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BRIEFING

Behavioural science investment needed to mitigate long-term health impacts of Covid-19

During the Covid-19 pandemic, media headlines and emerging evidence have reported shifts in population behaviours such as substance use, food and alcohol consumption, physical activity, and sedentary behaviour. Engagement with some preventative health services has also declined. This policy brief highlights potential long-term impacts of Covid-19 on health behaviour and chronic disease prevention. Recommendations for policy prioritisation are provided to help mitigate downstream consequences and prevent widening health and social inequalities.

OVERVIEW

Covid-19, for some, has led to changes in health behaviours, such as higher alcohol use, lower physical activity, increased sitting time, unhealthy food consumption, higher substance use, and reduced use of health services.

Subsequent downstream physical and mental health consequences are anticipated, with wider social and economic implications.

Policymakers should set direction for supporting changes to long-term health behaviours through formal commissions and refreshed disease prevention targets.

Investment in behavioural scientists, and specifically health psychologists, to help design, deliver, evaluate, and adopt interventions (at individual, community, population, and system level) will help to minimise adverse outcomes¹.

Behaviour change interventions and health services should meet the needs of high-risk groups to reduce inequalities in burden.

BACKGROUND

The Covid-19 pandemic has led to substantial changes in population behaviour and disease outcomes. Around 10 per cent of people with mild or moderate Covid-19 experience long-term health effects (Long Covid). Although some outcomes are improving due to better understanding of SARS-CoV-2 and clinical advancements, a significant proportion of people with severe Covid-19 require hospitalisation and experience substantially impaired quality of life².

Prior to the pandemic, unhealthy behaviours were estimated to account for 40 per cent of the determinants of premature death. This headline statistic was central to key UK policy documents through 2019, including the Department of Health and Social Care Prevention Green Paper, NHS Long-Term Plan, and Childhood Obesity Plan. Behaviours such as stopping smoking, attending cancer screenings, healthy eating, and physical activity were highlighted as policy priorities given their role in reducing the risk of chronic diseases such as cancer, type-2 diabetes, heart disease; and related issues such as obesity.

Since the onset of Covid-19, international health organisations and experts have expressed concern that population behaviours and engagement with health services has worsened. With large segments of the population under prolonged conditions of self-isolation, quarantine, and physical distancing, modification to some routine health behaviours has been inevitable. Changes to socioeconomic status through reduced income and job loss, as well as increased caring responsibilities (particularly for women), have also posed significant barriers to engaging with healthy behaviours. Poor mental health outcomes, such as increased reports of depression and anxiety, may aggravate or inhibit certain health behaviours.

The UK Government issued an official report in November 2020 recognising the high likelihood of long-term systemic health and economic effects, far beyond direct deaths observed from Covid-19³. Whilst the long-term effects are unknown, it is anticipated that the systemic effects will be profound with the most disadvantaged groups in the UK population hit the hardest.

HEALTH BEHAVIOURS FOR LONG-TERM COVID-19 POLICY PRIORITISATION

Refreshed policy priorities and interventions which reflect ongoing shifts in population health behaviours and disengagement with key services are urgently needed. These should complement and build on existing initiatives such as the Better Health and Every Mind Matters campaigns^{4,5}. There is growing concern that not enough people will receive the Covid-19 vaccine in certain high-risk groups, so interventions that promote and enable vaccination uptake in high-risk communities also warrant policy focus.

Long-term behaviours for policy prioritisation are summarised below:

Covid-19 vaccination uptake⁶

Eating behaviour⁷

Physical activity⁸

Sedentary behaviour (e.g. sitting)⁹

Alcohol consumption¹⁰

Substance use

Tobacco smoking¹¹Sleep hygiene¹²

Health service use (e.g. cancer screening, GP attendance)

COVID-19 VACCINATION UPTAKE

Since the vaccine was rolled out across England in priority populations, preliminary data has shown lower vaccination rates among ethnic minority groups (Black or Black British displaying lowest rates), people living in areas of higher deprivation, and those with severe mental illness or learning disabilities¹³. In the general population, younger people (particularly younger females) have also reported greater vaccination hesitancy¹⁴. General mistrust in vaccines, beliefs of lower collective importance and lower vaccine effectiveness, and concerns about potential side effects and the speed of vaccine development have been listed as key barriers to vaccine uptake^{15,16}.

EATING BEHAVIOUR AND DIET

Data from a study of 22,374 UK adults found that one third reported changes to quantities of food consumed through the first lockdown period. Some of the population trended towards persistently eating more, whilst others reported eating less (concerningly, particularly those who were already underweight)¹⁷. Food choices may also have shifted, with one third of people eating less healthily than usual¹⁸. One study found 56 per cent reported snacking more frequently¹⁹.

PHYSICAL ACTIVITY AND SEDENTARY BEHAVIOUR

An online UK survey of 9,190 adults found that a quarter reported lower levels of physical activity since Covid-19²⁰. Vulnerable populations reported doing around half a day less of 30 mins moderate-to-vigorous physical activity each week through the first lockdown period²¹. Another UK survey found that 57 per cent had either maintained or increased their physical activity during lockdown. However only a third met physical activity guidelines²². Sedentary behaviour, such as prolonged periods of sitting, has also risen, possibly due to government mandates to stay at home²³.

ALCOHOL CONSUMPTION

National surveys have indicated that one third (31 per cent) of adults reported drinking more alcohol through Covid-19 than normal²⁴. Around 24 per cent of individuals with pre-existing alcohol disorders, at high risk of relapse, reported increasing their alcohol intake²⁵.

