GIG CYMRU NHS WALES

Bwrdd Iechyd Prifysgol
Cwm Taf Morgannwg
University Health Board

DIRECTOR OF PUBLIC HEALTH REPORT ON DIABETES

November 2024

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ACKNOWLEDGMENTS

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CONTENTS

FOREWORD

Diabetes is one of the leading health issues of our age, with those affected experiencing a host of complications, reduced quality of life and reduced life expectancy. It is also a major draw on NHS resources, which can then not be used to improve health in other areas and for other conditions, as well as impacting on the wider economy through ill health and unemployment.

The human and financial costs of diabetes cannot be overstated; without concerted effort to address them, they are also set to rise.

Type two diabetes Mellitus (T2DM), which accounts for approximately 90% of diabetes is, however, largely preventable, both in terms of onset and the development of complications and outcomes. This should galvanise all of us to work together to stem its increase.

The major risk factor for developing T2DM is unhealthy weight. CTM currently has the some of the highest levels of overweight and obesity in Wales. As with the risk of developing complications from diabetes, unhealthy weight is strongly linked to increased financial deprivation. These are "wicked issues", which require a whole-of-society approach to address.

The coming wave of increased diabetes cannot be withstood. This report highlights a range of challenges driving the increase of diabetes in our communities, but it also outlines what we can do, collectively, to avert it.

This will require significant investment of both effort and resource. Whilst recognising our current financial constraints, we must also face the unsustainable human, social and economic cost, were we to fail to act decisively.

It is my hope that the information held within this report helps to frame the arguments, forge alliances and precipitate those decisive, co-operative actions.

Philip Daniels
Executive Director
of Public Health

1 INTRODUCTION

Aim of the Report

The aim of this report is to highlight the significant impact type 2 diabetes is currently having on the health and wellbeing of our population, how it's closely linked to rising obesity rates in Cwm Taf Morgannwg University Health Board (CTMUHB), and the potential crisis we will face over the next decade if we don't take steps now to address these issues.

Although the Health Board is committed to improving care across the whole of diabetes services due to the huge potential for prevention and early intervention associated with type 2 diabetes, the key focus of this report will be on type 2 diabetes.

2 BACKGROUND

More than 200,000 people in Wales are living with diabetes. 9 out of 10 of them have type 2 diabetes, and approximately half of these could have been prevented with lifestyle change to achieve a healthy weight, a better diet and increased physical activity.

People living with diabetes are at risk of sight loss, kidney failure, heart attacks and stroke alongside a number of other potentially serious complications. There is also a financial cost[1]: the treatment of type 2 diabetes accounts for around 10% of the annual NHS budget with 80% attributable to the complications of diabetes. This cost is projected to rise to over 17% by 2035.

In order to tackle the growing issue of diabetes, work to prevent diabetes and to ensure that there is provision of effective evidence-based care must both be prioritised.

Overweight and obesity is the leading modifiable risk factor for type two diabetes. **CTM currently has the highest levels of overweight and obesity in Wales, for both adults and children.**

The increase in individuals living with overweight and obesity seen in CTM is the result of changes in our food and activity environments – communities are flooded with unhealthy food, and it is often difficult for families to lead active lives. Influencing these factors will require a **whole systems approach** and as a health board our vision is to ensure that we;

- Support individuals and families to achieve and maintain a healthy weight
- Work with partners to create a healthy environment
- Ensure that CTMUHB is a healthy weight organisation
- Identify those at risk of developing diabetes and help them reduce their risk
- Effectively treat and support those with a diagnosis of diabetes
- Address inequalities

3 OVERVIEW AND RISK OF DIABETES

Diabetes is a condition in which the body doesn't produce enough insulin to maintain stable blood glucose levels, or where the insulin produced is unable to work effectively[2].

There are two main types of diabetes:

Type 1 diabetes – an autoimmune condition where the cells that produce insulin are destroyed. Lifelong insulin treatment is required to prevent death. Approximately 10% of people with diabetes have type 1 diabetes[2].

Type 2 diabetes – the body doesn't produce enough insulin for its needs or becomes resistant to the effects of the insulin produced. This condition may remain undetected for many years but is progressive and will require lifestyle changes (healthy diet and exercise). Over time most people will require oral medication +/- insulin[2].

In addition, **gestational diabetes** occurs when the body cannot produce enough insulin to meet extra needs during pregnancy. It can cause difficulties within the pregnancy for mother and child. Gestational diabetes usually resolves at the end of pregnancy. However, one third of women who develop gestational diabetes will develop Type 2 diabetes within 15 years[3].

'Non-diabetic hyperglycaemia', or **'pre-diabetes'**, is a condition characterised by higher-than-normal blood glucose levels, but below the threshold for a diagnosis of diabetes. Pre-diabetes is a high-risk state for developing type 2 diabetes, and between 26% and 50% of people with pre-diabetes will develop type 2 diabetes within 5 years[4].

RISK FACTORS FOR DEVELOPING DIABETES

Development of type 1 diabetes is not associated with obesity or other modifiable risk factors[2].

Gestational diabetes is more common in women living with obesity, those who've had gestational diabetes in a previous pregnancy, those who've previously given birth to a baby over 4.5kg, those with a family history of type 2 diabetes and those of certain ethnic groups (South Asian, Black African, African Caribbean)[5].

