

Tackling high blood pressure: Wales' silent killer





Contents

4	Foreword
6	Recommendations
8	Introduction Preface What causes high blood pressure? Diagnosing, treating and managing high blood pressure The impact of high blood pressure in Wales
12	Identified barriers to improving blood pressure in Wales Limited public awareness, understanding and empowerment Health system pressures Limited data Health inequalities Medication adherence
20	Mary's story: a case study
22	A framework for change An all-Wales approach to CVD prevention Better awareness, understanding and empowerment Transforming systems of care Improving data collection and availability
32	Appendix
34	References

Foreword

High blood pressure remains one of the most significant – and preventable – causes of serious illness and early death in Wales. Often symptomless, it quietly increases the risk of heart attacks, strokes, kidney disease and dementia. It is often known as the silent killer.

This report lays bare the scale of the challenge. An estimated 750,000 adults in Wales are living with high blood pressure, and as many as 220,000 may be undiagnosed. The consequences are stark. Cardiovascular disease (CVD) is a leading cause of premature death in Wales, and in 2023, the workingage cardiovascular death rate was the highest of the UK's four nations. These are not just statistics. They represent lives cut short, families devastated and a health system under immense strain.

Yet this is a crisis we can prevent. We have the tools, the evidence and the opportunity to act. What we need now is the political will and system-wide commitment to do so.

This report sets out a clear and compelling framework for change. It calls for the development of a cardiovascular disease prevention delivery plan for Wales, which is fully funded, a national public awareness campaign and a transformation in how we detect and manage high blood pressure – particularly through community-based and at-home monitoring. It also highlights the urgent need to improve data collection and tackle the deep-rooted health inequalities that continue to drive poor outcomes.

As a clinician and scientist, I can confidently say that improving the early detection and effective management of high blood pressure will save lives in Wales. As a small and integrated nation, I believe Wales has an opportunity here to lead the way in delivering a bold, preventative approach to cardiovascular health.

The time to act is now. If we are serious about reducing preventable deaths, easing pressure on the NHS in Wales and building a healthier, more equitable Wales, then tackling high blood pressure must become a priority, with Welsh Government, health boards and communities working together.

Tue .

Professor Bryan Williams
Chief Scientific and Medical Officer
of British Heart Foundation



Recommendations

An all-Wales approach to cardiovascular disease prevention:

Welsh Government must ensure that a Cardiovascular Disease (CVD)
Prevention Delivery Plan is developed, sufficiently funded and is driven and held accountable by a cross-sectoral steering group.

Better awareness, understanding and empowerment:

- 2 Delivery of a widespread public awareness campaign on CVD prevention.
- Welsh Government must pioneer a preventative agenda for health, supported by a dedicated budget, and continue efforts to create an equitably healthier environment.

Transforming systems of care:

- Delivery of a community and at-home blood pressure programme which is fully integrated with primary care.
- 5 Appropriate use of technology to support self-management of hypertension.

Improving data collection and availability:

- 6 Extend and evaluate the 'Quality Improvement Project: CVD prevention for people with hypertension' beyond April 2026.
- 7 Develop a Wales National Hypertension Dashboard.



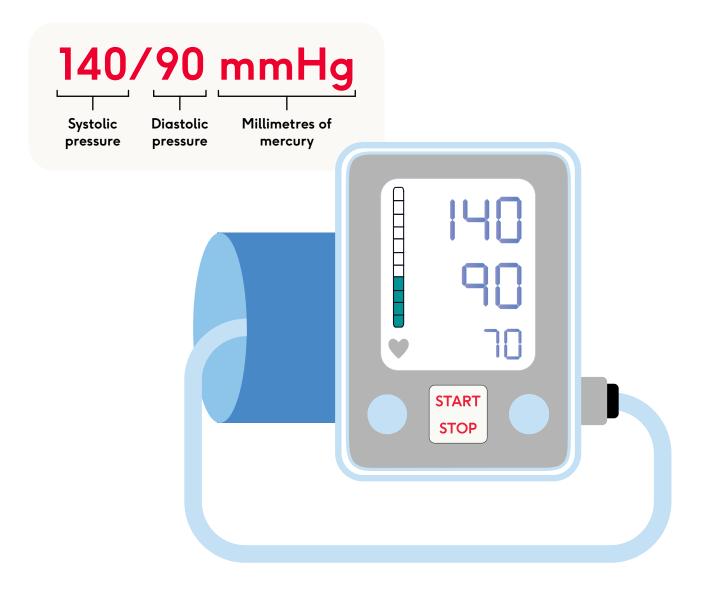
Introduction

Preface

Blood pressure is the force of blood moving through arteries, which are the vessels (tubes) that carry blood from the heart to the brain and other parts of the body. Blood pressure naturally fluctuates throughout the day but is considered high risk for future cardiovascular disease (CVD) complications when it consistently measures above 140/90mmHg – this is medically referred to as hypertension. High blood pressure can be known as a "silent killer" as there are often no symptoms, but there is an increased risk of life-threatening heart attacks

and strokes, and other serious conditions.¹ However, high blood pressure can be treated and managed with lifestyle changes, and if needed, prescribed medication.

This report outlines the challenges in identifying, diagnosing, and treating high blood pressure in Wales. Drawing on two years of consultation by British Heart Foundation (BHF) Cymru with patients, the public, professionals and stakeholders, several key recommendations are identified for improving the prevention, diagnosis and control of high blood pressure in Wales.



What causes high blood pressure?

Anyone can develop high blood pressure, and in most cases, there is no singular cause, but most people develop it because of diet, lifestyle or medical factors. A person might be more at risk as they get older (although it can affect anyone at any age), if they have a relative with hypertension, smoke, consume too much salt or alcohol, do not get enough exercise, or are overweight, especially around their mid-section.² Living in deprived areas is linked to a higher risk of having high blood pressure, as well as being of Black African or Black Caribbean descent.³

Diagnosing, treating and managing high blood pressure

To diagnose hypertension, the National Institute for Health and Care Excellence (NICE) recommends a healthcare professional takes at least two initial readings by placing a cuff from a blood pressure monitor on both arms.⁴ If initial readings are high, measuring consistently above 140/90mmHg, further monitoring

is advised to confirm diagnosis — this can be home-based, or ambulatory monitoring, where a cuff is worn and connected to a digital monitor which measures blood pressure at regular points over 24 hours. ^{5,6}

If someone is diagnosed with hypertension, their blood pressure can be managed and 'treated-to-target'. Treating-totarget refers to the steps a patient might take, with the support of the healthcare professional, to reach a desired blood pressure measurement. For most adults, a desired reading is between 90/60mmHg and 120/80mmHg, and for those aged over 80, the ideal blood pressure is under 150/90mmHg.⁷ Steps taken to improve high blood pressure include lifestyle changes such as stopping smoking; reducing alcohol intake; reducing the consumption of foods and drink high in saturated fat, sugar, and salt; eating more fruits and vegetables; and moving more.⁸ To further help treat blood pressure to target and reduce the risk of heart attack and stroke.9 a healthcare professional might also prescribe medications and offer annual reviews to monitor progress.¹⁰



An estimated

750,000 adults in Wales

are living with high blood pressure, and as many as 220,000 may be undiagnosed

The impact of high blood pressure in Wales

BHF estimates that 30% of Welsh adults have hypertension," with the number of adults diagnosed with hypertension projected to rise by 7% in the next decade.¹² Contributing factors to this projected increase include an ageing population and rising rates of obesity.¹³ Public Health Wales has reported there has been little sign of improvement in modifiable risk factors such as poor diet and physical inactivity in recent years.¹⁴ The obesity prevalence rate has increased by 44% in adults in the past two decades,15 and approximately a quarter of children aged 4 or 5 in Wales are considered overweight or obese.¹⁶

Not only is there a projected increase in the number of diagnosed hypertensive patients, but since 2019 the agestandardised death rate for CVD has increased. Despite improvements in CVD death rates since the 1960s, progress has now reversed, and recently we have seen an increase in the number of cardiovascular deaths in Wales. The working age CVD death rate rose from

61 per 100,000 in 2019 to 69 deaths per 100,000 in 2023; Wales also had the highest working age CVD death rate of the four UK nations in 2023.¹⁸

The NHS in Wales currently spends as much as £770 million annually on CVD¹⁹ and spending has increased by 54% since 2009/10.²⁰ Assuming that Wales has the same average treatment-to-target rate as England's (at around two-thirds), a recent study hypothesises that NHS Wales could save more than £11 million in three years if 80% of hypertension diagnoses were treated-to-target.²¹ We hope to have access to Wales treatment-to-target data in autumn 2025 so this analysis can be updated.

