Over the past few years I have been thinking about how we can solve the problem of the explosion of chronic diseases including diabetes, obesity and heart disease or if you like diabesity!

My journey into understanding how important it is to support people to understand their condition and be in a position to make choices about the care they receive and the life they want to lead after an illness or complex injury started while I was completing my PhD in South London in 2003. I am a neuro physiotherapist and have always worked in specialist tertiary centres. Where being a specialist and an expert mattered! During my study of investigating different types of physical therapy on functional outcome following stroke I was first introduced to the concepts of self-efficacy, confidence and locus of control. The importance of language and how you have conversations with people so not to create a power imbalance and ensure people feel they were equal partners in making decisions about their health. Ensuring that every conversation you have with someone you help them to have the knowledge and skills to support true shared decision making and letting people be in the driving seat of their recovery became a passion of mine. I have mentored clinicians and promoted Bridges Self Management and motivational interviewing training across services that I have led to start to change the conversation clinicians have with patients.

I moved to Wales in 2015 and I was surprised about the paternalistic approach to healthcare. There was very limited community neuro services across Wales and at the time there had been an all Wales paper written by the Heads of Physiotherapy providing a recipe book or pick and mix of what equipment should be made available to people with neurological conditions on discharge from the services. Some of which cost over £5,000. I had a many interesting debates - was this equipment really needed? Did we need to change our approach to how we had conversation with people, how we treated people and how we empower them to make choices for themselves and support them back into local communities. People don't need 'physiotherapy' to keep them well they need to find community based activities, exercise classes and get back too things they enjoyed before their injury.

There was a small WG investment into community neuro services and this was the start of my journey of coproduction, listening to people with lived experience about what they needed rather than what healthcare professionals thought they needed. This for me was the start of moving specialist services out to people's communities and treating people in community settings and leisure. What we found is treating people in groups in their communities meant that 60% of

people continued to exercise on discharge, people continued to meet as a group on discharge, people spent less time in specialist services, there were less concerns and they accessed less healthcare. This learning helped inform the Cardiff and Vale Rehabilitation model which is starting to drive change across our rehabilitation services.

The World Health Organisation regards obesity as one of the most serious global public health challenges of the 21st century. The UK has one of the highest levels of obesity in Western Europe. In Wales over a quarter of 4 and 5 years olds are over weight or obese, with more than 1 in 10 classified as obese. This gets worse in adulthood, with 6 in 10 adults overweight or obese and 1 in 4 obese. We know that more men than women are obese and our most disadvantaged communities are more likely to be obese compared to more affluent areas. Being over weight has become the norm in Wales. Evidence suggests that as the population becomes larger people find it harder to recognise what is a healthy weight. Obesity is the leading cause of several major conditions including type 2 diabetes, cardiovascular disease and some cancers and is associated with orthopaedic problems, poor mental health and depression.

Recent estimates by Cancer Research UK shows that obesity is the second greatest preventable cause of cancer, after smoking. It is predicted that 25 years from now that obesity will be the main case of cancer in women if we continue with our current life styles. Children who are over weight or obese are at risk of poor health as adolescents and into adulthood. 80% of people who are obese at 4 or 5 remain obese.

There is a risk of psychological harm in childhood obesity which include: bullying and discrimination from peers; low self esteem; anxiety and depression. Obesity impacts on quality of life. Having a high BMI is the leading contributor in Wales for increased Years Lived with a Disability. More people in the World are overweight than starving and for the first time being over weight is more likely in disadvantaged communities.

The financial cost to the economy is considerable. Illness associated with obesity is projected to cost the Welsh NHS more than £465 million per year by 2050, with associated cost to society and the economy of £2.4 billion.

Wales has the highest prevalence of diabetes in the UK with more than 200,000 people in Wales are living with diabetes. This is 8% of the population aged 17 and over and the numbers are rising each year. This is the first time over 200,000

people have been diagnosed with diabetes in Wales. Around 90% of people have type 2 diabetes. Estimates suggest a further 65,000 people in Wales have type 2 but have not yet been diagnosed. This means almost 275,000 people are living with diabetes in Wales.
A further 580,000 people in Wales are at risk of developing type 2 diabetes. This is the most devastating and fastest growing health crisis Wales is facing. If current trends continue, 311,000 people in Wales could have diabetes by 2030. Diabetes costs the NHS in Wales approximately £500 million a year, this is 10% of its annual budget. Around 80% of this is spent managing complications most of which could be prevented.

