GIG CYMRU NHS WALES
Iechyd Cyhoeddus Cymru
Public Health Wales

Prevention-Based Health and Care (PBHC) in Action

Case Studies

May 2025

Contents

Purpose of the Case Studies

There are already many examples of prevention activities and programmes, delivered at the individual level in the health and care system in Wales, which demonstrate Prevention-Based Health and Care in action.

The case studies present examples of work which showcase what good looks like, with respect to di erent components of the PBHC Framework, where the systems alignment and coordinated, collective e ort to achieve the desired outcome are clearly visible.

The Prevention-Based Health and Care (PBHC) Framework[1] is designed to create a shared understanding of the components required to embed prevention in the health and care system.

The framework aims to help those working in the health and care system to:

- Identify what action is required from their own and other parts of the system, to achieve the common goal
- Identify interdependencies that need to be navigated and opportunities for alignment within the health and care system
- Identify who they need to collaborate with to take a systematic and coordinated approach, to optimise their collective impact

There are already many examples of prevention activities and programmes, delivered through the health and care system in Wales. To illustrate the PBHC framework in action, this supporting document presents a series of case studies which showcase what good looks like, with respect to different components of the PBHC Framework, where the systems alignment and coordinated, collective effort to achieve the desired outcome are clearly visible.

OUTCOMES

Agree on the specific person-centred and population health **OUTCOMES** to be achieved

PREVENTION CYCLE

Work through the Prevention Cycle, to see:

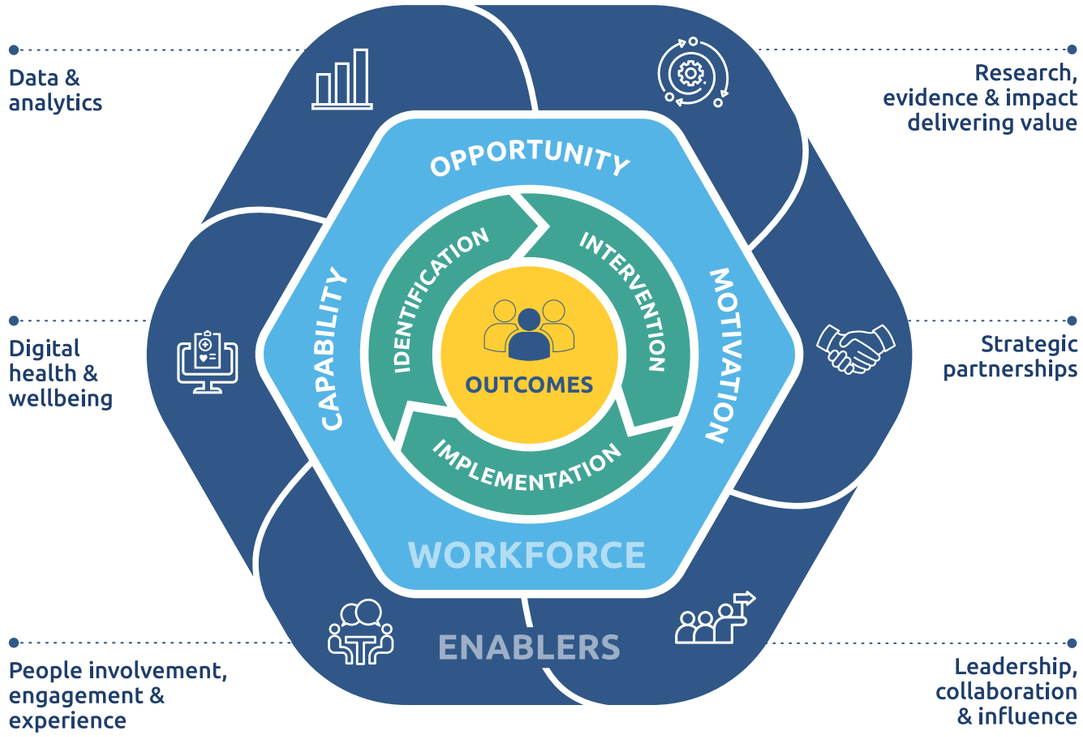
- **IDENTIFICATION** Who needs to benefit and how can they be reached equitably
- **INTERVENTION** What high quality prevention activity is needed
- **IMPLEMENTATION** How to deliver prevention activity