There are several modifiable risk factors associated with type 2 diabetes. Therefore, there is significant opportunity to reduce the risk and incidence of type 2 diabetes in our communities

THE MAIN RISK FACTORS FOR TYPE 2 DIABETES ARE;

- **Living with overweight or obesity**
- **High levels of fat stored around the liver or pancreas – can affect those of a healthy weight or those with overweight or obesity**
- **Abdominal obesity – waist measurement is unhealthy for your gender or ethnicity**

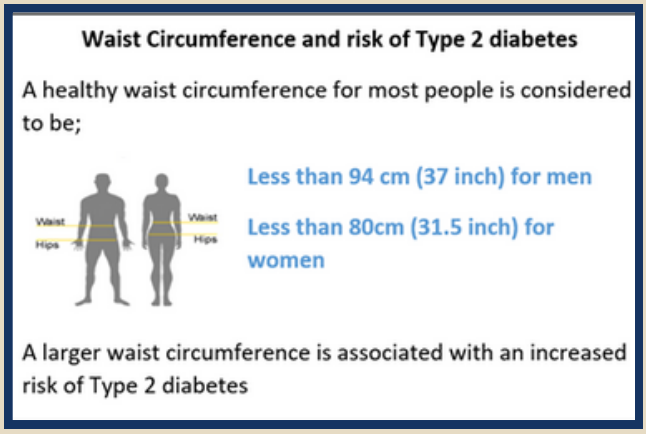
Living with overweight or obesity (BMI 25+) is the main modifiable risk factor for type 2 diabetes[2]. The risk of developing type 2 diabetes increases with increasing BMI. A study has shown that in individuals with low genetic risk of type 2 diabetes, those with obesity had over 6 times the risk of developing type 2 diabetes compared to those of normal weight[6].

Women with obesity are 3 to 4 times more likely to develop gestational diabetes than those of a normal weight[7].

Other risk factors for developing type 2 diabetes include high blood pressure, increasing age, certain ethnic groups (South Asian, Black African, African Caribbean)[8], low physical activity levels, and family history of type 2 diabetes. Risk factors for developing pre-diabetes are the same as those for type 2 diabetes[9].

Type 2 diabetes in children is uncommon, but the causes are the same as in adults, with the main risk factor being overweight or obesity [9].

Diabetes and your waist measurement | Diabetes UK (findhealthtips.com)



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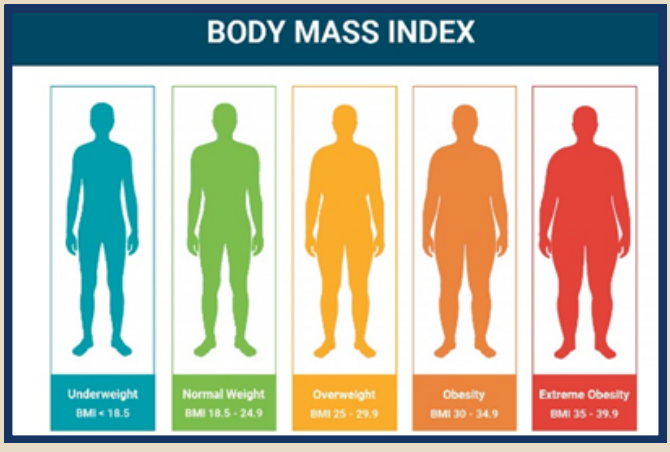
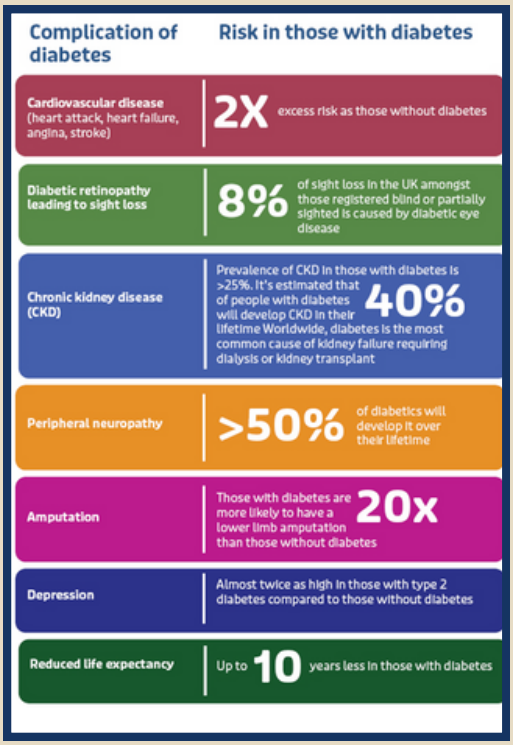


4 COMPLICATIONS OF DIABETES

Individuals living with diabetes are at risk of developing the following complications:

- Cardiovascular disease including heart attacks and stroke[10]
- Diabetic retinopathy leading to sight loss[1]
- Diabetic nephropathy (kidney disease) and kidney failure[12]
- Peripheral neuropathy resulting in altered sensation and pain in the hands and feet[13]
- Diabetic foot disease potentially leading to amputation[2]
- Reduced wellbeing and an increase risk of depression



The risk of such complications is higher in those with poorly controlled diabetes, those with obesity and those in the most deprived quintiles[2]. Those with diabetes also have up to 10 years reduced life expectancy as those without diabetes[14].

