GIG CYMRU NHS WALES

Bwrdd Iechyd Prifysgol
Betsi Cadwaladr
University Health Board

Betsi Cadwaladr University Health Board
Director Of Public Health
Annual Report 2023

Collective Action For A Healthier North Wales

Taking A Whole System Approach

Foreword

As we have moved through the COVID-19 pandemic recovery and back into business as usual, the Public Health community has reflected on the challenges that we now face.

Last year my annual report recognised the significant impact COVID-19 had on the mental health and wellbeing of the population of North Wales and how professionals and communities were working together to support our population through a journey of recovery. Over the past 12 months we have recognised that many of the 'wicked issues' we faced pre-pandemic have become increasingly more complex due to the greater prevalence of unhealthy behaviours and associated health conditions, alongside the negative impacts of economic pressures bearing down on communities, in particular those already most vulnerable.

The system successfully adapted to a range of needs during national pandemic lockdowns, but many of the successes, such as working from home and food delivery, have had negative unintended consequences on our health and wellbeing. In Wales the Public Health system has recognised that in order to address some of these 'wicked issues' there needs to be a move away from addressing individual level behaviours and a move towards taking a whole system approach to the complex problems we are facing as a society.

Historically Public Health have always taken a strong partnership approach to tackling the health and wellbeing needs of the communities they serve. Over the past 12 months in North Wales, we have started a journey of using whole system thinking and whole system methodology to enhance this partnership working and support the wider system to recognise that we all have a part to play in addressing the current challenges we face such as healthy weight, active and sustainable travel and the cost-of-living crisis. This annual report will reflect on our understanding and experience of taking a whole system approach in North Wales and offer examples of work that is taking place nationally, regionally and locally.

This is my first public health annual report since local public health teams were transferred from Public Health Wales to Local Health Boards, a move that I anticipate will continue to strengthen the local public health system for our citizens. I am hopeful the transfer will support the Health Board to further embed prevention, early intervention and reducing health inequalities as the core approach to population health in North Wales.

The Public Health Team in North Wales have shown great commitment and resilience during this process and have continued to deliver on the public health priorities for the population of North Wales. I would like to thank my Public Health Team and wider partners for their hard work and dedication over the past 12 months – Diolch yn fawr.

Teresa Owen

Executive Director of Public Health

Betsi Cadwaladr University Health Board (BCUHB)

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Executive Summary

There is increasing recognition that the public health challenges today are multifactorial, complex and cannot be solved by one organisation alone.

Taking a whole system approach can often mean different things to different people but underpinning the approach is ensuring everyone has a shared understanding of the problem.

The data in North Wales continues to show inequalities in health outcomes for those living in our poorest communities with a range of factors responsible for this including the accessibility and quality of health and social care services, individual behaviours and the wider determinants of health (such as housing, income and the physical environment).

The Welsh Government have demonstrated their commitment to taking a whole system approach across their programmes of work. One area that is applying this approach systematically across Wales is the national Healthy Weight Healthy Wales strategy. In North Wales this work is being led by the BCUHB Healthy Weight Healthy Wales Whole System Approach team.

Whole system approaches are also being used to address a number of other complex problems across Wales, including the national educational attainment gap and mental health and wellbeing in North Wales.

Locally across North Wales partners are making a significant contribution to the system through a range of place-based approaches. These approaches are tackling the underlying causes of ill-health within our communities, by identifying opportunities for leverage in the system.

Taking a whole system approach can offer both opportunities and challenges. One of the key opportunities is the engagement of parts of the system that often struggle to recognise their role in a complex problem.

When taking a whole system approach it is crucial that we consider potential unintended consequences, these can be positive or negative and occur due to the interconnected factors within a system. When taking a whole system approach it is vital that we consider the bigger picture and how causal factors are interlinked.

It is also important that we evaluate whole system approaches. Drawing conclusions on cause and effect in a whole system approach can be difficult, but using techniques that include social network analysis and ripple effect mapping can enable us to demonstrate what change has occurred and how change has occurred.

The report is written in four main sections: The first covers the context and opportunities of systems working. The second section provides examples of good work. The third section reflects on the challenges, opportunities and evaluation approach, while the penultimate and final sections provide further reading links and references.

1. An Introduction To A Whole System Approach

Many of the challenges facing us as a society have been called 'wicked problems', including climate change, inequality, poverty and obesity. These are issues that are highly complex, in that they are made up of a wide range of interconnected factors. There is no one right way to solve them, and no one organisation or agency are responsible for solving them alone. A diverse range of sectors and organisations must play a role, influencing where they can achieve change in the system. Whole system approaches are an increasingly popular way to tackle public health issues with examples of the approach being used with obesity prevention, youth offending, physical activity, and mental health and wellbeing.

Although there is no one agreed definition for a whole system approach (WSA), some people have defined the approach as:

'those that consider the multi-factorial drivers, involve transformative co-ordinated action across a broad range of disciplines and stakeholders, operating across all levels of governance and throughout the life course'[1]

'a dynamic way of working, that brings together stakeholders to develop a shared understanding of the challenge, and integrate action to bring about sustainable, long-term systems change'[2]

Men from the least deprived areas live an extra 13 years in good health compared to those from the most deprived. The difference is 17 years for women

Many other definitions include reference to:

- **recognition of working in a complex, adaptive system**
- **the use of system thinking to help illuminate the problem**

In practice, this means working across communities and stakeholders to develop a shared understanding of a complex problem, considering how the local system is operating, and where there are the greatest opportunities for change. Working in collaboration, stakeholders can then test a range of solutions and work to implement changes that are long-term, sustainable and focus on the root-cause of the problem. Changes need to work at all levels of the system, from an individual event-level action, through to changes in policy and processes which reflect what is valued in the system.

A whole system approach involves applying systems thinking, systems leadership and a range of methods and tools to better understand the problem, identify solutions and align priorities to define collective action.

Data: Life expectancy at birth:

	Wales	BCUHB
Female	**82.1**	**82.3**
Male	**78.3**	**78.8**

Healthy life expectancy

	Wales	BCUHB
Female	**62.4**	**65.2**
Male	**61.5**	**63.9**

Source: Health expectancies in Wales with inequality gap - Public Health Wales

Data: Life expectancy at birth:

Key Definitions

System

A set of tangible and intangible components (people, services, relationships, values) working together in an interconnected way and functioning as a whole. Systems are often described when talking about societal problems and about the way organisations can behave together.

Systems Change

Relationships between different components in the system are altered towards new outcomes and goals.

Complexity

Characterised by having multiple, interacting parts, being unpredictable and therefore having no straight line between cause and effect.

Systems Thinking

A way of making sense of complexity by considering things as part of a whole rather than a series of individual events.