People who live with a long term condition are often isolated and lonely. Research has linked social isolation and loneliness to higher risks of a variety of physical and mental health conditions: high blood pressure, obesity, weakened immune system , anxiety, depression, cognitive decline, Alzheimer's disease and even death. Being lonely is equivalent to smoking 15 cigarettes a day.

Physical in activity is associated with 1 in 6 deaths in the UK and is estimated to cost the UK £7.4 billion annually. The UK population is around 20% less active than in the 1960s. If the current trends continue, it will be 35% less active by 2030. Many people don't realise that physical activity has significant benefits for health, both physical and mental, and can help prevent and mange over 20 chronic conditions and diseases, including some cancers, heart disease, type 2 diabetes and depression. Around 1 in 3 men and 1 in 2 women are not active enough for good health.

So despite all this money being spent on chronic disease in Wales we still have some of the poorest health outcomes. Is our traditional bio medical model / system which is set up to treat disease and illness based on individuals biology and genomics really the answer to treating this pandemic of chronic disease. If we looked at this differently – most chronic disease is a social disease. Can a gastric bypass cure diabetes, as if you can cut out a bad lifestyle like a wart! Can you medicate out a bad diet, take a pill while you down a Big Mac and fries and a coke!

There is a non pharmaceutical intervention that is available to almost all people in Wales, food and exercise! Food is not just calories it can provide us with all the nutrients , hormones, proteins that can cure chronic disease. If you can eat yourself into the disease you can eat yourself out of the disease, is it possible to eradicate chronic disease?

When people think about curing chronic disease it is overwhelming its too big. This is not for the state or the NHS to cure this is a local problem, a community problem. With a little help from your friends is it possible to change your health? We know that you are more likely to be obese if your friends are obese than your parents. People need to be in a tribe. Can we use communities to be the cure?

This is exactly what the The Saddleback Church in America did. The church had a congregation of 30,000 people meeting in 5,000 small groups. The pastor after baptising 500 people realised how large the congregation was getting and sort help from a doctor. They devised the 'Daniel Plan' it was designed by medical professionals but delivered online , virtually and face to face by people with no clinical experience to the small church groups. Over 15,000 people signed up and lost in total 250,000 pounds. A functional medicine approach, a lifestyle intervention saw a change in people's behaviour due to peer support, the creation of social networks. People reported reduction in medication use, doctor and hospital visits, better energy, lower blood pressure. They changed people's biology by a social intervention.

COVID was viewed as an existential threat by the Governments and the population, however it became clear fairly quickly that those at greatest risk were those with obesity, type 2 diabetes and heart disease. Generally preventable chronic conditions. Despite this link being widely publicised people got fatter and there was a drop in activity levels during the first and second wave of the pandemic. Why was this? It highlights the challenges we face that people when faced with the possibility of dying if they caught COVID couldn't be motivated to make even small changes. We managed to scare people enough to wear face masks by themselves in cars and under water in swimming pools but they weren't scared enough to stop eating donuts and go for walk!

This is an exemplar of how the state can intervene with nudging and scaring people but it can't deal with the complexity behind the choices that people make. You need a complex intervention for a complex problem. These needs are not being met by services that are organised around the principles of the biomedical model and a social intervention focusing on better choices and improving health with less focus on treating disease but improving health is needed.

During May and June 2020 there was early indications that people where developing long COVID symptoms and we wondered if the learning from neuro

and rehab model could be used to offer a service that focused on recovery of symptoms rather than diagnosis and over medicalisation. If this could work for Long COVID could this approach work for other chronic health conditions. At the time there was a very strong demand from patient groups and some healthcare professional and direct pressure was brought to bear on Welsh Government to provide a top down biomedical, doctor led, diagnostic approach to solve this emerging syndrome and find a cure. What became apparent is that people are unique and therefore long COVID manifested itself depending on peoples dispositions. Therefore this required an intervention that could match and adapt to the uniqueness. The use of group based psychologically informed intervention, with peer support enabled people to recover or adapt to live well with their symptoms. A Social Return on Investment evaluation of the Long COVID Service in Cardiff and Vale concluded that there was a return of £5.38 social value for every £1 invested.

This approach and philosophy works and could be expanded to many chronic conditions with the opportunity to scale up the delivery of psychologically informed interventions to educate, to support self management and behavioural change to help people make good choices to live well. The community cure is in the magic of the group! We just have to be brave enough to do more of it!