WORKFORCE

Consider how to optimise conditions for the workforce to deliver prevention activity, addressing **CAPABILITY, OPPORTUNITY** and **MOTIVATION**

HEALTH AND CARE SYSTEM ENABLERS

Map the Health and Care System **ENABLERS** needed to support a systematic, coordinated approach, recognising the partners involved and collaborations required.



Case Study 1

The development of the All Wales Diabetes Prevention Programme (AWDPP)

What is the desired outcome?

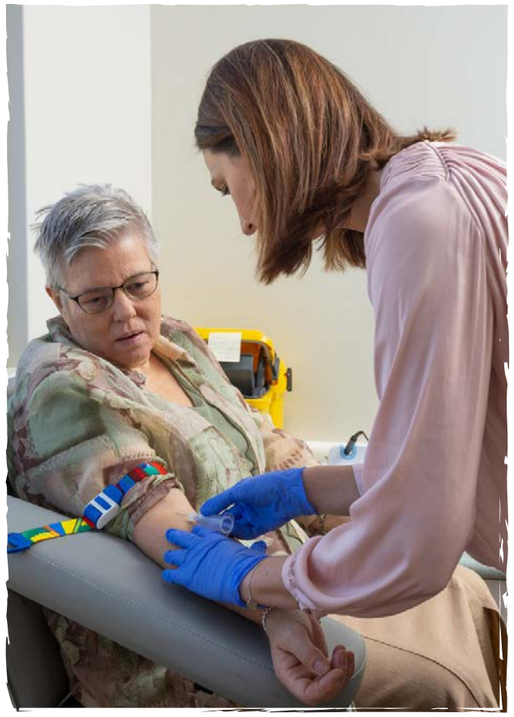
The All Wales Diabetes Prevention Programme (AWDPP) is a phased Wales wide programme which aims to reduce the risk of developing type 2 diabetes (T2D) in those identified to be at increased risk. This is important because T2D is a serious, sometimes lifelong condition. It is a leading cause of sight loss and a contributor to kidney failure, heart attack and stroke and despite being largely preventable the prevalence of T2D in Wales has increased by 40% over the past 10 years.

Prior to the AWDPP, the provision of diabetes prevention across Wales was varied and largely depended on individual GP practices. The AWDPP programme aims to facilitate a more systematic and equitable approach and reduce the unwarranted variation in approach to T2D prevention in primary care in Wales.

Who is the target population?

The target population includes adults aged 18 to 79 years of age, who are at increased risk of T2D, as identified by an HbA1c measurement of 42-47 mmol/mol, from a blood sample taken within the previous 3 months, for whom the intervention is clinically appropriate.

To optimise safety and effectiveness, eligibility criteria are systematically identified through the GP records, which exclude those for whom the intervention is considered clinically inappropriate or for whom the intervention is unlikely to be effective.



What is the intervention?

The AWDPP sees dedicated, trained healthcare support workers, deliver a single, evidence-based brief intervention, focused on increasing individual's understanding of the risk of developing diabetes and the benefits of dietary changes and increasing levels of physical activity

The person-centred approach encompasses a 'what matters to you?' conversation and goal setting.

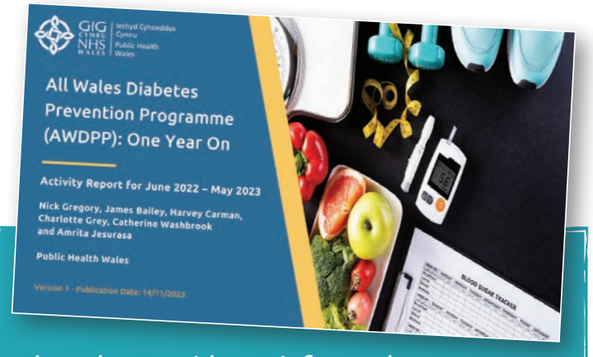
The intervention includes providing standardised advice and materials, delivered in a culturally appropriate and meaningful way.

