter the cells where it can be used for energy. It also helps store any excess glucose in the body.

High blood sugar levels can have short-term and long-term effects on the body. In the short term, high blood sugar levels can cause common diabetes symptoms and, in severe cases, lead to a hyperosmolar hyperglycaemic state (HHS) or diabetic ketoacidosis (DKA). Over the long term, high blood sugar levels can cause damage to various parts of the body, leading to diabetes complications.

While insulin is a crucial treatment for managing blood sugar levels and reducing the risk of complications, it is not the only factor. It is important to maintain an active lifestyle, eat a healthy diet, and manage other health factors such as blood pressure and cholesterol levels. Regular healthcare appointments and diabetes checks are also essential for early detection and prevention of complications. By taking a comprehensive approach to diabetes management, individuals can effectively control their blood sugar levels and reduce the risk of long-term complications.

Insulin resistance occurs when the body's cells do not respond properly to the insulin produced by the body or injected as medication. This can lead to an increase in blood sugar levels. Insulin resistance is commonly associated with type 2 diabetes and gestational diabetes, but it can also occur in individuals with type 1 diabetes or other types of diabetes. It can be a precursor to type 2 or gestational diabetes, and individuals with insulin resistance may require higher doses of insulin for the same amount of carbohydrates. The exact causes of insulin resistance are not fully understood, but it is more likely to occur in individuals with excess fat stored in and around the liver and pancreas. It can be influenced by factors such as weight, hormones, exercise, and lifestyle.

Recognising the symptoms of insulin resistance is crucial for early detection and management. Increased blood sugar levels or HbA1c levels may indicate that insulin is not working effectively. Individuals at risk of type 2 or gestational diabetes should also be vigilant for signs and symptoms of diabetes, as this can signify ineffective insulin function. While overweight or obesity is commonly associated with insulin resistance, it is not always the case for everyone. Treatment for insulin resistance often involves weight loss and increased physical activity, which can improve the body's insulin usage. In some cases, weight loss and improved insulin function may even lead to diabetes remission, as seen in ongoing research studies (referenced later in this report).

Recommendations

Recommendation 1: Implement an awareness campaign highlighting the increased risk of diabetes associated with ethnicity.

Recommendation 2: Target programmes specifically to support less affluent communities facing food insecurity to support healthier diets and reduce the risk of type 2 diabetes.

Diabetes in Wales

Diabetes is a significant health concern in Wales, with more than 200,000 people affected by the condition.^{xv} Type 2 diabetes accounts for approximately 90% of cases, highlighting the importance of addressing lifestyle factors such as diet and physical activity in diabetes prevention and management. The continuing increase and prevalence of Type 2 diabetes in Wales is higher than any of the other nations of the UK.^{xvi} However, it is crucial not to overlook other forms of diabetes, including type 1 diabetes, gestational diabetes, and rarer forms. In Wales, there are approximately 16,000 cases of type 1 diabetes, which require specialised care and management. The high prevalence of type 2 diabetes in Wales emphasises the need for comprehensive strategies and support systems to improve the health outcomes of individuals living with diabetes.

Quality Statement for Diabetes

During the inquiry, on 13th June 2023, the Diabetes Quality Statement was published. This followed the creation of the NHS Wales Executive on 1st April 2023, which brought together a number of existing NHS organisations.^{xvii} Alongside this came reforms to the planning and governance framework for long-term health conditions, with a new National Strategic Clinical Network for Diabetes launched on 1st October 2023 in support of the delivery of the National Clinical Framework for NHS Wales, which was published in March 2021.^{xviii} The new clinical network replaced the All Wales Diabetes Implementation Group (AWDIG).^{xix}

It must be noted that at writing of this report and during the course of the inquiry, funding for programmes previously funded by AWDIG have no automatic funding through the new Clinical Network. It is an ongoing concern by members of the CPG that arrangements for securing ongoing

funding for such projects (referenced later in this report) are uncertain.

The Quality Statement for diabetes care in Wales encompasses various elements to ensure the prevention of type 2 diabetes and the provision of high-quality care.^{xx} The focus on prevention is commendable, as type 2 diabetes can often be prevented or managed into remission with the right support. The statement emphasises the importance of good diabetes care in preventing emergencies and avoiding complications and sets out in the statement six quality attributes: Equitable, Safe, Effective, Efficient, Person Centered and Timely.

The commitment to equity in diabetes care is evident through collaboration with clinicians, service managers, and people with diabetes to develop national resources and address unwarranted variation. The emphasis on data-driven insights and the adoption of supportive technology further promote equitable care delivery.

The statement also prioritises safety, addressing the increased risk of harm during the pandemic by recovering and improving chronic condition management. The commitment to provision of accessible appointments and the availability of results to clinical teams through Diabetic Eye Screening Wales demonstrate a commitment to safe care. Recognition of the need for trained staff, error management tools, and effective preconception planning for pregnant individuals with diabetes further highlights the focus on safety.

Effectiveness is emphasised through the identification of high-risk individuals for type 2 diabetes and the provision of remission services. The use of the All-Wales Referral Pathway for new type 1 diabetes cases aims to reduce

hospitalisation, while the offer of research trial participation for newly diagnosed type 1 diabetes patients promotes effective care. Focusing on achieving treatment targets at a population level and delivering key care processes further enhances the effectiveness of diabetes care in Wales.

Efficiency is addressed through the planning of diabetes services based on locally adapted clinical pathways and the adoption of the all-Wales diabetes electronic patient record. These initiatives aim to streamline care across different settings and improve care integration.

Person-centred care is a key aspect of the Quality Statement, with a structured diabetes education program provided regularly, tools and support for addressing the emotional impact of diabetes, and a focus on individualised care planning and treatment targets. The integration of community, primary, and secondary care, along with collaboration with the third sector for peer support opportunities, further enhances person-centred care.

Timeliness is addressed through comprehensive care, support, and education for newly diagnosed individuals in their first year of diagnosis and early intervention for developing effective self-management habits. The use of risk stratification tools and early identification of patients with poor disease management further contribute to timely care provision.

During the Senedd Statement, the Minister for Health and Social Services, Eluned Morgan MS, highlighted the significance of diabetes in Wales and the need for sustainable solutions.^{xxi}

The emphasis on prevention programs, supportive care, technology, and community groups in diabetes care and support was acknowledged. Concerns regarding resourcing, data transparency, psychological support, access to

technology, and education were raised by Members of the Senedd and recognised by the Minister for Health and Social Services.^{xxii} The importance of partnership between government, local government, industry, the third sector and individuals in improving diabetes care and support was also emphasised.

Overall, the Quality Statement for diabetes care in Wales demonstrates a comprehensive approach to addressing the prevalence of diabetes and ensuring the provision of high-quality, person-centred, and timely care. The commitment to prevention, equity, safety, effectiveness, efficiency, and person-centeredness is commendable. However, the challenges and concerns raised during the Senedd Statement highlight the need for continued collaboration and improvement in diabetes care and support in Wales. The Quality Statement is intentionally high-level, so to be achieved, there is a need for further detail around delivery alongside robust governance and accountability arrangements. The intention is to deliver the Quality Statement in accordance with the new Clinical Pathways published throughout 2023. The need for measurable outcomes is crucial; the hope is that these will come from the new NHS Executive and Clinical Network.

It was noted during the inquiry, that whilst the delivery plans needed to meet the new Quality Statement must be imbedded at health board level, for a universal delivery of the Quality Statement a Wales-wide implementation plan may be needed to help steer and monitor deliverable outcomes against the Quality Statement.

During the inquiry, it was noted that there was a need for these positive changes for staff and patients to improve the care for people with diabetes. The Royal College of Podiatry noted positive changes made by podiatry teams, driven by the

Diabetic Foot Network, as a promising development. There is optimism about the new national clinical network and NHS Executive providing accountability and driving further improvements. However, sustaining an adequate number of skilled podiatrists is highlighted as a prerequisite for these improvements to be possible.

The All Wales Diabetes Patient Reference Group (AWDPRG) noted that there is great variability in planning around diabetes at health board level, and that there was a need to ensure that Diabetes Planning and Delivery Groups (DPDGs), or equivalent strategic planning groups, are consistently active across all health boards and actively including people living with diabetes to reflect lived experiences within the area.^{xxiii} Having these groups in place, with appropriate buy-in from the executive level within health boards, will also support the new Network and NHS executive structures to drive improvement.

Data

Wales participates in the National Diabetes Audit, which measures the effectiveness of diabetes healthcare against NICE clinical guidelines and Quality Standards in England and Wales.^{xxiv} The National Diabetes Audit includes four distinct areas of diabetes care, treatment, and outcomes, with the National Diabetes Core Audit (NDA) being the foundational audit crucial to driving improvements in care in Wales. In England, NDA data is published quarterly and is publicly available down to practice level. In Wales, NDA data is only published annually and publicly available down to the Health board level. In Wales, the NDA data is often published with a significant time lag – for example at time of publication we are awaiting NDA data to be published in Nov 2023 for the time period Jan 21- March 22. This is far longer than usual due to the COVID-19 Pandemic, but even prior to the pandemic the lag was longer for

Wales than for quarterly data dashboards for England.^{xxv} The timeliness of data, is crucial to understand performance across Wales and to target improvements in a responsive way.

Hopefully, shortly after publishing this report, new statistics from NDA data will be published, granting us an understanding of the trends relating to the quality of care in Wales for people living with diabetes. Further, Public Health Wales (PHW) is conducting a comprehensive analysis to project the prevalence of various diseases until 2035. This analysis aims to understand disease trends, develop projections for different scenarios, and assess the impact of amenable risk factors. PHW will also provide evidence-based public health interventions and evaluate the return on investment. The high-level analysis is set to be completed by autumn 2023, covering diseases such as diabetes, cardiovascular disease, cancer, smoking, respiratory disease, mental health, musculoskeletal disorders, and obesity. The initial analysis of diabetes has been included in the NHS in the 10+ report reviewed below, published 7th October 2023.

Science Evidence Advice: NHS in 10+ years an examination of the projected impact of Long-Term Conditions and Risk Factors in Wales

At the time of writing this report, a recent report from the Science Evidence Advice (SEA), “NHS in 10+ Years”, granted a preview of the projected impact of long-term conditions and risk factors affecting the NHS in Wales.^{xxvi} Diabetes was classed as one of the long-term conditions under review (LTC). The report clearly states that based on current trends, predictions of some LTCs are projected to increase more quickly than demographic growth. Type 2 diabetes is noted as a projected LTC on the rise that could be mitigated by modifying risk factors through

individual lifestyle changes and public health interventions.

The report notes that by 2038, almost one in five people in Wales are projected to be aged 70 or over, leading to a shift in old age dependency from 1 to 5 to almost 1 to 3. Life expectancy in the UK has grown slower than in other similar countries, with Wales experiencing stark differences in life expectancy between poorer and more affluent groups. The most deprived decile has a life expectancy of around 73.6 years, while the least deprived decile has a life expectancy of 82.0 years. This disparity is believed to be due to health inequalities, potentially widening for some poorer groups. The slow economic growth in Britain also contributes to declining living standards for some, exacerbating the differences in life expectancy.