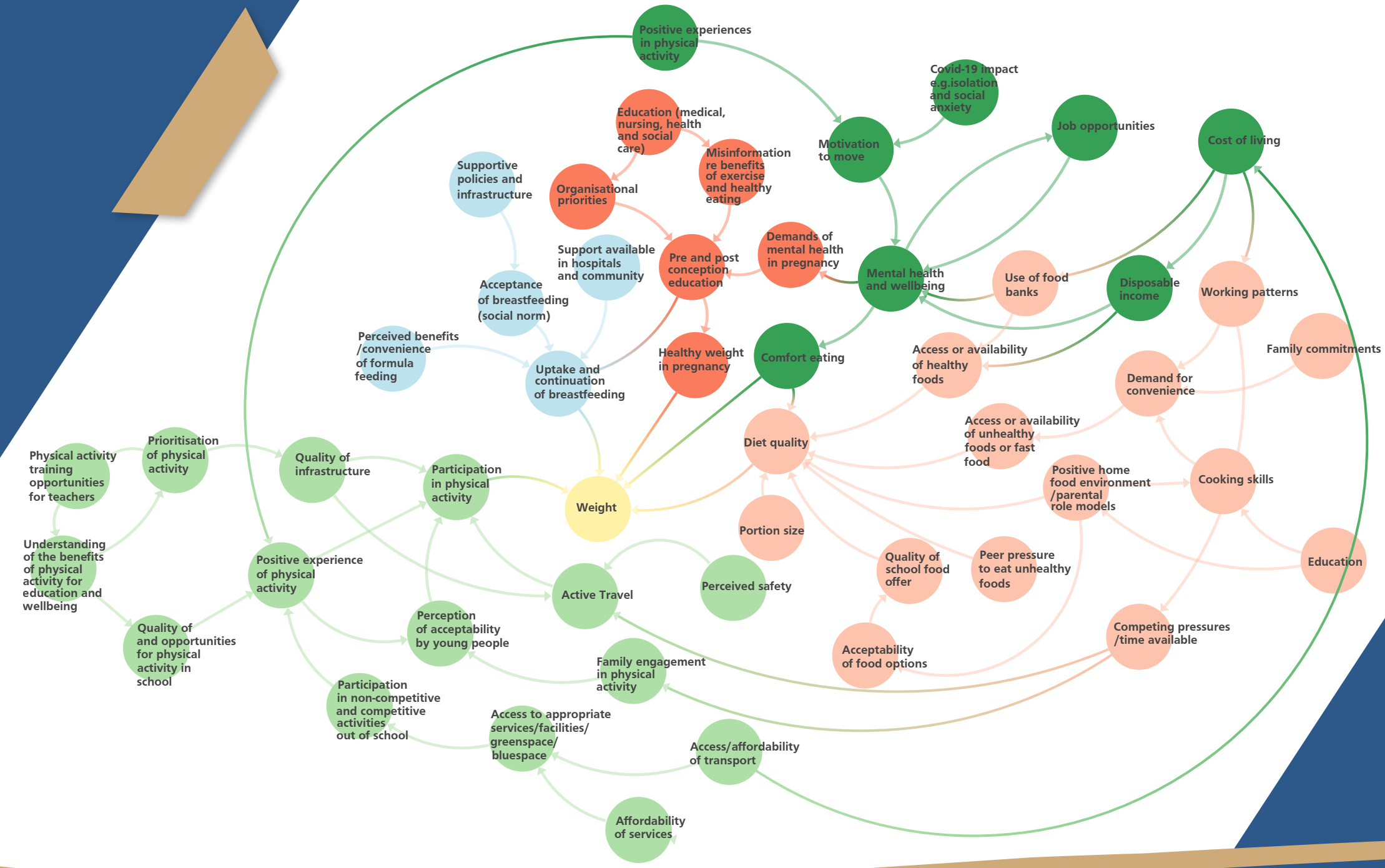
System Leadership

A set of skills and capacities that any individual or organisation can use to catalyze, enable, and support the process of systems-level change. System leadership is about how you can lead and influence when you're not in charge, particularly when working across organisations or sectors. Central to systems leadership is having good relationships so that we can work together towards a shared ambition.

System Mapping

A commonly used tool in whole system approaches. System mapping exercises seek to:

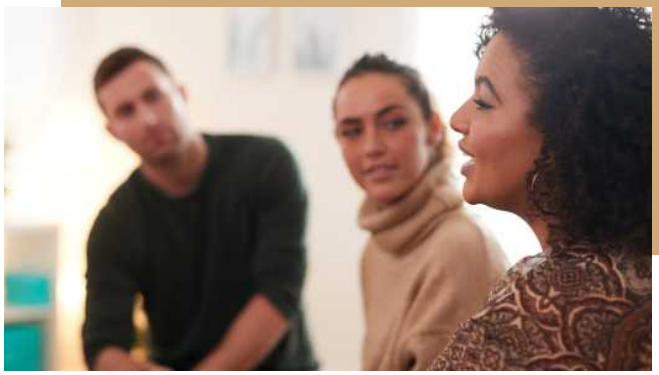
- **Visualise elements of the system, including relationships and feedback loops**
- **Simplify complexity and allows stakeholders to see the whole picture and to have a shared understanding**
- **Identify leverage, or intervention, points from the maps**
- **Illuminate the causes of the public health issue – including interdependent elements, the relationships between elements and any feedback loops**
- **Provide a shared understanding of the problem between stakeholders**
- **Identify action points or levers to intervene and change the existing system**
- **Help stakeholders see their place within the system**
- **Consider potential unintended consequences of actions**


Positive experiences in physical activity
Covid-19 impact e.g.isolation and social anxiety
Education (medical, nursing, health and social care)
Motivation to move
Job opportunities
Cost of living
Supportive policies and infrastructure
Organisational priorities
Misinformation re benefits of exercise and healthy eating
Support available in hospitals and community
Pre and post conception education
Demands of mental health in pregnancy
Mental health and wellbeing
Use of food banks
Disposable income
Working patterns
Acceptance of breastfeeding (social norm)
Perceived benefits /convenience of formula feeding
Uptake and continuation of breastfeeding
Healthy weight in pregnancy
Comfort eating
Access or availability of healthy foods
Family commitments
Demand for convenience
Diet quality
Access or availability of unhealthy foods or fast food
Positive home food environment /parental role models
Cooking skills
Physical activity training opportunities for teachers
Prioritisation of physical activity
Quality of infrastructure
Participation in physical activity
Weight
Portion size
Quality of school food offer
Peer pressure to eat unhealthy foods
Education
Understanding of the benefits of physical activity for education and wellbeing
Positive experience of physical activity
Active Travel
Perceived safety
Perception of acceptability by young people
Acceptability of food options
Competing pressures /time available
Quality of and opportunities for physical activity in school
Family engagement in physical activity
Participation in non-competitive and competitive activities out of school
Access to appropriate services/facilities/ greenspace/ bluespace
Access/affordability of transport
Affordability of services

2. The Opportunities Of Taking A Whole System Approach

Taking a whole system approach presents opportunities for the system and the organisations working within the system. Complex problems require a whole system approach with multiple stakeholders and sectors involved. There is a need to disrupt the system to change how it functions to address the problem.

A whole system approach evidences the journey through a complex problem and enables outcomes to be demonstrated. This approach allows for engagement with wider partners and stakeholders, many of whom wouldn't have recognised their role within the wider complex problem. Within a whole system approach no one organisation is held to account for a complex problem and no one organisation is leading.