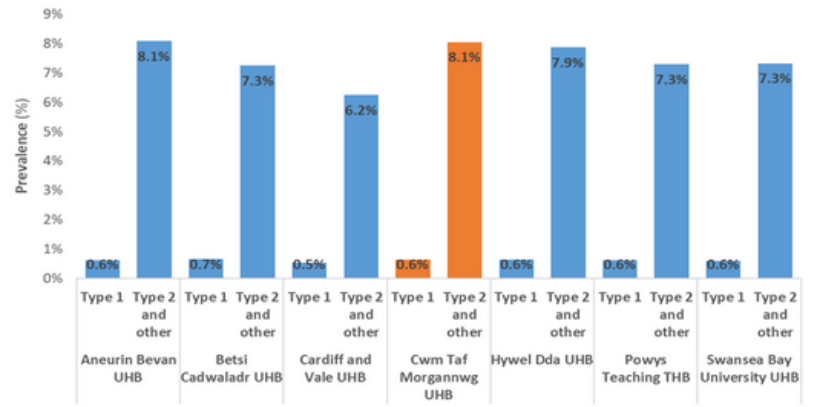
During 2022/23, 46 patients with diabetes were admitted to hospital on the retinopathy pathway with an associated average cost of £2,086 per spell, and a 6.5% mortality rate[15].

During 2022/23, 70 patients with diabetes were admitted to hospital on the amputation pathway costing £16,000 on average per spell, 71% of these were admitted as an emergency admission. 1 in 5 of those admitted through this pathway died[15].

5 PREVALENCE OF DIABETES

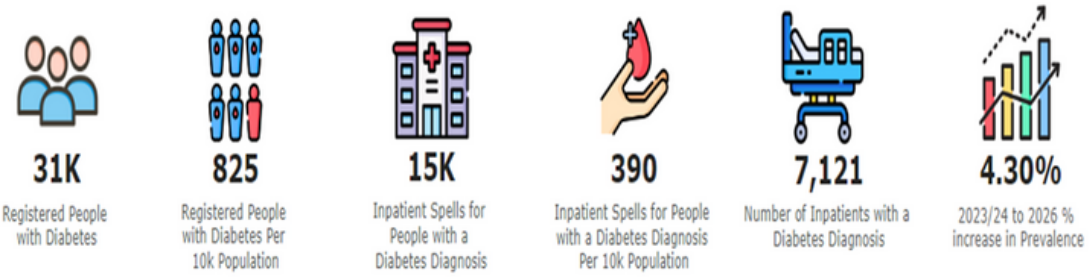
At 8.69%, CTM UHB has one of the highest prevalence of diabetes of all health boards in Wales. 8.1% of the registered population have a diagnosis of Type 2 and other diabetes. Type 1 diabetes has a much lower prevalence accounting for 0.6% of the registered population. Between April 2023 and March 2024, 5.5% of women who gave birth in CTM were recorded as having gestational diabetes. This has increased from 4.1% in 2018/19.

Figure 1 – Percentage of patients registered with diabetes, Type 1 & Type 2 and other, all ages, 2022/23 across Welsh Health Board Areas (data from Diabetes Insight and Variation Atlas)



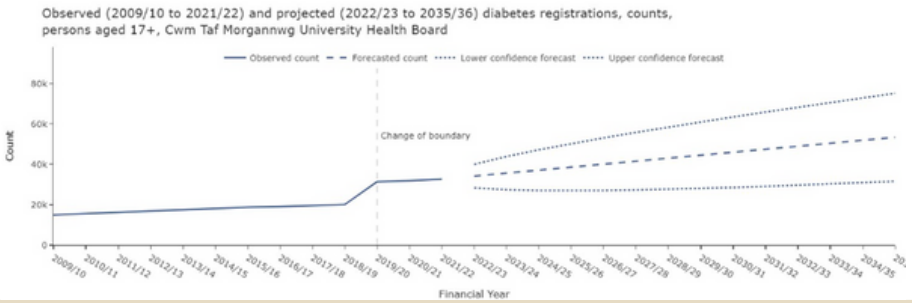
Of major concern is the anticipated rise in the prevalence of type 2 diabetes and the fact that type 2 diabetes is now being diagnosed at a younger age, even in children and young people. This age group often experiences more aggressive disease than older adults, with more rapid onset of complications at a younger age, threatening long-term health and quality of life in adulthood[16].

TYPE 2 DIABETES IN CTM



Although the prevalence of both type 1 and type 2 diabetes is predicted to increase, it is the increase in type 2 disease that is predominately driving upward trends. The challenges are both immediate and ongoing. The number of patients in CTM UHB with a diagnosis of type 2 diabetes is forecast by Public Health Wales to increase from 31,163 in 2023/24 to 32,564 in 2026, with the estimated prevalence of diabetes increasing to 8.6% in 2026. And if current trends continue, it is estimated that by 2035/36 approximately 1 in 11 adults will be living with diabetes in Wales[17].

Figure 2 – Forecasted number of patients with Diabetes (PHW 2023)[17]



PREVALENCE OF PRE-DIABETES

Individuals with pre-diabetes are usually asymptomatic so remain undetected for a long time. In December 2023, 15,593 adults in CTM (3.29%) were coded as having a diagnosis of pre diabetes, with new patients being identified each week. However, given pre-diabetes has no symptoms and detection is dependent on an individual having a HbA1c test, it is estimated that the true number of pre-diabetics in CTM UHB would far exceed this. The true forecast for increase in pre-diabetes prevalence is thus unknown but is likely to be vastly underestimated[18].

6 DIABETES AND OVERWEIGHT/OBESITY

CTMUHB has the highest rates of overweight and obesity in Wales and the highest percentage of people with type 2 diabetes with a BMI 40+. Around 2 in 3 adults in CTM are living with overweight or obesity, and around 1 in 3 are living with obesity[19].

