Cwm Taf Morgannwg University Health Board as a Population Health Organisation: a discussion and options paper for Board

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Background

At two sessions during the month of April 2021, the Board had strategic conversations about what it meant to be a population health organisation. The aim was to begin defining specifically what the Health Board needed to look like and how it needed to function if it must successfully tackle the population health challenges in Cwm Taf Morgannwg.

The input to the conversation included: (1) a reminder of our population health challenges, drawn from the 2017 DPH Annual Report – Frailty, Obesity, Inequalities and Loss of Wellbeing; (2) risk factors for COVID infection and mortality, and (3) reflection on the importance of hearing the community's voice in the collective response to these challenges.

Appendix 1 summarises the key outputs from those discussions.

Building on those conversations and drawing on best possible evidence, this paper defines, more specifically, potential opportunities which the Health Board could pursue in terms of strategy, leadership and operational activities. It does not rehearse the population health challenges in Cwm Taf Morgannwg but instead focuses on potential solutions for the Board's consideration.

A menu of goals for population health

The vision of the Health Board – becoming known as a population health organisation that works with its communities and partners to improve health and wellbeing - is already set out in key strategic planning documents. However, the strategic population health goals corresponding to this vision have not been made explicit, even though they are implied. Agreeing population health goals is important as it ensures that the organisation is clear with itself and partners exactly what it is seeking to achieve by pursuing specific actions and how it will hold itself to account for delivering on the ambitions.

To this end, the following menu of population health goals from 2021-2026 are supplied for discussion and consideration in Table 1.

Table 1 - Menu of potential goals for CTMUHB's population health system

S/N	Goal	Why (rationale)	Current
1	By 2026, in men and women in CTM, Life Expectancy at birth and Healthy Life Expectancy match the Wales average	Life expectancy and healthy life expectancy are good summary measures of the overall health of the population. The inequality gap should be measured in comparison to Wales as well as between deprivation groups within CTM	LE gap – average 1 year HLE gap – average 3.5 years
2	By 2026, the Slope Index of Inequality in Life Expectancy at birth and Healthy Life Expectancy between the most and least deprived population quintiles in CTM has been reduced by 20%		To Be Calculated
3	By 2026, Avoidable Mortality in CTM matches the Wales average	Avoidable mortality is a good summary measure of the performance of wider public health (preventable) and health & care (amenable) systems	Based on 2019 data (latest), CTM is at 300/100,000 population and Wales is at 260/100,000 population
4	By 2026, Life Expectancy in people with mental health problems in CTM matches that of those without	Physical health outcomes for people with mental health problems are unjustifiably poorer than those without. This is preventable and is responsive to co-ordinated action across public services	To Be Calculated
5	By 2026, the prevalence of key LTCs (stroke, diabetes, cancer and heart disease) in people with mental health problems in CTM matches that in those without		To Be Calculated
6	By 2026, Infant Mortality Rate (IMR) in CTM is lower than 2 per 1000 live births and percentage of Low Birth Weight (LBW)	Early life experience is predictive of future health and wider social outcomes. IMR is an important indicator of population health as it reflects the structural factors affecting population health	Latest data (2018/19) suggest IMR in CTM is approx. 4 per 1000 live births and % of live births with LBW approx. 7%
7	By 2026, the current inequality in smoking prevalence between groups at extremes of deprivation in CTM has been eliminated	Smoking rates are the largest single cause of inequalities in health	To Be Calculated.[1]
8	By 2026, the prevalence of overweight & obesity has been reduced by 5 percentage points from its current levels	Obesity influences life expectancy and is an important proximal risk factor for many long term conditions	Current prevalence of obesity & overweight in CTM is approx. 67%

[1] Population health management data for Rhondda in 2018 showed a prevalence gap of 15 percentage points between groups at extremes of deprivation

