How could our understanding of social inequities – both in the UK and more globally – shape delivery of medical care in the future?

'Today, there is a 36-year gap in life expectancy between countries. A child born in Malawi can expect to live for only 47 years while a child born in Japan could live for as long as 83.' (World Health Organization, 2021 b) In the UK, those living in the most deprived areas have two decades less life in general good health compared with those in the least deprived (Pratt, 2021). Why do we see such staggering polarity in public health at all areas of society? It is founded on social inequity.

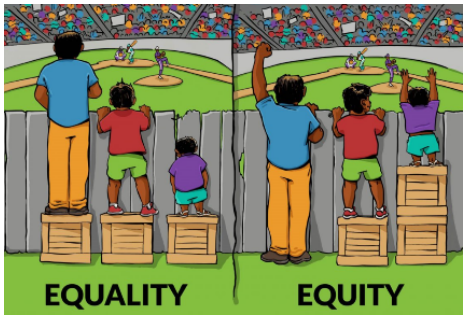

Figure 1, Equity vs. Equality, https://www.mentalfloss.com/article/625404/equity-vs-equality-what-is-the-difference (accessed on 30.04.2021)

Before considering the utility of societal understanding, it is crucial to define exactly what is meant by 'social inequity'. Inequity refers to 'unfair, unavoidable differences arising from poor governance, corruption or cultural exclusion' (Goh, 2017). Inequities are founded on a range of factors but are typically fuelled by more cultural influences. There is a clear distinction between inequity and inequality; they are not strictly interchangeable terms. Inequality refers instead to the uneven distribution of resources, generally due to genetic factors. This difference can be illustrated effectively when looking at medical care in the UK. Everyone has an equal claim to the national health service once registered, however the reality is very different. The ability to benefit from the NHS is not one and the same, rather it is heavily influenced by socioeconomics. These are the social inequities that need to be addressed *and* redressed within the future of medical care.

The understanding of such social inequity can provide a framework upon which a country, and its healthcare system, is shaped. Understanding can be gained by a multi-indicator system that considers both occupational or income inequities *and* inequities in health (child morbidity rates, life expectancy, maternal health, disability rates etc.).

The definition of a social inequity and the understanding thereof as set out thus provides the gateway to a detailed examination of the issue both in the UK and the global context.

The social determinants of health are defined by the WHO as 'the conditions in which people are born, grow, live and age, and the wider set of forces and systems shaping the conditions of daily life'. There is a systemic relationship between social determinants of health (deprivation, income inequality, race, gender etc.) and life expectancy – 'the higher the social position the better the health' (Marmot, 2005) – this is known as the social gradient of health. That there are inequities in the UK is without question. Males living in the least deprived areas can expect a life 9.4 years longer than those living in the most deprived areas (Pratt, 2021). The 'postcode lottery' is a term commonly featured in current news to reference the unequal provision of services across the UK purely owing to postcode. The variation is staggering. Kingston and Richmond has 50% more GPs than Barnsley. Less than 1 patient per 100,000 was referred for a CT colonoscopy

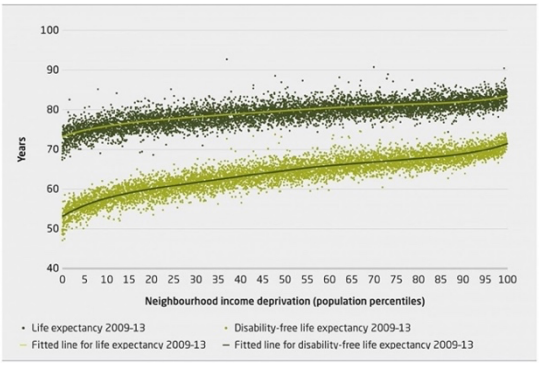

Figure 1, Inequalities in male life expectancy and disability-free life expectancy by neighbourhood deprivation 2009-13 https://www.kingsfund.org.uk/publications/what-are-health-inequalities (accessed on 29.04.2021)

(a procedure crucial to the diagnosis of bowel cancer) in Southampton, compared to 59 patients per 100,000 in Fareham and Gosport just half an hour's drive away. A hospital in Hillingdon admitted eight of ten patients with acute stroke to a stroke unit, whilst a hospital in Wyre Forest admitted only two (The Medical Technology Group, 2017), rapid access to care can have a huge impact on stroke patients. The imaginary line which dissects England into two economically, socially, culturally, and environmentally different halves is more real than it might appear. Those living in the north of England have a 20% higher risk of dying aged under 75 (Buchan, 2017); despite having greater health needs, the north receives a lower proportion of funds.