Targeted interventions to improve prevention, diagnosis and control of high blood pressure in Wales, which are sufficiently funded, could reduce the number of people suffering from life-threatening heart attacks and strokes, but also prevent avoidable emergency admissions and save vital NHS funds.

Identified barriers to improving blood pressure in Wales

Limited public awareness, understanding and empowerment

One of the identified barriers to detecting and managing high blood pressure in Wales is the limited public awareness and understanding of the condition and its subsequent risks. Around 50% of heart attacks and strokes in Wales are associated with hypertension.²² As there are rarely any symptoms with high blood pressure, people can have the condition without feeling unwell,²³ contributing to the misperception that it is not a serious health concern that needs treatment.²⁴

A 2024 YouGov survey carried out by BHF Cymru revealed that only 39% of respondents knew and understood their blood pressure numbers.²⁵ Anecdotal evidence from a 2024 focus group with the Wales Cardiac Public Panel (WCPP), facilitated by BHF Cymru, supported this finding. One participant highlighted that the lack of symptoms combined with limited awareness of the implications of high blood pressure, continues to be a barrier to diagnosis and treatment. As a result, potential hypertensive patients sometimes delay seeking medical advice, as it is not seen as urgent. This was also expressed in the BHF Cymru expert roundtable.

"Its asymptomatic nature causes people to think it's a condition that doesn't need to be urgently addressed or even get a medical check for."

- Participant in expert roundtable

Consultation with experts also highlighted that limited awareness and understanding of high blood pressure and its risks can create barriers with people following treatment plans after a diagnosis. Improved awareness and understanding of the long-term benefits of adhering to recommended lifestyle changes and prescribed medication is vital, alongside the right personalised support.

"It is public education, I think we've got to start with that because it's such a silent issue and people don't know they've got high blood pressure."

- Member of the WCPP focus group

Around 50%

of heart attacks and strokes in Wales are associated with hypertension



Health system pressures

Blood pressure is predominantly managed within primary care. However, with the growing and ageing population in Wales, there continues to be an increase in workload of GPs, and strained capacity in primary care services. Between 2021 and 2025, the number of fully qualified GP full-time equivalents (FTEs) in Wales decreased from 1,611 to 1,581.26 This indicates a gradual decline over the four-year period and a net reduction of 30 FTEs.²⁷ BMA analysis also suggests that there was a 32% increase in the number of patients per GP FTE in Wales between 2013 and 2022.28 This pressure on primary care is frequently reported and well-known amongst the public in Wales. While discussing detection and management of hypertension at the BHF Cymru WCPP focus group, participants highlighted a fear of being a burden on GPs among patients and the public. Experts at the BHF Cymru-hosted roundtable reinforced this view. They said that the fear of burdening GP services combined with a perceived lack of severity of hypertension can deter patients from seeking help. However, experts confirmed that monitoring patients' high blood pressure should not be perceived a burden on GP services as it is essential to the health of the patient and preventing further health complications.

"We're trying to get a GP appointment or to see a practice (nurse). These days it is becoming increasingly difficult."

- Member of the WCPP focus group

Community blood pressure testing initiatives, such as May Measurement Month, ²⁹ help increase understanding and awareness of hypertension and aim to alleviate some pressure from primary care. However, experts at the BHF Cymru roundtable stress that while these community initiatives are helpful, they must be integrated and streamlined with the wider health and care system. This means that initiatives must be supported by fully resourced primary care teams to enable the right healthcare professionals to follow up with patients when necessary.

Once diagnosed with hypertension, patients should receive periodic support and guidance for making appropriate lifestyle changes.³⁰ For instance, someone who smokes may benefit from being directed to Help Me Quit, the national NHS Wales smoking cessation service.³¹ For lifestyle changes to be the most successful, a personalised approach designed around the individual is essential, especially when supporting communities that face additional barriers to maintaining a healthy lifestyle.32 In some instances, a personalised approach may also include taking blood pressure medication as prescribed by a healthcare professional. Providing support for lifestyle changes, and finding a medication combination appropriate for the patient, requires time and capacity within primary care, as well as appropriate training and expertise.

"Behaviour change can make a massive difference but to enable behaviour change takes a lot of work."

- Participant in expert roundtable

Limited data

Accurate data are essential for effective hypertension care, but current data on the condition in Wales is lacking. The shift from the Quality and Outcomes Framework to the Quality Assurance and Improvement Framework removed the financial incentives for robust data collection in primary care, limiting insight into diagnosis, treatment, and outcomes. This challenge has been reinforced by hypertension experts in Wales who indicated that this change severely impacted the available data on high blood pressure, in particular around treatment and management.

BHF estimates that as many as 220,000 people in Wales may have undiagnosed hypertension,³⁴ and of the people who are diagnosed, at present we do not know if and how many are treated effectively at a national level. Without access to data for much of the patient pathway, it is difficult to fully understand the scale and complexity of hypertension in Wales, the efficacy of current pathways and interventions, or target resources effectively.³⁵

Barriers also exist when it comes to sharing patient data across systems, across borders, and between various parts of the health and care service. This is a continuous challenge faced in previous and ongoing pilots in Wales, which aim to link community pharmacies and GP surgeries to improve detection and treatment of hypertension, whilst also alleviating pressures on GPs. Both patients and experts raised the potential of pharmacies in diagnosing and treating high blood pressure throughout consultation. However, to be effective. this requires data sharing agreements in place between services. Both experts and healthcare professionals flagged that setting up data permission processes can be extremely time-consuming when capacity is already limited and can bring about excessive financial penalties if any data sharing errors are made. Around 13,300 Welsh residents are registered with GPs in England,³⁶ but the differing IT systems across the nations makes it difficult for surgeries to communicate with each other and to access patient records and referrals, impacting the quality and timeliness of care.37

Without access to data for much of the patient pathway, it is difficult to fully understand the scale and complexity of hypertension in Wales



Health inequalities

There are a number of things people can do to reduce their risk of cardiovascular disease and hypertension, including: not smoking, getting regular exercise, eating more fruits and vegetables, and reducing consumption of saturated fat, sugar, and salt.³⁸ However, deprivation in Wales is linked to higher smoking rates, lower physical activity, and higher CVD death rates.³⁹ Poverty rates in Wales remain at around 22%,40 with little progress being made in the past 20 years.⁴¹ In Wales, the prevalence of smoking is almost three times higher in the most deprived areas, compared to the least deprived areas, and this gap is continuing to grow.⁴² This is reflected in the rate of death from CVD amongst under-75s in Wales. In 2020/22, there were 109 deaths per 100,000 people in the most deprived 20% of the country, compared to 73 deaths per 100,000 in the least deprived 20%.43

New research suggests paediatric hypertension is increasing in children who are obese.⁴⁴ One study showed that individuals with persistent hypertension through childhood and adolescence were 7.6 times more likely to have adult hypertension than those with optimal blood pressure.⁴⁵ Although there is limited evidence on how childhood hypertension changes through adolescence, the growing rate of obesity among children in Wales is a cause for concern. Studies have shown that children and adolescents living with obesity are around 5 times more likely to live with obesity into adulthood, with 80% of adolescents living with obesity still measuring as having obesity in adulthood.⁴⁶ Furthermore, the percentage of children living with being overweight or with obesity in Wales continues to be higher in areas with the greatest deprivation.47 With the growing numbers of childhood obesity and stagnant poverty levels in Wales,

the projected increase in hypertension and cardiovascular disease burden in Wales needs to be addressed now.