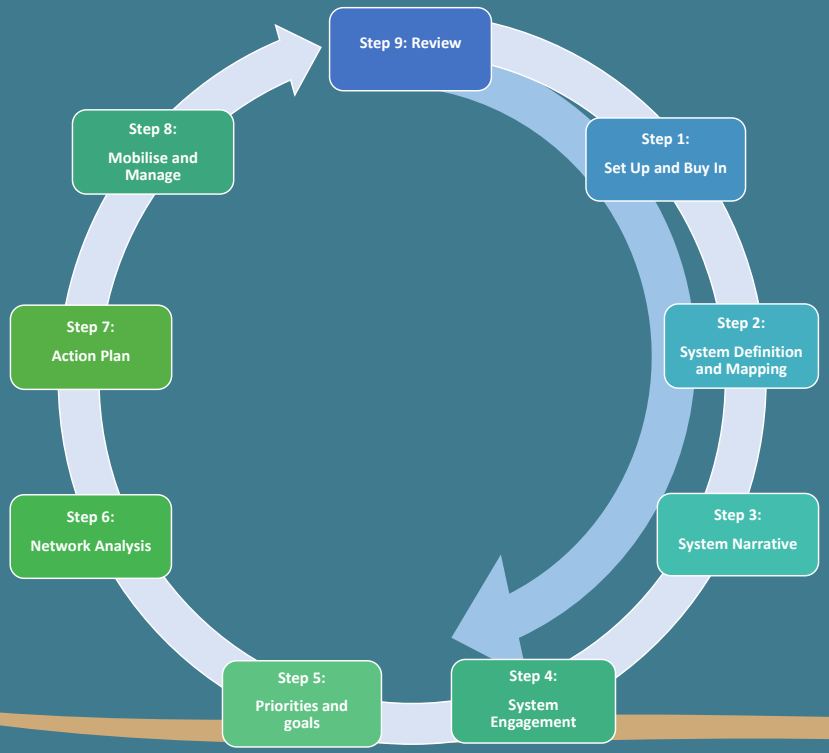
A whole system approach requires:

- **Strong leadership across the system through actively engaged partners**
- **Consistent language to promote a unified approach**
- **A shared understanding of the problem / issue**
- **Meaningful engagement with local communities**
- **Recognition that outcomes are influenced by a complex and adaptive system of interacting components**
- **Robust governance structures and shared values**
- **Continued learning, reflection and refinement**
- **Initiatives embedded within the broader policy**

National And Regional Whole System Approaches

Public health in Wales works at different levels to promote and protect the health and wellbeing of the population.

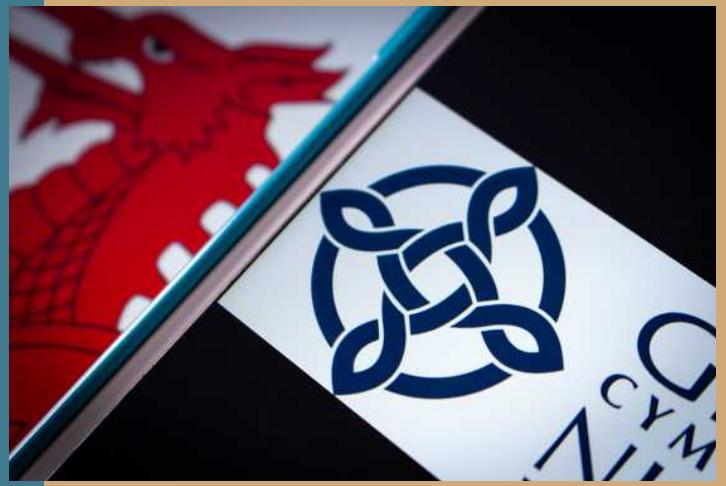
National level public health programmes of work are those being undertaken on an all Wales basis. Regional working in public health usually follows the geographical footprint of a Health Board. In the case of this report regional programmes of work are operating on a North Wales footprint. Some regional work can be informed by national work and there will always need to be local implementation, often at a local authority level or smaller community levels such as an electoral ward.



Healthy Weight: A Whole System Approach In North Wales

Healthy Weight: Healthy Wales (HWHW) is the Welsh Government's long-term strategy to prevent and reduce obesity in Wales through a whole system approach. Launched in 2019, this 10-year strategy recognises the importance of leadership and enabling change through a systems-based approach that focuses on **local leadership, collaboration and involvement and enabling local action**.

In North Wales we are taking a whole system approach by working with everyone who has an influence on the food we eat and how active we are. In North Wales we are following the 'Nine Step Approach to Whole System Working in Wales'. The BCUHB Whole System Approach to Healthy Weight Team are leading this approach and are working with partners from across North Wales.



Mapping The Causes Of Obesity

In North Wales we have used a tool called **'system mapping'** to work with partners to map the causes of unhealthy weight. This approach has ensured we have a range of experts with different backgrounds, experience and engagement with communities in North Wales to help us identify the causes of unhealthy weight and how these causes influence each other. This process allowed partners to identify the real challenges that the people of North Wales face when trying to eat healthily and move more, including the cost of food, public transport, time to cook and move more. This process identified how the cost of living crisis is having a significant impact on the choices available to families in North Wales when trying to eat well and be active. The map on page nine outlines the 94 causes of unhealthy weight in North Wales that were identified during the system mapping workshops.

Setting The Priorities

Following on from the system mapping, partners from across the system were then brought back together to agree the priorities for the Whole System Approach to Healthy Weight in North Wales

North Wales priority sub-systems:

- **Access to affordable and healthy food**
- **Eating well and being active in schools**
- **Eating well and being active in workplaces**

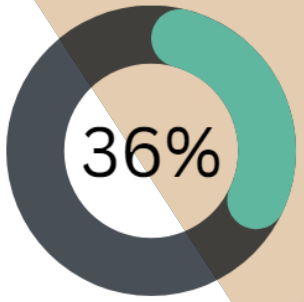
Mental health and wellbeing, health inequalities and climate change will run as golden threads through the three priority sub-systems.

Source: CMP 2018/2019

Only four in ten adults are at a healthy body weight

Source: CMP 2021/2022

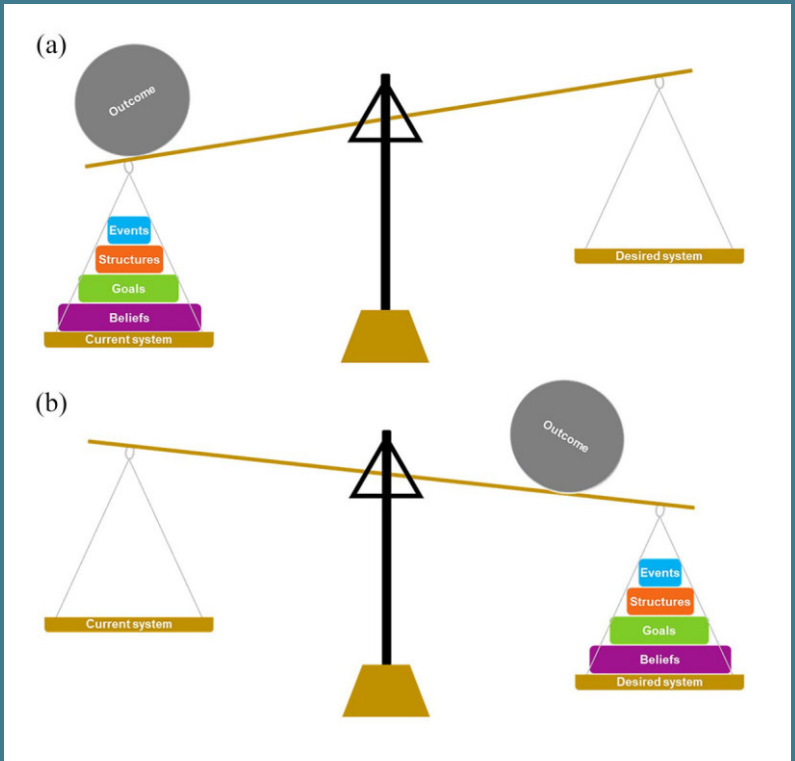
2 out of every 7 children aged 4-5 is living with being overweight or obesity