The NHS is built upon the value of healthcare that is free at the point of delivery. It is fundamental that it should provide equity of care and access to patients regardless of their home address. But how can the UK strive to shrink such extensive gaps in the delivery of medical care? How does our understanding and recognition of a social gradient of health inspire fresh courses of action?

The understanding of what social inequities the UK is faced with and where they are most prevalent enables a more bespoke and localised approach to the delivery of care. When considering an institution as complex as a public health service, reconfiguration is a challenge which increasingly grows to mean budget cuts, lower pay, and a downgrade in standard of service. This does not have to be the case. To truly tackle disparities across the UK, developments in medical care should take a less blanket approach. Change should instead be driven locally and regionally. If local leaders and residents build relationships with NHS management or national Government to address specifically where and how advancement to healthcare is necessary, effective strategies can be both constructed and implemented. A report partnered with the NHS Confederation (The NHS Confederation, 2013) recommends that a political consensus on clinically driven change should be established. It advocates that 'Politicians need to join with patient groups, clinicians and managers to highlight the potential benefits of change, where the evidence is strong, and promote the realised impact it has on care.' Social inequities have created a need for future medical care in the UK to differ regionally and tackle local goals. The NHS can no longer take a one size fits all approach.

Proportionate universalism is a principle coined by Marmot whereby 'all actions are universal, but with a scale and intensity that is proportionate to the level of disadvantage' (Marmot, 2010). An approach like this could shape the future delivery of medical care. In a society with such gaps in healthcare, we will need to adopt a 'sliding scale' based on deprivation and level of need to mitigate inequities. Inequities cannot be fully addressed and ultimately eradicated if progress is solely centred on the worst or best off.

The need for understanding of social inequities is yet more acute in the global context. There are already theoretical plans in place for the future delivery of global medical care, such as the Millennium Development Goals set in place by the World Health Organization (the 'WHO'). Universal health coverage is defined by the WHO as 'ensuring that all people have access to needed health services (including prevention, promotion, treatment, rehabilitation and palliation) of sufficient quality to be effective whilst also ensuring that the use of these services does not expose the user to financial hardship'. (World Health Organization, 2021 c). It has become the major target for many countries in terms of public health and is an objective which is shaping forthcoming healthcare.

We have reached a point in the worldwide development to medicine, where focus must be given to reaching the most vulnerable populations. Technology is rapidly coming to the forefront of medicine in more developed countries. Advances such as artificial intelligence, VR, trackers, 3D printing or robotics (The Medical Futurist, 2020) are beginning to play a huge role in shaping the future delivery of medical care. However, many countries are still struggling to control unresolved infectious epidemics or to eliminate deaths from illnesses deemed easy to cure. Roughly 1 in 5 children who die before the age of 5 (the majority being from South Asia and sub-Saharan Africa), die of diarrhoea (Banerjee and Duflo, 2011). A standardised plan of care cannot and will not be the solution in a world of such obvious social inequity. One example of how understanding social inequities can influence the delivery of medical care is the immunisation scheme set up by Seva Mandir in Udaipur, India. The idea was to offer each person who attended for immunisation, 2 pounds of dal (a staple food for the region), and a set of stainless-steel plates for completing the course (Banerjee and Duflo, 2011). This incentive proved not only to be effective, boosting immunisation rate to 7x what it was initially, but also inexpensive as increased efficiency meant a reduced price per immunisation. Small successes like these can be replicated at different levels globally as we continue to shape medical care around social inequity. Differences in levels of poverty and levels of education enable a different approach to be taken. Innovative methods of improving access to existing medicine will be just as pivotal as new technology.

