



Narrowing the gap: A fairer and sustainable future for public health

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Deloitte Centre *for*
Health Solutions

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Deloitte Centre for Health Solutions

About the Centre for Health Solutions
Established in 2011, the Centre is the research arm of Deloitte's Life Sciences and Health Care practices operating in the UK and across our European member firms. Our aim is to be a trusted source of relevant, timely and reliable insights on emerging trends, challenges and solutions. We use our research to encourage collaboration across all stakeholders, from pharmaceuticals and medical technology companies to health and care providers and commissioners, to the patient and health and care consumer.

Foreword

Welcome to this Deloitte Centre for Health Solutions report: *Narrowing the gap: A fairer and more sustainable future for public health*. This report is part of a series of reports examining the current challenges and future requirements for a resilient public health system in the UK. It provides an executive overview with insights based on our research findings. A further five reports dive deeper and present detailed findings from the primary research, case studies and literature reviews.

Our research was carried out between March and July 2021, against the backdrop of the third wave of COVID-19. The pandemic has exposed the impact of long-standing health inequalities and lack of progress in addressing the social determinants of health. It has also highlighted shortcomings in public health funding and in the roles, responsibilities and accountabilities of a beleaguered public health workforce. At the same time, it has emphasised the crucial role of public health and led to the rapid adoption of innovative ways of working.

The mitigation strategies adopted in response to COVID-19 (especially lockdowns and home working) and the loss of employment opportunities have resulted in a growing mental health crisis, a worsening of long-standing physical health issues, and damage to public finances and the wider economy. The social and economic consequences will have a long-term impact on the population's physical and mental health and wellbeing, and without concerted action there is a risk that health inequalities will increase further. The pandemic has also exposed the link between health and productivity and has shown how population health and workforce wellbeing are crucial assets for economic recovery and growth.

Traditionally, health and care have been shaped by policies, funding, systems and processes that are aimed at fixing problems when they become visible, rather than preventing them from happening. However, public health challenges are complex, interdependent and continually evolving, and require a combination of different approaches, including more effective collaboration between public services to tackle the 'wicked problems' that affect health risks and cause social and economic harm. The establishment of statutory Integrated Care Systems from April 2022 together with two new public health bodies, the UK Health Security Agency and the Office for Health Improvement and Disparities, provide a unique opportunity to build on the lessons learnt from the pandemic and design and deliver public health more effectively.

The UK needs to make the rhetoric of protection and prevention a reality, focusing more on wellbeing and preventative services, to create a resilient and sustainable public health system. It requires ambitious national goals, a cross-government strategy on health inequalities, and a bolder approach to innovation.

This report suggests action to improve public health and narrow the inequalities gap; and it highlights how emerging technologies, data analytics, partnership working, and population health management can be used to tackle the challenges. As always, we welcome your feedback.

Karen Taylor
Director Centre for Health Solutions

Sara Siegel
UK Health and Social Care Sector Leader

Narrowing the gap

Executive overview

Public health challenges are complex requiring cross-functional targeted, approaches to tackle them, alongside a deep understanding of the needs of defined populations. COVID-19 has shown the UK to be an unequal society and has exposed a crisis in public health services, including inadequate funding, variations in workforce capability and capacity and a need for clarity over roles responsibilities and accountabilities.

The pandemic has also raised awareness of public health and demonstrated its potential to use community assets and tackle local health issues more effectively. However, despite unequivocal evidence that prevention is more cost-effective than treatment, funding cuts and a lack of focus on prevention means there has been little progress in reducing health inequalities and addressing the impact of social determinants on the physical and mental health of the population.



About public health

What is public health?

Public health is defined as:

“The art and science of preventing disease, prolonging life and promoting health through the organised efforts and informed choices of society, organisations, public and private communities and individuals.”

World Health Organization¹

The role of public health is to improve the health of a defined population by protecting people from threats, preventing communicable and non-communicable diseases, promoting healthy behaviours and prolonging healthy life years. However, since its transfer of responsibility in England to local authorities, as part of the Health and Social Care Act 2012, there has been a more siloed and fragmented approach to public health across the UK. Subsequent cuts in local authority funding at a time when the needs of the population were increasing in both scale and complexity exacerbated the challenge to deliver an effective public health service.

Public health organisations have long recognised the need to shift away from siloed thinking and treating physical and mental illness, to promoting greater health and well-being in a sustainable way. However, this shift requires public health protection, prevention and promotion services to be strengthened and appropriately funded and to give public health teams the authority and support needed to influence the social determinants of health.