There is also a correlation between socio-economic deprivation, obesity and ethnicity in relation to CVD burden. A 2023 analysis found people who identified as Black, Black Welsh, Black British, African or Caribbean African, were the ethnic groups most likely to be living in the 10% most deprived areas in Wales.⁴⁸ In addition, in 2022, 71% of Black adults were living with being overweight or obese – the highest of all ethnic groups in the UK.⁴⁹ Across the devolved nations, including Wales, there is insufficient data to determine the correlation between ethnicity, hypertension and deprivation, but studies in England show hypertension to be more prevalent in Black and South Asian groups.⁵⁰ However, research, including clinical trials, often under-represents these groups, limiting confidence in the generalisability of results and the data available for determining personalised optimal blood pressure targets and treatments.⁵¹

Sex-specific events, such as the menopause, can contribute to the development of hypertension among women.^{52,53} Around one in ten women develop hypertension during pregnancy, including pre-eclampsia, which is associated with an increased cardiovascular risk in the future.⁵⁴ This intersects with ethnicity, with studies in England demonstrating Black women are more at risk of developing pre-eclampsia than White women.⁵⁵

Medication adherence

Hypertension experts at the BHF Cymrufacilitated roundtable highlighted that effective hypertension management, and the prevention of future cardiovascular events, requires a balance of both lifestyle changes and consistent medication adherence. However, it is estimated that only half of adults with high blood pressure fully adhere to taking their prescribed medication.⁵⁶ Experiencing side effects, limited patient involvement in decision making, and simply forgetting all contribute to non-adherence. In addition, complexity of treatment plans, accessibility of appointments, and out of pocket costs for repeat prescriptions, can create barriers to adhering to medication.⁵⁷

It is worth noting that many people with hypertension may be living with more than one condition (comorbidities); studies suggest that globally, over 50% of adults with chronic health conditions experience more than one condition.⁵⁸ This must be taken into account when tailoring treatment plans to the individual, as well as the patient's preference and adverse side effects of the medication.⁵⁹

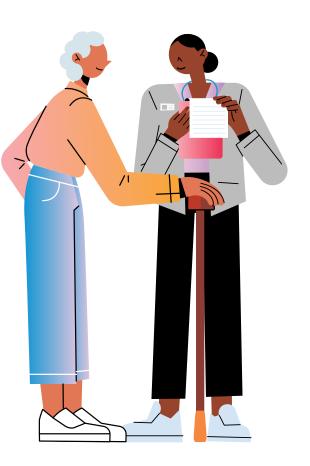
Participants in the 2024 WCPP focus group noted the challenges to finding the right medication, with phone consultations cited as being a barrier to more personalised care. Experts in the roundtable supported this view by highlighting that patients are often unaware that they can consult their GP about side effects and adjust their medication accordingly under GP quidance and supervision.

"There are lots of reasons why people don't take the right medication and side effects is a big thing for lots of people."

- Member of the WCPP focus group

It is estimated that only **50%**

of adults with high blood pressure fully adhere to taking their prescribed medication





"Don't wait for a crisis. Know your numbers."

Mary's wake-up call on blood pressure

Mary Rooney was fit, active, and enjoying life; regularly attending the gym and enjoying walks with her husband. But in January 2024, everything changed. "I just felt out of sorts," she recalls. "Then I was sick in the middle of the night. I felt hot, clammy, and I just knew — I told my husband, 'I think I'm having a heart attack."

Mary, from Kingcoed, Monmouthshire, was rushed by ambulance to the University Hospital of Wales in Cardiff, where she received emergency treatment and had three stents fitted.

But it was only after the heart attack that Mary began to fully understand the importance of managing her blood pressure. "I'd had hints before," she admits. "At one of my annual check-ups, they said it was a little high on one reading, but I was happy they didn't take it further. I thought, 'No medication – brilliant!'"

Now, 83-year-old Mary takes her blood pressure seriously. She uses a blood pressure monitor at home and takes prescribed medication. "I check it once a week," she says. "I've got a little leaflet that tells me what's normal, and it also

helps me know when I need to go to my GP surgery. It's more or less the same every week though, which is good news!"

She also warns others about using less accurate devices. "Use a monitor which has been approved and validated. Ideally try and use one that goes on your upper arm."

Mary's story is a powerful reminder of the importance of early detection and regular monitoring. With up to 220,000 people in Wales with undiagnosed high blood pressure, she urges others not to wait. "People should just know when they're getting older that they should go and ask to have it done," she says. "You don't have to see a doctor – just see a nurse or ask at your pharmacy and get your blood pressure checked."

Her message is clear:



Don't wait for a crisis. Know your numbers."

- Mary Rooney



A framework for change

Through engagement with patients, the public, and experts, BHF Cymru has identified four priority areas to improve hypertension in Wales:

Deliver an all-Wales approach to CVD prevention

Better awareness, understanding and empowerment

Transforming systems of care

Improving data collection and availability

We are pleased with the ongoing development of a national CVD Prevention Plan for Wales, which is currently being led by Public Health Wales. A high-level plan is due to be launched in September 2025 and as actions are developed to deliver the plan, these offer a major opportunity to drive progress in the above identified areas. However, activity is needed at all levels, from the support offered by local primary and community care services, through to action at a national level.

An all-Wales approach to CVD prevention

Recommendation 1:

Welsh Government must ensure that a CVD Prevention Delivery Plan is developed, sufficiently funded and is driven and held accountable by a cross-sectoral steering group

If we are to see the successful implementation of an all-Wales approach to CVD prevention, the CVD Prevention Plan must be supported by a dedicated budget and a cross-sectoral steering group to monitor progress. The appropriate infrastructure to support delivery measures must be provided to enable a national, whole-system and equitable approach to driving positive cardiovascular outcomes across Wales, including for hypertension.



Case study:

Scotland's CVD Proactive Care and Prevention Programme 60,61

In Scotland, a CVD Prevention Programme was launched in April 2025, with the aim of reducing preventable deaths from conditions like cardiovascular disease and stroke by 20% over the next 20 years. Led by the Chief Medical Officer's unit, the Programme has received funding of £10 million over the next three years for a specific enhanced service to ensure those in socio-economically deprived areas are equitably supported in identifying and treating risk factors for CVD.





Case study:

The All Wales Diabetes Prevention Programme (AWDPP)⁶²

Launched in 2022, the AWDPP is a delivery-focused programme which specifically targets pre-diabetes. A recent evaluation showed a 23% reduction in the risk of developing diabetic blood glucose levels among participants identified with pre-diabetes.

Although not yet rolled out across the whole of Wales, the AWDPP exemplifies the positive impact of a funded and resourced programme of work dedicated to prevention in Wales.