In the report, the population analysis proposes that to support an ageing population in leading fuller and longer working lives, adaptations need to be made in the workplace. This includes addressing negative attitudes towards older workers, improving workplace design, embracing new technologies, and adapting HR policies. Additionally, job-related training in mid-life should be prioritised to provide re-skilling opportunities. The NHS will need to address the age profile of its workforce. To ensure sustainability, policies should focus on retaining existing workers, attracting young people to the workforce, and attracting new talent. It is also important to mitigate the drivers of poor health to optimise life expectancy, especially among the most deprived groups, to reduce health inequalities.

Further, the report draws upon an analysis conducted by Public Health Wales (2018). The number of patients aged 17 and over with diabetes in Wales has increased by almost 60,000 people in 13 years,

reaching 212,716 in 2021-22. If current trends continue, it is projected that by 2035-36, there will be approximately 218,000 people living with diabetes in Wales, representing a 2.5% increase. However, if the current rate of increase in diabetes prevalence is maintained, the number could reach over 280,000 people.

The main risk factor for type 2 diabetes is obesity and poor diet, and if these factors continue to increase, the incidence of diabetes will rise more rapidly than demographic growth alone would predict. It is estimated that around 90% of diagnosed diabetes cases in Wales are type 2 diabetes, which can be reduced through lifestyle changes such as diet and physical activity.

Projections for diabetes in England and the UK also indicate a future increase in the number of people with the disease. Studies suggest a potential increase of 5.2% in people over the age of 18 with diabetes from 2014 to 2030 in the UK. In addition to overall diabetes prevalence, specific complications such as diabetic retinopathy are also projected to increase significantly.

The report highlights that effective management of diabetes is crucial, and advancements in medication and devices, such as hybrid closed-loop systems, are being increasingly utilised. Early screening and detection, particularly in children, can significantly reduce the occurrence of severe diabetic ketoacidosis. Given that diabetes is associated with other chronic diseases, efforts to slow down disease progression through behaviour changes and effective medication can greatly improve patients' quality of life and reduce pressures on the healthcare system.

Level of Care in Wales; Adults.

As previously mentioned, one key way to review the current level and status

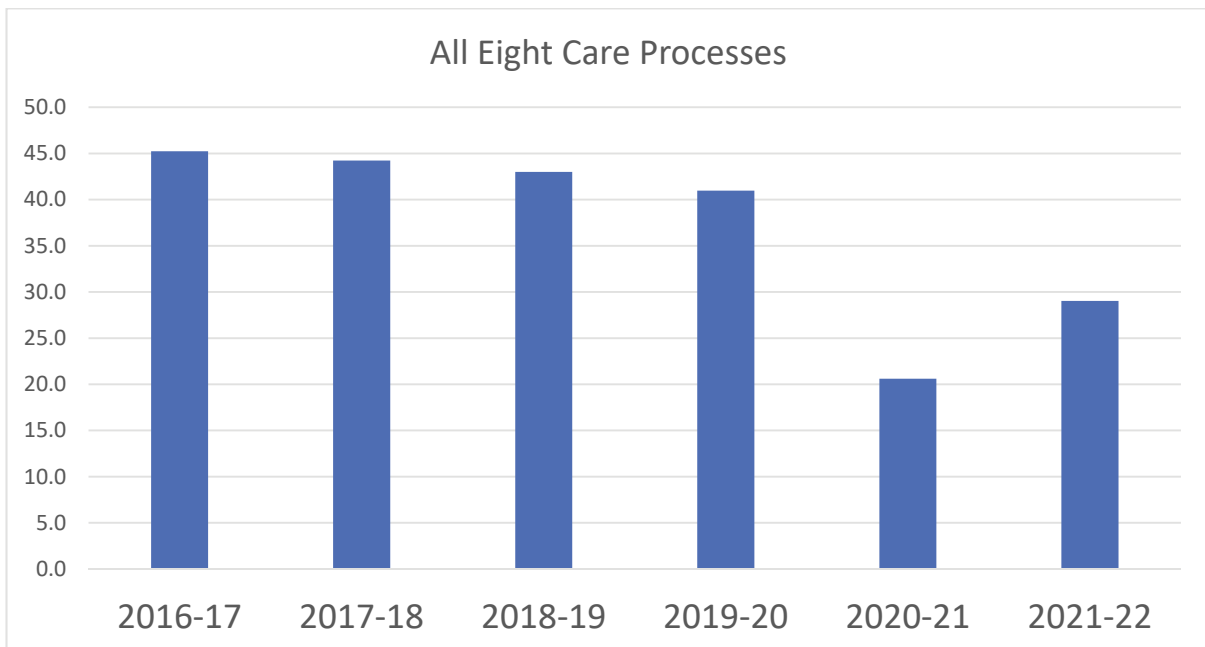
of care for people living with diabetes in Wales is the National Diabetes Core Audit (NDA). NDA data is a measure of the effectiveness of delivery of diabetes care against NICE guidelines; the data is crucial in monitoring, identifying, and recognising good and less good care across Wales. With the most recent report from the National Diabetes Audit yet to be published (at the time of writing this report, October 2023), the most recent comprehensive review of diabetes care for Wales was published in July 2022 for the period Jan 21- March 22^{xxvii}. This data is therefore, not current, but is the most recent we have publicly available.

The National Institute for Health and Care Excellence (NICE) recommends nine care processes for people with type 1 and 2 diabetes. However, retinal screening is not compared due to temporary service

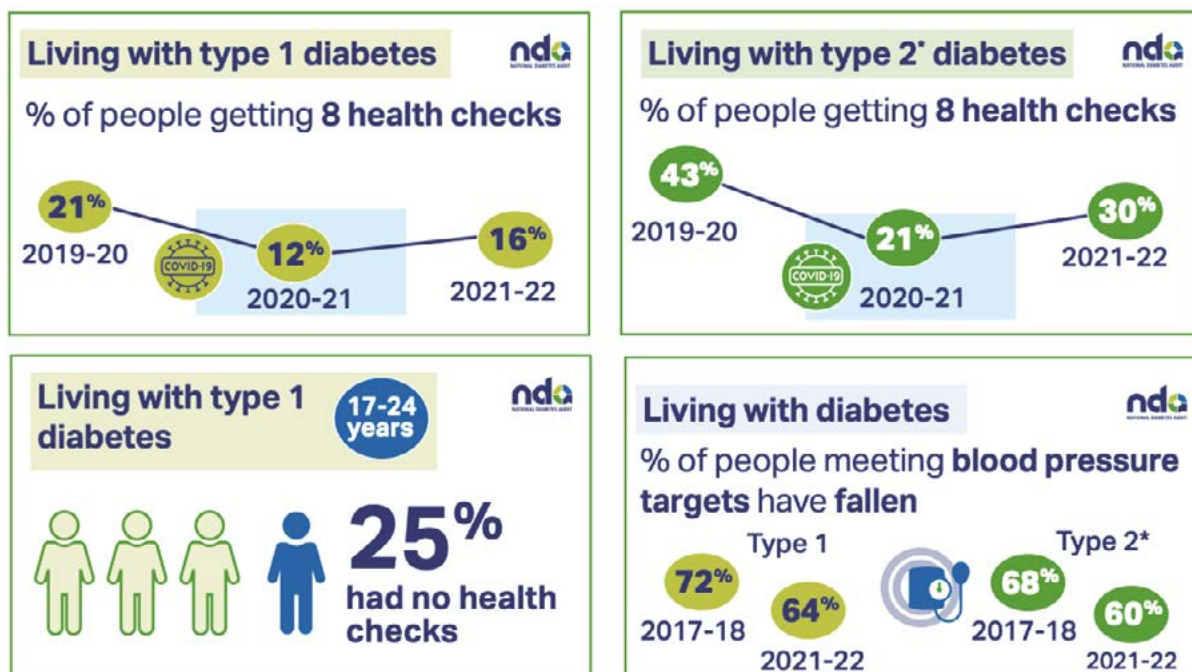
closures during the pandemic. Therefore, eight care processes compared across both type 1^{xxviii} and type 2^{xxix} diabetes are highlighted in the latest NDA report. Unfortunately, combining care management results of people living with both type 1 and type 2 diabetes shows that less than a third (29%) received all of their vital checks in 2021/22. Before the pandemic in 2019/20, the figure was 41%.

England has recovered much more quickly, where the same measurement of checks sits at 47% in 2021/22 compared to 57.3% in 2019. The recovery rate in Wales to meet management checks for people living with diabetes is not the same as in England and is falling behind.

The graph below notes the results of the last six annual NDA reports for Wales, from 2016/17 to the most recent 2021/22.



*Compiled from NDA reports^{xxx}



*Infographic of NDA Data, Wales 2021-22^{xxxii}

Further analysis of diabetes care in Wales reveals concerning trends in mortality risk, diabetic ketoacidosis (DKA) mortality rates, and HbA1c levels.

Firstly, the mortality risk ratios for both men and women with type 1 and type 2 diabetes in Wales are increasing.^{xxxii} This highlights the need for improved diabetes management and care to reduce the impact on mortality. Furthermore, the mortality risk rates are correlated with the increasing rates of DKA mortality, which have significantly risen in the three most recent data sets for Wales.^{xxxiii}

HbA1c levels, which indicate average blood glucose levels, continue to be recorded at high levels (86 mmol/mol or greater) in young adults in Wales compared to England. However, both Wales and England have similar rates of recorded lower safer levels (58 mmol/mol or less).^{xxxiv} This suggests that there is a need for targeted interventions to address high HbA1c levels among young adults in Wales.

The analysis also highlights the increased risk of angina for males with both type 1 and type 2 diabetes and females with type 2 diabetes, compared to the general population. However, the risk for females with type 1 diabetes has decreased compared to the general population. These findings emphasise the importance of managing diabetes and its associated cardiovascular risks.

Regarding stroke risk, men and women with type 2 diabetes in Wales face an increased risk compared to the general population. However, people living with type 1 diabetes in Wales have experienced a decrease in stroke risk. These results indicate the need for targeted interventions to reduce stroke risk among individuals with type 2 diabetes.

Additionally, women with type 1 diabetes in Wales have seen an increase in the level of risk for cardiovascular disease (CVD) compared to the general population.^{xxxv} This suggests a need for improved management and care for women with type 1 diabetes to mitigate the risk of CVD.

During the consultation process, AWDPGRG reported that people living with diabetes noted a stark difference in the level of care that they experienced when comparing pre- and post-care levels.

We also received submissions that reviewed the data provided by the Diabetes Insights & Variation Atlas (DIVA 2023), highlighting the current state of diabetes care in a health board. The figures indicate that there has been a decrease in the delivery of recommended diabetes care processes during the pandemic, but there has been some improvement since then. Prior to the pandemic, only 23.0% of people with type 1 diabetes and 54.7% with type 2 diabetes received the minimum standards of care. During the pandemic, these figures dropped to 6.7% (type 1) and 23.9% (type 2). However, the latest data up to August 2023 suggests that there has been progress, with care processes delivered at 21.5% (type 1) and 44.6% (type 2).