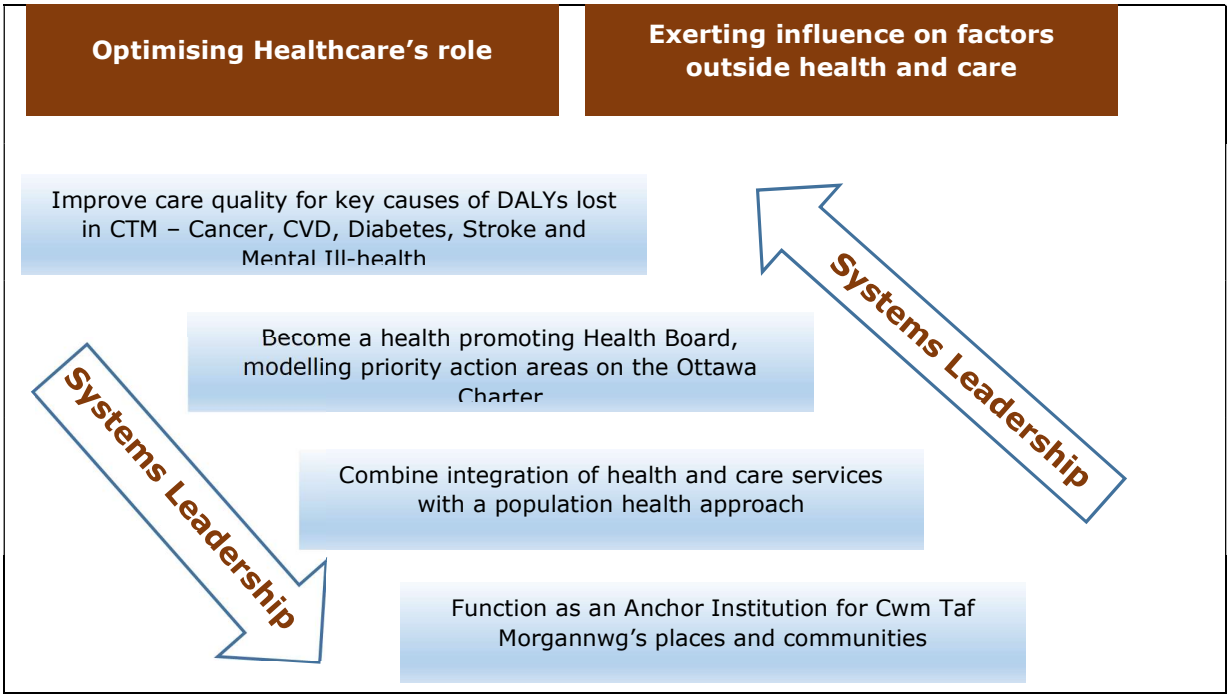
A strategic framework for options

In setting out a strategic framework for CTMUHB's population health approach, it is worth reiterating that population health is determined by a variety of factors acting in concert, including: (1) age, sex and constitutional factors, (2) individual lifestyle factors, (3) social and community networks and (4) wider socioeconomic, cultural and environmental conditions. Evidence demonstrates clearly that socioeconomic and environmental factors are the primary drivers of population health, and that health care determines 10-20% of population health. [2,3] To improve population health therefore, the Health Board needs an approach that has at least two over-arching components, viz:

- Optimising healthcare services contribution, and
- Exerting influence on those factors that lie outside the health and care system.

As shown in Figure 1 below, under each component, ranging from those over which the health board has more direct control to those over which it has less direct control, 4 'pillars' of the population health approach align and will be further described in this paper.

Figure 1: A framework for population health in CTM



[2] J.M. McGinnis et al., "The Case for More Active Policy Attention to Health Promotion," Health Affairs 21, no. 2 (2002):78–93

[3] B. Booske et al., "Different Perspectives for Assigning Weights to Determinants of Health," County Health Rankings Working Paper. Madison (WI): University of Wisconsin Population Health Institute, 2010d

1. Improve care quality for key causes of Disability Adjusted Life Years (DALYs) lost in CTM

Table 2 - Options for action on Improving care quality for key causes of DALYs lost in CTM