During the 30-minute consultation, a minimum data set is recorded and uploaded to the GP system, to allow for robust outcome evaluation and quality improvement in relation to equitable access and uptake.

What impact did the prevention activity have?

The outcome evaluation of the AWDPP is in progress and will report in due course. However, this programme is aligned to the approach used by the evidence-based programme in England, which research has demonstrated resulted in a 7% reduction in the number of new diagnoses of T2D between 2018 and 2019[2].

To date, the AWDPP has reached over half of the Primary Care Clusters in Wales. Early independent process evaluation of the AWDPP found more than half of those identified as being at risk and who attended consultations, had been unaware they were at increased risk of diabetes, and approximately 70% were referred on to behavioural support services to support their behaviour change.



A PBHC Approach

Key components of the AWDPP are the robust, evidence informed intervention, the systematic identification of those at increased risk of T2D, the delivery protocol against which fidelity can be assessed, and robust data collection, by a dedicated, trained workforce.

Find out more about the AWDPP here.

Case Study 2

Designed to Smile D2S

What is the desired outcome?

The desired outcome is to improve the oral health of children in Wales so that all children are free of tooth decay, which is largely preventable.

Who is the target population?

In 2015, Cardiff University found that 14.5 % of 3-year-olds in Wales had at least one tooth affected by tooth decay [3].

There were clear links with social deprivation with over 20% of 3-year-olds in the most deprived areas having experience of tooth decay. The 3-year-olds with at least one tooth affected by decay each had about 3 teeth decayed.

Comparison of data from this survey with data from dental epidemiological surveys of 5-year-old children in Wales highlights that much of the dental caries present at age 5 have already developed by age 3.

These results show a need for a greater focus on the very youngest children. The target population for the intervention is children aged 7 years and below living in deprived areas.

What is the intervention?

Designed to Smile (D2S) is a national programme, delivered by dedicated, trained staff in the NHS Community Dental Services in Wales, in partnership with nurseries, schools and other professional groups working towards a common aim: to prevent childhood dental disease.

There are two elements to the D2S programme, each delivering approaches recommended in NICE guidance [4].

1. A universal preventative programme for children from birth which involves a wide range of professionals, including health visitors and other early years services. The aims are to help start good habits early by giving advice to families with young children, providing toothbrushes and toothpaste, and encouraging regular dental practice attendance.

2. A targeted preventative programme for Nursery and Primary School children: This involves delivery of supervised toothbrushing and fluoride varnish programmes for children to help protect teeth against decay, and provision of oral health education resources.

   This element focuses on schools and nurseries within the three most deprived quintiles of the Welsh Index of Multiple Deprivation (WIMD), where the prevalence of tooth decay is highest and access to dental services lowest.

What impact did the prevention activity have?

In 2019, the Welsh Government released figures showing a 13.4% reduction in the proportion of children with tooth decay, with a 15% drop in disadvantaged areas.

Since the launch of the programme in 2009, children's tooth decay has reduced to a third, equating to 4,000 fewer 5-year-olds having tooth decay.

In the last six years there has been a 35% reduction in the number of children undergoing dental procedures under general anaesthesia, resulting in 3,200 less children a year having to undergo treatment for tooth decay [5].

A PBHC Approach

The D2S programme is supported by robust data, including uptake data. This data demonstrates that since D2S services resumed after the Covid 19 pandemic, participation in schools and nurseries has not returned to the pre-pandemic rate. Data also show that a greater proportion of parents are declining participation for their child since the pandemic. Work to increase participation by exploring reasons for these declines is ongoing. Work with strategic partners to explore and address barriers to participation is ongoing, with consideration to capability, opportunity, and motivation of all concerned.