It is important to understand the impact of poor diabetes management on individuals. Diabetes-related complications, such as Ischaemic heart disease, Alzheimer's, and Dementia, contribute to 10.4% of deaths in Wales. While COVID-19 was a significant cause of death in March 2022, it has now dropped to the 32nd leading cause of death in Wales. However, overall mortality rates remain high, with deaths registered in 2023 being 7.0% above average.

A significant aspect to consider is the prevalence of severe frailty among individuals with diabetes. Approximately 2.0% of people with type 1 diabetes and 5.3% with type 2 or other types of diabetes have severe frailty. Additionally, 65,970 individuals with type 2 diabetes have both severe frailty and HbA1c \leq 53 mmol/mol (7%), leading to higher rates of

hypoglycemia-related falls and subsequent hospital admissions.

Addressing these challenges requires a multifaceted approach. Education is vital in preventing long-term complications and promoting better diabetes management. Adequate funding for diabetes care and prevention and initiatives to support remission work are essential. Programs like SEREN (referred to later in this report) can be instrumental in preventing complications for individuals with type 1 diabetes, while education programs need to be developed to have a similar impact on individuals with type 2 diabetes and other diabetes-related causes or conditions.

To address these concerning trends, it is crucial to improve diabetes care and management in Wales. This includes implementing strategies to reduce mortality risk, improving DKA management, promoting better management of HbA1c levels, and addressing cardiovascular risks such as angina and stroke. Focusing on these areas can enhance diabetes care and improve health outcomes for individuals living with diabetes in Wales.

Eye Screening Care Services

Eye screening for retinopathy is an essential element of diabetes care and eye screening is one of the core processes for diabetes care. Regular eye screening reduces your risk of sight loss caused by diabetic retinopathy, a common complication of diabetes that affects the retina. Diabetic Eye Screening Wales (DESW) service is delivered directly by Public Health Wales to screen people with diabetes for retinopathy and refer to appropriate follow-on care where needed. Diabetic Eye Screening Wales is provided for every eligible person aged 12 years and over with diabetes who is registered with a GP in Wales. The service makes

use of mobile screening units, which visit the various health board areas. The service is in the process of transformation at present.

The latest available public data is for 2022-23 (provided to us by DESW) shows that just under 191,495 patients were eligible for the service. Of these, there were 63,611 results reported from screenings during the year.^{xxxvi} To put this in context, in the year 2019-20 DESW reported 116,009 screening results.^{xxxvii}

Patient representatives told the CPG inquiry that eye screening is a huge concern for people living with diabetes, with very long delays for screening appointments, causing huge worry and stress. It was suggested that a 9-5, Monday-Friday model is not fit for purpose and is a barrier to people being able to access screening services. Locality of screening services was also raised, with many screening clinics being located in areas without good transport links.

Of the screenings reported in 2021-22, 38.5% were found to have some degree of diabetic retinopathy. This includes 9.6% of patients who had potentially sight threatening retinopathy and 1.1% of patients who had severe retinopathy.^{xxxviii}

For those who require referral to treatment, waiting times can be significant.

The referral to treatment (RTT) pathway is the period of time a patient waits from a referral from a GP or other medical practitioner until treatment starts. Open pathways refer to the patient pathways where the patient has yet to start treatment and they are actively on the waiting list for treatment. Closed pathways refer to patient pathways where the patient has received treatment or has been deemed by a healthcare professional that they no longer require treatment and are removed from the waiting list.

There are two Welsh Government targets associated with RTT, these are: 95% of patients should wait less than 26 weeks from referral; and no patients should wait more than 36 weeks for treatment from referral.

Across all eyecare (not specifically care those with diabetes) the majority of patient pathways (53.4%) waited fewer than 26 weeks for their pathway to be closed in 2022-23.^{xxxix} However, the number and percentage of patient pathways closed after more than 36 weeks has increased markedly since the pandemic, with four in ten (40.3%) pathways closing after 36 weeks in 2022-23.^{xl}

Since the pandemic performance has deteriorated and the percentage of patient pathways closed before 26 weeks was 11.6 percentage points lower in 2022-23 compared to 2019-20.

At the end of the financial year in March 2023, there were just under 87,000 (86,910) open ophthalmology patient pathways. This is an increase of 3.9% from March 2022, and an increase of 74.8% since the last comparable month largely unaffected by the pandemic.^{xli}

People living with diabetes are therefore not getting an adequate screening or treatment service. We know from people living with diabetes that the worry and fear of losing their eyesight as a complication of diabetes can create a huge stress and burden on a person, so this service provision is likely to have a knock-on impact on mental health as well as a detrimental impact on eye health.

Diabetes in care homes

It is estimated that in the UK the current residential and nursing care home population of 450,000 will increase to 1,130,000 in the next 50 years.^{xlii}

It is estimated that approximately 1 in 4 care home residents may have diabetes but there are many within care homes that have undiagnosed diabetes.^{xliii} But many of those caring for someone living with diabetes lack the knowledge and understanding to be able to support and care for the patient appropriately and safely.

To try to remedy this, a multidisciplinary group launched the Diabetes Education and Information Resource (DEIR) in 2022 aimed at people caring for people with diabetes either at home or in a residential setting.^{xliiv} Evidence presented to the CPG indicated that when carers used this tool their knowledge and confidence increased from 40% up to 92%.

This tool was funded as a project by AWDIG and Welsh Government. It requires £600 funding annually, but now AWDIG has ceased and funding arrangements via the Network are yet to be made clear, this project has no long-term funding established.

Levels of Care in Wales: Children

As part of the review of diabetes care in England and Wales, since 2011, the National Paediatric Diabetes Audit (NPDA) has been delivered by the Royal College of Paediatric Child Health (RCPCH). The most recent report is for data sets of 2020/21.^{xliiv}

The analysis of diabetes care in children in Wales reveals several key findings.^{xliiv} Firstly, there has been a significant increase in the incidence of type 1 diabetes among children aged 0-15, with a 20.7% rise from 2019/20 to 2020/21. Additionally, there was an increase of 107 cases (12.4%) of diagnosed type 2 diabetes compared to the previous year. Certain groups, such as girls, those of non-white ethnicity, and those living in deprived areas, are at a higher risk of developing type 2 diabetes.

The report highlights that only 40.5% of children and young people aged 12 and above with diabetes received all six key health checks.^{xlvii} There has been a decrease in the number of children with type 1 diabetes having four or more measurements recorded, from 54.1% in 2019/20 to 14.9% in 2020/21. Furthermore, only a quarter (26.0%) of children with type 1 diabetes had one HbA1c measurement recorded during the audit year.

The national mean and median HbA1c levels for children with type 1 diabetes decreased slightly from the previous year. However, only 24.1% of those with a complete year of care and type 2 diabetes received all six recommended health checks, and the percentage of those receiving four or more HbA1c measurements decreased to 10.7%.

The report also highlights the prevalence of high blood pressure among children with diabetes, with 31% of those with type 1 diabetes experiencing hypertension in 2020/21.^{xlviii} The need for additional psychological support is evident, with 46.5% of children with type 1 diabetes and 59.5% of those with type 2 diabetes requiring such assistance.

Data from Paediatric Diabetes Units (PDUs) shows an increase in admissions for diabetes care.^{xlix} Additionally, a quarter (25.8%) of children and young people diagnosed with type 1 diabetes within the audit year had diabetic ketoacidosis (DKA) at diagnosis.

In terms of diabetes management, 11.4% of children with type 2 diabetes are managing their condition through diet alone, while half (48.1%) use dietary management alongside blood glucose-lowering medication. Furthermore, 23.2% use insulin injections with other blood glucose-lowering medication.

Finally, the report highlights the concerning prevalence of obesity among children with type 1 diabetes, particularly in the 4 to 5-year-old age group. In Wales, 57.2% of children in this age group were overweight or obese, which is more than double the rate reported in the Child Measurement Programme for Wales in 2018/19.ⁱ Children from deprived backgrounds are more likely to be affected by obesity and, in turn, increased risk of type 2 diabetes.

These findings emphasise the need for improved diabetes care and management in children in Wales, including increased access to health checks, regular measurements, and psychological support. Additionally, efforts to address the high rates of obesity among children with diabetes are crucial for better health outcomes.

Child Measurement Programme for Wales

The Child Measurement Programme (CMP) analysis for Wales provides insights into the prevalence of obesity among children in different regions.ⁱⁱ The report covers six Local Health Board (LHB) regions for the school year 2021-2022, with the aim to expand the coverage to the entire country in the following year.

The data reveals variations in the proportion of children with obesity across LHBs and Local Authorities. The prevalence ranges from 10.6% in Powys Teaching Health Board to 14.1% in Swansea Bay at the Local Health Board (LHB) level and from 9.9% in Monmouthshire to 15.8% in Neath Port Talbot at the Local Authority level.

Comparing the current data to the figures from 2018/19, it is observed that the proportions of children with obesity have generally increased across five Health Board regions.ⁱⁱⁱ However, Powys Teaching Health Board reports a lower proportion than the previous year.

Aneurin Bevan and Swansea Bay University Health Boards are the only regions with comparable data from the previous year (2020/21). While there was a statistically significant increase in the proportion of children with obesity in both LHBs in 2020/21 compared to pre-pandemic reporting, the current data for 2021/22 shows a statistically significant reduction in obesity rates.ⁱⁱⁱⁱ

The analysis also highlights the impact of deprivation on obesity prevalence. Across all six LHBs, the proportions of children with obesity are higher in the most deprived quintile according to the Welsh Index of Multiple Deprivation. This difference is statistically significant in four of the LHB regions.

Examining deprivation trends over time within LHBs, three regions show a similar pattern from pre-pandemic to 2021/22. Swansea Bay shows a reduction in the deprivation gap since 2018/19, while Cardiff & Vale and Hywel Dda LHBs demonstrate an increase. However, as the deprivation gap is a relative measure, these results should be interpreted separately for each LHB and not used for direct comparisons. Additionally, caution is advised due to the limited number of measurements since the pandemic.

Comparing the current data for deprivation-related obesity proportions with the 2020/21 data shows that the proportion of children with obesity in the most deprived quintile has significantly decreased in 2021/22 for both Aneurin Bevan and Swansea Bay Health Boards. This suggests that the previous increase in obesity measures reported for 2020/21 may have been driven by changes in regions with higher levels of deprivation.^{liv}

These findings underscore the importance of addressing childhood obesity in Wales, particularly in deprived areas. Efforts should be focused on reducing

obesity rates, monitoring trends, and implementing targeted interventions to improve the health and well-being of children.

Review of Diabetes UK Survey Results on Diabetes Management in Wales - April 2023

This report presents the findings of a survey conducted in Wales to assess the challenges faced by individuals with diabetes. Diabetes UK Cymru presented the data to the Cross Party Group as part of its inquiry.^{lv} The survey aimed to gather insights on diabetes management, access to care, care processes, access to technology, elective surgery, and access to diabetes education programs. The data was collected from 698 respondents, of which 520 provided valid postcodes for analysis. This review highlights key findings and provides recommendations for addressing the identified issues.

Diabetes Management:

The survey revealed that over half of the respondents in Wales (55%) experienced difficulties managing their diabetes in 2022. Notably, respondents from the most deprived areas reported a higher incidence of difficulties, often attributing them to the rising cost of living. Lack of access to diabetes healthcare teams emerged as the most common cause of these challenges.