Better awareness, understanding and empowerment

Recommendation 2:

Delivery of a widespread public awareness campaign on CVD prevention

There is strong support for public awareness campaigns on hypertension and its risks, as well as cardiovascular disease in general. Both BHF Cymru's WCPP and the expert roundtable emphasised this need, and 67% of respondents to our public survey supported such campaigns.

"There is a need for public awareness campaigns for high blood pressure and people knowing their numbers."

- Participant of expert panel

Welsh Government should fund and deliver an annual national public health awareness campaign on CVD prevention. The 2024 'Time to Talk' Public Health Wales survey found that 20% of respondents were unaware of the CVD risks associated with smoking and alcohol, and 38% wanted more support to reduce their risk of developing CVD.⁶³ A national public awareness campaign would be a positive step towards addressing the current gap in knowledge and empower the population of Wales to make healthier choices.

A campaign must be tailored to specific communities given the prevalence of health inequalities, and a campaign should be developed in collaboration with all stakeholders, including the third sector, to ensure widespread and equal distribution of consistent messages.

The forum currently being used to develop the CVD Prevention Plan provides an opportunity to consider the role of public awareness, alongside targeted health interventions, and who is best placed to deliver this. For example, such a campaign could be delivered by Welsh Government in tandem with other public awareness campaigns like the 2023 ACT FAST stroke campaign.⁶⁴

International examples show that combining public awareness campaigns with targeted blood pressure testing and wider support for lifestyle changes can reduce CVD hospital admissions and empower patients to manage their health.



Case study:

Canada's Cardiovascular Health Awareness Programme (CHAP)

CHAP is a community led CVD management programme, which primarily targets adults aged over 65. Sessions are held in local pharmacies and led by trained volunteers who provide blood pressure measurements, risk assessments, education materials and lifestyle recommendations, utilising partnerships between local organisations and primary care.65 A 2011 analysis of the programme in 20 communities across Ontario with access to CHAP, found there was a 9% relative reduction in hospital admission for cardiovascular disease.66

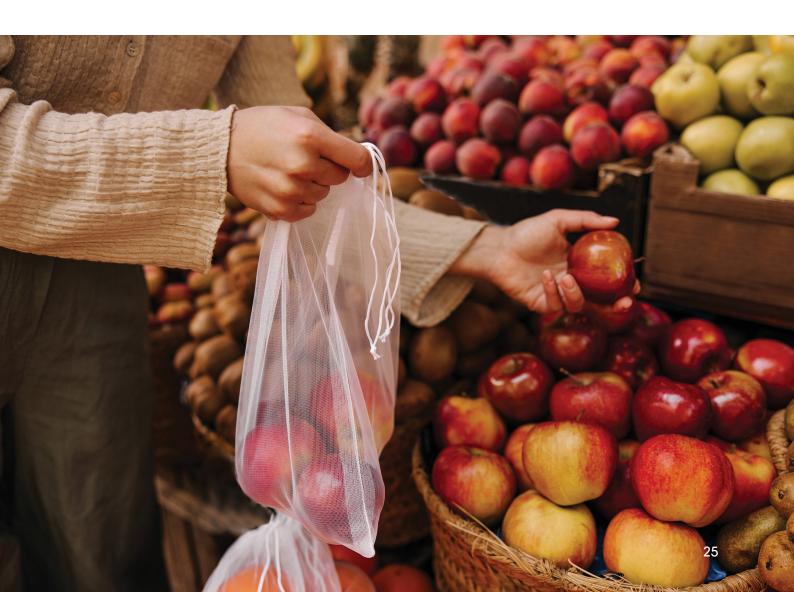
Recommendation 3:

Welsh Government must pioneer a preventative agenda for health, supported by a dedicated budget, and continue efforts to create an equitably healthier environment

To improve rates of hypertension in Wales, we must strive to prevent it in the first instance. Equitable provision of support for the whole of Wales to make appropriate lifestyle changes must be available, in particular for smoking, obesity and exercise. There needs to be a shift in how we approach health planning to include a newfound focus on prevention, pioneered and driven by Welsh Government. To support this, Welsh Government must commit to a dedicated prevention budget to ensure that adequate resources can

be provided to deliver on commitments to tackle cardiovascular disease, whilst also driving the prevention of other non-communicable diseases like diabetes and cancer.

In addition to this, Welsh Government must continue in their efforts to create a healthier environment to ensure the people of Wales feel supported and empowered to make the appropriate lifestyle changes. One example of such efforts is the 2025 Food (Promotion and Presentation) (Wales) Regulations, which limits the promotion of products high in fat, sugar, and salt and aims to make healthier choices more accessible. ⁶⁷ This was a positive step forward and Welsh Government must ensure consistent enforcement across retailers as the regulations come into force.



To enable future generations to build healthy habits which last a lifetime, initiatives which drive CVD prevention must begin in childhood. For example, the Wales Food and Fun School Holiday Enrichment Programme (SHEP) provides nutrition education, physical activity and healthy meals to children during summer holidays in schools where more than 16% of the student population qualifies for free school meals.^{68, 69} The initiative launched in Cardiff in 2015 and expanded nationally in 2016, becoming fully Welsh Government-funded in 2019.70 In 2024. nearly 12,000 children participated, with 83% enjoying the programme and 88% learning something new about food and nutrition.71 Initiatives like SHEP must continue to be sustainably funded and accessible to all children in Wales if the Welsh Government is to fulfil its commitment to becoming the first ever 'Marmot Nation' to tackle health inequalities.72

Considering the whole host of intersectional barriers present in attaining healthy lifestyles across Wales, health initiatives and population-level approaches to prevention must target every community and population group in Wales, in the most appropriate way. Furthermore, every interaction with the health and care system should ensure a wider wellbeing and prevention approach is embedded throughout a patient's journey.



Transforming systems of care

Recommendation 4:

Delivery of a community and at-home blood pressure programme which is fully integrated with primary care

BHF Cymru consultations with experts highlighted community blood pressure initiatives could offer huge opportunities in expanding widespread access to testing, reaching currently under-served communities and alleviating pressures on GPs. Initiatives like May Measurement Month and ongoing pilots with community pharmacists in Wales demonstrate that if services are designed and delivered in collaboration with a variety of partners, including primary care, they can play an important role in all aspects of hypertension management. To enable this on a wider scale, a whole-system approach to development and delivery is needed to ensure patients receive effective follow-up, treatment, and support where and when needed. This includes annual reviews for any concerns with treatment plans to increase medication adherence, and personalised support for lifestyle changes. To prevent additional pressure on the current system, however, the primary and community workforces involved must receive sufficient investment and increased capacity, skills and expertise.



Case study:

May Measurement Month (MMM) in Wales

As part of MMM, screening sites were established in community settings such as GP surgeries,

pharmacies and public places across Wales.⁷³ Data from the 2017, 2018 and 2019 campaign across Wales shows that of the 1,496 participants highlighted as hypertensive, 58.5% were unaware they had the condition.⁷⁴ These statistics highlight for the first time the proportion of undiagnosed and uncontrolled hypertension patients in Wales, demonstrating the need for systematic community blood pressure screening.⁷⁵



Case study: Scotland's Connect Me

The 2019–2021 'Scale-Up Blood Pressure' pilot involved over 150 practices across Scotland, enabling patients to monitor their blood pressure at home and send readings via text.^{76,77,78} Patients were given advice on lifestyle changes and how to manage their blood pressure.⁷⁹ Over 30,000 people participated, saving more than 67,000 in-person appointments.80 In two areas, the median blood pressure was lowered after 6 months of remote monitoring.81 A 2021 survey found 57% of users became more health-aware and 59% saved time.82 Due to its success, the programme evolved into 'Connect Me', forming part of the Scottish CVD Prevention Programme. The new Connect Me pathway uses software which integrates with existing clinical records, minimising the impact on GP staff's workload.83

A BHF Cymru YouGov poll found that 54% of respondents support wider access to at-home blood pressure monitors for those seen to be 'at risk' of having high blood pressure.84 Both experts and patients endorse home monitoring, especially for individuals unable to attend clinics. Research shows that combining home monitoring with professional support improves medication adherence and encourages lifestyle changes.85,86 At-home blood pressure monitoring also has the potential to reduce health inequalities, due to its convenience and ability to foster greater patient involvement in managing hypertension.⁸⁷ To encourage at-home monitoring, free blood pressure monitor loaning schemes should be made readily available across the whole of Wales from a variety of community-based hubs.