Figure 3 – Adult overweight or obesity by health boards and Wales Source: National Survey for Wales (July 2023)[19]

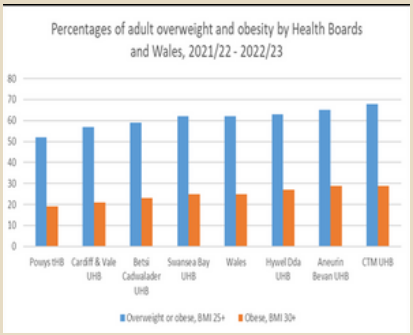
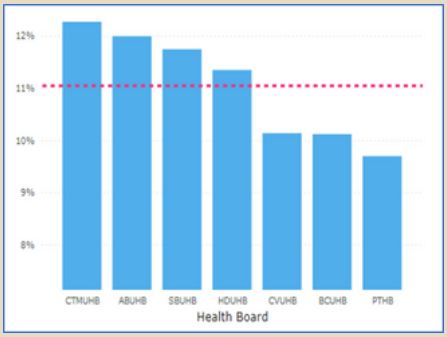


Figure 4 – Percentage of type 2 diabetic patients with a BMI of 40+, 2022/23[15]



Of greater concern, is that 1 in 8, 4-5-year-olds in CTM start their school journey with obesity, and more than 1 in 4 are overweight[19].

This is the highest rate of child obesity in Wales. Rates of child obesity and overweight are particularly high in Rhondda Cynon Taf and Merthyr Tydfil County Borough Council areas.

Children and adolescents living with obesity are around five times more likely to have obesity in adulthood than those who were a healthy weight[20]. Around 55% of children living with obesity continue to have obesity into adolescence, around 80% of adolescents with obesity will continue to live with obesity into adulthood, and around 70% will have obesity over age 30.

Work focused on reducing the number of children living with overweight and obesity is essential to prevent diabetes in our communities.

The number of children registered with Type 2 diabetes and being treated in paediatric diabetes units in England and Wales increased by more than 50% between 2017 and 2022[21]. Early onset of Type 2 diabetes is associated with faster disease progression. The majority of diabetes cases in adulthood are attributable to overweight and obesity.

There are currently children in CTM who have a diagnosis of Type 2 diabetes.

Healthy weight is strongly linked to deprivation. Children in our poorest communities are 50% more likely to be living with obesity than children in our most affluent areas. Therefore, significant work to support children in areas of deprivation will be needed if we are to address the inequalities that already exist.

Figure 5 – 4–5-year-olds with overweight or obesity by deprivation fifth, CTMUHB, 2022/23

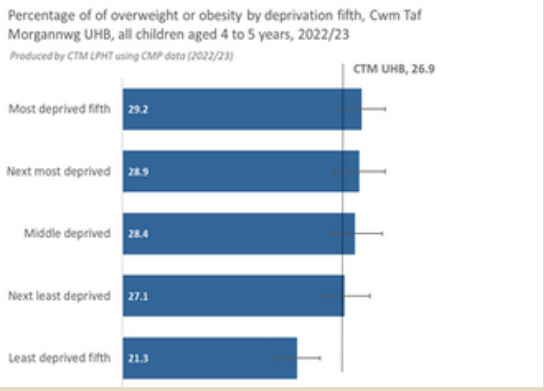
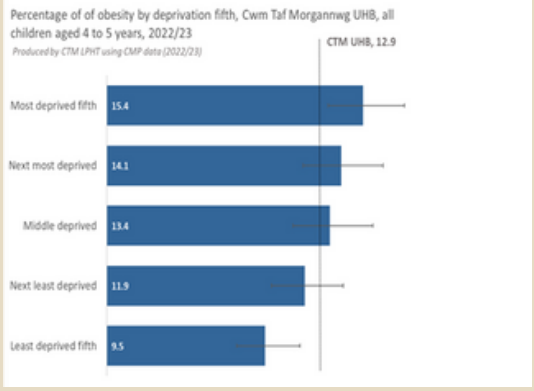


Figure 6 – 4–5-year-olds with obesity by deprivation fifth, CTMUHB, 2022/23



7 IMPORTANCE OF PREVENTION

The key public health implication for type 2 diabetes is the opportunity for prevention. There are three stages of prevention where we can positively impact upon the trajectory of type 2 diabetes:

PRIMARY PREVENTION

- Prevent individuals from becoming overweight/obese, encourage a healthy diet and uptake of recommended levels of physical activity

SECONDARY PREVENTION

- Support those with overweight/obesity to become and maintain a healthy weight
- Identify people at risk of type 2 diabetes and test them for pre-diabetes/diabetes
- Support those with pre-diabetes to achieve remission through lifestyle changes

TERTIARY PREVENTION

- Ensure all people living with diabetes are appropriately monitored
- Achieve NICE recommended treatment targets for blood glucose (HbA1c), blood pressure and cholesterol
- Promptly identify and treat complications of diabetes

Significant work in CTM in currently being undertaken at all stages of prevention. Work is also underway to develop CTMUHB as a healthy weight organisation. As a health board that employs around 12,000 staff, 80% of whom live within the boundaries of CTM, the opportunity for influence both amongst CTM staff and consequently in the community, should be not underestimated.

The following sections outline key aspects of this preventative work.

PRIMARY PREVENTION

HEALTHY WEIGHT: HEALTHY WALES (HWHW) is the Welsh Government's long-term strategy focused on the prevention and reduction of obesity in Wales.