Access to Care:

The survey identified significant difficulties in accessing care for individuals with diabetes in Wales. More than a third (41.0%) of respondents found it challenging to make appointments for their diabetes checkups. Additionally, over half (52.4%) of those seeking emotional or psychological support faced difficulties in accessing it. Moreover, people in the most deprived quintile were 30% more likely to have had no contact with their healthcare team in over a year compared

to those in the least deprived. Alarmingly, 1 in 8 people in the most deprived areas reported no contact with their healthcare team in over a year.

Care Processes:

Less than a third of people with diabetes in Wales (29.0%) received all their vital checks in 2021/22, compared to 41.0% before the pandemic. These vital checks include HbA1c, Blood Pressure, Cholesterol, Serum Creatinine, Urine Albumin, Foot Surveillance, BMI, and Smoking. The decline in the rate of receiving all vital checks indicates a need for improved care processes to ensure comprehensive diabetes management.

Access to Technology:

Responses from individuals with type 1 diabetes in Wales highlighted the positive impact of technology on diabetes management. In Wales, 85.0% of people using technology agreed that it helped them manage their diabetes in 2022, with 75.4% reporting improved wellbeing. Furthermore, 60.0% stated that diabetes technology made remote consultations with their diabetes team easier. This underscores the importance of integrating technology into diabetes care strategies.

Tech Use in Wales funded by the NHS:

The survey revealed that a significant proportion of individuals with type 1 diabetes in Wales are utilising technology funded by the NHS. Among respondents, 70% use Flash Glucose Monitoring, 31% use Continuous Glucose Monitoring, 26% use an insulin pump, 8% use a Hybrid closed-loop system, and 2% use open source/DIY Closed-loop technology. These figures indicate a positive trend in adopting diabetes technology in Wales.

Barriers to Accessing Technology:

The survey identified barriers to accessing technology for individuals with type 1 diabetes in Wales, necessitating attention

and intervention. Further analysis of these barriers can provide insights for policymakers and healthcare providers to address patients' challenges in accessing diabetes technology.

NHS Elective Surgery:

Approximately 12.2% of survey respondents reported having had elective surgery with the NHS in the previous two years. Of these individuals, 29.4% found it more challenging to manage their diabetes while waiting for surgery. Moreover, 11.9% of survey respondents were currently on a waiting list for elective surgery, with 12.0% experiencing delays due to their HbA1c levels. These findings emphasize the need for coordinated care to effectively manage diabetes during the waiting period for surgery.

Impact of Waiting for Surgery:

The waiting period for surgery has significant implications for individuals with diabetes. Survey respondents waiting for surgery reported various impacts on their condition management, including the need to visit their GP (40%), visits to A&E (17%), paying for private care (11%), and considering going private for surgery (36%). These findings underscore the importance of timely surgical intervention and improved coordination between diabetes management and surgical teams.

The survey results highlight the challenges faced by individuals with diabetes in Wales, including difficulties in managing their condition, accessing care, and navigating the healthcare system. These findings call for concerted efforts from policymakers, healthcare providers, and stakeholders to address these issues and ensure better health outcomes for people with diabetes in Wales. By improving access to care, strengthening care processes, promoting technology adoption, and optimising the management of diabetes during the waiting period for

surgery, the healthcare system in Wales can enhance diabetes care and support the well-being of individuals living with diabetes.

During the inquiry, respondents noted that on the current care available for people living with diabetes in Wales highlight positive aspects and improvements. Developing the Diabetes plan in 2016 is seen as a positive step towards managing and preventing diabetes. It provides a framework for addressing the needs of people with diabetes and improving their care.

Accountability is emphasised as a key factor in delivering services. The implementation of prevention and remission programs is seen as a positive initiative in tackling diabetes. Additionally, the creation of open-access clinics in some parts of Wales is a step towards improving access to care for people with diabetes.

The consultation responses also highlight the importance of patient activation programs in podiatry and the development of technical roles for support workers in this field. These initiatives aim to enhance the care and support provided to people with diabetes, particularly in managing complications related to foot health.

However, respondents also express concerns about the limited availability of services for people with diabetes in Wales. While acknowledging that the existing services are of high quality and run by dedicated professionals, there is a consensus that there is a need for more of these services. This shortage poses a challenge in ensuring adequate care for all individuals living with diabetes in Wales.

Workforce

The National Workforce Implementation Plan, published in response to the

additional demands on the NHS workforce due to the COVID-19 pandemic, outlines immediate actions to address current pressures within the NHS in Wales.^{lvi} With the NHS Wales workforce at record levels, employing over 105,000 staff, the plan acknowledges the increasing global demand for healthcare workers. The World Health Organization predicts a shortfall of 10 million health workers worldwide by 2030, highlighting the need for proactive measures.^{lvii}

To address the immediate challenges, the plan proposes ethically recruiting more nurses from overseas, building on the success of the 'Once for Wales' pilot campaign, which resulted in approximately 400 nurses joining the NHS.^{lviii} Additionally, the creation of an 'All-Wales Collaborative Bank' aims to address short-term staffing issues and provide staff with choice and flexibility, while reducing reliance on agency working.

In response to extreme pressure situations, such as the urgent roll-out of a national vaccination program, Health Education and Improvement Wales (HEIW) is developing proposals to deploy reservists to support the regular workforce.^{lix} The plan also emphasizes the importance of volunteer engagement, intending to encourage more individuals to contribute to the health and care system.

The Welsh Government plans to release detailed plans for specific professions and services, including nursing, dentistry, and pharmacy, within the next two years. These plans will provide a comprehensive framework for addressing workforce challenges within these sectors.

One of the factors raised by respondents to the consultation, and several times during meetings of the CPG and the consultation responses, was the lack of a long-term plan for Diabetes Specialist

Nurses, otherwise known as DSNs. The All Wales Diabetes Patient Reference Group (AWDPRG), which represents the voice of people living with diabetes in Wales, shared several concerns during the consultation process.

They stated that workforce pressures are a significant issue in managing diabetes in Wales, directly affecting the quality and availability of care for patients. Patients have reported waiting periods of up to seven weeks to receive the results of their diabetes review. This delay is concerning, particularly for those who are struggling with self-management, as any necessary adjustments to their care plan are being postponed. The shortage of Diabetes Specialist Nurses (DSNs) contributes to this delay, with patients reportedly waiting a week or more for a call-back regarding their care. The network stresses that the work conducted for a strategic plan needs to be fast-paced to ensure an adequate number of nurses to replace retiring DSNs to improve the situation.

Indeed, work conducted by Diabetic Lead Nurse Julie Lewis, Renal and Diabetes Centre Glan Clwyd, with Diabetic Specialist Nurses in Wales has echoed similar concerns calling for new strategic thinking to plug the gaps and differences for uniform work practices of DSNs in Wales, training, progression and recruitment. Citing similar concerns regarding the need for new DSNs being trained to replace the increasing number looking to retire or change careers in the next few years.^{lx}

The strategic nursing workforce plan is being written and, during this report's writing, was entering phase two (of three), named 'producing the plan'. In the interim, the Integrated Medium-term Plan (IMTP) highlights the shortages facing the nursing workforce in Wales.^{lxi}

The CPG noted several workforce issues in various healthcare professions during our inquiry. The responses highlight several workforce challenges in supporting people living with diabetes within the NHS. One major issue is the need for more suitable applicants for vacant positions and new university registrants. This shortage of qualified healthcare professionals can strain the workforce and potentially impact patient care.

Furthermore, the increased length of support needed for university graduates to become competent in their roles is concerning. This suggests that additional resources and training may be required in the current workforce to ensure that healthcare professionals are adequately prepared to support people with diabetes.

The Royal College of Podiatry noted that the management of diabetes foot complications is seen as a less attractive career direction for podiatrists due to stress and burnout. This is concerning as the complexity of patients with diabetes and foot disease is at an all-time high, largely due to longer lifespans and multiple co-morbidities. It is crucial to influence undergraduate and postgraduate educational programs to provide and sustain a capable workforce in delivering complex lower limb conditions.

Responses further noted insufficient resources for providing individualised care, especially when transferring services from paediatric diabetes care to adult services, and a lack of access to specialist dietitians and lifestyle courses for people with diabetes in the community compound the challenges the workforce faces. The shortage of dietitians, particularly those with the necessary skills, and the difficulties in recruiting part-time dietitians are additional concerns in delivering effective diabetes care.

Patients and Health Care Professionals noted that adult psychological services are also inadequate to provide the needed provision for people living with diabetes in Wales. Currently, there is no uniform level of service care and provision for adults living with diabetes to access. A long-term strategy plan is needed, to address the need for dedicated specialised professionals to support the implementation of new diabetes psychological pathways.

In addition to these concerns, there are complaints about long intervals between hospital appointments. Some patients reported to the AWDPRG that they have not been seen for 2.5 years despite previous six-monthly check-ups. The shift to telephonic consultations is also causing dissatisfaction among older patients who prefer face-to-face interactions. Age-related issues are being addressed by the Older People Commissioner, who is currently conducting a consultation to investigate difficulties securing medical appointments electronically.^{lxii}

Further the AWDPRG noted the shift to online education programmes has posed accessibility challenges for some patients, and there is a noticeable lack of support for increasing access to diabetes management technology.

To address these issues, it is essential to develop a workforce plan and prioritise diabetes care within the NHS. This plan should include strategies to recruit and retain healthcare professionals, especially for diabetes-specialist nurses, podiatry and other health care professionals where an ageing workforce and inadequate training places are observed. Additionally, support for workforce growth, advancement in clinical practice, and leadership roles is crucial to ensure the provision of high-quality care for people living with, diabetes.

Recommendations

Recommendation 3: Make NDA Core Audit accessible, updated quarterly and presented as a dashboard for local comparison, as is available in England.

Recommendation 4: Improve collaboration between primary and secondary care services to effectively manage diabetes during the increased waiting period for surgery.

Recommendation 5: Increase access to NDA data to local level to help drive improvement through highlighting areas of good practice and performance of the 8 care processes in Wales.

Recommendation 6: Implement strategies to reduce the mortality risk of people living with diabetes by improving DKA management, promoting better means to control HbA1c levels, and addressing cardiovascular risks such as angina and stroke.

Recommendation 7: Focus efforts on reducing obesity rates, monitoring trends, and implementing targeted interventions to improve the health and well-being of children.

Recommendation 8: Ensure support for diabetes specialist workforce growth when drafting the NHS workforce plan for Wales, including advancement in clinical practice and leadership roles.

Recommendation 9: Review the need for a Diabetes Implementation Plan to deliver the aims and objectives of the Quality Statement for Diabetes Care in Wales.

Recommendation 10: Ensure the current transformation of diabetic eye screening services is effective in improving access to eye screening, and take action to reduce waiting times for follow up treatments for those with diabetes-related eye conditions

Recommendation 11: Ensure continued funding for the DEIW tool to help improve care for people living with diabetes in care homes.