Option	Rationale	Exec Lead (and Support)
1. Implement Value-Based health in Diabetes	A Value-Based health approach emphasises operational success in healthcare based on a focus on outcomes	Director of Finance (Director of Public Health)
2. Implement pre-Diabetes Pathway improvement across CTM 3. Embed the Inverse Care Law Programme in CTM	The prevalence of diabetes is likely to rise in the wake of the COVID pandemic. Board strategic conversations highlighted need to focus on secondary prevention by minimising clinical risk factors for the long term conditions that cause most DALYs lost in CTM – high blood pressure, raised blood glucose, high blood cholesterol and high BMI. The pre-Diabetes pathway and Inverse Care Law programmes target these risk factors	Director of Public Health (Director of Primary Care and Mental Health)
4. Conduct a Health Equity Audit for stroke in CTM	Equity is a key domain of the Institute Of Medicine 6-part approach to healthcare quality but is often neglected by health systems. The new Stroke Quality Statement in development will emphasise Equitable care and CTM can get on the front foot about this dimension of Quality that is fundamental to population health improvement	Director of Therapies and Healthcare Sciences (Director of Public Health)
5. Improve detection of atrial fibrillation and anticoagulation for people with atrial fibrillation in Primary Care	Atrial fibrillation increases the risk of stroke by 500% and the DPH annual report from 2019 demonstrated that only a fraction of cases were being detected in the community and only a fraction of detected cases were being properly anticoagulated	Director of Primary Care and Mental Health (Director of Public Health)
6. Implement an integrated Level 2/3 weight management service for CTM	2 in 3 adults are either overweight or obese and obesity contributes directly to morbidity with key causes of DALYs lost in CTM – CVD, Diabetes, Cancer, Stroke We need increased focus on secondary prevention - minimising clinical risk factors at the root of much DALYs lost in CTM - high BMI being a notable one.	Director of Public Health (Director of Therapies and Healthcare Sciences)

2. Become a Population Health-oriented Health Board, modelling priority action areas on the Ottawa Charter

The Ottawa Charter was set out over 30 years ago as a framework for organisations, governments and institutions for promoting health. Its priority action areas remain relevant as a framework for CTM's population health challenges.

A Health Promoting Health Board enables people – its patients, staff and communities - to increase control over, and to improve, their health. Looking to make healthcare delivery successful and sustainable, it puts preventative health high on its agenda and creates the conditions for population health responsibility and leadership at all levels of the organisation.

The Table below sets options for action discussed in recent Board strategy sessions against the priority action areas of the Charter.

Table 3 - Options for action on Population Health-oriented Health Board

Ottawa Charter domain	**Options**	**Exec Lead (and support)**
Develop a health promotion policy for CTMUHB	1. Enable healthy behaviours for staff, specifically: • Review current cycle-to-work scheme to ensure it facilitates access to e-bikes or e-scooters • Review active travel plans • Invest in staff stop smoking services • Develop a staff weight management service 2. Establish a policy of systematically applying a Brief Intervention to all patient contacts throughout our services	Director for People (Director of Public Health, Director of Therapies and Healthcare Sciences)
Create a supportive environment for health and wellbeing in CTM	3. Identify, incentivise and nurture staff Health Promotion champions in all sites and wards 4. Conduct fundamental review of catering services across CTM to ensure that the available food offer promotes healthy eating and makes the healthy choice the easy choice	Director for People (Director of Public Health, Exec Leads for Estates & Facilities - Chief Operating Officer)

	5. Explore the use of CTM UHB facilities for staff to undertake physical activity e.g. use of physiotherapy gyms/pools, large rooms for staff exercise classes	
Strengthen staff and community action for health	6. Identify clear preventative health target areas as objectives in job plans, and appraise against targets 7. Empower and support primary care clusters and GP practices to be 'health promoting' centres as well as 'disease managing' centres within the community	Director for People Director of Primary Care and Mental Health
Develop personal skills for staff in health promotion	8. Make MECC (Making Every Contact Count) training mandatory for all CTM staff 9. Empower staff to identify personal well-being goals, with risky behaviours and clinical risk factors open for discussion in all appraisals, with access to support to achieve goals.	Director for People
Re-orientate our acute health services towards increasing emphasis on prevention	10. include in job descriptions and appraisals action to reduce inequalities and shift services to prevention across their portfolio areas 11. Work with HEIW to a focus on health inequalities, brief intervention and prevention in the curriculum for training of health professionals	Director for People Director of Therapies & Health Sciences / Medical Director

3. Combine integration of health and care services with a population health approach

Like most health systems around the word, CTMUHB faces increasing challenges from growing numbers of complex multi-morbid patients, the rising costs of care and increasing recognition that a failure to address the wider determinants of health does impact the outcomes we achieve from our healthcare services.

The Board recognises that integrated health care delivery is a necessary innovation to tackle these challenges. The benefits of integrating health and care services however need to be extended to the general CTM population by combining the scope of integrated care with a population health approach.

