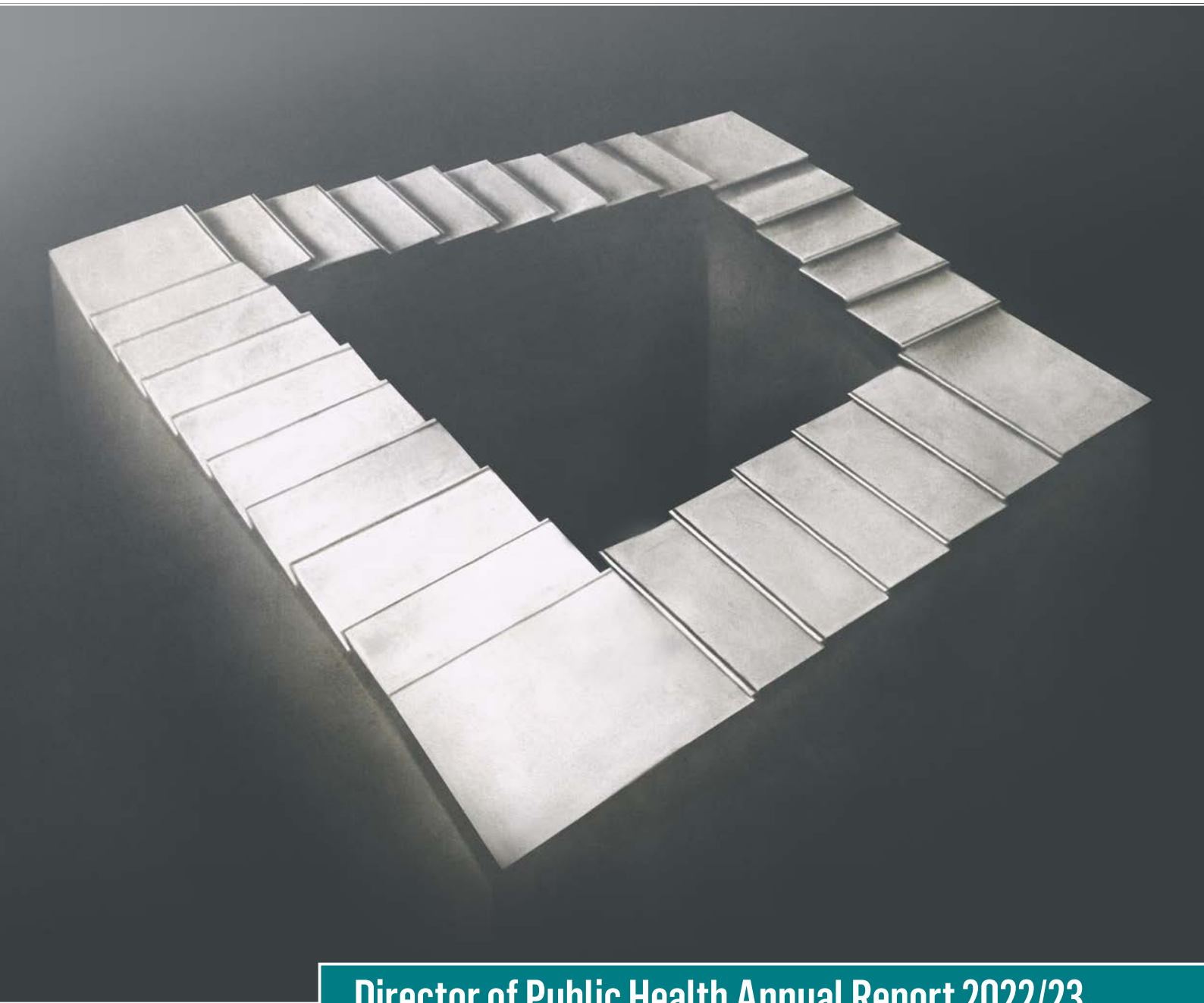
To be *fair*

Evidence-led approaches to addressing health inequalities in Cambridgeshire and Peterborough.



Director of Public Health Annual Report 2022/23

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Foreword

This is my first annual public health report in my role as DPH for Peterborough and Cambridgeshire. I arrived here in June 2021, when we were still heavily in the throes of the pandemic.