Find out more about the Designed to Smile programme here

Case Study 3

‘No one left behind’- Equitable access to Covid Vaccine in Aneurin Bevan University Health Board (ABUHB)

What is the desired outcome?

The aim of the COVID-19 vaccine equity workstream in Aneurin Bevan was for every person to have fair access and opportunity to receive their vaccination if they made an informed choice to do so.

The workstream recognised equitable access to vaccination would help address the disproportionate impact that COVID-19 could have on under-served groups.

By December 2020 when the COVID-19 vaccination programme was rolled out in the UK, the population health need and demand for a safe, effective intervention to reduce the transmission of COVID-19 and reduce health risks associated with it, were imperative to management of the COVID pandemic.

ABUHB offered COVID-19 vaccinations in accordance with the Joint Committee for Vaccination and Immunisation (JCVI) guidance, which included the order of priority for vaccination, based on occupation, age and clinical risk.

By 2021, uptake of COVID-19 vaccination was generally high in adults in Wales (1st dose -90%, 2nd doses-78%). However, inequitable uptake in underserved groups remained an issue [6].

Who is the target population?

Through close partnership working, groups including homeless people, people with substance misuse issues and sex workers, were identified as underserved in the provision of vaccinations.

Evidence suggests people experiencing homelessness and those with substance misuse issues may face a range of barriers to vaccination including not receiving an invitation due to lack of address or GP registration, difficulty accessing vaccination clinics due to lack of resources or transport, or difficulty attending a set appointment time, misinformation about COVID-19 vaccination and low levels of trust in the government and medical services [7].

How was the intervention implemented?

The team worked closely with partners, including Gwent Drug and Alcohol Service (GDAS), Aneurin Bevan Local Public Health Team, The Wallich, the AB Liver Health team, Pobl and Cornerstone to overcome known barriers, utilising local resources and established relationships.

Their approach included using community venues, and mobile teams to vaccinate people. This allowed people to be vaccinated in the Wallich bus, and the testing team’s bus, to vaccinate people in their temporary accommodation.

Rough sleepers were vaccinated by Health Board vaccinators delivering with support from the Wallich on the ‘breakfast run.’

Sex workers in Newport were offered vaccination within their residence by a mobile team and links were made with women’s refuges to promote COVID vaccination amongst their residents.

What impact did the prevention activity have?

Over 120 people received first dose vaccine, and 80 people received second dose vaccine through these outreach sessions.

Having developed a strong collaborative working relationship with GDAS to undertake outreach vaccination clinics with their service users, the AB Local Public Health Team and Health Protection colleagues continue to adopt this model of working to improve acceptability and accessibility and deliver other prevention work, for example, in relation to reducing transmission of TB and Hepatitis and to reduce Cardio-Vascular risk factors.

GDAS
GWENT DRUG AND ALCOHOL SERVICE

A PBHC Approach

On one level, this case study draws on the analysis of data to identify under-served groups, cross referenced with local knowledge.

On another the vaccine equity workstream identified barriers to uptake experienced by their target population and worked closely with strategic and delivery partners to remove the barrier to optimise uptake in underserved groups.

Case Study 4

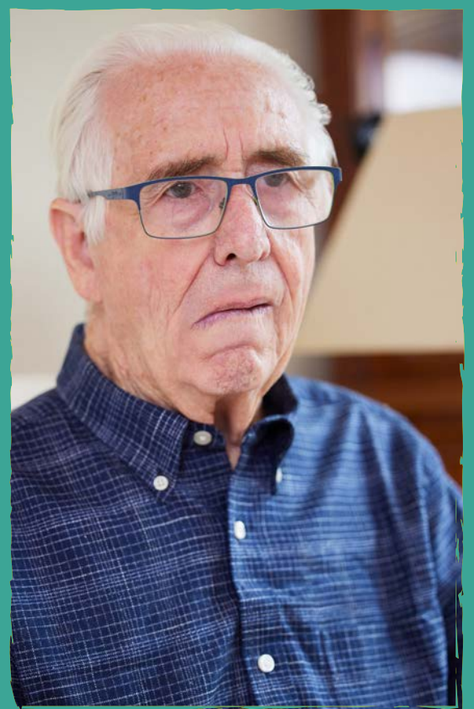
‘Stop a Stroke’ Campaign

What is the desired outcome?