Diabetes and Mental Health

Impact of Diabetes on Mental Health in Wales

Diabetes is more than a physical health condition – it has behavioural, psychological and social impacts and can place huge demands on a person. Research consistently shows that people living with diabetes experience higher levels of psychological distress and depression compared to those without diabetes.^{lxiii} Rates of depression are especially high in individuals with type 1 diabetes. Moreover, people with diabetes face specific psychological harms related to diabetes, such as diabetes distress, Type 1 Disordered Eating, and hypoglycaemia-related issues.^{lxiv}

The link between increased psychological distress and worsening diabetes self-management is well-established.^{lxv} High diabetes distress predicts higher average blood glucose levels, as measured by HbA1c, in both type 1 and type 2 diabetes. Despite this, access to appropriate psychological support for adults with diabetes in Wales and the wider UK has been lacking. This is due to the existing gaps in psychological health services. Generic mental health practitioners often lack expertise in assessing and managing diabetes-specific issues, leading to missed risks and ineffective interventions.^{lxvi}

The consequences of unmet psychological need in people living with diabetes extend beyond the individuals themselves. It also impacts their families, employers, and the healthcare system. Therefore, it is crucial to address the psychological needs of people living with diabetes at all stages of their lifespan and at all levels of intervention.^{lxvii}

To address this issue, several national documents provide recommendations for psychological care in diabetes:

The Diabetes Quality Statement states that “Health boards provide tools and appropriate support to people with diabetes to help address the emotional and psychological impact of living with diabetes”, a nationally agreed clinical pathway has also been published.^{lxviii}

The All-Wales Standard for People with Diabetes emphasises the need for specialist clinical psychology services in transitioning from paediatric to adult services.^{lxix}

The Well-being of Future Generations Act and A Healthier Wales Policy both highlight the importance of psychological support in maximising physical and mental well-being.^{lxx}

NICE guidelines also emphasise the association between psychological factors and poor glycaemic control in both type 1 and type 2 diabetes.^{lxxi}

“From Missing to Mainstream” by Dr Rose Stewart, provides an overview of the psychological issues faced by people living with diabetes and the difficulties they cause.^{lxxii} It also offers a framework for integrating psychological care into routine diabetes services, guidance for developing and managing specialist diabetes psychology services, and examples of pathways and protocols for supporting people living with diabetes with specific psychological needs.

Psychological care for people living with diabetes should be integrated, accessible, and flexible. Integration involves embedding psychological care within diabetes teams and training healthcare professionals to be aware of and offer basic support for psychological issues. Accessible care requires adequate staffing, quick access to support, suitable therapeutic spaces, and the option of online therapy appointments. Flexibility

is essential due to the diverse range of psychological presentations and the impact of various factors on a person's psychological health and diabetes management.

During the inquiry, one clear theme that was represented by people living with diabetes and clinicians alike was the lack of provision and access to psychological support for people living with diabetes. The most cited and referenced was the lack of clear and adequate support from child to adult services.

The AWDPRG (All Wales Diabetes Patient Reference Group) in their responses recognised the need for a Psychology Service for individuals living with diabetes across all Health Boards in Wales. While psychologists are available there are some areas where this service is currently unavailable. This poses a challenge for individuals with Type 1 diabetes who are diagnosed at later stages of life, such as ages 40, 50, or 60, as they may not be able to access the service due to the existing age limitations or the absence of the service in their respective Health Boards.

The AWDPRG shared an individual's personal experience and highlighted the importance of psychological support for people with diabetes. After spending four days in Intensive Care with Diabetic Ketoacidosis (DKA), they found it challenging to come to terms with their diagnosis and integrate diabetes into their life. Seeking support, they reached out to a support group they found on the Diabetes UK website, where they received weekly phone calls and attended group meetings that provided them with the much-needed support and understanding.

Despite the availability of support groups, it is important to note that there is currently no dedicated Psychology Service

for individuals over the age of 25 in Wales, although a Business Case has been developed to address this gap. Cardiff and Vale UHB (University Health Board) has taken steps to develop a Business Case and involve a Patient Representative in the Diabetes Specialist Interest Group (DSIG) Subgroup.

The importance of Psychology Services has been emphasised by the Young Persons Diabetes Support Group and the need for a Disordered Eating Service has also been highlighted. These voices further emphasise the significance of accessible and comprehensive psychological support for individuals living with diabetes.

In conclusion, there is a clear need for improved access to Psychology Services for individuals with diabetes in Wales. The experiences shared by individuals demonstrate the impact of the lack of psychological support in managing the emotional and psychological challenges associated with diabetes. It is crucial that Health Boards work towards implementing dedicated Psychology Services to ensure that individuals of all ages can access the support they need to effectively manage with their condition and enhance their overall well-being.

Current Eating Disorder Services in Wales for People Living with Type 1 Diabetes and Disordered Eating (T1DE)

Disordered eating is a significant concern for individuals with Type 1 Diabetes and was referred to by the patient reference group and several independent responses to the inquiry. The complexities of managing type 1 diabetes, such as the need for precise control over carbohydrate intake and insulin administration, can result in heightened anxiety and depression among patients. This, in turn, increases the risk of developing Type 1 Disordered Eating (T1DE) as they attempt to exert control over their weight.^{lxxiii}

Our inquiry noted that in Wales, up to 67% of young people with type 1 diabetes exhibit disordered eating behaviours, and 7% have clinically diagnosable eating disorders. However, it is important to note that many cases of T1DE go unrecognized or undiagnosed. Hence, healthcare professionals need to be able to identify T1DE and differentiate it from other diabetes-related factors that may present similarly, such as difficulty accepting the diagnosis or disengagement from diabetes services.

The Royal College of Psychiatrists (RCPSYCH) has proposed diagnostic criteria to assist healthcare professionals in identifying T1DE.^{lxxiv} These criteria include an intense fear of weight gain, insulin restriction, and behaviors that cause harm to health, diabetes distress, or impairment in daily functioning. By following these criteria, healthcare professionals can ensure that patients receive the appropriate support and treatment for T1DE.

A collaborative approach between diabetes and eating disorder specialists, as well as other healthcare professionals, is crucial in managing T1DE. Particularly, when hospital admission is required, coordination between multiple teams is necessary to address the complex needs of patients. The careful reintroduction of insulin and carbohydrates is vital to prevent rapid weight gain and mitigate the risk of complications associated with T1DE.

Furthermore, close monitoring of individuals with people living with type 1 diabetes who exhibit disordered eating behaviors is essential. This includes vigilant observation for potential complications such as hypoglycemia, hyperglycemia, DKA, glucose toxicity, and edema. By actively managing these

risks and providing comprehensive care, healthcare professionals can support individuals with T1DE and improve their overall well-being and quality of life.^{lxxv}

It is important to note that most patients with T1DE will have a normal weight and BMI, which cannot be relied upon as identifying factors. Therefore, diagnosis should be based on the proposed criteria rather than solely focusing on weight or BMI.

Recommendations

Recommendation 12: Implement the recommendations outlined in Dr Rose Stewart's report and the Guidance on Recognising T1DE to ensure that psychological care is integrated, accessible, and flexible, meeting the needs of people living with diabetes at all stages of their lifespan and improving overall health outcomes.

Prevention

Positive Food Environment

Following a consultation and a review of food environments in Wales, a recent Welsh Government statement announced positive steps towards addressing the impact of unhealthy foods on public health.^{lxxvi} The introduction of new legislation in 2024, aiming to be implemented by 2025, to restrict the placement and promotion of products high in fat, sugar, and salt is commendable. These restrictions on volume-based promotions, product placement, and temporary price promotions will help to create a healthier food environment and encourage consumers to make better choices.

The proposals highlight the concerning statistics regarding obesity in Wales, with over 60% of adults being above a healthy weight and over a quarter of children living with overweight or obesity by the time they start school.^{lxxvii} The increase in obesity-related diseases, such as type 2 diabetes, further reinforces the need for government action to make food healthier and promote healthier lifestyles. The strong support for such action from the public, as demonstrated by the Public Health Wales survey, further validates the necessity for these changes.^{lxxviii}

The alignment of the legislation with England's legislation ensures consistency and a broader impact across the UK. The commitment of the Welsh Government to work with the industry in providing guidance and support for the reformulation of products shows a collaborative effort to bring about positive change.

The statement also mentions other proposals under consideration, such as calorie labelling and ending the sale of energy drinks to children.^{lxxix} These additional measures, if implemented, would further contribute to a healthier food

environment and promote better health outcomes.

Overall, the Healthy Food Environment Statement in Wales demonstrates a proactive approach to addressing the pressing issue of unhealthy foods and their impact on public health. The introduction of legislation, industry collaboration, and consideration of additional measures reflect a comprehensive strategy to create a healthier food environment and promote healthier choices.

During the inquiry, matters relating to the food environment in Wales and the impact of obesity and diabetes in Wales highlighted several important considerations. Healthy eating and exercise are consistently emphasised as key factors in reducing obesity. It is recognised that podiatrists can play a role in maintaining patients' mobility and offering lifestyle support. This highlights the importance of a multidisciplinary approach to tackling obesity and diabetes, with healthcare professionals from various fields working together to provide comprehensive care.

The availability of healthier food options and the implementation of public health programs are seen as crucial for maintaining or supporting weight loss. It is suggested that dieticians can provide information and support to the general population, further emphasising the need for accessible resources and support in promoting healthy lifestyles.

However, the consultation responses also highlight concerns regarding the allocation of resources by the Welsh Government for obesity. Respondents argue that the current allocation is inadequate and call for expanding weight management lifestyle courses for adults. Additionally, the lack of tier 1 or 2 obesity services for children is identified as a problem that needs to be addressed.

During the inquiry there was an emphasis on the importance of earlier intervention in tackling obesity and diabetes. It is argued that early intervention could save money and improve health outcomes in the long run. Increasing rates of breastfeeding is highlighted as a significant intervention that could have a positive impact on health.

One of the concerns raised by the AWDPRG was the increased pressures and stigma associated towards weight loss and risk of diabetes. It was noted that recent comments made by the Government representatives asking people to take personal responsibility for their condition and wellbeing were antagonising as many felt that they were making every effort to manage their condition and reduce risks associated with increased weight, but the service provision was inadequate for prolonged and continued weight loss and self-management.

Lastly, it is noted that the Healthy Weight Healthy Wales strategy has needed more resources since 2019. This suggests a need for increased support and investment in initiatives to improve the food environment and promote active travel, as these measures can have long-term benefits for obesity and diabetes prevention and management in Wales.

All-Wales Diabetes Prevention Programme

The All-Wales Diabetes Prevention Programme (AWDPP) is a national initiative led by Public Health Wales, aimed at reducing the risk of individuals developing type 2 diabetes.^{lxxx} The programme received £1 million per annum funding until March 2024 from the Welsh Government. It was launched in June 2022 during Diabetes Awareness Week. The AWDPP focuses on providing an intervention to individuals identified as being at risk

of developing type 2 diabetes, with a HbA1c level between 42-47 mmol/mol. The AWDPP involves trained Health Care Support Workers delivering a brief intervention under the supervision of local dietitians. The intervention aims to support individuals in making lifestyle changes, including improvements in diet, physical activity, and overall healthier choices.

The programme is currently being funded by PHW for implementation in 14 primary care clusters (two clusters per health board in Wales), which is 23.3% of the 60 primary care clusters in Wales. A further 21 clusters (35%) are delivering the AWDPP without PHW funding, but are using alternative funding streams which are very often non-recurrent and guaranteed only in the short-term. 35 clusters (41.6%) are not delivering the AWDPP.