My team and I were fully occupied by the response, and it is only in recent months that we have been able to focus on the important task of improving the health of our population. Despite the challenges, I have really enjoyed my first year, I have found the area to offer diversity and challenge and fantastic partners who have been really willing to work together. I have the great luck of being supported by an extremely dedicated and able team, who despite being exhausted by the pandemic response, have returned to their substantive roles with great vigour. I am very grateful to them.

The fact that the pandemic had a disproportionate impact on people who were poorly paid and did not have the option to work from home, has brought with it a renewed desire to address inequalities. The natural response to tackling inequalities is to target interventions to those who are deemed to be in greatest need. That often leads to interventions that are targeted at the poorest areas, partly because that is how we present our data. Yet this approach may not be the best way of tackling inequalities.

The report outlines the reasons for this and makes the case for universal approaches, coupled with the systematic identification of individuals at need who can then benefit from evidence-based intervention. This approach will result in resource being more effectively deployed to those who need it most and is much more likely to be effective at reducing inequalities.

I would like to thank the people who have helped me to produce this annual report:

- Emmeline Watkins for writing the report and her incredible patience with me
- Andrew Robson for the analytics
- Tom King from the business intelligence team for the graph on deprivation
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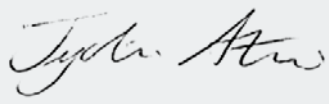
- Helen Freeman for the Health Child Programme Content
- Jonathan Bartram and Joao Rocha from the ICB for their comments
- Public Health Directorate Management Team member for the comments and contributions
- Sally Thomas for designing the report



Jyoti Atri

Introduction

Health inequalities are unfair and avoidable differences in health between people or communities. The exposure and exacerbation of health inequalities through the Covid-19 pandemic has resulted in focused attention on health inequalities and renewed interest in addressing them. Yet our awareness of health inequalities and our desire to address them is not new.

The Black report in 1980[1] exposed health inequalities and made clear statements about the broader determinants of health inequalities, such as education, income and housing. These inequalities start early in life and have sustained impact on all aspects of life including health and death. The Marmot review in 2010[2] made a clear articulation of the determinants of health inequalities and outlined actions that would address them.

There have been attempts by national government to reduce inequalities in health. However, ten years after the publication of his initial review Prof Marmot identified that inequalities in health had actually widened[3]. These widening disparities were in place long before the additional and unequal distribution of the impact of Covid-19[4], and now, two and a half years after the start of the pandemic, we are facing another threat to our residents' health which will once again have most of an impact on the most deprived households. This summer, our most deprived residents have already felt the effects of sharp increases in food, fuel and other costs of living, and the effects will worsen and be felt more widely as we enter the winter months. Stark choices for households are likely to result in poorer health for many especially those who are not able to absorb the additional costs.

There have also been multiple and ongoing attempts to reduce health inequalities at a local level in Cambridgeshire and Peterborough and yet health inequalities persist. Figure 1 shows the patterns for deaths under the age of 75 years where men in the most deprived fifth of areas have a considerably higher rate of premature death, and the gap between the most and least deprived fifths has remained relatively consistent. For women, this gap has potentially widened in recent years.

This report explores some of the reasons for why we have not been successful at reducing health inequalities and outlines some approaches, based on evidence and experience, that may materially improve outcomes for those who are experiencing inequalities and reduce inequalities.

1. The Black Report 1980 (sochealth.co.uk) 2. Fair Society Healthy Lives, February 2010 3. Health Equity in England: The Marmot Review 10 Years On - The Health Foundation, February 2020 4. COVID-19: Review of emerging evidence of needs and impacts on Cambridgeshire & Peterborough, 2021/2022

The determinants of health inequalities

The causes of health inequalities lie predominantly in the wider determinants of health such as good housing, good education, good employment and income, healthy environments, a supportive community, and family.