"Home blood pressure monitoring is certainly something we should advocate for."

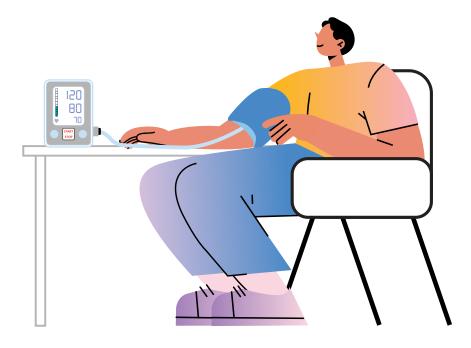
- Participant in the expert roundtable



Case study:

Cardiff & the Vale Library Blood Pressure Monitor Loan Scheme⁸⁸

Blood pressure monitors are now available to borrow from libraries and community hubs across Cardiff and the Vale of Glamorgan. With a library card, residents can loan a monitor for free for three weeks to check their blood pressure at home. Each loan includes an informative booklet on blood pressure, how to use the device, and what to do if readings are concerning. A similar scheme in which Hampshire County Council Public Health and Hampshire Library Services partnered to provide free blood pressure monitors to loan out of 40 libraries, saw 601 monitors loaned in the first year of delivery (April 2024 to April 2025).89 98% of users said their experience was either 'excellent' or 'very good' and 43% reported finding their blood pressure slightly raised,90 highlighting the potential in such schemes to improve awareness and bring healthcare into communities.



Recommendation 5:

Appropriate use of technology to support self-management of hypertension

Wearable technology, such as smart watches, can boost public interest in their health and support prevention efforts, but policymakers must note that current evidence does not yet support using such commercial devices to monitor blood pressure reliably. Despite this, such wearable devices can still play a big role in encouraging healthier lifestyles, enabling better health monitoring and improve patient understanding of their health.^{91, 92} For example, a 2025 UK Parliamentary report exploring wearable devices and disease prevention, found that wearables can increase daily steps, aid weight loss, and help achieve lower blood pressure.93

As part of the Tackling Diabetes Together Programme, Public Health Wales have funded three apps for Type 2 diabetes - to facilitate self-management for those with a diagnosis, and to prevent the condition for those who are at high risk.94 BHF Cymru welcomes the apps which include features aimed to empower users, such as weekly tracking dashboards, interactive learning modules and goal setting. Furthermore, the BHF Data Science Centre is currently working to unlock the potential of smartphones and wearable data to discover new ways to prevent, diagnose and treat CVD by securely linking wearable data with electronic health data.95



Improving data collection and availability

Quality data on hypertension diagnosis and treatment-to-target is necessary to fully understand how we improve high blood pressure in Wales. NICE recommends ensuring a full range of data are available to monitor high blood pressure, inform CVD prevention policy and address health inequalities.96 In England, this is met through the CVD Prevention Audit (CVDPREVENT). This is a national primary care audit which extracts routinely held GP data, providing information on how many people are diagnosed with various cardiovascular conditions, including hypertension, and how effectively they are managed within primary care. 97 Welsh Government must adhere to NICE guidance on data if we are to improve detection, diagnosis and treatment of hypertension.

Recommendation 6:

Extend and evaluate the 'Quality Improvement Project: CVD prevention for people with hypertension' beyond April 2026

As part of the work on the CVD Prevention Plan so far. Public Health Wales have collaborated with clinical stakeholders to develop a Quality Improvement (QI) Project focused on CVD prevention for people with hypertension, which has been approved as part of the 2025/26 General Medical Services contract. We welcome the aim of the QI Project to financially incentivise GP practices to undertake at least one of three workstreams focused on high blood pressure: the first focuses on improving identification of hypertensive patients, the second on enhancing patient engagement through improving attendance to their annual review, and the third on delivering holistic, patient-centred care.98

To ensure the Hypertension QI Project reaches its potential, it is essential that clinicians are supported at an early stage with appropriate training, clear guidance, and a standardised digital data collection template embedded into primary systems, for example the kind of software that is currently provided by AUDIT+. We understand that this work is currently underway, however, as we are part way through 2025, this QI Project must be extended beyond 2026 to truly assess the value of the initiative whilst all support is in place.

Lastly, robust evaluation of this QI project at a practice, health board, and national level is essential. This will enable future approaches to be as effective, evidencebased and person-centric as possible.

Recommendation 7:

Develop a Wales National Hypertension Dashboard

The Hypertension QI project in Wales provides an opportunity to utilise the data collected for wider scale analysis. Building on the momentum of the QI project, Welsh Government should develop a National Hypertension Dashboard for Wales as part of a wider endeavour to improve cardiac data. This would provide clinicians with an overview of the condition, highlighting any gaps in the system. Data on treatment could also be used to fully understand where people are not being treated-to-target, and the reasons why, allowing for more targeted policy recommendations and intervention.



Digital Health and Care Wales (DHCW) is currently developing a Heart Failure Dashboard. Data are extracted from GP surgeries through a programme called AUDIT+ and will enable information to be presented on emergency admissions, length of hospital stay, readmission rates, and mortality rates after emergency admissions. These data will be available on a health board level. However, the AUDIT+ software has only been guaranteed until March 2026 as the company has gone into administration; an alternative programme must be secured to ensure data can continue to be extracted for future dashboards.



Appendix

BHF Cymru engaged with the public, patients, the clinical community and key stakeholders to inform this report. This took place between 2024 and 2025 and aimed to explore the issue of high blood pressure in Wales, the challenges faced and how we can address them.

Continued expert engagement, 2025

Throughout the first half of 2025, the BHF Cymru Policy and Public Affairs team met with healthcare professionals, researchers, policymakers and key stakeholders to remain up to date on the picture in Wales as this report was developed. This ensured we could include the most recent pilots, schemes and updates from across Wales within the report, making the recommendations as relevant and as pragmatic as possible.

Expert roundtable, summer 2024

We welcomed healthcare professionals, researchers and sector leaders to an expert roundtable on high blood pressure with the aim of gaining a well-rounded understanding of hypertension in Wales. Discussion was centred around challenges to detecting, diagnosing and managing high blood pressure in Wales, with specific focus on current pressures within the health service, opportunities around community testing and importance of lifestyle changes.

Blood pressure patient panel, spring 2024

We invited members of the Wales Cardiac Public Panel to discuss their perspective and experiences of high blood pressure in Wales. Members of the panel were asked six broad questions to guide conversation on themes such as the challenges to getting a hypertension diagnosis and medication adherence. Gaining patient insight was valuable in ensuring we gained a true understanding of hypertension from a variety of lived experience perspectives.

YouGov blood pressure survey, spring 2024

In May 2024, British Heart Foundation Cymru commissioned YouGov to conduct a public survey on blood pressure. The 1,001 respondents were asked questions on topics including where they were most likely to get their blood pressure checked, their understanding and awareness of the risk of hypertension, and opinions on how high blood pressure is managed.