While the AWDPP may not be as extensive as comparable programmes in England, it marks a significant step forward in diabetes prevention efforts in Wales.^{lxxxi} It is part of the Healthy Weight Healthy Wales Strategy, which aims to reduce obesity levels by 2030.^{lxxxii} The programme has shown promising initial uptake, with 50% of the 3,068 identified individuals participating in the AWDPP.

The importance of such prevention programmes is underscored by the current food environment in Wales, which is a significant driver of increased obesity levels and associated health burdens. The CPG on Diabetes has welcomed the AWDPP and supports proposals for positive food environments to foster a healthier relationship with food.

Overall, the All Wales Diabetes Prevention Programme is a significant step towards reducing the risk of type 2 diabetes in Wales. By targeting at-risk individuals and supporting lifestyle changes,

the programme aligns with the Healthy Weight Healthy Wales Strategy and the need for a more positive food environment. Continued funding, evaluation and expansion of the programme will be crucial in achieving the goal of reducing diabetes rates and improving public health outcomes. Central funding must take into account that the alternative funding upon which more than half of participating clusters currently depend may not be sustained.

Recommendations

Recommendation 13: Continue to fund, and expand, the All Wales Diabetes Prevention Programme to reduce the levels of type 2 diabetes in Wales.

Recommendation 14: Fund programmes and initiatives to reduce obesity levels in Wales under Healthy Weight Healthy Wales.

Remission

Type 2 diabetes is a global health issue that has traditionally been considered chronic and progressive.^{lxxxiii} However, recent research has highlighted the potential for type 2 diabetes remission, especially for individuals within 6 years of diagnosis.^{lxxxiv} The inquiry focused on the Type 2 Diabetes Remission Programme implemented in Wales, which was presented to the Cross Party Group on Diabetes by Catherine Washbrook-Davies which supported individuals in achieving remission through weight loss. The programme utilises a Total Diet Replacement (TDR) approach and involves the participation of registered dietitians. This review examines the outcomes of the programme and its potential impact on diabetes management and healthcare costs.

Prevalence and Impact of type 2 diabetes in Wales:

As of 2020, there are approximately 204,326 registered individuals living with diabetes in Wales, with around 90% having type 2 diabetes.^{lxxxv} The prevalence of diabetes is expected to rise to 10% by 2035, placing a significant burden on individuals and the healthcare system. type 2 diabetes is associated with various complications and can reduce life expectancy by up to six years. Moreover, poor diabetes control increases healthcare utilisation and costs.

The Role of Weight Management in type 2 diabetes Remission:

Weight management has emerged as an effective intervention for type 2 diabetes prevention and remission. The DiRECT study demonstrated that an intensive weight management programme utilising a very low-calorie approach resulted in 46% of participants achieving type 2 diabetes remission.^{lxxxvi} This remission was sustained as long as participants maintained their weight after initial rapid weight loss. The study also showed

that weight loss can lead to a complete return to normal β cell function in some individuals.^{lxxxvii}

The type 2 diabetes Remission Programme in Wales:

The type 2 diabetes Remission Programme in Wales was implemented in January 2020 as a pilot project involving four university health boards. The programme aimed to test the real-world implementation of Total Diet Replacement-based interventions for type 2 diabetes remission. A total of 90 participants were enrolled, with each health board delivering the programme to 15-30 participants.

Programme Outcomes:

At the end of the 12-month intervention, 42 patients completed the programme. Among patients with two HbA1c results available at 12 months, 62% achieved remission, and 79% showed improvements in diabetes control compared to baseline. These outcomes demonstrate the potential for type 2 diabetes remission through weight loss and highlight the effectiveness of the type 2 diabetes Remission Programme in Wales.

Benefits of Weight Loss:

Even if remission is not achieved, weight loss offers numerous health benefits for individuals with type 2 diabetes. It reduces the risk of developing conditions like heart disease and certain cancers. Additionally, weight loss can lead to reducing or discontinuing blood glucose-lowering medications, thereby reducing medication costs.^{lxxxviii}

Cost Considerations and Funding Models:

The type 2 diabetes Remission Programme in Wales reviewed two funding models. In three health boards, all costs for total meal replacements were covered by all Wales funding. In one health

board, patients made a 50% contribution to the cost. These funding models will inform future decisions regarding the sustainability and scalability of the programme in Wales.

The type 2 diabetes Remission Programme in Wales has shown promising outcomes in achieving type 2 diabetes remission through weight loss. The programme's use of TDR and the involvement of registered dietitians have contributed to its success. The programme not only improves the health outcomes of individuals with type 2 diabetes but also has the potential to reduce healthcare costs associated with diabetes management. Further expansion and evaluation of the programme can provide valuable insights for improving type 2 diabetes care and support in Wales. By prioritising weight management and type 2 diabetes remission, Wales can significantly reduce the burden of type 2 diabetes on individuals and the healthcare system.

Cross Party Group Actions

The Cross Party Group wrote to the Health Minister, noting support for the programme and the need for continued funding. In response on the 17th of April 2023, the Minister for Health and Social Services responded, stating:

"I welcome sight of the enclosed report and the Group's support for the introduction of this intervention. With the predicted rise in type 2 diabetes and the large personal and societal impact of diabetes prevalence, it is vital the NHS adapts to prevent type 2 diabetes, and where possible support people to achieve remission.

In June I expect to publish the Quality Statement for Diabetes, which includes commitments for the continued development of diabetes remission

services. I hope to say more about this to the Senedd on the day of publication."

Review of the Quality Statement on Diabetes, the statement states that: *Health boards provide remission services to appropriate people living with type 2 diabetes to help reduce the prevalence of type 2 diabetes and the risk of developing serious complications.*^{lxxxix}

However, funding has yet to be announced for further delivery of an All-Wales Remission Programme.

During the Cross Party Group inquiry, several members echoed the need and support for a delivery of a programme in Wales with dedicated yearly funding for a universal access across Wales. The AWDPRG noted that such services should be part of the bedrock of essential support to help people reduce weight and continued risks associated with type 2 diabetes.

Recommendations

Recommendation 15: Implement an All Wales Diabetes Remission Service to help increase type 2 diabetes remission in Wales.

Technology

One of the most effective ways and means for someone living with diabetes to manage their diabetes well is access to technology. These can vary from Flash Glucose Monitoring, Continuous Glucose Monitoring (CGM), Insulin Pumps, Hybrid Close Loop, and open source /DIY closed-loop technology.^{xc}

Diabetes UK's Diabetes is Serious survey asked our respondents (living with type 1 diabetes) how technology helped them manage their diabetes.^{xcii}

85.0% of respondents with type 1 diabetes using technology agreed it helped them to manage their diabetes in 2022, and 75.4% said it improved their overall well-being. Furthermore, 60.0% of respondents informed Diabetes UK that diabetes technology made remote consultations with their diabetes team easier. Technology is changing the way that people living with diabetes live their lives and reduces pressures associated with the condition that can further cause complications.

Sensor technology for type 1 diabetes has been available in the Welsh NHS since November 2017. What some may find challenging when obtaining monitoring technology in Wales is the eligibility criteria. For example, referral to Flash glucose testing is an option that requires consideration of several factors, such as the frequency of blood glucose testing in a day, more than one episode of severe hypoglycaemia, or frequent asymptomatic hypoglycaemia.

On the 31st of March 2022, NICE guidelines were updated, which changed the eligibility criteria.^{xciii} Changes in NICE guidelines will support referrals for this monitoring technology; in essence, it is a shift in thinking that recognises technology as an integral part of diabetes management. The choice will be based (according to NICE) on shared decision-making with the individual based on

preferences, needs, characteristics and the functionality of the devices available.

However, new NICE guidelines don't immediately translate into the latest recommendations being adopted as policy. In a written question response to Hefin David MS on the 22nd of April 2022, the Minister for Health and Social Services, Eluned Morgan MS, cited staff training obligations as a possible obstacle to implementing the updated NICE guidelines.^{xciii}

On the 8th of November 2022, Joel James MS asked if the First Minister would provide an update on the qualifying criteria for flash and continuous glucose monitoring technology for diabetes management.^{xciv} In response from the Welsh Government, the Minister for Rural Affairs and North Wales and Trefnydd Lesley Griffiths MS noted the importance of the accessibility of such technologies in Wales. With the Minister of Health and Social Services in the Chamber, it was noted that she would write to Joel James MS with a response on the current rollout of the NICE Guidelines.^{xcv}

During the writing of this report (October 2023) an imminent NICE update on the use of Hybrid Closed Loop systems for managing blood glucose levels in type 1 diabetes is due to be published.^{xcvi} We expect that updated guidelines will improve access for people living with diabetes using insulin pump or CGM technology to Hybrid Closed Loop technologies that drastically support people living with diabetes to help them manage their condition.

In our DIS survey, we learnt that only 31% of respondents use CGM, and 26% use insulin pump technology in Wales. During the inquiry, people living with diabetes highlighted several important factors to consider when embracing new technologies both in the care and

the management of people living with diabetes. One key issue raised is the potential disadvantage faced by some older individuals or those who are either less digitally literate or need access to laptops, computers, or smartphones. This can hinder a person's ability to participate in virtual consultations, which have become increasingly common in healthcare settings. To address this, a scoping exercise is suggested to be implemented to gather insights from rural areas regarding technology access and support.

The importance of good internet and Wi-Fi access is emphasised, particularly for populations with limited access to healthcare professionals. Technology-dependent healthcare services, such as virtual appointments and remote monitoring, rely on reliable internet connections. This is crucial for ensuring equitable access to healthcare, especially in rural or underserved areas.

Respondents also highlight the future potential of technology in diabetes care. Such as the overarching NHS Wales APP which continues to roll out pan Wales and other supportive NHS apps with access to personal health records become more prevalent, it is essential for patients to have the necessary technology for self-management. Continuous glucose monitoring (CGM) devices and insulin pumps are mentioned as examples of technology that contribute to self-care and provide insights into patient behaviours and activation levels. It is noted that children and adults with type 1 diabetes generally have good access to technology, but there is uncertainty regarding adults with type 2 diabetes.

The Royal College of Podiatry supports incorporating technology to improve diabetes care. Virtual appointments are recognised as a time-saving measure

for both patients and healthcare professionals, as they eliminate the need for unnecessary clinic visits. CGM devices are also highlighted as a valuable tool for patients to monitor their glucose levels and engage in self-care.

However, it is acknowledged by the AWDPRG that alternative approaches should be available for patients who may not be suitable for technological changes based on their individual needs and circumstances. It is important to consider the diverse needs of patients and ensure that technology is not the sole approach to diabetes management but rather one option among a range of available strategies.

The NPDA highlights that some minority ethnic groups, and more deprived groups, are less likely to use diabetes pump technology. The use of diabetes technology has a positive impact on HbA1C levels, and so this unequal use of tech may contribute to the fact that people in deprived and some minority ethnic groups have higher average HbA1cs. More can be done to address this clear inequality in care and outcomes.