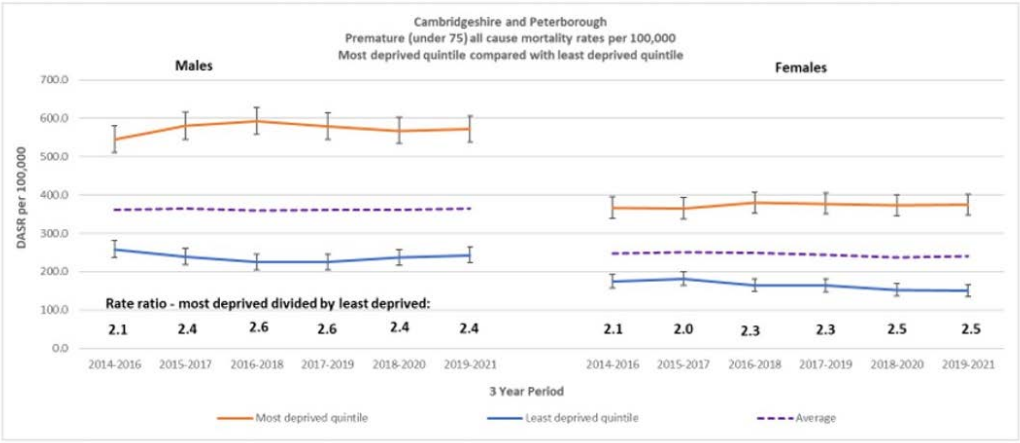
Many of the structural levers for addressing these lie outside local control, however this report will focus on what can be done at a local level to address health inequalities. If we are to be successful in tackling health inequalities now, we must learn from our experience to date and draw on the international evidence base of successful interventions.

Health inequalities are unfair and avoidable differences in health between people or communities. Our focus must be on reducing inequalities in health outcomes and to do this we must understand the determinants of those inequalities. These include education, income, gender, age, sexual orientation, disability, genetics, ethnicity and background, and access to services and treatment.

Whilst many of these factors may predispose individuals to experience health inequalities, most of these factors should not inevitably lead to inequalities in health outcomes. It is how society responds to these different risk factors that should lead to a reduction in inequalities in outcomes.

> Our focus must be on reducing inequalities in health outcomes and to do this we must understand the determinants of those inequalities

Comparison of **most** and **least** deprived IMD quintiles
three-year aggregated age standardised rates per 100,000



Source: CPICS DSCRO Deaths Registrations; ONS Mid-Year Population Estimates and Indices of Multiple Deprivation 2019.

Figure 1 All-cause mortality rates in those under 75 years between 2014 and 2021 by Indices of Multiple Deprivation (IMD)

Targeting by geographical groupings will miss most individuals that could benefit

Inequalities in health are experienced by individuals, yet much of our analysis and data presentation is aggregated, hiding considerable variation.

Information is often presented by geography, or the Indices of Multiple Deprivation (IMD) which itself is based on small area geographies.

Data presented by deprivation categories can highlight the health inequalities and the outcomes that need improving – but it doesn't necessarily inform the type of intervention that is going to be most effective. Sometimes, given the geographic clustering of deprived areas in Cambridgeshire and Peterborough, the presentation of data by deprivation can lead a focus on geographically based interventions.

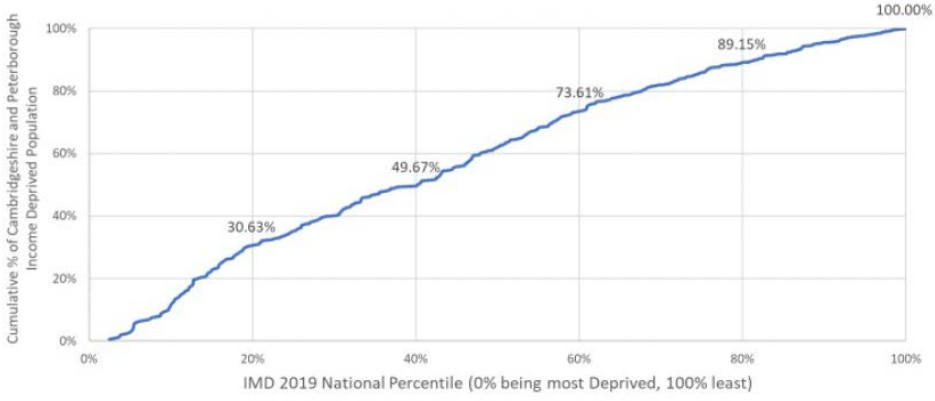
To the person with a hammer everything looks like a nail! Whereas we need to be rigorous and evidence-led in choosing the most effective intervention mechanism.

The factors that may predispose an individual to experience health inequalities are distributed widely across the county and not restricted within particular geographies. For example, a very important factor in health outcomes is income, and although low incomes are associated with some geographic areas, there remains a lot of variation.

Figure 2 shows the cumulative number of individuals who are income deprived across Cambridgeshire and Peterborough against IMD percentiles. Put simply, it's likely that all our areas, even the wealthiest, are home to people on low incomes.