The overweight and obesity rate is 36% higher in the most deprived areas compared to the least deprived

Agreeing Actions

At the priority-setting workshop, partners were also asked to complete a Systems Action Register using the Action Scales Model[3] for each of the three themes. The Action Scales Model helped participants think how they can tip the balance from a system which promotes unhealthy weight (obesogenic, diagram a) to one that is health promoting (diagram b). They were asked to identify places to intervene in the system to ensure they were considering long-term, sustainable system change. The actions explored at the workshop have been used to create the sub-system actions.



Sub-system Actions

Access to affordable and healthy food

- **Ensuring there are affordable, healthy, sustainable food and drink options within public sector organisations**
- **Reducing access to hot food takeaways**
- **Improving access to affordable and healthy food**

Eating well and being active in schools

- **Supporting the provision of healthy and locally sourced food in schools**
- **Embedding physical activity throughout the school day**
- **Supporting the implementation of the new school curriculum around eating well and being active within the school day**

Eating well and being active in workplaces

- **Supporting the provision of healthy and locally sourced food in workplaces**
- **Embedding physical activity throughout the workday**
- **Supporting the implementation of the Healthy Travel Charter**

These sub-system actions will be the priorities for change within our healthy weight whole system approach programme of work in North Wales.

Mental Health And Wellbeing: A Whole System Approach In North Wales

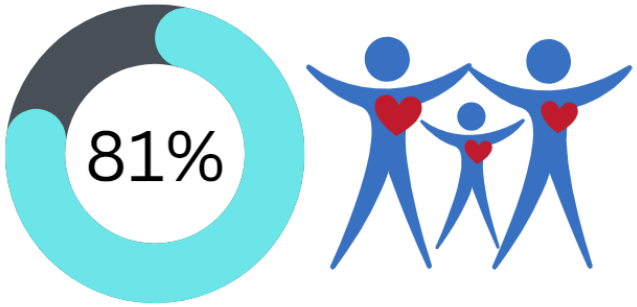
As we recognised in our last public health annual report, our mental health and wellbeing is the result of a wide range of factors. This includes our genes, our lifestyles, our family and community relationships and networks. It is also influenced by broader determinants such as our work, education, access to services, and our built and natural environment.

The refresh of the T4MH Strategy presented an opportunity to:

- **rebalance the focus to address mental health and wellbeing outcomes across the life-course considering risk and protective factors from the early years through to school aged children, working age adults, and older people**
- **prioritise action around primary and secondary prevention, earlier intervention, and use of community assets to build resilience**
- **identify and address inequalities in mental health and wellbeing outcomes**
- **develop a different approach, culture, and shared narrative to build trust between different parts of the system, including delegated leadership**

In order to facilitate a shift in both the 'what' and the 'how' of developing the new Strategy, four partnership workshops were hosted in 2022/23. Each building on the output from the previous one, the workshops provided the time and space for cross-sector partner organisations, including Mental Health Advocacy Groups, to develop a shared understanding of the key challenges and opportunities in improving population mental health and wellbeing. This included identifying where the greatest impacts could be realised by working together.

Source: 2021 Census



81% of people living in North Wales report their health to be good, or very good

Five Ways to Wellbeing

Over the next 12 months there will be a shift in how the people of North Wales are supported to maintain their mental health and wellbeing. Partners will be shifting the focus towards:

- **Giving every child the best start in life**
- **Prevention and early intervention**
- **Ensuring that the people of North Wales get the right support the first time they ask for help**

This will be achieved through working together with wider partners to identify their role within the system and how they can achieve change to ensure the population of North Wales live healthy fulfilling lives.

Educational Attainment: A Whole System Approach Across Wales (Led By Public Health Wales)

Educational attainment is a key determinant of health, well-being and health equity and contributes to other well-being goals, such as A Prosperous Wales. The Wider Determinants of Health Unit in Public Health Wales (PHW) is using a whole system approach to explore opportunities to contribute to reducing the educational achievement socio-economic disadvantage gap.

To understand the relationships between the causes and consequences of factors which influence educational achievement in Wales, PHW have undertaken a Participatory Systems Mapping exercise through a series of workshops with participants from education and health sectors. With support from youth workers, separate workshops were also undertaken with young people to validate the factors identified during the mapping exercise.

Through this method PHW have gained multiple perspectives, visualised the complexity of the situation and can better understand and describe how child and family factors, the home learning environment, school environment and broader community, social and economic factors interrelate and influence educational outcomes.

The percentage of pupils in Wales who achieve five or more good GCSE grades is 33 percentage points lower for students who receive free school meals

The next steps will be to work with others, including Attainment Champions (head teachers working to tackle the impact of poverty), to use the systems map to consider how the Community Focused Schools policy can influence the attainment gap. They will also use the map to engage other public health colleagues to explore how existing programmes relate to each other, the educational attainment gap and consider points of leverage for our future efforts.

Partners in North Wales have been identifying a range of causes of poor educational attainment based on insight and experience from families in North Wales. This includes:

- **Access to high quality childcare services**
- **Support for parenting**
- **Speech and language needs**

BCUHB will continue to be a key partner in this work and will support the Public Service Boards across North Wales with implementing the actions identified nationally to ensure all children in North Wales reach their full potential. This work will also be closely linked with the recently launched BCUHB Children's Charter which was developed with the support of 2,400 children and young people across North Wales.

Source: Inequalities in GCSE results across England and Wales, Education Policy Institute and Nuffield Foundation.

	Free school meals	Other pupils
Percentage of pupils achieving 5 or more good GCSEs	**28**	**61**

3. Local Whole System Approaches

A Whole System Approach In Wrexham – HMP Berwyn Health And Wellbeing Strategy

HMP Berwyn is a male training and resettlement prison in Wrexham, North Wales, with around 1,900 prisoners. It is the largest prison in the UK.

People in the criminal justice system (including people in prison, those on probation and people in other places of detention) are more likely to experience a higher burden of chronic illness, mental ill health and substance misuse (drugs and alcohol) problems than the general public. Offenders often come from already marginalised populations in the wider community. By improving the health and wellbeing of people in prison, there is an opportunity to improve the lives of the individual, their family and the wider community. It also offers an opportunity to reduce re-offending by tackling the underlying causes of offending behaviour.