It is also noted by some respondents that the current information technology systems both in Primary and Secondary care, used to analyse patient data from their diabetes technology, haven't been uniformly updated throughout health boards. Clinicians shared examples noting that paper-based systems are still relied upon and woefully inadequate to support people living with diabetes utilising technology to support their diabetes management. This concern was further stressed, noting that if continued prevalence data for people diagnosed with diabetes in Wales continues, in over a decade, up to 10% of the population in Wales could be utilising technology to manage their diabetes.

Recommendations

Recommendation 16: Ensure equitable access to diabetes technology in Wales for type 1 and type 2 diabetes.

Recommendation 17: Review primary and secondary care information technology systems to support the increased use of diabetes technology.

Diabetes and Education

Impact of type 1 diabetes in School

Recent research reviewing the impact of living with diabetes and educational attainment in Wales found that children living with diabetes are more likely to miss school. Those facing challenges managing their diabetes missed 15 more sessions of school each year, had lower educational attainment and were also half as likely to attend university as children without diabetes.^{xcvii} These missed education days related to managing the condition and diabetes burnout, a psychological by-product of living with diabetes, affected academic performance.

In a Diabetes UK survey of parents/ carers of children with type 1 diabetes conducted in November 2021, 50.73% of respondents said that their child's anxiety and mental health around school had been negatively impacted by their diabetes.

During our inquiry it was noted by School Nurses that there has been an increase in the number of children with type 2 diabetes presenting at school, a relatively recent development; there is a growing need for support for children living with obesity and at risk of or having developed type 2 diabetes. Positive encouragement and support is needed at this most crucial stage of development to ensure that a positive relationship with food and exercise is developed and to reduce the mental health implications of living with obesity at school.

Living with any diabetes in school can be complicated, and children with diabetes and other long-term health conditions experience can experience detriment.

These are some of the experiences that parents and School Nurses have informed the Cross Party Group about:

- **Delayed School start (after school holidays) for children.** Training and adequate planning must be conducted to ensure the children's safety at school. Unfortunately, this isn't always the highest priority for schools and is only finalised during the first few days of term. This means that children living with long-term health conditions find themselves at home for the first few days, missing education and alienating them from their peers who have returned.
- **Inadequate Staff Training.** In the most extreme circumstances, parents have had to move children from their school of choice or have been refused on the grounds of insufficient provision to support a child living with a long-term health condition adequately. In daily practice, this can also result in the parents of the children being called in if a technical issue with any diabetes management technology that a child is wearing to manage their condition is unknown to the teachers or if the teachers do not feel comfortable managing a condition during school time.
- **Education Exclusion.** This could mean that a child cannot participate in a school day, an away day, eat a treat that has been brought in, or generally participate in a physical activity. Most of the time, the reason for not supporting and excluding a child is a lack of awareness of the condition and understanding of a child's needs and how they can manage their condition.
- **Medical exclusion.** Children with long-term health conditions like diabetes have a higher number of medical appointments, which can lead to higher absenteeism. This can lead to frustration being wrongly placed on the child for not attending classes

and, in extreme circumstances, being punished. Punishment and frustration by teachers are also felt when a child may be using a mobile to monitor their condition.

- **School Meals.** Information from catering at schools to support parents and children living with diabetes can be found inadequate. Understanding the calories and carbohydrates of meals is essential to support insulin injection and adequate medication intake. Not all parents receive the information in good time to adequately prepare their children for school for the day. Because of this, children with long-term health conditions tend to be sent with packed lunches, which undermines schemes such as free school meals.
- **After School Clubs.** Usually, these activities are arranged by volunteers or single teachers for supervision. Unfortunately, provision for children with long-term health conditions is not provided, and children tend to be excluded from participation on these grounds. This can lead to further social isolation and places a child at a disadvantage to their peers, as after-school provision can support a child's development and give more support to families from low socioeconomic backgrounds.
- **Teaching Impact on Students.** Management of a condition without adequate staff provision can impact the overall education of the child living with diabetes and their peers. Disruption to class to support a child with their condition can impact comprehensive lesson planning and the educational attainment of the course. Continued disruptions can lead to misplaced frustrations by the

teacher and the students, placing a further psychological and social impact on the child.

Calls for accessible guidance for parents and schools to help develop plans to support children with additional learning needs.

Early in 2023, the petitioner, Zoe Beasley, highlighted to the Senedd through her petition (supported by Diabetes UK Cymru) that there are around 1,400 children and young people with type 1 diabetes in Wales who require support in school to manage their condition and reach their full potential.^{xcviii} The petition calls for accessible guidance for parents and schools to develop plans supporting children with additional learning needs, specifically focusing on children with type 1 diabetes.^{xcix} However, many of these children, like her son do not receive the necessary support due to a lack of understanding and funding.

Zoe shares her frustration with the lack of dedicated support, emphasizing that without proper care, type 1 diabetes can lead to life-threatening complications. She points out that the Equality Act 2010 legally defines children with diabetes as individuals living with a disability, and schools are responsible for ensuring they are not disadvantaged. Zoe highlights the importance of support during the nursery to primary school transition, as children cannot be trained on insulin pumps until they are eleven years old, and some are diagnosed with diabetes from birth.^c

Diabetes UK Cymru and Zoe note that the Additional Learning Needs and Education Tribunal (Wales) 2018 Act is a positive step, as it introduces Individual Development Plans to support students and meet their academic, physical, and support needs.^{ci} However, its implementation hasn't been smooth,

and several parents have faced difficulty obtaining and maintaining adequate provisions for their children at school living with debates.

Zoe calls for the Welsh Government to review the current guidance for the Act by creating accessible format guides and support materials to increase participation from schools and local authorities, aiming to reduce the barriers to access for children with type 1 diabetes. These guidelines will help to support teachers and decision makers of the impact that diabetes management can have on educational attainment and grant examples of situations to help arrange and discuss support with parents and children living with diabetes.

Overall, Zoe's petition seeks to improve support for children with type 1 diabetes in schools by advocating for accessible guidance and resources that ensure their needs are met, and they receive the necessary care to thrive academically and physically.

Overall Public Understanding of Diabetes

One theme common with concerns raised in educational settings, is the lack of understanding of diabetes. In a recent survey conducted during the Summer of 2022 of people living with diabetes as part of the 'Missing to Mainstream', DUK Cymru found that 37% of people living with diabetes continued to face stigma associated with their diabetes.^{cii}

The survey also found that 77.6% of respondents feel that the General Public doesn't understand diabetes at all or not very well compared to 26% of respondents giving the same response for Health Care Professionals (general) understanding.^{ciii} Therefore, a greater understanding of the condition is needed with welcomed awareness of hidden conditions such as diabetes by

educational institutions, especially for lecturers and peers who may be unaware of the overall impact of the condition.

During the inquiry, several responses on the general public's knowledge of diabetes in Wales revealed areas where improvement is needed. The AWDPRG suggested that national TV coverage is necessary to promote exercise and healthy eating before diabetes diagnosis. Drawing lessons from successful smoking campaigns and other life-limiting conditions is seen as a valuable approach to raising awareness about diabetes and its prevention.

One key aspect highlighted in the responses is the need for the public to understand that their current behaviours can significantly impact their future health outcomes. This understanding is crucial in promoting healthier lifestyles and reducing the risk of developing diabetes.

Respondents have a specific concern about the lack of public awareness regarding type 1 diabetes. They noted that is important for the public to better understand its prevalence, symptoms, and management. Public awareness is primarily focused on type 2 diabetes and its association with overweight and obesity. However, there is a need to broaden this awareness to include a better understanding of associated health problems and the daily impact of living with diabetes.

The Royal College of Podiatry also highlight a lack of public awareness about foot health and diabetic foot ulcers. In response to this, the Royal College of Podiatry provides patient information on foot care and campaigns for greater awareness. However, there is still a need for improved public understanding and risk reduction for type 2 diabetes.

In conclusion, the consultation responses indicate that there is a clear need for enhanced public knowledge and awareness of diabetes in Wales. This includes raising awareness about all types of diabetes, their prevalence, symptoms, management, associated health problems, and the daily challenges faced by individuals living with diabetes. Drawing inspiration from successful initiatives for other health conditions, national campaigns can significantly improve public awareness and promote healthier lifestyles to reduce the risk of diabetes.

Review of the SEREN Programme for Children/Young People and Families Living with Type 1 Diabetes in Wales

During the inquiry, the SEREN Programme Team presented at the Cross Party Group to highlight the programme to members and the inquiry. However, it must be noted that there are several education programmes for people living with diabetes in Wales. These include:

- MyDesmond – An online programme to support and educate adults with type 2 diabetes.^{civ}
- X-PERT – A 6-week group education course to improve knowledge and skills for adults with type 2 diabetes.^{cv}
- DAFNE (Dose Adjustment for Normal Eating) - An education course for adults with type 1 diabetes.^{cvi}
- The SEREN Programme – Structured education for children and young people.^{cvi}
- SEREN Connect – An education programme to support young people with type 1 diabetes moving between child and adult healthcare services.^{cvi}

The SEREN Programme is a structured education programme designed for children and young people and their families living with Type 1 diabetes (T1D) in Wales.^{cix} It was developed to address

the lack of a structured education programme for the paediatric age group and to improve outcomes for children with type 1 diabetes. This review examines the development, implementation, and outcomes of the SEREN Programme, as well as its potential impact on diabetes management and healthcare costs in Wales.¹

Development and Implementation:

The idea for the SEREN Programme was conceived in 2012, with the aim of creating an adaptable and transferable structured education programme for children and young people with type 1 diabetes management. A multidisciplinary working group was formed to develop the programme based on the philosophy of empowering and supporting children and young people and their families in managing diabetes. The programme consists of various modules tailored to different age groups and specific aspects of type 1 diabetes management, such as diabetes at diagnosis, transitioning to secondary school, and using insulin pumps.

Since its inception, the SEREN Programme has undergone continuous development and improvement. Facilitator training was introduced in 2018, and collaborations were established with other organizations, such as BERTIE and My Way Digital Health, to enhance the programme's resources and digital capabilities. The programme has also received funding from the Welsh government, with over £650,000 invested to date.

Programme Outcomes:

The SEREN Programme has successfully delivered structured education to children and young people across Wales. Approximately 900 children and young people have received education

on diabetes at diagnosis, with around 60 children and young people per year participating in the moving to year 7 module. The programme has also expanded to include modules on active lifestyles and insulin pump use. Feedback from children, young people, and their families has been positive, highlighting the effectiveness of improving knowledge and self-management skills.

Health professional training has been an integral part of the SEREN Programme, with interactive sessions conducted twice yearly since 2019. Over 80 health professionals have attended the training, with ongoing and mandatory attendance for new staff. This training ensures that healthcare professionals are equipped with the knowledge and skills to support children and young people with type 1 diabetes effectively.

Potential Impact on Diabetes

Management and Healthcare Costs:

The SEREN Programme aligns with the recommendations of the National Institute for Health and Care Excellence (NICE) for offering structured education to all children and young people with type 1 diabetes.^{ox} By providing comprehensive and quality-assured education, the programme aims to improve self-management skills and reduce the risk of complications associated with poorly managed diabetes. This, in turn, can lead to better health outcomes, enhanced quality of life, and potential cost savings for the healthcare system.