SUBSTANCE USE

Although data is limited, preliminary reports have suggested increased rates of drug use for substances such as cannabis, prescription benzodiazepines, and prescription opioids. Also, higher relapse rates have been observed for those in recovery from addiction²⁶.

TOBACCO SMOKING

In contrast to other behaviours, emerging evidence has suggested that tobacco quit rates and attempted quit rates have increased since the pandemic. The charity Action on Smoking and Health reported that over one million people had stopped smoking by July 2020, and 440,000 had attempted to quit²⁷. This suggests that Covid-19 may be a ‘teachable moment’ for promoting tobacco control policies and smoking cessation services.

SLEEP HYGIENE

Increased prevalence of sleep disorders through Covid-19 has been highlighted across different countries²⁸. The digital application company Fitbit has reported changes to global sleeping patterns, with people going to bed later and sleeping for longer²⁹. Poor quality sleep has been associated with the occurrence of adverse events through the pandemic. Adverse events have included, for example, illness with Covid-19, financial difficulty, loss of paid work, problems sourcing medicine, difficulties with accessing food, and perceived threats to personal safety³⁰.

PREVENTATIVE HEALTH SERVICES AND HELP-SEEKING

Preventative health services, such as cancer screening, may have seen declines in attendance and delays in help-seeking for symptoms^{31,32}. There have also been reductions in patient engagement across general health services, such as visits to Accidents and Emergency³³. Some reasons reported for non-attendance include fear of Covid-19 infection, not wanting to burden the health system, and practical barriers^{34,35}.

LONGER-TERM CONSEQUENCES AND WIDENING HEALTH AND SOCIAL INEQUALITIES

Poor health behaviours and disengagement with health services are anticipated to contribute to subsequent downstream physical and mental health consequences, carrying wider social and economic implications³. The Covid-19 pandemic is disproportionately burdening low socioeconomic and black and minority ethnic groups^{36,37}, as well as women with caring responsibilities³⁸. As has been highlighted in Government reports and the recent Covid-19 Marmot Review (as part of the Health Foundation Covid-19 Impact Inquiry), there is concern around widening health and social inequalities. Several Covid-19 and wider research studies have already shown that socioeconomic status, ethnicity, gender, age, and education are often predictive of poorer health behaviours and health-related outcomes. In addition, people in these groups often display the highest risk of SARS-CoV-2 infection, hospitalisation, and death from Covid-19³⁹. The combined effects of worsening behavioural outcomes paired with higher risk of non-communicable disease and severe Covid-19 are likely to accentuate existing inequalities with long-lasting systemic effects.

Although it is not possible to forecast the precise indirect impacts of Covid-19 (like worsening health behaviours) on the economy, the UK Government anticipates major long-term negative financial ramifications³. Emphasis has been placed on developing and implementing interventions to support health promotion in individuals, communities, populations, and systems.

BEHAVIOURAL SCIENTISTS IN THE COVID-19 RESPONSE

Behavioural scientists are multidisciplinary professionals that include health psychologists, who have been instrumental in navigating mitigation strategies for SARS-CoV-2 transmission. They have helped to identify effective and cost-effective Covid-19 strategies, and the groups for whom interventions are effective in terms of key equality and diversity issues⁴⁰.

What is behavioural science?

Behavioural science is an umbrella term for a selection of disciplines (such as health psychology) that study human behaviour. Behavioural scientists often aim to understand behaviours related to health and what can predict and change behaviour in individuals, communities, populations, and systems. Integrating behavioural science into public policy and practice can improve health outcomes, reduce inequalities, and promote sustainable health and social care systems^{41,42}.

CONCLUSION

Long-term disease prevention strategies should be prioritised now that most of the UK have been living under policy restrictions for a prolonged period, and the Covid-19 vaccine is rolling out. Evidence-based interventions which support the uptake of healthy behaviours and promote engagement with health services should be invested in by public policymakers. This will offset long-term indirect damage caused by the pandemic. Behavioural science and health psychology should be central in informing behaviour change strategies and health policy.

POLICY AND PRACTICE RECOMMENDATIONS

Key recommendations include:

- 1 Policymakers should refresh disease prevention targets with a psychologically-informed lens, to account for the impact of Covid-19 on long-term health behaviours and health service use.
- 2 Behavioural scientists, and in particular health psychologists with expertise in behaviour change, should be embedded in policy teams and health services to inform intervention design, delivery, evaluation, and adoption.
- 3 Health services and behaviour change interventions should be developed to meet the needs of high-risk and underserved groups, to reduce further inequality.
- 4 All those with a remit of human behaviour change should receive suitable training to enable a psychologically-informed workforce, building capacity in behavioural science.

The British Psychological Society Covid-19 Behavioural Science and Disease Prevention Taskforce have produced a series of guidance documents to support the use of behavioural science and health psychology during the pandemic and beyond. Please find below guidance and recommendations to support policy makers and public health practitioners.

Behavioural guidance for reducing SARS-CoV-2 transmission:

- [Optimising policies & communication](#)
- [Optimising vaccine uptake for Covid-19](#)
- [Post-Covid-19 vaccine behaviour guidance](#)
- [Encouraging self-isolation guidance](#)
- [Encouraging hand hygiene guidance](#)
- [The psychology of handwashing](#)
- [Digital contact tracing briefing](#)
- [Guidance on public health messaging](#)

Behavioural guidance for longer-term health behaviours impacted by Covid-19:

- [Alcohol consumption guidance](#)
- [Eating behaviour guidance](#)
- [Physical activity guidance](#)
- [Sedentary behaviour guidance](#)
- [Sleep hygiene guidance](#)
- [Stopping smoking guidance](#)

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