To maximise this opportunity, HMP Berwyn has taken a whole prison system approach to improving health and wellbeing. In 2022, a Health and Wellbeing Strategy was launched to create an environment in which not only is it easier for the men living in HMP Berwyn to make healthier choices but also considers how we can support staff and prisoner's families to also make healthy choices.

The ambitious strategy covers:

- **Mental health and wellbeing**
- **Eating well and being active**
- **Smoke-free**
- **Drug and alcohol use**
- **Oral health**
- **Sexual health**
- **Screening and immunisation**

Taking a whole prison system approach requires everyone within the prison to work together to create a healthier place for people to live, work and visit. The strategy is overseen by a multi-disciplinary group including representatives from HMP Berwyn, BCUHB Public Health, BCUHB Healthcare, Prison Officers' Association (POA), Novus Cambria, Barnardo's, Wrexham County Borough Council Health & Social Care and prisoner representation.

One key success from the strategy has been a recent suicide prevention train the trainer programme where both prisoners and staff attended training alongside each other. This approach recognised everyone's role in suicide prevention both within the prison and the wider community. Prisoners have been extremely complimentary of the approach, as it has improved the relationships between staff and prisoners and enabled the two groups to identify shared life experiences relating to mental health and wellbeing.

"I thought it was good to attend the training alongside prison officers. It gave me an understanding of things from their perspective and also helped them to see things from our perspective".

HMP Berwyn Prisoner

A Whole System Approach In Flintshire - Place Making Plans

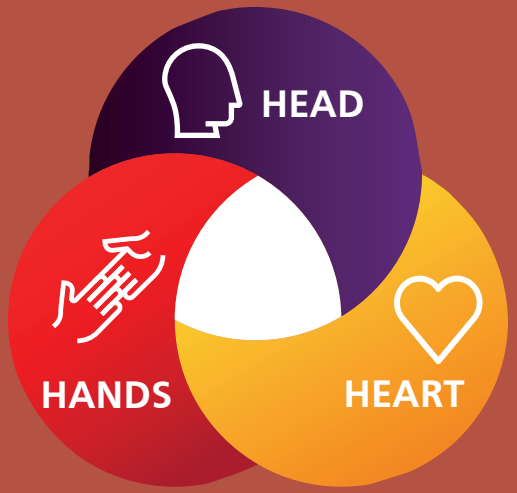
Place Making is an approach that considers how people use, live, work, socialise and move within their local area, with the aim of creating inclusive, connected, vibrant and healthy communities. Place Making aims to improve and transform local spaces through collaboration to understand the needs and aspirations of local people, businesses and wider stakeholders.

Flintshire County Council is co-ordinating the development of Place Making Plans on behalf of a range of partners over the next two years in seven-town centres across Flintshire (Holywell, Shotton, Buckley, Connah's Quay, Mold, Flint and Queensferry). The first three towns to go live with this work are Holywell, Shotton and Buckley.

The Place Making journey so far:

- **Place Making requires a 'whole-system approach' involving a wide range of professional and community stakeholders working together to understand how communities think (head), feel (heart), and what they want from their local area (hands).**

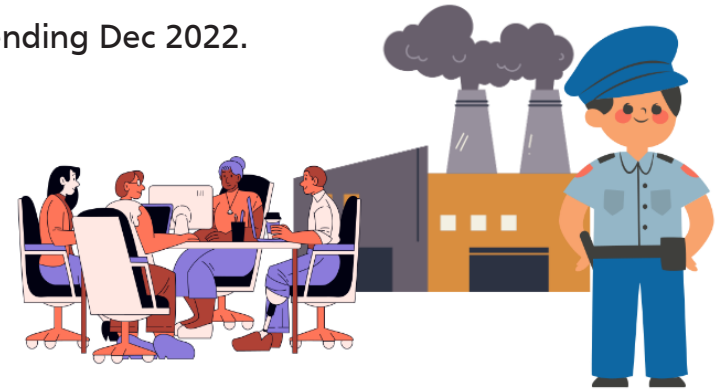
Underpinned by the Design Commission for Wales Place Making Guidance (2020), Flintshire is following an eight-step process to inform the development and implementation of local plans.



Flintshire have completed stage one and two of the process over the past 12 months. This has involved collection and interpretation of health and wellbeing, economic, cultural, regeneration and movement data. In addition to the data analysis, local insights were gathered via an on-line digital survey and a series of face-to-face consultation events, which resulted in over 5000 responses. System leaders have then been engaged through a 'Place Group' to consider the consultation findings.

By working with leaders from across the system it is hoped that the solutions to the challenges identified through community consultation will ensure that consideration is given to the complexity of the issue and offers long-term sustainable solutions to make the towns in Flintshire a place where people are supported to make healthy choices.

Source: StatsWales, data for year ending Dec 2022.



75.3% of adults in North Wales are employed.
The unemployment rate is 2.0%

1. Digital and face to face consultations to be co-ordinated by Flintshire County Council
2. Multi-agency steering group to consider consultation findings
3. Key themes and priorities identified
4. Town centre Place Making Plan developed
5. Welsh Government and Design Commission for Wales engaged
6. County Council to approve plan
7. Plan approved amongst key stakeholders
8. Delivery of plan alongside key stakeholders

A Whole System Approach In Denbighshire - Denbighshire Social Supermarket

Taking a whole system approach to reducing food poverty requires approaches that make food affordable, reduce the length of the supply chain and tackle food waste. In 2021, Denbighshire's **Cogog** Social Supermarket initiative was established to collaboratively implement sustainable food projects across the county. Cogog aims to increase and improve the accessibility of local, healthy and affordable food while minimising food waste and adding value to existing services and local assets around food. By offering an alternative and sustainable food option based on redistributing surplus food, it aims to support a community-centred approach to improving health and wellbeing and reducing inequalities in food accessibility.

Led by Denbighshire County Council, the 2022-23 pilot project was funded by BCUHB and involved partners from the public, private and voluntary sector. The pilot focused on a ready-meal food delivery service in the rural areas of South Denbighshire. The South Denbighshire Community Partnership (SDCP) delivered the service in collaboration with Well-Fed, and between September 2022 and March 2023, 273 South Denbighshire customers used the service to purchase 350 ready-made meals.

In addition to the food delivery service, community fridges providing nutritious and affordable ready-made meals were set up at five rural locations in South and Mid Denbighshire, including Canolfan Ni, Corwen and the Market Hall in Ruthin.

"It's great to have tasty, healthy and affordable meals so easily available and delivered to my door".

Georgina, Corwen resident

The delivery service and retail customers reported improved accessibility to affordable food, and some improvement in accessibility of nutritious food resulting from the ready-made meals. A total of 455kg of surplus food was saved from landfill wastage as a result of the pilot project. While the service was available to all, the majority of customers were from an older demographic aged 60 and over, and individuals experiencing transport issues and reduced accessibility to services were perceived to benefit the most.

"Glad the meals are there. They are really helpful to the community....has helped due to the rising cost of electric, especially when cooking for one person".