Studies have shown that structured education can lead to reductions in HbA1c levels and improved glycaemic control. Even a 0.4% reduction in HbA1c can result in significant cost savings over time. The SEREN Programme, by improving self-management and empowering children and young people and their families, has the potential to achieve these

outcomes and reduce the burden on the Welsh NHS.

Sustainability and Future Plans:

To ensure the sustainability of the SEREN Programme, a proposal has been made for each Health Board to contribute annually. This funding would cover continued access to the accredited programme, printed resources, ongoing health professional training, and regular updates. This is only part of the picture, though. The SEREN programme currently depends on a national coordinator who enables the resources to be continually developed and updated in line with constant changes to diabetes tech and best practice and whose role is to maintain the programme's accreditation status and enable and support health boards to deliver the programme. The coordinator has been funded through the AWDIG, which has now ceased and been replaced by the National Strategic Clinical Network.

Funding for programmes previously funded by AWDIG have no automatic funding through the new clinical Network and arrangements for securing ongoing funding for such projects are as yet uncertain. Future funding for this post is therefore not secured at this point. And concerns were raised that without funding, the programme would not be able to continue in its current form. Without an up-to-date, accredited structured education programme, there is a risk of outdated resources and poor self-management in children and young people, as well as inconsistency across services, leading to increased healthcare costs and reduced quality of life, and a potential postcode lottery. It was raised that the absence of a funded education programme for children would mean that this age group were being treated inequitably.

¹ Presentation was provided to the CPG which can be requested by emailing Wales@diabetes.org.uk

The SEREN Programme has gained recognition and interest beyond Wales, with several centres in the UK and overseas utilising the programme's resources. This recognition further highlights the quality and effectiveness of the programme in diabetes management.

The SEREN Programme has successfully addressed the lack of structured education for children and young people with type 1 diabetes in Wales. Through its comprehensive curriculum, interactive resources, and trained educators, the programme empowers children and young people and their families to effectively manage diabetes. The positive outcomes and participant feedback demonstrate the programme's impact on knowledge, self-management skills, and potential cost savings in the long run. The sustainability of the programme through annual contributions from Health Boards, with the support of the national coordinator, ensures continued access to quality education for children and young people with type 1 diabetes in Wales. By prioritizing structured education, Wales has become an international leader in paediatric diabetes education and has the opportunity to improve further diabetes management and outcomes for children, young people, and their families.

Case Study: Presented during a Hybrid CPG Inquiry Session

Nia, a mother of a 12-year-old boy named Gruffudd, shared her experience of having a child with Type 1 diabetes and the importance of the SEREN programme during the Cross Party Group on Diabetes. The diagnosis of type 1 diabetes significantly changes a person's life, and Nia emphasised the need for structured education to learn how to manage the condition. The SEREN program provided them with day-by-day sessions during the crucial first week after diagnosis, covering everything they needed to know

to live with type 1 diabetes. The bilingual programme allowed Gruffudd to engage with it in Welsh, his preferred language, the only accredited programme able to provide such a service.

Living with Type 1 diabetes involves constantly facing new challenges and learning how to manage them. The SEREN programme has been a valuable resource for Nia and Gruffudd in navigating these new experiences and stages of life. Transitioning from primary to secondary school was a significant step, and the SEREN programme's transition sessions helped Gruffudd settle in, feel normal, and stay healthy. The programme has also been instrumental in creating an invisible safety net of people who understand type 1 diabetes and know how to keep Gruffudd safe, including teachers, coaches, and friends.

Nia and Gruffudd have consistently used the SEREN programme to ensure accuracy and consistency in information and language used to discuss and treat type 1 diabetes. It has equipped Gruffudd to advocate for himself and his needs, making him an informed and proactive patient. Nia expressed her gratitude to the type 1 care team at the Princess of Wales Hospital, especially those involved in the SEREN programme, for their integral role in Gruffudd's life with Type 1 diabetes.

In conclusion, the SEREN programme has been essential in supporting parents like Nia and children like Gruffudd to manage their type 1 diabetes. It has provided them with the knowledge, resources, and support needed to navigate the challenges of living with the condition. The programme's focus on patient empowerment and education has significantly impacted Gruffudd's ability to care for himself and advocate for his needs.

Recommendations

Recommendation 18: Ensure the future sustainability of education programmes like SEREN for people and families living with diabetes in Wales.

Recommendation 19: Review the current implementation of the Additional Learning Needs (Wales) Tribunals 2018 Act and its impact on education for children living with type 1 diabetes.

Recommendation 20: Commit to continued funding for a coordinator for the SEREN education programme to enable the programme to continue.

Inquiry Overview

The inquiry into diabetes care in Wales has resulted in comprehensive recommendations addressing various aspects of diabetes management and prevention. These recommendations cover a wide range of areas, including awareness, access to data, collaboration between healthcare services, obesity reduction, workforce support, psychological care, technology, education, and funding sustainability. But it must also be noted that the recommendations are based on the fantastic work that our clinicians in Wales do daily. Without them, this report wouldn't have much to review, and the CPG sends a collective thanks for their amazing work.

We also wouldn't be able to do this without the patient voice, their experiences of diabetes care and management are crucial in helping us support changes to improve overall diabetes care in Wales. The CPG is very thankful of the work conducted by the AWPRG to collect thoughts and responses from people living with diabetes across Wales, their submissions have been critical to understanding the current level of care in Wales and to help us understand the impact of the dedicated work of our clinicians and NHS Services.

One of the first recommendations of this report is implementing an awareness campaign highlighting the increased risk of diabetes associated with ethnicity. This campaign aims to raise awareness among at-risk populations and promote early intervention and preventive measures. We must do more to work with groups most at risk of diabetes, including those facing tough socio-economic factors during these difficult times. To tackle the socio-economic factors contributing to diabetes, the inquiry recommends targeting programs specifically to support less affluent communities facing food insecurity. These programs will help

improve access to healthier diets and reduce the risk of type 2 diabetes.

The inquiry also emphasises the importance of making the NDA Core Audit accessible, updated quarterly, and presented as a dashboard for local comparison. This will facilitate easy identification of the effectiveness of primary care outcomes and allow for identifying areas that require improvement. By highlighting areas of good practice and monitoring the performance of care processes, healthcare providers can make informed decisions and improve the overall quality of care.

Improving collaboration between primary and secondary care services is another crucial recommendation. This collaboration will ensure effective diabetes management during increased waiting periods for surgery, preventing gaps in care and ensuring optimal outcomes for people with diabetes. Overall strategies to reduce the mortality risk among people living with diabetes, such as improving DKA management and controlling HbA1c levels, are also recommended. Addressing cardiovascular risks, including angina and stroke, is crucial for improving the long-term health outcomes of individuals with diabetes.

The inquiry emphasises the need to focus efforts on reducing obesity rates, particularly for future generations. Monitoring trends and implementing targeted interventions will help improve the overall health and well-being of the population and reduce the risk of developing diabetes. This is a critical recommendation as the number of people living with type 2 diabetes continue to increase so will the pressures on our NHS and our workforce.

Supporting the growth of the diabetes specialist workforce is also crucial for

providing quality care. Ensuring that the NHS workforce plan for Wales includes support for clinical practice and leadership roles is essential to meet the increasing demand for diabetes care.

Overall, the inquiry recommends reviewing the need for a Diabetes Implementation Plan to deliver the aims and objectives of the Quality Statement for Diabetes Care in Wales. This plan will help ensure that goals are met and that care remains patient-centered and effective. Without it, it is feared that there will not be an extra means to direct focus at healthboard level to implement the Quality Statement and ensure an effective and universal access of care.

The inquiry made several other recommendations that included improving access to diabetic eye screening services, continuing funding for tools that improve care in care homes, implementing psychological care recommendations, expanding prevention programs, funding initiatives to reduce obesity, ensuring equal access to diabetes technology, reviewing information technology systems, sustaining education programs, and reviewing the impact of educational legislation on children with type 1 diabetes. These recommendations are based on fantastic work already being done in Wales that needs continued funding and support to deliver the best care for people living with diabetes.

In conclusion, the inquiry into diabetes care in Wales has produced comprehensive recommendations addressing various aspects of diabetes management and prevention. When applied collectively, these recommendations will contribute to better diabetes care, outcomes, and overall health in Wales.

Respondents and external stakeholders of the CPG

- Diabetes UK Cymru
- Dr Rose Stewart, Consultant Clinical Psychologist, Betsi Cadwaladr University Health Board / Diabetes Psychology Network UK
- Lisa Daniels, Swansea Bay UHB, Paediatric Diabetes Specialist Nurse
- SEREN Programme
- Diabetic Foot Network
- Royal College of Podiatry
- Wendy Gane, All Wales Patient Reference Group on Diabetes
- Dr Julia Platts, National Clinical Lead for Diabetes NHS Wales
- Sujatha Thaladi, Mentor Ring
- Mathew Norman, Diabetes UK
- Rachel Burr, Director of Wales, Diabetes UK Cymru
- Rachel Churm, Diabetes Exercise Scientist, Swansea University
- Cancer Research UK
- Michelle Moseley, RCN Wales Education and Lifelong Learning Advisor
- Sarah Crowley, Diabetes Transitional Care National Coordinator
- Christine Cotterell-Morgan, Diabetes Education/ThinkGlucose Lead & DSN, Nyrs Arwain/ThinkGlucose and Education Lead/Diabetes Specialist Nurse
- Professor Linda Speck, Head of Health Psychology Services - CTMUHB
- Emma Burke, Stroke Association
- Dr Rebecca Thomas, Sr Research Officer, Swansea University
- Dr Philip Evans, Consultant Diabetologist
- Scott Crawley, National Diabetic Foot Co-ordinator, Cardiff and Vale UHB
- Ross Evans, Kidney Wales
- George Watkins, Mind Cymru
- Dr Kate Rhodes, Clinical Health Psychologist, NHS Wales
- Bethan Lloyd, Consultant Clinical Psychologist, Service lead for HDUHB Health Psychology Service
- Dr John Butler, Clinical Psychologist, ABUHB Diabetes Service
- Dr Bethan Philips, Consultant Clinical Psychologist, CTM UHB
- Dr Jessica Broughton, Clinical Psychologist, CTM UHB
- Neica Jones, Implementation Group Coordinator, NHS Collaborative
- Catherine Washbrook-Davies, All Wales Nutrition & Dietetic Lead for Diabetes (Adult) & All Wales Diabetes Prevention Programme (AWDPP)
- Rob Lee, Vice Chair AWDPRG
- Dr Nicolas Webb, Royal College of GPs
- Dr Carys Marshall, Principal Clinical Psychologist, Cardiff and Vale UHB
- Tess Saunders, RCPOD
- Joanne Oliver, NHS Wales Implementation Groups and Network Manager, NHS Collaborative
- Nicola Pitman, NHS Executive
- Claire Baker, Paediatric Diabetes
- Nia Elis, Parent of a child living with type 1 diabetes
- Dr Lisa Morris, Clinical Psychologist
- Lauren Edmunds-Smith, NHS Collaborative
- Kieran Sawdon, NHS Collaborative
- Dr Sarah Davies, GP, Clinical Director for Diabetes in Primary Care

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