The desired outcome of the Stop a Stroke (SAS) project was to reduce the incidence of stroke due to atrial fibrillation (AF).

An estimated 7,400 people have a stroke each year in Wales and estimates are that stroke costs Wales £1billion a year, potentially rising to £2.8billion by 2035 [8].

AF is a significant risk factor for stroke, contributes to twenty percent [9] of all strokes in the UK and causes the most disabling strokes with the highest mortality.



Who is the target population?

The target population was people with AF in Wales, who are therefore at increased risk of stroke and its disabling consequences.

How was the intervention implemented?

People with AF who were at risk of having a stroke were systematically identified by the CHA2DS2-VASc score. Following investigations into the treatment they were prescribed, those not receiving oral anticoagulation were offered a timely treatment review to reduce their risk of a stroke which was close to the person’s home and with a clinician they were familiar with.

Whilst primary care providers are best placed to do this, the expertise in anticoagulation, particularly in complex situations, is often in secondary care.

The SAS project team worked to find the best way of giving primary care clinicians sufficient knowledge, confidence and motivation to deliver AF treatment reviews effectively in general practices.

The SAS project started within Cardiff and Vale University Health Board (CVUHB) when updated NICE guidelines on the management of AF were produced in 2014 and subsequently supported by the All-Wales Medicines Strategy Group (AWMSG) and Welsh Government.

The project team worked with colleagues in primary care, the British Heart Foundation (BHF) and Public Health Wales (PHW) conducting several ‘Plan, Do, Study, Act’ (PDSA) cycles to test methods of providing a co-ordinated approach to completing treatment reviews effectively.

To measure the impact of each method, the number of people with AF receiving each treatment group (warfarin, new oral anticoagulants (NOAC), antiplatelet monotherapy or no treatment) in the GP practices involved, were tracked over time.

Qualitative feedback from the participants of the various methods were collected to inform how the structure of delivery affected their understanding and confidence.

They found 4 key components:

1. Education of primary care clinicians to increase knowledge and confidence of anticoagulation for AF
2. Financial support in the form of a local enhanced service (LES) to appropriately remunerate primary care for providing a service historically delivered in secondary care.
3. A user-friendly, robust system for identifying people with AF requiring review and capturing the outcomes of the reviews to prove effectiveness of the support given.
4. The interaction of primary care clinicians with secondary care specialists. Working with 4 Primary Care Clusters in Cardiff and Vale in the first instance, the number of people with AF receiving anticoagulation increased by 209 between July 2016 and March 2017. The number of people on antiplatelet monotherapy decreased by 164 in the same time period.

Given the potential benefits of SAS, the programme has now been extended to ensuring that each person with AF across Wales has a review of their stroke risk and their anticoagulation status in line with the latest NICE /AWMSG guidance.

What impact did the prevention activity have?

After piloting the SAS project in 4 PCCs in CVUHB, between 2014 and 2017, the number of people prescribed antiplatelet monotherapy reduced from 26% to 6%.