Corwen resident

A Whole System Approach In Conwy - Food Matters / Bwyd O Bwys

A whole-system approach to addressing obesity includes the availability of healthy school meals and school food programmes providing nutrition education and food skills and literacy. The provision of school meals has several benefits, including supporting children's health and development, reducing health inequalities and supporting learning and attainment[4]. In response to the cost of living challenge and food poverty, in 2022 the Welsh Government announced that all primary school children in Wales would get free school meals by 2024. The policy aims to eliminate child hunger, as well as promote healthy eating and improve child behaviour and attainment at school.

In response to the new policy, Conwy County Borough Council Education Services developed an innovative digital resource called Food Matters to promote and support the whole system approach to healthy weight. Food Matters aims to promote the nutritional value of school meals and encourage pupils and parents to take advantage of the offer, as well as developing children's knowledge and skills in cooking and preparing healthy nutritious meals in a fun, safe, and engaging way. The knowledge and skills gained through Food Matters raises the profile and importance of a healthy diet and provides a foundation for a positive journey with healthy and nutritious food throughout the life course.

Using funding from BCUHB schools have been supported to purchase food production and cooking utensils and equipment to support the delivery of the programme. Educational resources have been prepared to encourage children to develop healthy food skills and choices, the aim is to bring together pupils, school caterers and teachers to promote healthy eating in the school environment. The programme empowers pupils to become Food Matters ambassadors to promote the value of school meals and encourage all pupils within their schools to benefit from and enjoy school meals.

The bilingual digital resource contained a package of videos, lesson plans and resources to support teachers to coordinate and facilitate practical sessions with their pupils. Topics covered within the Food Matters resource included an introduction to basic food groups and The Eatwell Guide, a focus on identifying hidden fats and sugars within foods, and food hygiene including food storage and preparation. Pupils were also supported to investigate their school lunch menu and supported in promoting school meals within their school. In line with the new curriculum in Wales, Food Matters promoted pupils' entrepreneurial skills around food by working collaboratively to organise events and activities to promote school meals within their school.

"Feedback from schools has been incredibly positive, with teachers reporting that the resources are of high quality and are in alignment with the Curriculum for Wales... they are looking forward to embedding the programme into the school curriculum".

Nia Williams, Education Health and Wellbeing Officer, Conwy County Borough Council

45% of those aged 11-16 in Conwy are eating one or more portions of fruit or veg per day.

Source: School Health Research Network Data for 2021 Children's Health & Wellbeing Dashboard

A Whole System Approach In Gwynedd - Skyline Project In Blaenau Ffestiniog

Y Dref Werdd is a social prescribing service that is taking a whole system approach to tackling health and wellbeing through green initiatives. Projects help families reduce their energy usage, guide and train individuals to get qualifications in conservation, as well as improving people's mental health and wellbeing by spending more time outdoors. It is a great example of how green social prescribing not only improves your mental health and wellbeing but educates you on the environment and area where you live and the importance of protecting it.

Skyline is a project in Blaenau Ffestiniog which will further enhance the offering of Y Dref Werdd. It is about re-connecting communities to public land so that communities can manage the land for environmental, health, social and economic benefits. The aim of the project is to bring food, fuel and knowledge back to the communities in which it is used to enable them to thrive. Together with the local community they are setting up a functional and efficient market garden, a sustainable and affordable firewood business and a traditional skills centre to teach old skills to new generations.

The funding from Skyline has enabled the Dref Werdd to develop large areas of derelict land. One area in particular was of concern due to various reports of anti-social behaviour and crime on the site. This area of land is surrounded by houses and developing this site has meant that people feel safer within their community and can take part in developing the area together for the benefit of their community. The site aims to be self-sufficient in the longer term with solar panels and a small wind turbine on site.

ydrefwerdd

The funding has enabled the erection of a large potting shed on site for the community to use to build their knowledge and skills around growing food as well as doubling as a warm space during colder months. A large Polytunnel will be installed in the coming weeks for growing vegetables and salads. The aim is to sell to local businesses but also to be able to provide to local schools in the longer term. The site also hosts an outside kitchen area for the community where everyone will be welcomed to cook, eat and socialise together.

9% of people in Gwynedd report feeling lonely

Source: PHOF

A Whole System Approach In Anglesey - PIPYN Project

Anglesey is one of three areas in Wales identified as having high rates of children who are overweight. With a focus on prevention and early intervention, the PIPYN pilot project is seeking to test effective whole system working approaches in collaboration with a wide range of professional stakeholders across the statutory and voluntary sector as well as families themselves to tackle unhealthy weight in children.

A new partnership group has been established to enable collective system action focusing on healthy weight preventative actions across the county. The partnership key objectives are:

- **Raising awareness of a whole system approach amongst key partners**
- **Utilising and maximising current assets in Anglesey through system mapping and alignment**
- **Creating a common voice to enable creation of local opportunities and initiatives for families**

Key outcomes include:

- **Engagement and communication with wider stakeholders and public to identify issues, challenges and gaps**
- **System mapping workshop to better understand the complex issue of high prevalence rates of overweight in children**
- **Opportunities and resource mapping to better understand what is available and offered on Anglesey in terms of healthy assets**
- **Family Support Intervention Team set up to provide 1-1 support to families**

Engagement With Families

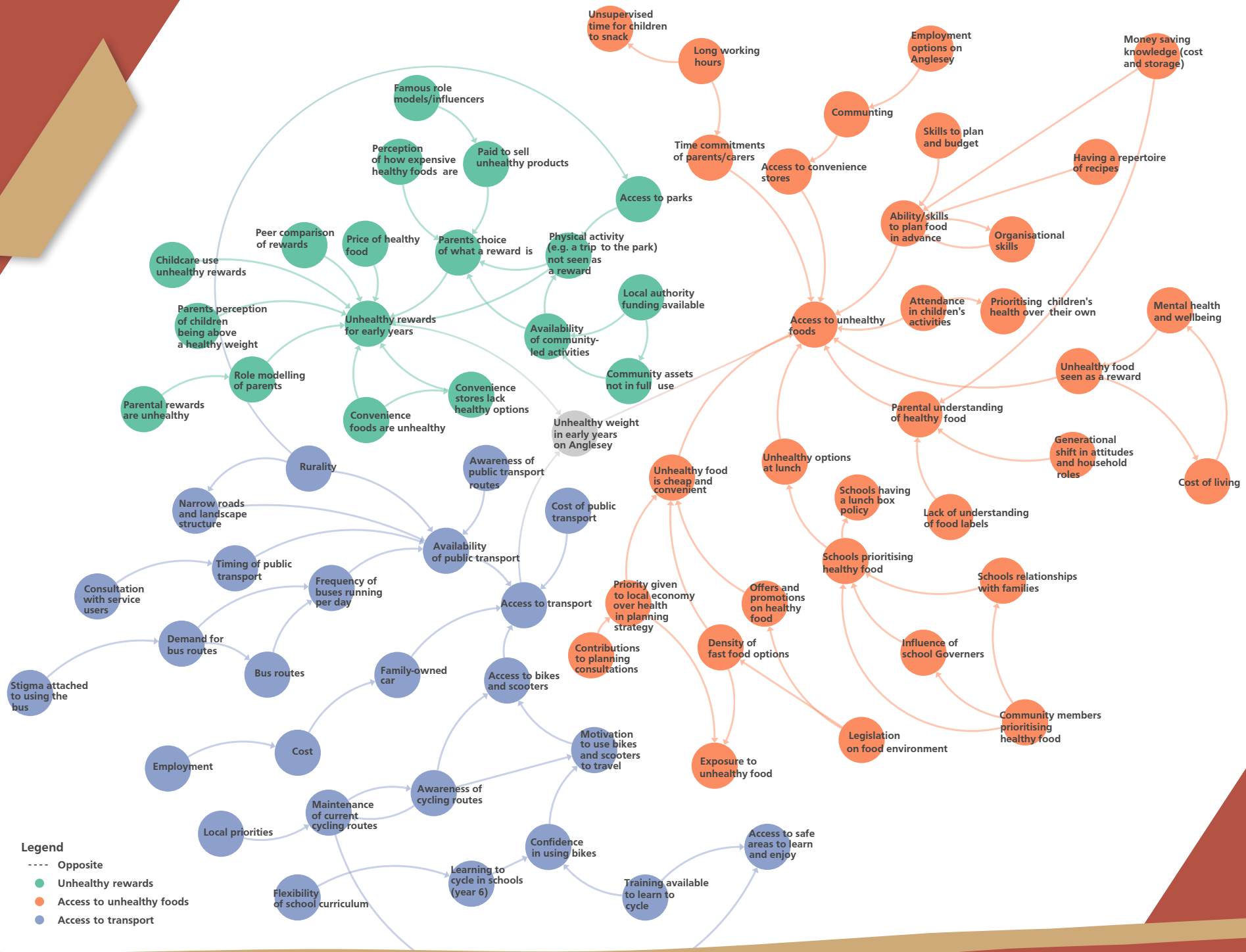
Parents were asked:

What do you think could / needs to be done to address children being above a healthy weight?

"Free activities in the local areas, encouraging children to become more active and having more PE sessions in school and free after school activities especially now that all the bills are going up some may not be able to afford to pay for activities".

A key element of the project has been engagement with local families to understand what parents think are the causes of unhealthy weight.

Discussions with 85 parents identified a lack of free opportunities to be active and in response to this feedback 40 free active play sessions are being delivered across Anglesey by Môn Actif and the Urdd.


Unsupervised time for children to snack
Long working hours
Employment options on Anglesey
Money saving knowledge (cost and storage)
Communting
Skills to plan and budget
Famous role models/influencers
Perception of how expensive healthy foods are
Paid to sell unhealthy products
Time commitments of parents/carers
Access to convenience stores
Having a repertoire of recipes
Access to parks
Ability/skills to plan food in advance
Organisational skills
Peer comparison of rewards
Price of healthy food
Parents choice of what a reward is
Physical activity (e.g. a trip to the park) not seen as a reward
Childcare use unhealthy rewards
Local authority funding available
Attendance in children's activities
Prioritising children's health over their own
Mental health and wellbeing
Parents perception of children being above a healthy weight
Unhealthy rewards for early years
Access to unhealthy foods
Availability of community-led activities
Community assets not in full use
Role modelling of parents
Unhealthy food seen as a reward
Parental rewards are unhealthy
Convenience stores lack healthy options
Convenience foods are unhealthy
Unhealthy weight in early years on Anglesey
Parental understanding of healthy food
Generational shift in attitudes and household roles
Cost of living
Rurality
Awareness of public transport routes
Unhealthy food is cheap and convenient
Unhealthy options at lunch
Schools having a lunch box policy
Narrow roads and landscape structure
Cost of public transport
Lack of understanding of food labels
Availability of public transport
Timing of public transport
Schools prioritising healthy food
Schools relationships with families
Consultation with service users
Frequency of buses running per day
Priority given to local economy over health in planning strategy
Offers and promotions on healthy food
Access to transport
Demand for bus routes
Contributions to planning consultations
Density of fast food options
Influence of school Governers
Stigma attached to using the bus
Bus routes
Family-owned car
Access to bikes and scooters
Community members prioritising healthy food
Motivation to use bikes and scooters to travel
Legislation on food environment
Cost
Employment
Exposure to unhealthy food
Awareness of cycling routes
Maintenance of current cycling routes
Local priorities
Confidence in using bikes
Access to safe areas to learn and enjoy
Learning to cycle in schools (year 6)
Flexibility of school curriculum
Training available to learn to cycle
Legend
Opposite
Unhealthy rewards
Access to unhealthy foods
Access to transport

The Challenges Of Taking A Whole System Approach – Unintended Consequences

Due to the range of interconnected factors influencing a problem, a key consideration when taking a whole system approach is that of unintended consequences – an outcome of an action that was not intended or foreseen. Unintended consequences can be positive or negative but it's important to have an awareness of them when taking a whole system approach. Understanding the big picture and how causal factors are inter-related may help us think through what might be influenced by any changes we make. An effective way to do this might be through a system mapping exercise.

An understanding of unintended consequences also highlights the importance of 'test and learn' pilot initiatives to ensure there are no negative unintended consequences occurring because of an intervention.

It is also important to ensure that, as part of any monitoring and evaluation plan, short-term proxy measures are in place to test whether the change is having any unintended consequences. For example, if a workplace were to ban unhealthy food in the canteen, an unintended consequence might be that staff leave the workplace and buy unhealthy food from nearby local takeaways. It would therefore be important to consider monitoring sales or footfall to local fast-food takeaways when implementing a change to workplace food policy.

Pupils from Ysgol Llanllyfni attending school wearing their PE kits

Conversely, a positive unintended consequence may occur when making changes to school uniforms. Asking pupils to wear active wear clothing at all times in school means that as well as pupils being more comfortable throughout the school day, they don't need to change when participating in physical activity which saves time in the school day and allows more time to be spent on being active.

Evaluating A Whole System Approach

System approaches to a complex problem often work in non-linear and unpredictable ways. As such, it can be hard to draw conclusions about cause and effect, as multiple factors within an intervention may affect the outcome, with the context in which the change occurred also potentially contributing to the outcome. Unintended consequences (both positive and negative) are common, and it can be difficult to capture these impacts using traditional evaluation methods.

Furthermore, it may be many years before population-level change is realised; there is therefore a need to ensure other 'indicator' measures are in place to ensure the intervention, however complex, is achieving what it set out to. Evaluation of systems approaches focus on how change has occurred, as well as seeking to understanding what change has occurred. This helps us better understand which parts of our intervention are working, and which are not.