The population health approach considers a wide range of factors and interrelated conditions that influence the health of populations over the life course, identifies systematic and unwarranted variations in their patterns of occurrence, and applies the resulting knowledge to improve the health and well-being of those populations.[4]

Although health and care integration and the population health approach are not entirely new concepts in the NHS, the concrete operationalisation of the strategies that link them is still largely missing in Wales. CTMUHB has a unique opportunity to blaze a trail here and the approach of some integrated healthcare organisations, such as Kaiser Permanente in the USA, demonstrates that it is possible to successfully adapt a broad population health approach to the way health and care services are organised and delivered.

Careful review of the literature demonstrates that combining integration of care with the population health approach requires cohesive strategies that bring together whole care cycle, medical and non-medical care, for defined population groups alongside their involvement in designing their care options. The establishment of System Groups and Integrated Locality Groups in CTM represents a bold step towards the re-design of service organisation and delivery that is necessary to effect this linkage.

The opportunity to be realised by the Health Board is that of making the new structures deliver on this population health promise. The Framework in Figure 2 articulates the key principles of the model of care that starts with people's needs and ensures that resources and co-ordinated efforts are directed at those needs.

[4] Kindig, D and Stoddart, G. What is population health? *Am J Public Health* [Internet], 2003; 93(3): 380–3. Available from: http://www.ncbi.nlm.nih.gov/pubmed/12604476 DOI: 10.2105/AJPH.93.3.380 [PMC free article] [PubMed] [CrossRef] [Google Scholar]

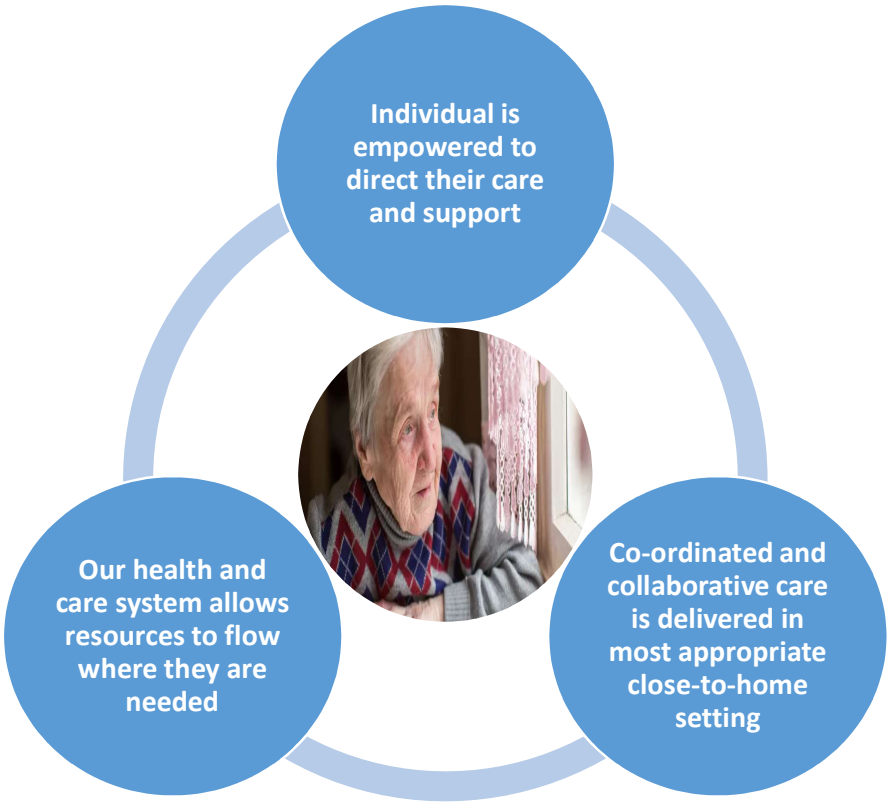


Figure 2 - A framework for Integrating Care in CTM

Table 4 - Options for action on combining integration of health and care services with a population health approach

Option	Rationale	Exec Lead (and Support)
1. Invest sustainably in Population Health Management by establishing a Population Health Management Unit	The CTM Local Public Health Team has the reputation across Wales for expertise in the nascent approach of population segmentation and risk stratification. We are already creating in-house capability for developing data-driven population segmentation algorithms using machine learning and other advanced statistical methodologies. Our goal is to become a centre of excellence in Wales for data-driven population health management innovations.	Director of Public Health (Director of Finance)
2. Invest in a Population Involvement Unit to ensure	Involvement of population groups is key to co-producing evidence based care options that meet the needs and are acceptable to our population.	Chief Executive Office / Director of