The SAS project provided:

1. Primary care clinicians with education regarding the risk of stroke and AF, including education sessions provided to every Cluster/GP Practice in CVUHB and many others across Wales
2. An online resource www.stopastroke.co.uk to support risk assessment and safe prescribing – providing links to both national and health board specific guidance
3. A model, of enabling primary care colleagues to effectively and sustainably review people with AF and initiate prescribing of appropriate anticoagulation, that worked well across diverse GP clusters in Cardiff and Vale
4. The SAS Audit+ tool, which has been successfully deployed to 416 GP practices across Wales, providing each with a dashboard that allows all primary care practices to identify people with AF who are at risk of stroke based on their CHA2DS2-VASc score, and their current treatment (warfarin, Direct Oral Anticoagulant (DOAC) or antiplatelet or not currently on treatment)
5. A separate dashboard (Primary Care Information Portal) that allows all Cluster leads and Health Board (HB) leads to view Cluster/HB data to identify variance
6. An E-advice system within CVUHB which has led to a reduction in Out Patient Haematology referrals and appointments

In addition, every Health Board now has a Local Enhanced Service Specification for the direct initiation of oral anticoagulants for AF.

A PBHC Approach

The SAS project illustrates: the use of data and digital developments to support the systematic identification of individuals within the target population, as well as quality improvement activities, training and support for the workforce to offer an intervention to reduce the risk of stroke.

Find out more about the SAS project here

Case Study 5

Using a Population Health Management approach to support people to address fuel poverty needs

What is the desired outcome?

The desired outcome of the Population Health Management (PHM) project on winter fuel poverty undertaken in Taff Ely Primary Care Cluster between December 2022 and April 2023 was to reduce the burden of fuel poverty of people by improving opportunities for preventative care closer to home and overall experience of care.

During 2022, the combination of rapidly rising energy costs and a cost-of-living crisis came together to see some of our most vulnerable populations reducing or even turning off their heating. Welsh Government estimated that 45% of all Welsh households could be in fuel poverty [10].

This was concerning since evidence shows that living in cold temperatures can increase the risk of a number of preventable diseases and conditions, including strokes, heart attacks, respiratory diseases, falls, injuries and hypothermia [11, 12, 13].

Who is the target population?

Individuals at the greatest risk of adverse health effects of fuel poverty, including exacerbation of chronic conditions.

How was the intervention implemented?

This project tested the feasibility of applying a PHM approach to proactively identify individuals, using a combination of Population Segmentation and Risk Stratification (PSRS) data and GP clinical data. Individuals were included, based on a number of characteristics, including age (65+), deprivation, number and type of chronic conditions and being in certain population segments of the population related to their health needs.

The PHM Unit worked closely with Taff Ely Primary Care Cluster and the pre-existing Taff Ely Frailty Service to systematically identify and contact people at increased risk of experiencing fuel poverty, based on modelled data.

Once identified, people were contacted by Health Care Support Workers (HCSW) through telephone calls and with a conversation initiated to identify unmet needs through a 'What matters' based conversation.

Depending on the individual, needs may have related to social isolation or mental health concerns, and issues relating to housing, finances, or domestic tasks.

Once the appropriate level of support was identified and consent confirmed, people were referred directly to a service/intervention by the HCSW.

Connections were largely made by social prescribing and linking with third-sector organisations, allied health professionals, rehabilitation services and social services.

What impact did the prevention activity have?

Six hundred and twenty-five people were successfully contacted from 1,110 attempted patient contacts.

Around 1 in 10 were signposted to a warm home service, but a much larger number (1 in 5) had unmet health needs which were discussed.

Of the 625 people, 196 (31%) were referred to a further intervention (117 to frailty services, 43 to NEST, and 51 to other services).

Qualitative data collected highlights the positive and lasting impact that the intervention had on people. Exploration of partners' views demonstrates that they saw the use of PSRS data and the resulting intervention as a proactive project that had a positive impact on both people and staff.

> ' It has provided the chance for early intervention. This will help patients stay well longer and also save money.'

A PBHC Approach

The project was co-designed by Taff Ely Primary Care Cluster, the Taff Ely Frailty Service and Cwm Taf Morgannwg PHM Unit. The project aligned an existing cluster funded initiative, the Taff Ely Frailty Service, with Value Based Health Care service improvement funding, to employ the HCSW, via the bank.

A systematic means is used to identify people from the population who are at greatest risk, using existing data and modelling technology. However, the intervention takes an entirely person-centred approach.