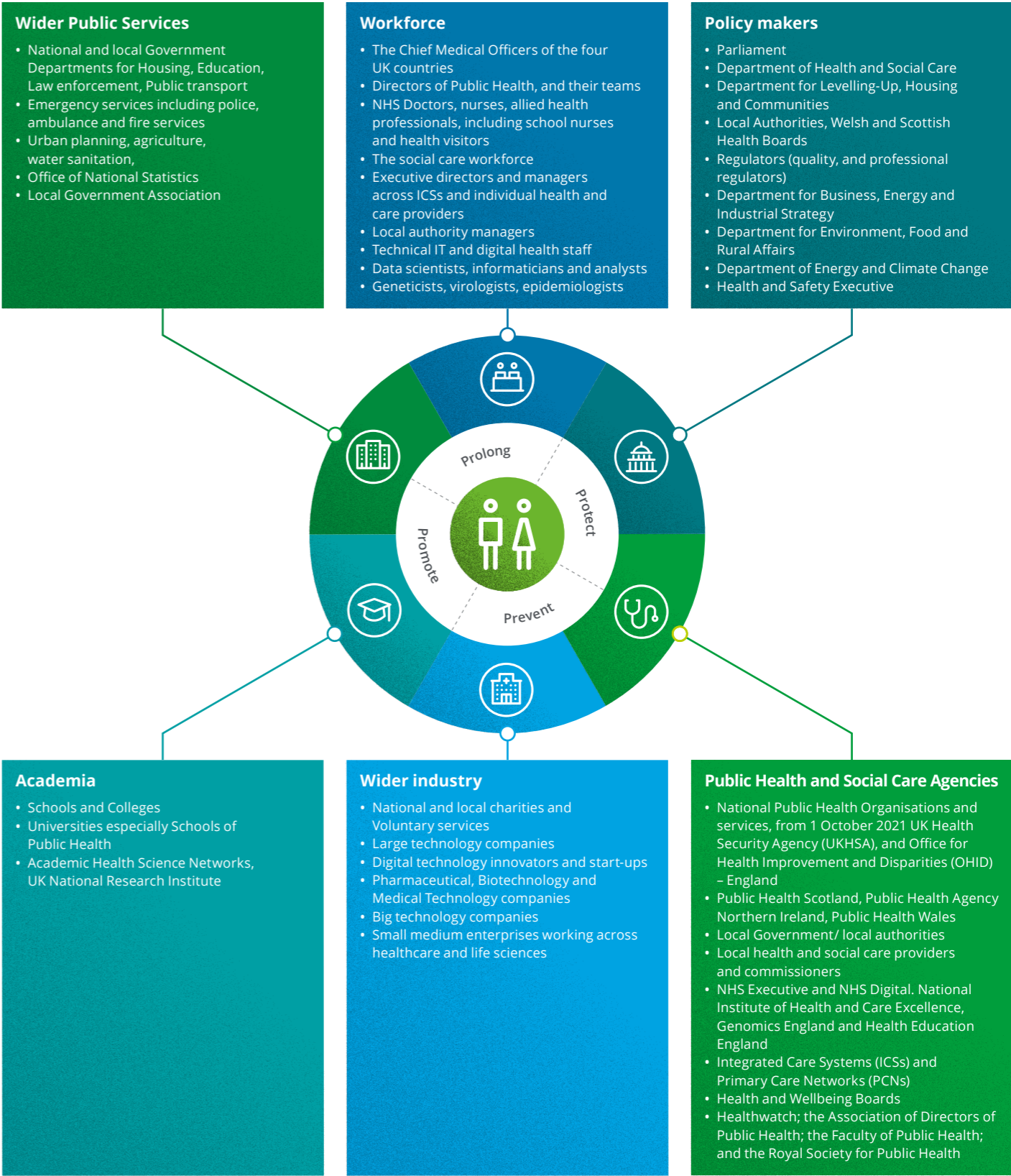
Yet the clear evidence of widening health inequalities, increased still further by the COVID-19 pandemic, demonstrates that the current approach is not as effective as it needs to be.

The challenges are complex, and the remit of public health services is diverse and far reaching, requiring specialist skills across multidisciplinary teams. While central and local governments are responsible for developing coherent policies, programmes, and a robust infrastructure, addressing the varied needs of local populations requires local public health teams to deploy a wide range of skills from surveillance, research and evaluation to engaging with and empowering the public. Directors of Public Health (DsPH) and their teams also need the authority and resources to influence a wide range of public and private stakeholders (Figure 1). A crucial, but often contentious responsibility, is to challenge unhealthy behaviours and influence the cultural attitudes and beliefs of the public, including addressing health and digital literacy.