that our population are co-producing their care options		Communications (Director of Public Health)
3. In each ILG, create 'Integrated Care Villages' of circa 20k population. A 'care navigator' is aligned to each ICV to oversee community referrals and to help support patients upon discharge from hospital.	Evidence shows that successful strategies that combine integrated care and population health approaches usually involve some level of integration of health and non-health services (and resources) to coordinate actions. To this end, each ICV in CTM would pool the professional knowledge of GPs, pharmacists, district nurses, social services and housing to create better co-ordinated and efficient hyper-local care systems. Population Segmentation & Risk Stratification data for each ICV will support anticipatory care and care for both vulnerable and non-care seeking populations.	Chief Operating Officer / Director of Primary Care and Mental Health
4. Engage Community Housing Cymru and CTM's network of Registered Social Landlords to design and implement a 'CTM Healthy Housing' Programme	Embracing inter-sectoral action and partnerships is critical to this approach. A housing programme in NZ involved house modifications to reduce overcrowding, insulation and ventilation improvements, and health and social service assessments, referrals and linkages. It resulted in a 21% reduction in emergency hospitalisation in 5-34 year olds.[5]	Director of Strategy and Transformation (Director of Public Health)
5. Review CTMUHB's offer and investment in social prescribing	Healthcare providers are well placed to facilitate ways for people to socially connect with others in their neighbourhood and community. Social prescribing is a key intervention to achieve this. In particular, we should review the extent to which we are either investing in or making our facilities available for: • Creative activities such as art or dance lessons, singing or gardening groups. • Connecting activities such as peer support services, time-banking • Active groups such as fitness, volunteering, employment support	Exec Leads for Estates & Facilities - Chief Operating Officer / Director of Finance Director of Strategy and Transformation (Director of Public Health)

[5] Jackson, G, Thornley, S, Woolston, J, Papa, D, Bernacchi, A and Moore, T. Reduced acute hospitalisation with the healthy housing programme. *J Epidemiol Community Heal* [Internet], 2011; 65(7): 588–93.

	• Ways to improve people's practical circumstances, looking at issues such as housing, debt, falls prevention, domestic abuse and benefits advice	

4. Function as an Anchor Institution for Cwm Taf Morgannwg's places and communities

The term 'anchor institutions' refers to large public sector organisations whose long-term sustainability is tied to the wellbeing of the populations they serve. They get their name because they are unlikely to relocate, given their connection to the local population, and have a significant influence on the health and wellbeing of communities.[6]

The size, scale and reach of CTMUHB means we have significant influence on the health and wellbeing of the CTM population. The Table below identifies key domains of the Anchor Institutions framework and aligns potential priorities for action in CTMUHB.

Table 5 - Options for action on functioning as an Anchor Institution for Cwm Taf Morgannwg's places and communities

Domain	Options	Rationale	Exec Lead
Employment	1. Widen participation of CTM residents in the workforce by: • Targeting positions for local people • Creating pre-employment programmes, work placements and volunteer work experience 2. Create apprenticeships that target more vulnerable people in CTM – e.g. young people at risk of homelessness and	The HB employs over 13,000 staff, 80-90% of who live in the communities we serve. There is a strong link between 'good' work and good health. By helping more CTM residents – particularly those furthest from the labour market – into quality work, CTMUHB can improve the welfare of its local communities and begin to narrow inequalities.	Director for People

[6] https://www.health.org.uk/news-and-comment/charts-and-infographics/the-nhs-as-an-anchor-institution

	the long term unemployed		
Procurement & Commissioning	3. Shift more spend locally by: • Building local capacity and • Supporting local supply chains.[7] 4. Embed social value into purchasing decisions by prioritising and monitoring it.[8]	CTMUHB has significant purchasing power. Procuring and commissioning more goods and services from local small and medium-sized enterprises (SMEs) and voluntary and community sector organisations can have an important economic impact, as resources spent locally have a multiplier effect and are reinvested in the local community at a faster rate than resources spent with national corporations.	Director of Finance
Capital & Estates	5. Expand community access to CTMUHB's property 6. Develop accessible community green spaces on CTMUHB's land 7. Work in partnership across CTM to maximise the wider value of CTMUHB's estates 8. Create Housing-Health partnerships with RSLs – e.g. Rhondda Housing Association – to develop step-down and re-ablement facilities, extra support and care for people in their own homes	CTMUHB has physical assets that can be leveraged for community benefit. It could manage and develop these to support broader social, economic and environmental aims. Communities are more resilient when people are connected through social networks, and opening NHS buildings and land for community use or supporting the development of green spaces can provide vital opportunities for social interaction.	Director of Finance