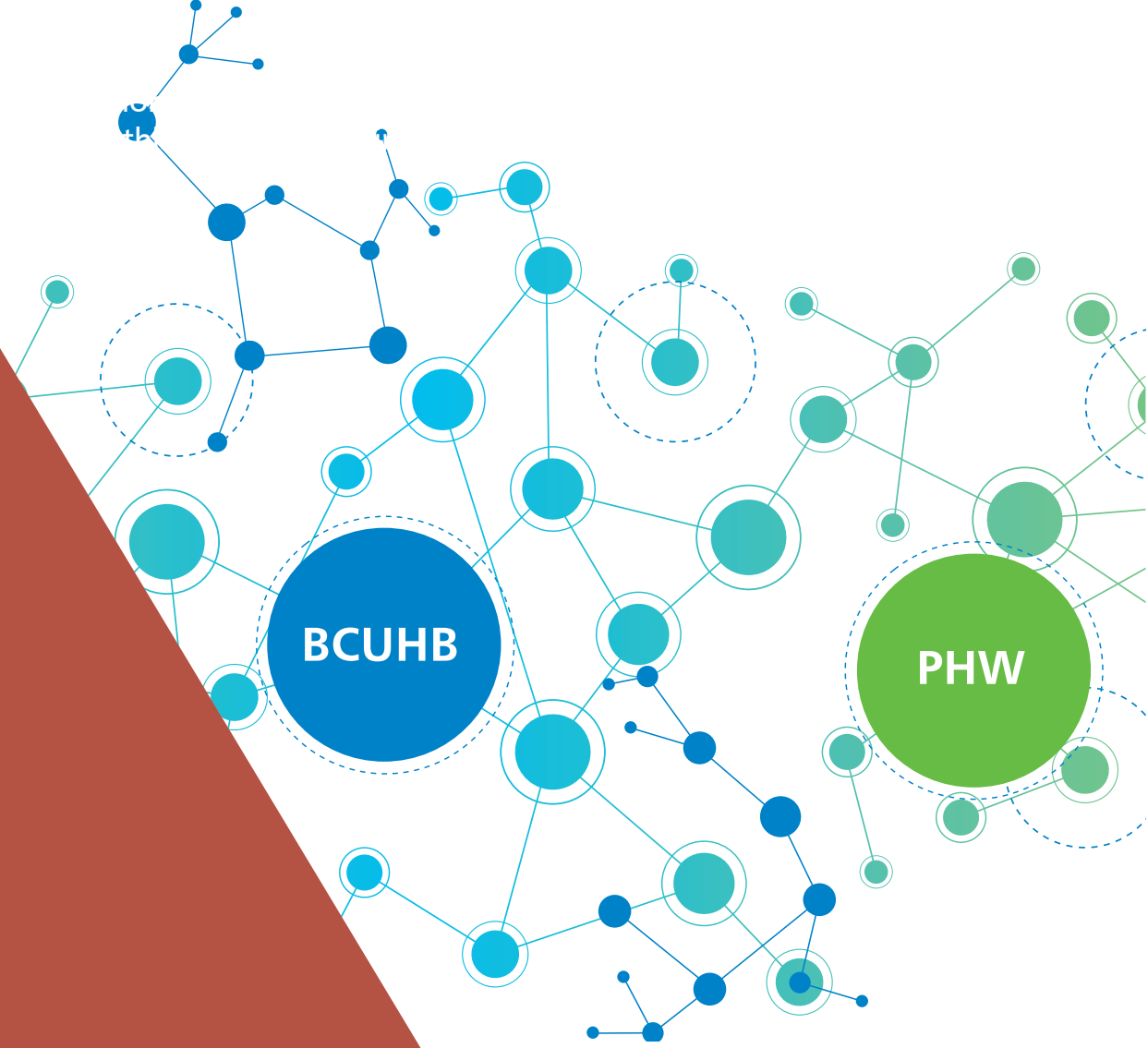
It is also important to note that evaluation of systems approaches is a rapidly evolving field, with no one agreed methodology for evaluating complex interventions or whole system approaches. Where whole system approaches have been used, a range of mixed-method evaluation tools have been adopted, from qualitative methods such as storytelling and case studies, to theories of change, frameworks and maturity matrices alongside more traditional pre - and post-intervention studies. Other novel approaches for evaluating whole system approaches include ripple effect mapping and social network analysis.

Ripple Effect Mapping (REM)

Ripple Effect Mapping (REM) is a way of mapping and understanding the intended and unintended consequences over time. It is therefore capable of capturing some of the wider impacts of a systems approach. In North Wales an example of this has been the ripple effects from the initial system mapping workshops. At these workshops one cause of adults being inactive was identified as being parents spending time watching their children being active, which means they don't have time to be active themselves. In response to this, Freedom Leisure in Wrexham agreed to provide free gym passes to all parents bringing their children to after school activities in their facilities.

Social Network Analysis

Social Network Analysis (SNA) is an established technique that identifies and analyses the inter-connections and influences between different people or organisations within a system. This helps us to learn how information and resources are shared across the network and who might be more influential in creating change. In North Wales the initial social network analysis conducted by Leeds Beckett University identified the most connected individuals were part of BCUHB and PHW. The ambition of the system working is to start growing the role and influence of other individuals and



Conclusions

- As many of us are now working to tackle complex issues, organisations would benefit from developing a greater understanding of how to take a whole system approach to a problem
- Staff working across the public, private and third sector would benefit from accessing training in whole system approach methodologies and evaluation techniques to ensure they are confident in implementing a whole system approach and partners can take shared ownership in applying the approach
- Partner organisations need to ensure they engage in whole system approaches to tackling complex problems. Strong engagement in the process will ensure that there is a shared understanding of the problem and one cause or action does not over dominate the approach
- Relationships are crucial to taking a whole system approach, meeting partners, spending time understanding each other's priorities and building connections through face to face meetings, walking meetings and catch-ups are key ways of facilitating system change

Partners from across North Wales receiving training in whole system approaches

4. Further Reading

Whole System Approaches To Obesity

Whole systems approaches to obesity and other complex public health challenges: a systematic review

Bagnall, AM., Radley, D., Jones, R. et al.

Guidance: Whole systems approach to obesity: Whole systems approach to obesity - GOV.UK (www.gov.uk)

Public Health England Whole System Approach to Obesity Resources: Public library - UKHSA national - Knowledge Hub (khub.net)

System Mapping

Systems Mapping: How to build and use causal models of systems | SpringerLink

Social Network Analysis

Valente_2012+Science.pdf (fsu.edu)

Ripple Effect Mapping

Ripple Effect Mapping: Ripple effects mapping: capturing the wider impacts of systems change efforts in public health

Nobles, J., Wheeler, J., Dunleavy-Harris, K. et al.

System Change

Systems Change (lankellychase.org.uk)

Systems Thinking Toolkit

Systems Thinking Toolkit - FSG

References

1. A.-M. Bagnall, D. Radley, R. Jones, P. Gately, J. Nobles, M. Van Dijk, J. Blackshaw, S. Montel and P. Sahota, "Whole systems approaches to obesity and other complex public health challenges: a systematic review," BMC Public Health, 2019.
2. D. Buck, A. Baylis, D. Dougall and R. Robertson, "A Vision for Population Health: Towards a Healthier Future," The Kings Fund, 2018. [Online].

   Available: https://www.kingsfund.org.uk/. [Accessed November 2022].
3. The Action Scales Model: A conceptual tool to identify key points for action within complex adaptive systems - James D Nobles, Duncan Radley, Oliver T Mytton, , The Whole Systems Obesity programme team, The Whole Systems Obesity programme team, 2022 (sagepub.com)
4. Child Poverty Action Group. (2020). Expanding Eligibility for Free School Meals in England.

   https://cpag.org.uk/sites/default/files/files/policypost/CPAG-FSM-briefing-2020.pdf

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