Case Study 6

‘Born into Care’ Swansea

What is the desired outcome?

The Swansea ‘Born into Care’ project was developed with the desired outcome of reducing the number of babies going into care.

The approach for achieving this was through identifying safeguarding concerns early and providing multi-agency support for parents during pregnancy and in the first two years after a baby is born, a period known as the first 1000 days of life [14].

The removal of a newborn baby into care is perhaps one of the most difficult decisions that professionals have to make.

In 2019, The Nuffield Foundation published ‘Born into care: newborns and infants in care proceedings in Wales’ [15].

This provided the first-ever picture of the extent to which newborn babies and infants are subject to care proceedings in Wales, and how this has changed over time, based on analysis of Cafcass Cymru data from 2011-2018.

Over this period, a total of nearly 1400 newborns in Wales were subject to care proceedings [16]. The data demonstrated both a higher rate overall than in England and significant variation across local authority areas and the three Designated Family Judge (DFJ) courts in Wales.

The highest incidence was consistently found in the jurisdiction of the Swansea and Southwest Wales court.

Who is the target population?

Parents who are at risk of having their child taken into care, from the early stages of pregnancy through to the child’s birth and up to the age of two years old.

What is the Intervention?

The ‘Born into Care’ project is a collaboration between supported care planning teams; statutory social work teams, the Jig-So service (a service that supports young families), and Swansea Bay University Health Board.

It offers enhanced antenatal care, parenting support and practical help, intensive home visits and group support. The project uses an evidence-informed, person-centred, strengths-based, solution-focused approach and places families’ voices and experiences at the heart of what they do.

The team works alongside families, building upon their existing strengths and sharing material and information on child development, adverse childhood experiences (ACEs), attachment, bonding and other parenting material. There is a focus on building parents’ confidence and supporting them to engage with other services in their community.

‘ We are still struggling with our anxiety. So it’s really helped with our mental health as well, hasn’t it? The support was amazing. Even now, when she’s 18 months old, and they’re still there for when I need them’

Other support offered includes:

- Supporting behaviour change in relation to smoking, alcohol, substance misuse, diet and physical activity.
- A ‘relationships’ programme that provides advice on what a healthy relationship between parents might look like and through the group’s facilitators, provides a safe space to discuss often challenging topics. These include what abusive partner behaviour looks like, strategies for overcoming stressful situations, coping with arguments and dealing with disagreements.
- Practical support with any housing or benefit issues and anything that could impact on parenting ability.

‘ It’s given us a lot more confidence. We’ve learned a lot and we’ve learned a lot about being parents and about babies, and I think without it, we would’ve been a lot more lost or second guessing ourselves.’

What impact did the prevention activity have?

Independent evaluation of the Jig-So approach, a key element of the Born into Care project, reported that ‘the majority of families working with Jig-So closed to the service with a positive outcome’:

- Of the 151 families open to both social services and JIG-SO, 132 families engaged well
- Of these, 15 children (11 %) were removed from their parents’ care, leaving 87 % of those who engaged with the service having either a positive outcome, or work ongoing
- In contrast, 19 families did not engage with JIG-SO and 15 (79%) of these families had the child removed from their care, giving a positive outcome (or work ongoing) rate of only 21% [17]

‘ It’s got us out and about a lot more as well, so we’re interacting with a lot more people, where we would have been stuck in the house.’

A PBHC Approach

This project addresses the important outcome of reducing the incidence of infants taken into care, identified through the publication of national and local level data. A person-centred approach is taken, intervening early in pregnancy to give expectant parents the opportunity to develop their skills and confidence and to reduce safeguarding concerns before the baby is born, using evidence-informed approaches.

For further information

https://www.nuffieldfjo.org.uk/wp-content/uploads/2023/03/nfjo_newborn-babies_best_practice_guidelines_english_20230330-2.pdf

https://socialcare.wales/resources/born-into-care-swansea-council-the-accolades-2024

Case Study 7

Multifactorial Falls Risk Assessments in the Community

What is the desired outcome?