References

- BHF, 2023. High Blood Pressure Causes and Symptoms. Available from: https://www.bhf.org. uk/informationsupport/risk-factors/high-bloodpressure
- BHF, 2023. High Blood Pressure Causes and Symptoms. Available from: https://www.bhf.org. uk/informationsupport/risk-factors/high-bloodpressure
- BHF, 2023. High Blood Pressure Causes and Symptoms. Available from: https://www.bhf.org. uk/informationsupport/risk-factors/high-bloodpressure
- NICE Guidelines, 2019. Hypertension in Adults: Diagnosis and Management. Available from: https://www.nice.org.uk/guidance/ng136/ chapter/Recommendations#diagnosinghypertension
- NICE Guidelines, 2025. How Should I Diagnose
 Hypertension? Available from: https://cks.nice.org.
 uk/topics/hypertension/diagnosis/diagnosis/
- Tse, T., et al., 2022. Revisiting Ambulatory Blood Pressure Monitoring. RACGP. Available from: https://www1.racgp.org.au/ajgp/2022/august/revisiting-ambulatory-blood-pressure/
- BHF, 2023. High Blood Pressure Causes and Symptoms. Available from: https://www.bhf.org. uk/informationsupport/risk-factors/high-bloodpressure#Blood_pressure_readings
- 8. BHF, 2024. Understanding High Blood Pressure. Available from: https://www.bhf.org.uk/informationsupport/publications/risk-factors/understanding-high-blood-pressure
- BHF, 2024. Understanding High Blood Pressure. Available from: https://www.bhf.org.uk/ informationsupport/publications/risk-factors/ understanding-high-blood-pressure
- NICE Guidelines, 2019. Hypertension in Adults: Diagnosis and Management. Available from: https://www.nice.org.uk/guidance/ng136/ chapter/Recommendations#treating-andmonitoring-hypertennsion
- BHF Cymru, 2025. BHF Statistics Factsheet

 Wales. Available from: https://www.bhf.org.uk/ what-we-do/our-research/heart-statistics
- 12. Public Health Wales, 2025. Cardiovascular Disease Prevalence Trends, Risk Factors, and 10-Year Projections. Available from: https://phw.nhs. wales/services-and-teams/observatory/data-and-analysis/cardiovascular-disease-prevalence-trends-risk-factors-and-10-year-projections

- Public Health Wales, 2025. Cardiovascular Disease Prevalence – Trends, Risk Factors, and 10-Year Projections. Available from: https://phw.nhs. wales/services-and-teams/observatory/data-and-analysis/cardiovascular-disease-prevalence-trends-risk-factors-and-10-year-projections
- 14. Public Health Wales, 2025. Cardiovascular Disease Prevalence – Trends, Risk Factors, and 10-Year Projections. Available from: https://phw.nhs. wales/services-and-teams/observatory/data-and-analysis/cardiovascular-disease-prevalence-trends-risk-factors-and-10-year-projections
- 15. BHF 2025 analysis of Welsh Government, 2022/23. Adult Lifestyle (National Survey for Wales): April 2022 to March 2023. Welsh Government, 2022/23. Available from: https://www.gov.wales/adult-lifestyle-national-survey-wales-april-2022-march-2023, and Welsh Health Survey. Welsh Government, 2023. Available from: https://statswales.gov.wales/Catalogue/Health-and-Social-Care/Welsh-Health-Survey/lifestyles-by-gender-year
- 16. Public Health Wales, 2025. Proportion of Children with a Healthy Weight Remains Higher than Pre-Pandemic Level. Available from: https://phw.nhs. wales/news/proportion-of-children-with-a-healthyweight-remains-higher-than-pre-pandemic-level
- 17. Public Health Wales, 2025. Cardiovascular Disease Prevalence – Trends, Risk Factors, and 10-Year Projections. Available from: https://phw.nhs. wales/services-and-teams/observatory/data-and-analysis/cardiovascular-disease-prevalence-trends-risk-factors-and-10-year-projections
- 18. BHF 2025 analysis of Nomis (ONS) 2023 data.
- BHF Cymru, 2025. BHF Statistics Factsheet Wales. Available from: https://www.bhf.org.uk/what-we-do/our-research/heart-statistics
- Public Health Wales, 2025. Cardiovascular Disease Prevalence – Trends, Risk Factors, and 10-Year Projections. Available from: https://phw.nhs. wales/services-and-teams/observatory/data-and-analysis/cardiovascular-disease-prevalence-trends-risk-factors-and-10-year-projections
- 21. Public Health Wales, 2025. 'ABCD Plus'
 Cardiovascular Disease Prevention Plan for Wales.
 For publication 9th September 2025.
- 22. BHF Cymru, 2025. BHF Statistics Factsheet Wales. Available from: https://www.bhf.org.uk/what-we-do/our-research/heart-statistics

- 23. WHO Global Report, 2023. Global Report on Hypertension: The Race Against a Silent Killer. Available from: https://www.who.int/publications/i/item/9789240081062
- 24. BHF Scotland, 2019. Beating High Blood Pressure: Scotland's Silent Killer. Available from: https:// www.bhf.org.uk/-/media/files/heart-voices/ beating-high-blood-pressure-scotlands-silentkiller-report-final.pdf?reve0ef6be5c6&hash=18Z A3233061E3073BB8EE2145F99
- 25. All figures, unless otherwise stated, are from YouGov Plc. Total sample size was 1001 adults. Fieldwork was undertaken between 16th—20th May 2024. The survey was carried out online. The figures have been weighted and are representative of all Wales adults (aged 18+).
- 26. StatsWales, 2021–2025. Number of GPs employed in general practices (headcount and full-time equivalent), by GP type and area. Available from: https://statswales.gov.wales/Catalogue/Health-and-Social-Care/General-Medical-Services/General-practice-workforce/number-of-gps-employed-in-general-practices
- 27. StatsWales, 2021–2025. Number of GPs employed in general practices (headcount and full-time equivalent), by GP type and area. Available from: https://statswales.gov.wales/Catalogue/Healthand-Social-Care/General-Medical-Services/ General-practice-workforce/number-of-gpsemployed-in-general-practices
- 28. British Medical Association 2024 analysis of Welsh Government, 2025. General Practice Workforce. Available from: https://statswales.gov.wales/Catalogue/Health-and-Social-Care/General-Medical-Services/General-practice-workforce, Welsh Government. General Medical Services: Pre-March 2020. Available from: https://statswales.gov.wales/Catalogue/Health-and-Social-Care/General-Medical-Services/pre-march-2020, and Welsh Government. General Practice Population. Available from: https://statswales.gov.wales/Catalogue/Health-and-Social-Care/General-Medical-Services/General-practice-population
- 29. May Measure Month. Available from: https://www.maymeasure.org/get-involved
- NICE Guidelines, 2019. Hypertension in Adults: Diagnosis and Management. Available from: https://www.nice.org.uk/guidance/ng136/chapter/ Recommendations#treating-and-monitoringhypertennsion
- **31.** Help Me Quit. Available from: https://www.helpmequit.wales/about-help-me-quit/