[7] If not already done, we can conduct an internal audit of procurement spend to identify the % of purchasing that stays within CTM, and then work out how to reallocate more of our purchasing budget towards local organisations. Having a baseline % and agreeing a target annual shift is key and this can then be monitored via the Population Health Primary Care and Partnerships Committee

[8] There are good examples of NHS organisations that have embedded social value into procurement processes, either by introducing explicit weightings or designing core contract specifications so that suppliers must meet specific conditions – for example, creating local jobs and training opportunities, paying a living wage and adopting environmentally sustainable practices. Having said that, Wales' Community Benefit Measurement Tool is widely reputed as a good example of embedding social value into procurement process and it may well be that we have fully exploited the opportunities here.

Environmental Sustainability	9. Increase focus on and invest in embedding the Wellbeing of Future Generations Act Sustainable Development Principle		

5. Systems Leadership

As already set out in this paper, the Health Board's challenge of securing sustainable population health improvements in CTM requires action across domains both within and out with its direct control. 'Systems leadership' is an approach that is well suited to issues that require collective action, where no single organisation can control the outcomes. It is about local leaders from across the health and care system sharing a cohesive approach to working together to improve health and wellbeing for a population.

In a recent thematic analyses of three population health case studies, Bigland and colleagues[9] identified three key themes around 'getting started,' 'maintaining momentum' and 'indicators of success' in systems leadership.

Getting started is about a 'call to action' and assembling a 'coalition of the willing'. Previous conversations at this Board show there is an organisation willingness around population health to which this paper hopefully speaks. The potential options are set out in Table 6 below.

Maintaining momentum principally relates to system structure and relationships. The organisational structure – through ILGs and SGs – ensures CTMUHB is already shaped to lead the system whilst the relationships built with our external stakeholder organisations in formal partnerships will prove essential.

Finally, indicators of success that capture resource gains to the system and shifts in data indicators at the population level need to become core to our

[9] Bigland, C., Evans, D., Bolden, R. *et al.* Systems leadership in practice: thematic insights from three public health case studies. *BMC Public Health* **20,** 1735 (2020). https://doi.org/10.1186/s12889-020-09641-1

systems leadership journey and Table 1 of this paper offers possible goals for adoption.

Table 6 - CTMUHB Leading the Population Health System in Cwm Taf Morgannwg

Domain	Option	Responsibility
Getting Started	1. Use influence to advocate for more resources to tackle health inequalities. 2. Instigate *Constructive Disruption* both in the Health Board and Welsh Government, for example: a. Re-balance between RTT vs. population health outcomes, and b. Change language from 'Demand/Capacity' to 'Need/Demand/Capacity' 3. Champion action and challenge proposals and Board papers to think of the impact on inequalities in health across the population. Useful tool could be the routine use of Health Equity Audits and Health Inequality Impact Assessments. 4. Connect with our communities and hold monthly surgeries in different localities to better understand the health issues and experiences of our population so that decisions are rooted in our communities' lived experiences.	Non-Executives
	5. Revise Job descriptions to include action to reduce inequalities and shift services to prevention across their portfolio areas	Executives

Appendix 1

Proposed actions for a Population Health organisational approach at the Board Strategic and Development Days, April 2021

Population Health Organisation:

- Requires leadership at all levels: non-executives, executives, senior managers, all staff, partners and the population we serve.
- It is about systematically applying all our resources to evidence based interventions that are important to the population we serve.

Population Health Management:

- Key to recognise that there is lots we can progress while we await the segmentation and risk stratification data. The latter is a tool to help us further define and refine our approach in an incremental process as we look to implement evidence based actions and interventions, involving patients in each segment.
- Anticipatory care – see it in the context of prevention, integration, collaboration and involvement (WBFG Act)
- Opportunity to use third sector data e.g. Citizens Advice

Non-Executives:

- Using influence to advocate for more resources, based on more need to tackle inequalities.
- Need for *Constructive Disruption* from UHB to Welsh Government e.g. move from RTT to population health outcomes - FGC will support
- Leadership role in championing action and challenging proposals thinking of the impact on inequalities in health across the population. Useful tool could be the routine use of Health Equity Audits and Health Inequality Impact Assessments.
- Have all sectors of the population been involved in developing proposals? Particularly those who may not be accessing services - think need and not demand
- Connect with our communities and hold monthly surgeries in different localities to better understand the health issues and experiences of our population so that decisions are rooted in our communities.