If we were to focus our attentions on the most deprived quintile, we would only reach 31% of individuals who are income deprived and miss the majority. Even the least deprived quintile contains 11% of the income deprived individuals across the county.

Cumulative % of income deprived population in Cambridgeshire and Peterborough by National Indices of Multiple Deprivation Percentile (using 2019 IMD and 2020 mid-year population estimates)



Sources - Indicies of Multiple Deprivation 2019, DLUHC and 2020 Mid-Year Population Estimates, ONS

Figure 2 The Cumulative percentage of income deprived population in Cambridgeshire and Peterborough by Indices of Multiple Deprivation

Using food poverty as an example, whilst primary and secondary schools in the most deprived areas in Cambridgeshire and Peterborough are likely to have the highest proportions of children eligible for free school meals, the majority of children eligible for free school meals will be in the other quintiles and all primary and secondary schools in Cambridgeshire and Peterborough have some children eligible for free school meals.

Apart from geographic targeting of interventions, the other approach that is often used is to target resources to the highest need individuals. This is an approach that is widely used by our health and social care sector, where need thresholds must be crossed before individuals can access care or support. Whilst of course this approach is required to protect limited resources and to ensure only those who are in need receive services, the limitation of this approach is that there are inequalities in healthcare-seeking behaviour and subsequent access to services can widen inequalities further[5]. Focusing resources at those in greatest need who are already unwell cannot result in a reduction of health inequalities as the determinants of those inequalities will already have had their impact. It is too late.

The case for universal approaches

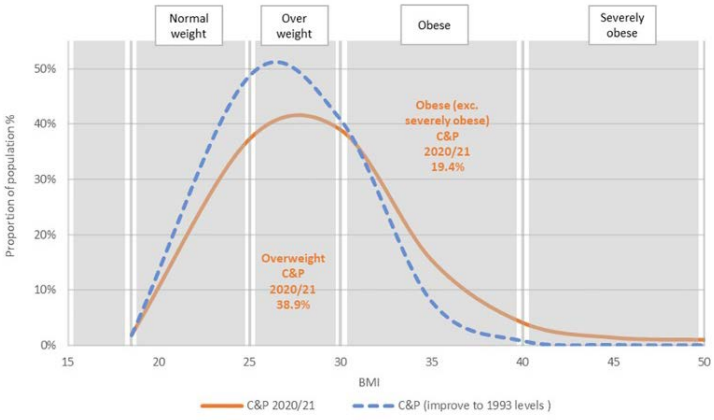
When faced with a problem such as excess weight which impacts the health of the majority of the adult population, targeted approaches that focus on a relatively small number of people will not work at reducing overall risk in the population.

Figure 3 illustrates the population distribution of those overweight and obese in Cambridgeshire and Peterborough and how that has shifted over the last 30 years, with many more of us now overweight and obese, something that need reversing.

However, if we focus on those who are overweight and living in the most deprived quintile, we will miss the majority of people who need to lose weight.

Using a threshold approach, focusing on those who are obese or severely obese for example, we will miss the majority who are overweight and whose health is already at risk because of it and who could go on to be obese.

Cambridgeshire and Peterborough Adult Obesity - illustration



Source: derived from Active Lives Survey and Health Survey for England

Figure 3 Illustration of the current distribution of those overweight and obese in Cambridgeshire and Peterborough compared to 1993[6]

5. The Inverse Care Law, Lancet. Hart, J. T, 1971 Feb 27;1(7696):405-12 6. Illustration based on point prevalence data for Cambridgeshire and Peterborough based on Active Lives Survey 2020/21 and England data from Health Survey for England 2019.

Offering intensive individual level support to all of those who are overweight is unaffordable, impractical and not cost effective; universal measures are required to tackle a problem of this scale. Measures such as changing the environment to support people to walk or cycle by default or restricting advertising of fast foods are more cost effective.

Of course, we will want to offer additional support and interventions to those who are obese, but this cannot be at the cost of universal approaches which have the potential to improve the risk levels of many more people.

Universal approaches can be very successful at both improving population health outcomes and reducing inequalities, without being stigmatising. For example, universal measures on smoking, such as the smoking ban in indoor public spaces, other smoking legislation and pricing measures have resulted in reduced overall population smoking prevalence, reduced inequalities in smoking initiation[7] and smoking prevalence between the most deprived and least deprived deciles, have continued to reduce since the introduction of the ban[8].