Progress toward integration of health and social care

Over the past six years there has been a progressive move towards the integration of health and social care, with a growing emphasis on prevention and a specific commitment by the NHS in 2018. to ‘increase healthy life expectancy by at least five extra years by 2035 and reduce the gap between the richest and poorest by making prevention a priority’.² Since then, integration planning has gained momentum, with all healthcare providers becoming part of a geographically based Integrated Care System (ICS) and social care positioned strategically within the ICS structure. In March 2021, the government set out plans to transform public health by closing Public Health England (PHE) by the end of September and splitting its responsibilities between a new UK Health Security Agency (UKHSA) and the Office for Health Improvement and Disparities (OHIP), part of the Department of Health and Social Care (DHSC), and led by the Chief Medical Officer. However, the DsPH and their teams remain part of local government.

Figure 1. Examples of the wide range of stakeholders involved in the public health functions



Source: Deloitte LLP.

The challenges and opportunities facing public health

This report provides an overview of the findings of our research into the views of health and care professionals and public health experts about the current challenges facing public health. The research consisted of a survey of 1,500 front-line health and care professionals across the UK, and interviews with 85 public health experts together with insights from Deloitte colleagues and an extensive literature review. Our survey and interviews were conducted between March and July 2021 (see Methodology Annex).

The details of the research evidence underpinning this overview is presented in a series of companion reports reflecting the complexity of public health services. Together they examine:

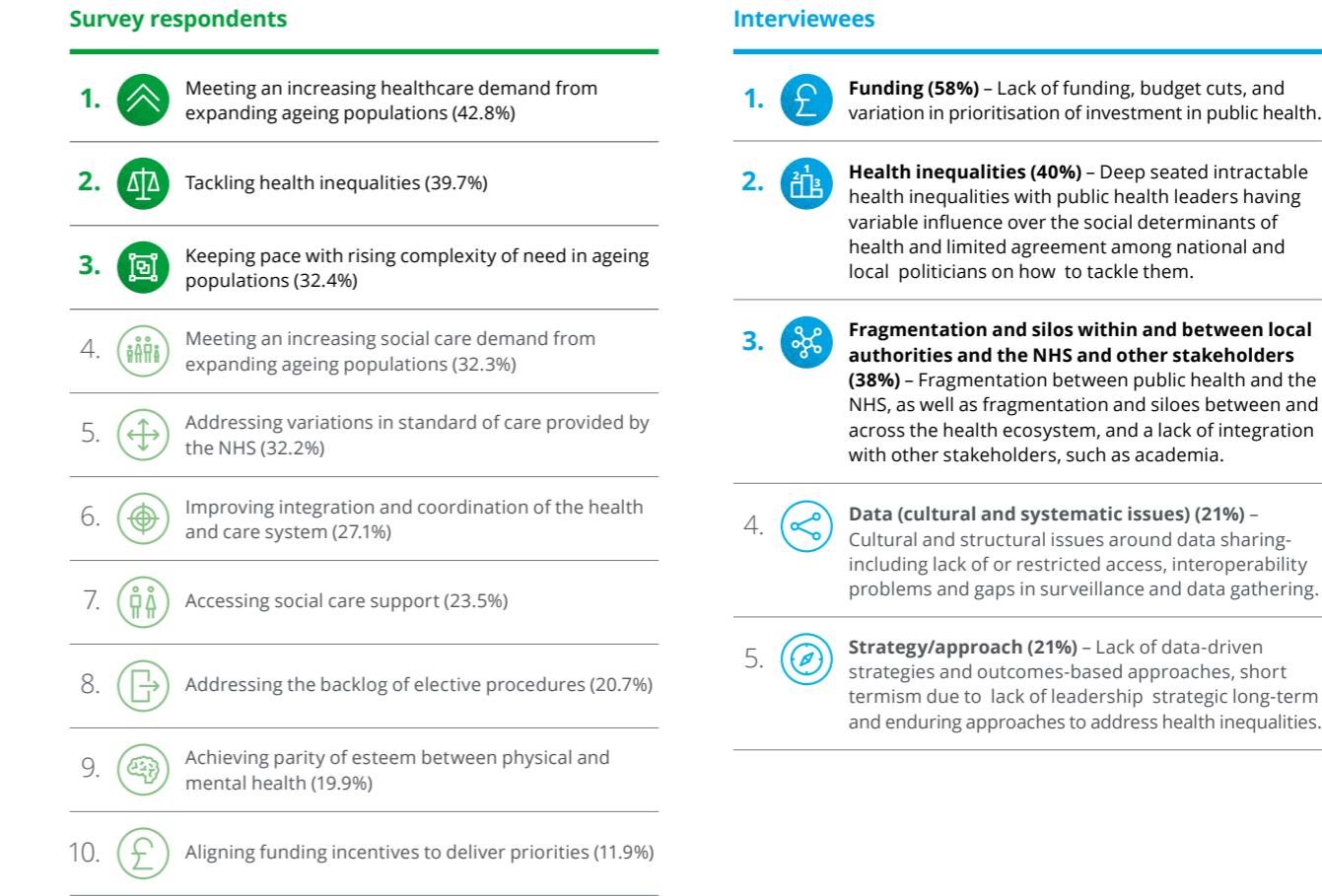
- the progress in tackling health inequalities
- the challenges facing health protection, prevention and promotion services both before and during the pandemic
- the actions needed to deliver a fairer more resilient future for public health, including a number of good practice case studies.