The HWHW strategy takes a whole systems approach, and sets out changes that will be required by 2030 using four themes to address the causes of obesity:

- Healthy environments
- Healthy settings
- Healthy people
- Leadership and enabling change

CTM VISION:

We are currently developing our local, long-term vision for Healthy Weight in CTMUHB, aligned to the National Strategy. This includes:

- Leading a Whole System Approach to Healthy Weight
- Developing as a healthy weight organisation – creating a healthy environment for our staff, patients and visitors
- Providing co-designed, community-oriented support for individuals and families to achieve and maintain a healthy weight

IF WE ARE TO REDUCE THE HIGH NUMBERS OF PEOPLE LIVING WITH OVERWEIGHT AND OBESITY IN CTM, IT IS ESSENTIAL THAT WE TAKE A LONG TERM, SYSTEM WIDE, UPSTREAM APPROACH

WHOLE SYSTEM APPROACH TO HEALTHY WEIGHT

The drivers behind our unhealthy environments are complex, and many different people hold levers for change. If we are truly to change obesity trajectories in CTM it is essential that this complex system works together, with a shared understanding of the issue and shared goals. This is at the core of our Whole System Approach to Healthy Weight.

The Whole System Approach to Healthy Weight includes;

- Leading a change in the way we talk and think about obesity across CTM
- Creating healthier communities together – working with stakeholders to take opportunities to shape our food and activity environments
- Listening to communities
- Developing Joint Regional Action Plan based on working with people across CTM
- Facilitating long term change

Over the next year we will be focusing on how we can work together to increase access to good quality, affordable food across RCT, Merthyr and Bridgend and how we can make it as easy as possible for people in CTM to move around the region in a way that is healthier.
Aligned to our Whole System work, we are working with the Public Service Board to develop a regional active travel charter, and with maternity colleagues on the development of an infant feeding strategy.

CTMUHB AS A HEALTHY WEIGHT ORGANISATION

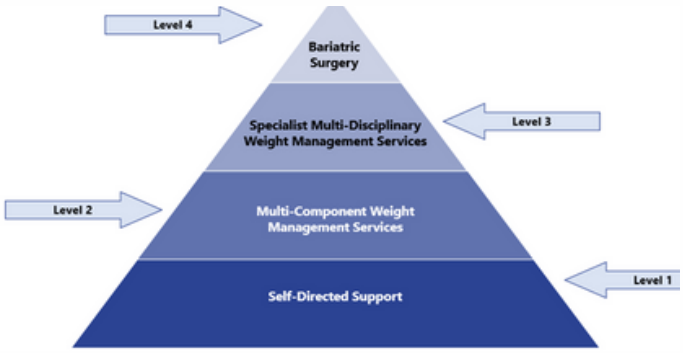
Many staff in CTM will be living with overweight and obesity, and this will be contributing to staff sickness and early departures from the workforce. Our facilities and catering teams have been transforming both the food we serve to our patients and the food we serve in our canteens to make it easier for everybody to eat healthily. We will be signing up to the CTM regional active travel charter, with anchor institutions across the region looking to lead the way in making it easier for people to make active travel choices.

We will be working to ensure we provide the right support to staff to achieve and maintain a healthy weight, and learning how to improve our environments to make it easier to achieve and maintain a healthy weight.

SECONDARY PREVENTION

Support for individuals and families to achieve and maintain a healthy weight
The Healthy People theme of HWHW outlines an ambition for fair and equitable access to weight management pathways.

The service levels in the All-Wales Weight Management Pathway for children, young people and families are summarised as:



ADULTS

The Adult Weight Management Service in CTMUHB delivers levels 1-3 with level 3 having a referral pathway into the WHSCC funded Level 4 service delivered by Swansea Bay UHB.

Over the past two years, we have developed a comprehensive weight management pathway for adults across all levels, with significant investment in a new Level 3 service to support those with the greatest need to manage their weight.

With a current capacity of 250 people a year in our adult service, and an estimated 100,000 people potentially eligible for Level 3 weight management services in CTM, this service is unable to meet long-term demand. The service also has limited prescribing capacity, meaning only a subset of people are able to access novel weight loss medications.

Across all levels of the pathway many outcomes have been positive but **capacity and equity of uptake** remain an issue.

This emphasises the need for upstream approaches.

CHILDREN

Since 2022 the PIPYN[22] Programme has run in Merthyr as part of a national pilot. The scheme integrates systems work to improve local food and activity opportunities with direct support to help families make healthy choices. In 2024 this programme has been implemented in in Taf Ely and Rhondda primary care clusters, and its progress and outcomes will be evaluated as we look to design a long-term model.

While PIPYN provides Level 1 weight management support for children aged 3-7 years and their families, and there is also generic input from the heathy schools and pre-schools teams, **there is currently no support for children and young people outside of this criteria.**

A business case to develop an integrated approach to support children and families achieve and maintain a healthy weight is currently being developed. This will include provision across level 1 – 3 of the weight management pathway integrated with our Whole Systems Approach to Healthy Weight.

TACKLING PRE-DIABETES

> **"I had no idea I was in the risk group. The GP said my tests were fine. Glad I attended as I found it really useful to get the information I needed."**

> **"I am so glad it is available. My blood sugars have gone back to normal so I am extremely happy."**

> **"Before I came to the appointment, I was so afraid of getting diabetes. The healthcare support worker helped me work through some of my misconceptions... and I was able to think about what I could do to get my blood sugars down."**

Secondary prevention of Type 2 diabetes includes identification and appropriate management of those with pre-diabetes.