Another such example is the addition of fluoride to drinking water, which can improve population oral health and reduce inequalities in dental caries[9]. If targeted approaches are used alone, the potential to improve population health outcomes, is missed.

Universal approaches are also essential when identifying those in greater need or at higher risk. For example, our health visiting services routinely visits all babies, providing systematic support to all new mothers but identifying and providing intensive and systematic support to any families with greater need. Without this universal intervention, it would be much harder to identify those who needed more help.

Even for something such as smoking in pregnancy, which on the face of it warrants a very targeted approach, without routine carbon monoxide checks, many pregnant smokers or those exposed to smoking in pregnancy, through household members smoking, would be missed and would not be offered support to stop smoking. Once identified, individuals can be offered the additional support they need.

The balance between a proportionate universal approach and a more targeted offer, and its impact on outcomes, has also played out in the approach to supporting families with the youngest children. The original Sure Start programme was funded to provide universal access to community-based support and health provision, but as funding changed a much more targeted approach needed to be offered which meant that it is more difficult to identify early signs of difficulties within families as they are no longer regularly attending universal sessions with their peer group.

It also potentially impacted local community views on the purpose of Sure Start centres[10]. The new national approach for Family Hubs has recognised this gap and is moving towards a coordinated and universal Start for Life and family services as well as ensuring that there are additional targeted interventions to support vulnerable and under-served populations[11].

For all these reasons, universal approaches should be the first port of call.

Proportionate or progressive universalism

Combines the approach of improving health of all individuals as well focusing efforts on improving the health of the groups with the highest need.

For services, this means that there is a universal offer but one that is systematically planned and delivered to enable access and give support according to need – both at an individual level and at a neighbourhood level to ensure better outcomes for all.

7. Impact of UK Tobacco Control Policies on Inequalities in Youth Smoking Uptake: A Natural Experiment Study | Nicotine & Tobacco Research | Oxford Academic (oup.com), May 2020 8. Smoking inequalities in England, 2016 - Office for National Statistics (ons.gov.uk) 9. Health and Care Bill: water fluoridation - GOV.UK (www.gov.uk), March 2022 10. Sure Start: voices of the 'hard-to-reach' (pdf - researchgate.net) October 2007 11. Family hubs and start for life programme: local authority guide - GOV.UK (www.gov.uk), August 2022

The limitations of universal approaches

Universal approaches may sometimes fail to address inequalities.

Some groups and communities are also more likely to experience challenges in accessing care, including preventative care – with issues such as the availability of services in their area, services opening times, digital exclusion, access to transport, access to child care, language and literacy, poor experiences in the past, misinformation and fear - all being highlighted by the NHS[12] as potential reason for differential access to care.

The Covid-19 vaccine is a universal offer that has been incredibly effective at reducing population harm from Covid-19, without this universal offer we would still be seeing many hospitalisations and deaths due to Covid-19. However, it has become increasingly clear, through the pandemic that this universal offer was not universal in reach. In fact, those who were most likely to need it due to being at higher risk through social factors, were least likely to take up the vaccine.

The offer of vaccination was systematic and there was considerable additional planning and engagement across geographies, ages, ethnicities and communities to address the issues such as opening times, transport, facilities, language, understanding and misinformation. However, there was clearly variable impact of vaccine initiatives, both nationally and locally, and there are still some local areas and communities with lower levels of Covid-19 vaccine uptake.

The complexity of addressing the underlying systemic issues and addressing individual concerns was highlighted throughout – with some real successes, but the continued lack of vaccine confidence in some areas despite considerable efforts highlights that there are still lessons to be learned to enable effective implementation and support to access this type of universal offer.

Interventions to improve uptake of such a universal offer may increase uptake for all, without reducing the inequalities across the population. For example, in Sweden[13] there was a randomised controlled trial of monetary incentives to undergo early Covid-19 vaccination, compared to other measures such as behavioural nudges or reminders. One group received a 200 Kr (£16) cash incentive if they were vaccinated within 30 days of becoming eligible for vaccination whereas the other groups received behavioural nudges.

> “It has become increasingly clear, through the pandemic that this universal offer was not universal in reach. In fact, those who were most likely to need it due to being at higher risk through social factors, were least likely to take up the vaccine.