- 32. Welsh Government, 2024. Wellbeing of Wales. Available from: https://www.gov.wales/sites/ default/files/pdf-versions/2025/5/4/1748512169/ wellbeing-wales-2024.pdf
- Davies, A., et al., 2024. Primary Healthcare Professionals' Approach to Clinical Coding: A Qualitative Interview Study in Wales. Available from: https://bjgp.org/content/bjgp/early/2024/10/28/BJGP.2024.0036.full.pdf
- BHF Cymru, 2025. BHF Statistics Factsheet Wales. Available from: https://www.bhf.org.uk/what-we-do/our-research/heart-statistics
- 35. Public Health Wales, 2025. Cardiovascular Disease Prevalence Trends, Risk Factors, and 10-Year Projections. Available from: https://phw.nhs.wales/services-and-teams/observatory/data-and-analysis/cardiovascular-disease-prevalence-trends-risk-factors-and-10-year-projections
- 36. Welsh Government, 2024. NHS cross-border care between Wales and England: 2024. Available from: https://www.gov.wales/nhs-cross-border-care-between-wales-and-england-2024-html#155415
- Rees, J., 2025. 'Too Much Paperwork' in Referring Patients to England. BBC News. Available from: https://www.bbc.co.uk/news/articles/ cn4zjn2p2keo
- 38. BHF, 2024. Understanding Your Heart Health. Available from: https://www.bhf.org.uk/informationsupport/publications/healthy-eating-and-drinking/understanding-your-heart-health
- BHF, 2024. Cardiovascular Inequalities in Wales: an Analysis. Available from: https://www.bhf.org.uk/ what-we-do/our-research/heart-statistics/healthinequalities-research/cardiovascular-inequalitiesin-wales-an-analysis
- 40. Welsh Government, 2025. Relative income poverty: April 2023 to March 2024. Available from: https:// www.gov.wales/relative-income-poverty-april-2023-march-2024-html
- Bokhari, T., et al., 2025. Poverty in Wales 2025. Joseph Rowntree Foundation. Available from: https://www.jrf.org.uk/poverty-in-wales-2025? mc_cid=f5c5972d65&mc_eid=a465729bb
- **42.** BHF, 2024. Cardiovascular Inequalities in Wales: an Analysis. Available from: https://www.bhf.org.uk/what-we-do/our-research/heart-statistics/health-inequalities-research/cardiovascular-inequalities-in-wales-an-analysis

- 43. BHF 2025 analysis of Nomis (ONS) 2023 data.
- 44. Jeong, S. and Kim, S., 2024. Obesity and Hypertension in Children and Adolescents. Clinical Hypertension. Available from: https://clinicalhypertension.biomedcentral.com/articles/10.1186/s40885-024-00278-5
- 45. Urbina, E., et al., 2019. Relation of Blood Pressure in Childhood to Self-Reported Hypertension in Adulthood. AHA Journals. Available from: https:// doi.org/10.1161/HYPERTENSIONAHA.118.12334
- Simmonds, M., et al., 2015. Predicting Adult Obesity from Childhood Obesity: A Systematic Review and Meta-Analysis. Available from: https://doi. org/10.1111/obr.12334
- 47. Public Health Wales, 2025. Proportion of Children with a Healthy Weight Remains Higher than Pre-Pandemic Level. Available from: https://phw.nhs.wales/news/proportion-of-children-with-a-healthy-weight-remains-higher-than-pre-pandemic-level
- Welsh Government, 2023. Analysis of Population Characteristics by Area Deprivation. Available from: https://www.gov.wales/analysis-populationcharacteristics-area-deprivation-census-2021html#133470
- 49. UK Government, 2024. Overweight Adults
 Ethnicity Facts and Figures. Available from:
 https://www.ethnicity-facts-figures.service.gov.uk/
 health/diet-and-exercise/overweight-adults/latest/
- 50. BHF, 2025. Bridging Hearts: Addressing Inequalities in Cardiovascular Health & Care. Available from: https://www.bhf.org.uk/what-we-do/our-research/heart-statistics/health-inequalities-research/bridging-hearts-addressing-inequalities-in-cardiovascular-health-and-care
- Su, E., et al., 2024. Ethnicity-Specific Blood Pressure Thresholds based on Cardiovascular and Renal Complications: A Prospective Study in the UK Biobank. BMC Medicine. Available from: https:// bmcmedicine.biomedcentral.com/articles/10.1186/ s12916-024-03259-5
- Wenger, N., et al., 2018. Hypertension Across a Woman's Life Cycle. Available from: https://pmc. ncbi.nlm.nih.gov/articles/PMC6005390/pdf/ nihms947554.pdf
- Maas, A. and Franke, H., 2009. Women's Health in Menopause with a focus on Hypertension. Available from: https://pmc.ncbi.nlm.nih.gov/articles/ PMC2644382/

- 54. BHF, 2021. Critical Six-Week Window to Reset Blood Pressure after giving Birth. Available from: https://www.bhf.org.uk/what-we-do/news-from-the-bhf/news-archive/2021/june/critical-six-week-window-to-reset-blood-pressure-after-giving-birth
- 55. Arechvo, A., et al., 2022. Maternal Race and pre-Eclampsia: Cohort Study and Systematic Review with Meta-Analysis. BJOG. Available from: https://obgyn.onlinelibrary.wiley.com/doi/ abs/10.1111/1471-0528.17240
- 56. NHS Health Research Authority, 2016. Understanding Adherence to Blood Pressure Treatment and Statins. Available from: https:// www.hra.nhs.uk/planning-and-improvingresearch/application-summaries/researchsummaries/understanding-the-determinants-ofmedication-adherence-in-hypertension/
- 57. OECD, 2018. Investing in Medication Adherence Improves Health Outcomes and Health System Efficiency: Adherence to Medicines for Diabetes, Hypertension, and Hyperlipidaemia. Available from: https://www.oecd.org/en/ publications/investing-in-medication-adherenceimproves-health-outcomes-and-health-systemefficiency_8178962c-en.html
- 58. NICE Guidance, 2023. Multimorbidity:
 How Common is it? Available from: https://cks.
 nice.org.uk/topics/multimorbidity/backgroundinformation/prevalence/
- 59. Public Health Wales, 2019. Cardiovascular Atlas of Variation. Available from: https:// performanceandimprovement.nhs.wales/functions/ networks-and-planning/cardiovascular/cvn-docs/ cardiovascularatlasofvariation-march2019-pdf/
- Scottish Government, 2025. Cardiovascular Disease Prevention Scheme. Available from: https://www. publications.scot.nhs.uk/files/pca-2025-m-02.pdf
- Scottish Government, 2025. NHS Scotland Operational Improvement Plan. Available from: https://www.gov.scot/publications/nhs-scotland-operational-improvement-plan/pages/6/
- 62. Public Health Wales, 2025. NHS Wales Diabetes Prevention Programme Cuts Risk of Developing Type 2 Diabetes by nearly a Quarter. Available from: https://phw.nhs.wales/news/nhs-wales-diabetes-prevention-programme-cuts-risk-of-developing-type-2-diabetes-by-nearly-a-quarter/

- 63. Public Health Wales, 2024. Time to Talk Public Health. Available from: https://phw.nhs.wales/ topics/time-to-talk-public-health/time-to-talkpublic-health-panel-publications/publications/ time-to-talk-public-health-august-2024-surveyresults/
- 64. Public Health Wales, 2023. More Awareness needed to act F.A.S.T to Treat Stroke and Save Lives. Available from: https://phw.nhs.wales/news/moreawareness-needed-to-act-fast-to-treat-stroke-andsave-lives/
- 65. Ye, C., et al., 2013. The Impact of a Cardiovascular Health Awareness Program (CHAP) on Reducing Blood Pressure: A Prospective Cohort Study. BMC Public Health. Available from: https://bmcpublichealth.biomedcentral.com/ articles/10.1186/1471-2458-13-1230
- 66. Kaczorowski, J., et al., 2011. Improving Cardiovascular Health at Population Level: 39 Community Cluster Randomised Trial of Cardiovascular Health Awareness Program (CHAP). The BMJ. Available from: https://www.bmj.com/content/342/bmj.d442
- 67. Welsh Government, 2025. The Food (Promotion and Presentation) (Wales) Regulations 2025. Available from: https://senedd.wales/media/dj0l33xd/subld16988-e.pdf
- 68. Welsh Local Government Association. 'Food and Fun' School Holiday Enrichment Programme. WLGA. Available from: https://www.wlga.wales/foodand-fun-school-holiday-enrichment-programme
- 69. Nutrition Skills for Life. Food and Fun. Available from: https://nutritionskillsforlife.com/community-worker/improving-food-and-nutrition-in-community-settings/school-holiday-enrichment-programme-shep/#:~:text='Food%20and%20Fun'%20schemes%20are%20run%20in%20schools,is%20part%20of%20the%20core%20and%20essential%20criteria
- 70. Gdula, A. and Williams., K., 2025. Welsh Local Government Association – Food and Fun 2024 Evaluation Report. Available from: https:// www.wlga.wales/SharedFiles/Download. aspx?pageid=62&mid=665&fileid=4516
- Gdula, A. and Williams., K., 2025. Welsh Local Government Association – Food and Fun 2024 Evaluation Report. Available from: https:// www.wlga.wales/SharedFiles/Download. aspx?pageid=62&mid=665&fileid=4516