The COVID-19 pandemic has uncovered huge social inequities across the globe. Pre-existing inequities have acutely affected Black, Asian and minority ethnic members of society across an array of areas. Female job loss rates due to the coronavirus are roughly 1.8 times higher than male job loss rates (Madgavkar, et al., 2020). The understanding of such inequities has led to the use of new technologies. By way of example only, the concept of telehealth has seen substantial progress when used to face the threat of coronavirus. Telehealth is the 'delivery of health care services, where patients and providers are separated by distance'. It capitalises on applied science to combat inequity and provides quality medical care to those living in rural, remote, and vulnerable areas (World Health Organization, 2016 a). As displayed in figure 3 it is a system steadily growing in use as the world of medicine develops.

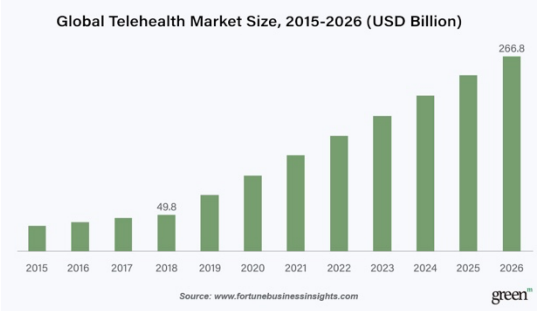

Figure 3, Global Telehealth Market Size
https://greenm.io/data-challenges-in-telehealth/ (accessed on 01.05.2021)

US firm Zipline began couriering blood and drugs to Rwanda in 2016. Since the onset of the Covid 19 pandemic it has expanded its services and delivered PPE and other medical resources to vulnerable communities in North Carolina in hopes of increasing equitable access to care and the utilisation of telehealth across the state. The service consists of drones delivering supplies via parachute to minimise the need of any additional infrastructure, with the intention of eventually delivery directly to patients' homes. The company has continued work in Ghana, providing contactless transportation of test samples between rural locations and city-based laboratories (Meisenzahl, 2020).

Advances in technology such as this have the power to either catapult those suffering at the hands of social inequities into modern-day medicine, or only further widen the international gaps in standard of healthcare. Global governance must take care in the future to harness the benefits of technology but also regulate the power it presents. In the coming years as we begin the recovery

period post-pandemic, social inequities will have been reshaped and global governance / medical organisations will face immense economic and logistical pressure; they must endeavour to harness the benefits of technology but also monitor it in terms of its ramifications of social inequities.

'The Future of Health Care is Human' (Block, 2019). Changes to primary care could be a solution to mitigating social inequities. Delivery of medical care will begin to take a more proactive rather than reactive approach. Many current healthcare systems, including the NHS and Canadian Medicare, are not designed to prevent the onset of disease but instead to deal with ill health when it presents. They are reliant on patients being able to contact the system as and when they have noticeable symptoms (Wise, et al., 2016). Understanding inequities allows measures to be taken to prevent illnesses rather than simply treat them when they occur. As previously discussed, everyone does not have equitable access to medical attention: lack of education may cause a patient's symptoms to go unnoticed; those living in remote locations have further to travel for a simple diagnosis; financial limitations can be barriers to care access. The existence of inequities requires a patient-centred approach to health care that better understands the needs of individual patients and communities. Understanding social inequities shapes a future focused on holistic delivery of medical care, where patients are treated as a whole person and according to their own social situation.

Ultimately, understanding and prioritising social inequities is essential to tackle healthcare needs, both in the UK and on a global scale. They shape a system where measures to mitigate and adapt to disparities become integrated into health programmes and services at the primary and secondary level. The extraordinary medical and scientific success represented by the development and rollout of Covid 19 vaccines within an incredibly short period of time demonstrates the incredible advances in medical knowledge and application. But without the understanding of social inequities, whatever advancement there has been in medical knowledge and care cannot be expeditiously and fairly delivered.

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