The All-Wales Diabetes Prevention Programme (AWDPP) was developed following pilot work in North and West Wales. The approach involves the identification of individuals with pre-diabetes (HbA1c 42-47 with no history of diabetes) by searching GP databases. Eligible patients are offered a 30-minute person-centred lifestyle appointment with a healthcare support worker focused on increasing patient understanding of pre-diabetes and the role of diet and physical activity levels in reducing risk. Signposting and/or onward referral to additional support is undertaken as appropriate, to programmes such as weight management services, the National Exercise Referral Scheme, interactive digital education programmes and/or a variety of wider community provision.

Follow up is undertaken at 12 months.

In CTM, the AWDPP model was rolled out from October 2022 across Merthyr Tydfil and Bridgend West, led by the CTM dietetic service, in line with the national model. In addition, national primary care funding was secured to allow additional primary care led rollout in a number of practices in the remaining clusters using a similar core model. Additional funding was secured from April 2024 to operate a single diabetes prevention programme across all clusters in CTM with a common service model and evaluation framework. Additional weight management capacity will also be provided to support these patients.

At the end of March 2024, nearly 800 people had attended an appointment and the uptake rate (consultations attended/invitations sent) was 5% higher in CTM UHB than the national average.

Much more could be done with the AWDPP in CTM. Short-term funding for posts to deliver the programme have been a challenge in terms of staff recruitment and retention and there have been gaps in delivery due to vacancies.

TERTIARY PREVENTION

Diabetes Care

Annual Diabetic Reviews

We know that certain components of diabetes care such as annual monitoring, early effective education and optimisation of therapies for glycaemia and cardiovascular risk considerably reduce the risk of diabetes complications.

NICE guidance has identified a number of checks that should be carried out on people living with diabetes on an at least annual basis to monitor their health and detect potential complications[23] . These are described as the 8 care processes.

In Q1 2024/25, 38.85% of patients with diabetes in CTM are recorded as having received all eight care processes – 20.1% in type 1 diabetes and 41.5% in type 2 diabetes[15].

There is considerable variation in percentage compliance for all 8 care processes across the different GP cluster areas within CTM, ranging from 28.7% to 52.5%, with 6 clusters falling below the All-Wales average of 43.7%[15].

Treatment Targets

There are three NICE recommended treatment targets for diabetes:

- BP≤140/80
- Prescription of a statin in those with high Cardio Vascular Disease (CVD) risk
- HbA1c ≤58 mmol/mol

Maintaining a HbA1c below 58mmol/mol is associated with lower risk of developing complications. CTM has the lowest percentage of patients achieving this treatment target in Wales at 55.52%.

The Value Based Healthcare programme is supporting enhanced pathways to improve outpatient management of diabetic eye disease and inpatient care of diabetic foot disease.

We have an agreed basis for structured education. The 6-week XPERT diabetes or XPERT insulin programmes are evidence based and adhere to Welsh Government Quality standards (2023) and NICE Guidance. Capacity to deliver diabetes structured education has been increased by changing the skill mix of staffing to include support worker delivery of XPERT diabetes. XPERT Insulin continues to be delivered jointly by diabetes nurse specialists and Dietitians. Referral rates for structured diabetes mellitus education have increased, receiving 125-160 per month since June 2023 which is positive.

All referrals for Type 2 diabetes structured education are now triaged by nutrition and dietetics via a single point of access. In the last 8 months, significant progress has been made in reducing referral to treat times as part of COVID recovery and all patients are now offered Type 2 education in line with the national pathways and within the 14-week therapy RTT.

In addition, MyDESMOND is currently funded nationally as a digital option for diabetes, pre-diabetes and gestational diabetes education. However, national funding for MyDESMOND will end by March 2025. From April 2025, health boards in Wales will therefore need to identify additional funding to continue providing this digital patient education tool.

8 APPLICATION OF BEHAVIOURAL SCIENCE IN CTM

Behavioural science is the scientific study of behaviour - what enables it, what prevents it, and how best to elicit and maintain it[24]. The use of behavioural science encourages us to understand the complexity of what drives individuals' actions and decision making, which in turn can support our policies, services and communication, as well as increase our chance of improving and protecting health and wellbeing.

There is increasing routine application of behavioural science in CTM, including programmes such as Making Every Contact Count (MECC). MECC is an approach to behaviour change that enables the opportunistic delivery of consistent and concise healthy lifestyle information through everyday conversations that organisations and individuals have with other people.

The COM-B model of behaviour is increasingly applied within CTM to support insight gathering opportunities, behavioural diagnosis, and evaluation.This model recognises that behaviour is part of an interacting system, and in order for a desired behaviour to be taken up, a person needs to feel **capable**, have the **opportunity** to perform the behaviour, and be **motivated** to do so.

As part of embedding the behavioural science approach to diabetes care within CTM, the Public Health Wales Behavioural Science Unit and CTM UHB, in collaboration with the Centre for Behaviour Change at University College London, are undertaking a project which seeks to gain a greater understanding of diabetes in the context of a complex system, taking into consideration the connections and interdependencies between behaviours, different/multiple actors and behavioural influences. A participatory workshop was held in April 2024 which brought together a diverse range of healthcare professionals involved in diabetes care in CTM UHB. Early findings from this work include a lack of connection and collaboration across the system, potential duplication of care processes and opportunities to increase patient centred approaches and improve self-management. Ongoing consultation regarding findings are underway with local stakeholders to collectively identify opportunities for intervening in the system to optimise outcomes and consider suggestions for behaviourally informed priority improvement activity.