The desired outcome of this project was to increase equitable access to structured multifactorial falls assessment (MFA) in community settings, to enable timely removal or mitigation of preventable falls related risk factors and reduce the incidence of falls and related injuries.

Falls are a leading cause of injury, one of the highest causes of disability-adjusted life years [18] and according to Age UK, the most common reason for older people to be taken to the emergency department in a hospital. They can result in serious injuries which often result in poor short and long-term health outcomes, placing a heavy demand on health and care services.

Muscle weakness, poor balance, visual impairment, polypharmacy and the use of certain medicines, environmental / tripping hazards, and some specific medical conditions all contribute to the risk of falling.

Assessing the risk of falls therefore requires an MFA to identify all risk factors. In Powys Teaching Health Board this assessment was usually undertaken at an outpatient falls assessment clinic.

However, service review found variation in the frequency and attendance of falls assessment clinics and staff reported they did not find the paper falls risk assessment tool user friendly. These factors combined demonstrated the need to review the assessment process and explore how the service could be delivered more equitably.

Who is the target population?

The target population is people who are potentially at increased risk of falls, particularly those who are elderly or frail.

What is the Intervention?

Capitalising on digital and technological advances, the MFA app provides a simple, evidence-based, user-friendly assessment tool that can be used in face to face or phone consultations.

The app allows MFA to be completed and recoded on a smartphone or laptop, which gives it utility in domiciliary and community settings and negating the need for a person to attend an outpatient clinic.

The app automatically generates a summary of interventions to reduce any risks identified and the assessor can work with the individual to ensure any potential risks are removed or mitigated in a timely manner.

To further increase accessibility to this service, people can self-refer if they are concerned about falls and access the help and advice they need to prevent falls before they happen.

What impact did the prevention activity have?

Evidence demonstrates that MFA apps are associated with significant reductions in falls and are perceived by app users and care professionals as being highly beneficial19. In support of this evidence, the following individual case study is of a 76-year-old gentleman who was referred by his GP to a Community Assistant Therapy Practitioner (ATP), requesting a MFA for recurrent falls.

The man lives in a 3rd floor flat, with no lift and had not left his property in 4 months due to his fear of falling. He was therefore unable to attend a clinic. It was arranged that he could therefore have the MFA done at home via the use of the MFA app.

The ATP went through the MFA with the gentleman and identified his anxiety score for falls was high at 8/10, balance and mobility were poor and contributing to his falls/fear of falling. He was unable to shower due to difficulty accessing his bath and had urgency to urinate but was not always able to access his bathroom in time due to fear of walking in low light and insufficient support. He had not had his eyes tested for 4 years.

As a result of his MFA, a wheeled Zimmer frame was provided to enable him to walk safely to the bathroom at night. He was referred to continence services for advice and support and a domiciliary eye test was arranged. He was seen at home by a physiotherapist for strength and balance exercises and referred to Care and Repair for grab rails to be installed in his bathroom.

The patient completed the exercises prescribed by the physiotherapist daily, and within 4 weeks was able to successfully complete a stair assessment.

The more supportive walking aid improved his gait pattern, and new glasses improved his vision, reducing the risk of tripping. Four months after the initial MFA, the man is able to complete the stairs leading to his flat and a wheeled rollator has been provided for him to access the outdoors', which he now does regularly. His anxiety score for falls had reduced from 8/10 to 5/10.

A PBHC Approach

Identification of the need for service improvement was data driven, the intervention uses technology to enable an evidence-informed, easy to use app, to increase equitable access to MFA and provide care closer to home.

For further information, visit the Falls Prevention Service here

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Acknowledgments

We would like to extend our thanks to all those who provided information in relation to the case studies and those involved in the delivery of the programmes showcased.

Prevention-Based Health and Care (PBHC) in Action

Case Studies

GIG CYMRU NHS WALES
Iechyd Cyhoeddus Cymru
Public Health Wales