12. NHS England » What are healthcare inequalities? 13. Monetary incentives increase COVID-19 vaccinations - PubMed (nih.gov) Campos-Mercade P etal. Science. 2021 Nov 12;374(6569):879-882

While some of the behavioural nudges significantly increased the intention of participants to be vaccinated, they did not significantly impact uptake, however the vaccine uptake rate in the monetary incentive group was 4 percentage points higher than the control.

Interestingly, financial incentivisation provided a similar boost to the rate of vaccination across all the demographic groups – thus improving uptake for all, but not reducing inequalities. This presents ethical questions of acceptability of improving absolute uptake overall and thereby preventing hospitalisations and deaths in those who are most vulnerable, yet not reducing inequalities.

There is obviously a trade-off between overall cost of an intervention program such as an incentive programme, the fairness with respect to who is eligible and this needs to be clearly and transparently balanced with the cost-effectiveness of the intervention.

For vaccine incentives, it is fairer if the incentive is universal - offered to everyone, including groups who are likely to have high uptake or have already been vaccinated. This would mean the cost for each additional vaccinated person above the baseline would be much higher than for targeted incentives. However, the cost-effectiveness of such a program could still be positive if it reduces future pandemic costs sufficiently.

It is easier to target incentives when the need (and lack of need) can be clearly identified - such as in those smoking during pregnancy. Here, targeted monetary incentives have been shown to be highly effective at improving quit rates compared to normal care[14], with very clear benefits as to health outcomes for the mother and the child.

The ongoing debate of universal versus targeted support measures for energy costs this winter especially given the existing budget constraints highlights the complexity of these decisions and the need, if targeting, to identify all those in need or at risk of poor outcomes.

Care needs to be taken that interventions are based on true assessment of risk or need, rather than on the much easier to measure but crude demographic or geographic characteristics.

Targeting to demographic or geographic groups assumes that the selected group is homogenous both in behaviour and health outcomes and also risks missing many people who are not in these groups but still in need. In addition, a service that is crudely targeted to a group can lead to a level of stigma and an unwillingness to use the service, which needs to be addressed in any successful targeted service.

Whatever form of targeting is used it is important that the identification of those at risk is carried out with the best data available, and the intervention has a strong evidence base of impact on outcomes.

> **There was clearly variable impact of vaccine initiatives, both nationally and locally, and there are still some local areas and communities with lower levels of Covid-19 vaccine uptake.**

14. Cochrane Review (2019) Incentives for smoking cessation - PMC (nih.gov)

Table 1 Brief overview of types of targeting and the advantages and disadvantages

Targeted group for intervention	Advantages	Disadvantages
Risk group identified at an individual level	▪ Requires robust individual level data to enable risk scoring ▪ Intervention can be targeted to those at need/ risk and is likely to have more impact on outcomes	▪ Information to risk score is not always available ▪ Requires system analytic capacity to identify risk groups ▪ People below the cut-off for intervention may still have risks that can be reduced
Groups with key health or behavioural need	▪ Focused interventions such as incentives and peer support are possible ▪ Some individuals with need will be known to services	▪ Often based on the individual or service identifying their need and accessing intervention – therefore groups may be missed leading to a widening of inequalities. ▪ Need is not always easy to identify ▪ Can be assumptions that group are similar in characteristics and a similar intervention is appropriate for all
Demographic group e.g. homeless, migrants, traveller communities, those on benefits	▪ Can be easy to identify ▪ Often have high health needs	▪ Assumes a group is homogenous and have the same needs ▪ Can lead to culture blaming and stigmatisation ▪ Specific services can be perceived as poorer quality leading to issues with utilisation by the group ▪ Focus can be on particular health conditions or support needs, neglecting broader health problems
Geographical/ deprivation	▪ Requires no individual level data to identify target group ▪ Need is proportionately higher in deprived areas	▪ Substantial proportion of health need is elsewhere.
Demographic e.g age, ethnicity	▪ Most services have age information	▪ Need is often higher in deprived individuals at an earlier age. ▪ Age cut offs can therefore worsen inequalities if this isn't taken into account

Conclusions and Recommendations

The renewed interest and commitment to tackling health inequalities as a result of the pandemic, is very much welcomed. Historic approaches at tackling these inequalities have not been successful, in fact inequalities have widened.