9 MAXIMISING USE OF HEALTH INTELLIGENCE AND TECHNOLOGY

We need to prioritise optimal use of data/health intelligence to target action most effectively, and to monitor progress and return on investment. As part of the national Tackling Diabetes Together Programme, a workstream has been set up to fully explore current provision and the possibility of a national diabetes register.

In the meantime, use is being made of current resources such as the recently updated Diabetes and Insights and Variation Atlas (DIVA) dashboard in improvement planning.

There are a number of plans in place to increase use of patient-reported outcome measures (PROMS) and patient-reported experience measures (PREMS) to utilise patient feedback. The Therapies PREM is being implemented across services, and PROMS are planned to be recorded in line with the Minimum Data Set for Weight Management Services. XPERT outcomes are recorded and benchmarked nationally.

There is also considerable potential for digital efficiencies in care processes such as digital self-referral and self-booking. Other changes being explored include adding a specific diabetes DATIX to all Wales DATIX system, plus the use of technology for patient monitoring and education is another area not fully explored.

10 CURRENT CHALLENGES

CTMUHB is currently facing a considerable number of challenges relating to type 2 diabetes

- Obesogenic environment of CTM – the healthy choice is not the easy choice in CTM
- Competing priorities within the current economic climate is a risk to stakeholder commitment to support system wide working around healthy environments and tackling obesity
- Short term funding and delays in recruitment have delayed roll out of the primary care led pre-diabetes service
- Insufficient capacity within the current adult weight management pathway in CTM to meet population need
- No paediatric weight management pathway in CTM – no support for children with overweight/obesity to reach and maintain a healthy weight
- No remission service available in CTM to target those with newly diagnosed type 2 diabetes
- Sub optimal and inequitable provision of routine diabetes care – low uptake of all 8 care processes with considerable variation across the UHB; varied podiatry provision across the UHB
- Low uptake of diabetes structured education programmes and limited funding for ongoing provision
- Current primary and secondary care services are working beyond capacity – additional requirements relating to diabetes prevention and improving diabetes care is a challenge in the current climate
- Processes are visibly siloed and there is a need for increased connection and collaboration, and greater understanding of the 'whole system' amongst health care professionals in order to optimise care and provide a seamless experience for people living with type 2 diabetes
- Duplication across care processes/pathways e.g., multiple health care professionals record weight, BMI, blood pressure across primary and secondary care
- Missed opportunities to provide brief advice at the point of diabetes diagnosis in order to support future engagement with diabetes annual reviews and structured education

11 WHAT MORE NEEDS TO BE DONE?

Although the Health Board is committed to improving care across the whole of diabetes services, due to the huge potential for prevention and early intervention associated with type 2 diabetes the focus on action within this report has been on type 2 diabetes.

For type 2 diabetes there are 3 overarching objectives: -

- Preventing onset of modifiable risk factors for Type 2 diabetes, e.g., prevention of overweight/obesity
- Preventing onset of type 2 diabetes in those with modifiable risk
- Preventing poor outcomes through effective diabetes care

Together these support all cohorts across the Type 2 diabetes pathway, covering primary and secondary through to tertiary prevention approaches. To achieve this there needs to be a focus on universal, evidence-based care pathways, workforce development, improved communication and engagement, and enhanced monitoring and data analysis.

Both use of behavioural approaches and maximising technology to improve outcomes are also key components of this work.

Running along all workstreams an increased commitment to research and evaluation at both a local and national level will promote best practice and shared learning.

Table 1 in appendix highlights the key action areas to be addressed at each part of the type 2 diabetes pathway.

A NUMBER OF NEXT STEPS HAVE BEEN IDENTIFIED:

1. Continue to develop a **whole systems approach** to healthy environments and tackling obesity.

2. Review of potential funding opportunities to allow expansion of key services as outlined for weight management, education and early complication management and commencement of remission and psychology services.

3. Ensuring continued collaboration with all stakeholders nationally and central coordination and oversight of activity across the whole pathway at a UHB level to maximise resource, expertise and learning.

4. Explore opportunities and approaches to increase professional and public awareness of diabetes prevention, management and complications.

5. Work with clinical colleagues to further explore completion rates for core care processes and determine improvement actions required.

6. Utilise the learning from the behavioural systems mapping event and behavioural science evidence base to identify areas for action and different approaches to working.

7. Prioritise optimal use of data/health intelligence to target action most effectively and monitor progress and return on investment.

12 CONCLUSION

While diabetes is a concern across Wales, the scale of the challenge in CTM is considerable.
CTM has one of the highest prevalence of diabetes across health boards in Wales and some of the poorest outcomes in Wales. The current obesity profile in CTM for adults and children means we are at high risk of fulfilling the projected picture of an even steeper increase in the prevalence of type 2 diabetes over the next 10 years.

CTM has a higher percentage of more deprived areas than other Health Board areas in Wales which has a clear association with poorer health outcomes including overweight and obesity.

Amongst this UHB picture there are many examples of good practice and improvements in care but huge challenges remain in terms of insufficient capacity and short-term funding and our ability to provide an equal offer across all areas of CTM.

Type 2 diabetes has the dual challenge of balancing optimum management of those already diagnosed, with the need to prevent the development of new cases if we are to achieve a sustainable, effective approach. All stages of prevention are important in the management of type 2 diabetes, but as it is estimated that around half of Type 2 diabetes could be prevented with lifestyle changes, our collective focus and investment needs to shift towards primary and secondary prevention. This is not something that the health board can do alone. Our statutory and community partners are key to this work. Socioeconomic factors not only influence outcomes for people with diabetes but deprivation increases the risk of developing type 2 disease due to its influence on lifestyle factors. **Obesity is a major challenge for our population and one that requires a full system approach to effectively achieve change.** We thus need our statutory and community partners to work together with us, prioritising actions that will make a real difference for our current population and that will also improve the health of future generations in CTM.