- 72. Welsh Government, 2025. Wales to become World's First 'Marmot nation' to Tackle Health Inequalities. Available from: https://www.gov.wales/walesbecome-worlds-first-marmot-nation-tackle-healthinequalities
- 73. Williams, A., et al., 2022. Levels of Undiagnosed and Uncontrolled Hypertension in Wales: Results from May Measurement Month 2017, 2018 and 2019 Blood Pressure Campaign. Available from: https:// www.nature.com/articles/s41371-022-00734-5
- 74. Williams, A., et al., 2022. Levels of Undiagnosed and Uncontrolled Hypertension in Wales: Results from May Measurement Month 2017, 2018 and 2019 Blood Pressure Campaign. Available from: https:// www.nature.com/articles/s41371-022-00734-5
- 75. Williams, A., et al., 2022. Levels of Undiagnosed and Uncontrolled Hypertension in Wales: Results from May Measurement Month 2017, 2018 and 2019 Blood Pressure Campaign. Available from: https:// www.nature.com/articles/s41371-022-00734-5
- Alexander, H., 2022. Scale-Up BP Final Evaluation. Available from: https://www.tec.scot/wp-content/ uploads/Scale-Up-BP-final-eval-v22Feb22.pdf
- 77. Scottish Government, 2019. Home Blood Pressure Monitoring. Available from: https:// www.gov.scot/news/home-blood-pressuremonitoring/#:~:text=New%20technology%20 that%20allows%20patients%20to%20monitor%20 their,and%20can%20help%20to%20deliver%20 more%20accurate%20readings
- 78. BHF Scotland, 2019. Beating High Blood Pressure: Scotland's Silent Killer. Available from: https:// www.bhf.org.uk/-/media/files/heart-voices/ beating-high-blood-pressure-scotlands-silentkiller-report-final.pdf?reve0ef6be5c6&hash=18Z A3233061E3073BB8EE2145F99
- 79. BHF Scotland, 2019. Beating High Blood Pressure: Scotland's Silent Killer. Available from: https://www.bhf.org.uk/-/media/files/heart-voices/beating-high-blood-pressure-scotlands-silent-killer-report-final.pdf?reve0ef6be5c6&hash=18ZA3233061E3073BB8EE2145F99
- Alexander, H., 2022. Scale-Up BP Final Evaluation. Available from: https://www.tec.scot/wp-content/ uploads/Scale-Up-BP-final-eval-v22Feb22.pdf
- 81. Alexander, H., 2022. Scale-Up BP Final Evaluation. Available from: https://www.tec.scot/wp-content/ uploads/Scale-Up-BP-final-eval-v22Feb22.pdf

- 82. Alexander, H., 2022. Scale-Up BP Final Evaluation. Available from: https://www.tec.scot/wp-content/uploads/Scale-Up-BP-final-eval-v22Feb22.pdf
- 83. Pringle, E., 2022. Thousands Monitoring Blood Pressure from Home. Available from: https:// healthandcare.scot/stories/3313/blood-pressuremonitoring-connect-me
- 84. All figures, unless otherwise stated, are from YouGov Plc. Total sample size was 1001 adults. Fieldwork was undertaken between 16th—20th May 2024. The survey was carried out online. The figures have been weighted and are representative of all Wales adults (aged 18+).
- 85. Kim, J., Wineinger, N., and Steinhubl, S., 2016. The Influence of Wireless Self-Monitoring Program on the Relationship Between Patient Activation and Health Behaviours, Medication Adherence, and Blood Pressure Levels in Hypertensive Patients: A Substudy of a Randomized Controlled Trial. Available from: https://pubmed.ncbi.nlm.nih.gov/27334418/
- 86. Finnikin, S. and Sheppard, J., 2022. Realising the Potential of Home Blood Pressure Monitoring in the Community: Should HBPM be the Default? Available from: https://bjgp.org/content/bjgp/72/718/242. full.pdf
- 87. Wood, S., et al., 2016. Influence of Ethnicity on Acceptability of Method of Blood Pressure Monitoring: a Cross-Sectional Study in Primary Care. British Journal of General Practice. Available from: https://bjqp.org/content/66/649/e577
- 88. Glamorgan Voluntary Services, 2025. Blood Pressure Monitors Now Available to Borrow from Cardiff Hubs and Libraries. Available from: https://www.gvs.wales/news/blood-pressure-monitors-now-available-to-borrow-from-cardiff-hubs-and-libraries
- 89. BHF Cymru Engagement 2025 with Hampshire Libraries Blood Pressure Monitor Home Loan Scheme.
- BHF Cymru Engagement 2025 with Hampshire Libraries Blood Pressure Monitor Home Loan Scheme.
- Bove, L., 2019. Increasing Patient Engagement Through the Use of Wearable Technology. Available from: https://www.npjournal.org/action/showPdf?pii=S1555-4155%2818%2931275-3

- Narain, V. and Lally, C., 2025. Consumer Wearable Devices and Disease Prevention. UK Parliament, POST. Available from: https://researchbriefings. files.parliament.uk/documents/POST-PN-0741/ POST-PN-0741.pdf
- Narain, V. and Lally, C., 2025. Consumer Wearable Devices and Disease Prevention. UK Parliament, POST. Available from: https://researchbriefings. files.parliament.uk/documents/POST-PN-0741/ POST-PN-0741.pdf
- 94. Public Health Wales, 2025. NHS Wales Empowers Public with Free Diabetes Prevention and Management Apps. Available from: https://phw.nhs.wales/news/nhs-wales-empowers-public-with-free-diabetes-prevention-and-management-apps/
- 95. BHF Data Science Centre. Smartphones and Wearables. Available from: https:// bhfdatasciencecentre.org/areas/smartphonesand-wearables/
- 96. NICE Guidance, 2010. Cardiovascular Disease Prevention. Available from: https://www.nice.org.uk/guidance/ph25/chapter/Recommendations
- NHS England. CVDPREVENT Outcomes Indicators. Available from: https://data.cvdprevent.nhs.uk/ outcomes-intro
- Primary Care One, 2025. Practice Guidance for CVD Prevention in People with High Blood Pressure QI Project. Available from: https:// primarycareone.nhs.wales/tools/gms-qualityimprovement-2025-2026/gms/cvd-prevention-forpeople-with-high-blood-pressure-qi-specificationpdf/
- 99. National Heart Failure Dashboard, produced by Digital Health and Care Wales (DHCW) on behalf of the Welsh Value Transformation, NHS Wales Performance and Improvement. Available from: https://vbhc.nhs.wales/digital-health/dataproducts/dashboards/