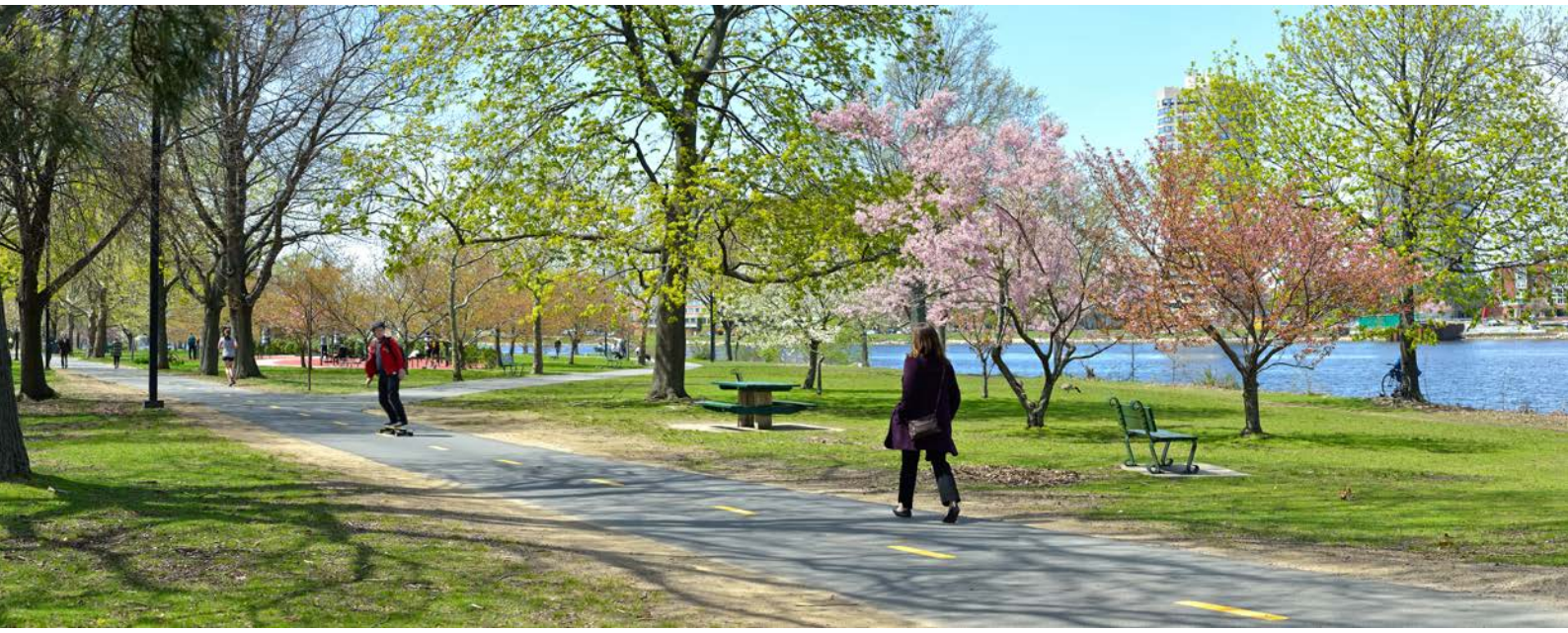
The automatic response to tackling inequalities is to target, however, as demonstrated in this report, universal approaches can be far more effective at reducing inequalities, than targeted approaches.

Universal approaches are also necessary in identifying those individuals who are in need of further intervention. Targeting has also often been carried out on geographical basis or using IMD quintiles, as argued in this report, this can often lead to the majority of individuals in need, being missed.

To be fair to our residents we need to successfully reduce inequalities in health outcomes. To be successful in this we must be more intelligence-led and evidence-based.

We need to:

- Keep a focus on universal interventions as a key way of improving outcomes, reducing inequalities in health in our population.
- Make sure that any universal offer is systematically planned and delivered to enable access to all and give additional support according to need.
- Start early (pregnancy and childhood) before inequalities become entrenched
- Ensure that any targeted intervention is
    - based on need, ideally through universal identification of need or risk rather than grouping by easily available information such demographics or geography
    - evidence-led as to approach
- Be transparent and explicit around considerations for interventions clearly articulating the proposed individual and population benefits, draw first on evidence based approaches with proven cost effectiveness and where evidence is not available, research and evaluate the impact of new and innovative approaches.



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