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14 GLOSSARY OF TERMS

Autoimmune condition – A condition in which the body's immune system mistakes its own healthy tissues as foreign and attacks them

Body Mass Index (BMI) – an estimate of total body fat. The BMI is defined as weight in kilograms divided by the square of the height in metres: weight/height^2

Cardiovascular disease – diseases of the heart and blood vessels

Diabetic foot disease – Infection, ulceration, or destruction of tissues of the foot of a person with currently or previously diagnosed diabetes mellitus

Diabetic nephropathy (kidney disease) – a long-term (chronic) kidney disease where high blood sugar levels damage the kidneys' filtering system (work of removing waste products and extra fluid from the body)

Diabetic retinopathy – damage to the blood vessels at the back of the eye (retina) due to raised blood sugar levels. It can cause blindness if left undiagnosed and untreated

Gestational diabetes – the body cannot produce enough insulin to meet extra needs during pregnancy which results in high blood sugar levels. This is detected by a glucose tolerance test

Glycaemia – the amount of glucose/sugar in the blood

HbA1c – a blood test that measures a person's average blood sugar level over the past 2 to 3 months

Kidney failure (End-stage kidney disease) – The kidneys no longer work well enough to meet the needs of daily life. This is a life-threatening condition. Treatment options are dialysis or a kidney transplant

Obesity – having an excess amount of body fat. It is officially defined as having a BMI of 30+
Overweight – having more body fat than is optimally healthy. It is officially defined as having a Body mass index (BMI) of 25-29.9

Patient-reported experience measures (PREMS) – gather information on patients' views of their experience whilst receiving care and are an indicator of the quality of patient care

Patient-reported outcome measures (PROMS) – capture a patient's view of their own health and enable them to report on their quality of life, daily functioning, symptoms, and other aspects of their health and well-being

Peripheral neuropathy – damage to nerves in the body's extremities such as the hands, feet, arms and legs

Pre-diabetes – a condition where blood sugar levels are higher than normal, but not high enough to be diagnosed with diabetes. Defined as a HbA1c results of 42-47 mmol/mol

Type 1 diabetes mellitus (T1DM) – the cells that produce insulin in the body are destroyed. This results in high blood sugar levels (HbA1c 48+)

Type 2 diabetes mellitus (T2DM) – the body doesn't produce enough insulin for its needs or becomes resistant to the effects of the insulin produced. This results in high blood sugar levels (HbA1c 48+)

15 APPENDIX

Tabl 1: Camau gweithredu allweddol ar gyfer atal diabetes Math 2 yn sylfaenol, eilaidd a thrydyddol

Patient Cohort	Key Action Areas
Population wide - Diabetes risk reduction across lifespan	System wide working to help build healthier environments and tackle obesity Access to good quality food (including increasing breastfeeding initiation and continuation) Design of and access to community spaces A strong focus on children and young people
Those with known risk factors but no diagnosis of pre-diabetes/ diabetes	Increasing public awareness of diabetes risk Improving 'at risk' patient identification and testing for pre-diabetes and type 2 diabetes. Provision of a children and young person's weight management service Expansion of current adult weight management services
Those with pre-diabetes **HbA1c 42- 47mmols**	Continued development and expansion of the Pre-Diabetes Programme in CTM Improve uptake of the pre-diabetes programme, and target those of greatest need Adequate provision of weight management support for those with pre-diabetes
All newly diagnosed type 2 diabetics	Increase capacity and uptake of the type 2 diabetes structured education programme. Ensure the programme is acceptable and accessible to the target population Adequate provision of weight management support Provide brief advice at the point of diagnosis to support understanding of type 2 diabetes, self-management of the condition, and engagement in the care processes Early optimisation of therapies for raised HbA1c and management of cardiovascular risk factors, e.g., high blood pressure, raised cholesterol Increased focus on psychological aspects of care and psychologically informed services
Newly diagnosed type 2 diabetics with potential for remission (up to 6 years post diagnosis)	Implementation of a type 2 diabetes remission service in CTM
Patients on Type 2 diabetic registers **Routine Care**	Improving annual uptake/completion of the 8 National Diabetes Audit Care Processes Work needed to understand non-attendance of diabetic eye screening appointments and ensure uptake is increased and equitable Increased accessibility of clinic venues and appointment times Act on findings of the 8 National Diabetes Audit Care Processes, in particular the achievement of 3 treatment targets related to BP, HbA1c and cholesterol Optimising medication and self-management of diabetes Simplified referral processes Improved communication, collaboration, and networking across primary care and other health care professionals involved in diabetes care Implementing diabetic element of the Community Heath Pathways Project
Patients on Type 2 diabetic registers **Treatment of complications**	Early recognition and effective referral pathways for further investigation/treatment Review podiatry services across CTM to ensure they are appropriate and equitable Ensure there is equitable CTM-wide provision of best practice for the treatment of diabetic complications
Care for unscheduled admission/surgical intervention	Health Board wide protocols in place to ensure appropriate care of diabetic patients irrespective of speciality/service accessed
Crosscutting 1. A consistent approach underpinned by person centred care 2. Support for individual behaviour change, self-management and shared decision making 3. Maximising potential of technology and development of one digital record for people living with diabetes 4. Data driven planning and prioritisation with a focus on patient outcomes	