Executives:

- Revise Job descriptions to include action to reduce inequalities and shift services to prevention across their portfolio areas
    - Clear target areas identified as objectives in job plans e.g. DoF to move target %age of budget to prevention and early intervention, DoWF&OD employing staff from lowest quintiles of deprivation with support through volunteering options, training and supported career progression.
    - Appraisal against targets

Staff:

- Staff Champions at all levels – start small and build
- Mandatory MECC training and systematically applying a Brief Intervention to all patient contacts throughout our services – Leaders with patients
- Recognising most staff are residents of CTM and can also be empowered and motivated to be leaders in the community

- Staff empowered to identify personal well-being goals, with risky behaviours and clinical risk factors open for discussion in all appraisals. Identifying and agreeing well-being goals and support for delivery in the same way as PDPs
- Enable healthy behaviours for staff e.g. current cycle to work scheme does not facilitate the purchase or leasing of e-bikes or e-scooters and our topography prevents the use for many. Currently there are no bikes parked at many of our sites.

System Leaders:

- A coordinated and agreed approach across the system with partners, prioritising action on health improvement and health inequalities. An opportunity to build on the traction of the system response to Covid.
- Engage Health and social care in addressing health inequalities – equitable approach on the basis of need not demand.
- Enable healthy behaviours e.g. cycle paths from public transport hubs (train stations and Bus stations/stops) to public buildings
- Empower public and third sector staff e.g. champions, well-being appraisals, MECC training (24% of employed adults in CTM work in the public sector).

Leaders in Wales:

- Host a Wales Population Health Management Unit to support the development across Wales and share the learning

Integrated Health Strategy:

- Need to think long term – minimum of a 10 year strategy with a 30 year vision – break it up into 10 year chunks
- Clear 10 year targets e.g. increase healthy life expectancy to the Wales Average in 10 years, reduce the Slope Index of inequality for HLE to the Wales average. 20 year target to be the best in Wales, 30 year target to be the best in UK – need to be ambitious.
- It has to be everyone's business – owned be every member of staff and public/patients involved.
- Clinical services: *amenable mortality* avoided through effective and timely health care
- Population Health Management – aspiration to tackle health inequalities – *preventable mortality*
- Involve our communities:
    - Develop a *Population Health Involvement Unit* to share skills in involvement as services develop and implement this way of working.
    - Develop a deal for health and wellness e.g. Wigan approach: Our Part, Your Part.
- **Prevention: Systematically address risk factors**
    - ***Population Health Management***
    - Segmentation
    - Risk Stratification
    - Linked to VBHC agenda
    - ***Primary prevention: Enabling healthy behaviours***
    - Smoking prevalence
    - Promoting a health weight and diet

- Increasing physical activity
- Moderate alcohol consumption
- ***Secondary prevention: Minimising clinical risk factors***
- Blood Pressure
- Blood Glucose
- Body Mass Index
- Cholesterol
- ***A focus on early years***
- Preconception to age 7 years
- Targeted interventions based on need
- ***Management of Ambulatory Care Sensitive Conditions***
- Identify through PHM data
- Target anticipatory care initiatives and management
- ***Care coordination and social referral through integrated health care teams***
- Care coordinators link to social and non-medical need to community assets
- Co-produce plans for social needs with involvement of patients and carers.
- Social referral schemes

Realising the potential of Technology (Malcolm Lowe-Laurie and Prof Sir John Tooke)

- Remote consultations, triage and follow up
- Specialist outreach: secondary and tertiary to primary care
- Use of remote monitoring and surveillance
- Need to overcome digital illiteracy and access issues. Is there an opportunity to gain sponsorship e.g. google – everyone wants to help the NHS right now.
- Use of decision aids for complex co-morbidity
- Machine learning and AI:
    - OP attendance alerts – target those who most need it
    - AI to predict A&E attendance and enable pre-emptive intervention
    - Machine learning to detect sight threatening retinopathy
    - Carefully select projects to embark on – project selection criteria
    - Use of predictive models of demand vs presentation, based on social, demographic and economic indicators
    - Execs to give "cover" for clinicians to do things differently.
- Key opportunity: match digital modelling with PHM to see who are we missing?
- Need to identify and target ever harder to reach/engage population.