We asked our survey respondents and interviewees to identify the top three challenges to creating an effective public health system that the UK was facing before the onset of the pandemic. Figure 2 shows their responses.

The most frequently mentioned challenges identified by the survey respondents were meeting the demands of a growing and ageing population, tackling health inequalities and keeping pace with the rising complexity of the needs of an ageing population. The most frequently identified challenges mentioned by our interviewees were: funding cuts, difficulties in reducing deep-seated health inequalities and fragmentation and silos within and between services.

There was a general consensus that the scale and pace of the disruption caused by COVID-19 caught most governments by surprise, and in the UK exposed the unequal impact of health inequalities on health outcomes for specific groups of the population. Moreover, the pandemic has changed irrevocably how the public perceives health threats. This has added to the concerns that were already evident before the pandemic about the capacity and capabilities of public health organisations to meet the growing needs for services and to reduce health inequalities; the lack of access to health data; and the fragmentation of the public health infrastructure. However, they also noted how the pandemic prompted many bold and innovative responses and demonstrated the agility, skills and talent of the public health workforce and the impressive development and rollout of COVID-19 vaccines. They also identified an enhanced appreciation of the role of the voluntary and charitable sectors as well as partnership working with stakeholders.

Figure 2. Prior to the COVID-19 pandemic, what were the top three challenges the UK was facing to create an effective public health system?



Note: Multiple choice question; percentage represents proportion of total respondents selecting a particular option.

Note: 74% of our 67 public health interviewees answered this question.

Source: Deloitte analysis of survey of 1,504 health care professionals conducted by M3 between 21-28 April 2021. Survey and interview question: Prior to the COVID-19 pandemic, what were the top three challenges the UK was facing to create an effective public health system?

An unparalleled opportunity to tackle health inequalities

Despite a marked increase in overall life expectancy in recent decades, there is a 19-year difference in healthy life expectancy between the most affluent and the poorest communities.³ Its effect can be seen across all stages of life, from childhood onwards. Conventional explanations such as lack of access to medical care, genetics and unhealthy lifestyles, are only part of the explanation. The more intransigent causes are the inter-linked social, economic, political and environmental factors known as the social determinants of health – the ‘causes of the causes’ of health inequalities (see Figure 3).

At least once a decade over the past 50 or so years, there has been a definitive research report highlighting the enduring problem of health inequalities in the UK. Despite numerous initiatives to tackle the causes, the problems have remained intractable. More recently, in 2010 and 2020, research by Sir Michael Marmot and his team at the University College London Institute of Health Equity (IHE) demonstrated that health inequalities are increasing and that the entrenched inequalities between different population groups in England are closely aligned to the social gradient – with people who are less advantages in terms of socio-economic position have worse health outcomes (and shorter lives) than those who are more advantaged.^{4,5} Moreover, to reduce the steepness of the social gradient will require universal actions but with a scale and intensity that is proportionate to the level of disadvantage, known as ‘proportionate universalism’.

A further Marmot report in December 2020, includes an evaluation of the impact of the COVID-19 pandemic on health inequalities and highlights that the groups most affected by the virus were the same people who had the worse health outcomes before the pandemic. Life expectancy has now stalled (and for some groups declined, reversing the gains made over the past decade). The report also highlights the damage caused by rising child poverty, the closure of children’s centres, reductions in per-pupil education spending, an increase in poorly paid work including zero hours contracts, a lack of affordable housing, multi-generational and overcrowded housing, and reductions in adult social care.⁶

“We now have a once in a lifetime opportunity to make a concerted effort to tackle health inequalities.”

Director of Public Health

The challenge is how to solve these ‘wicked problems’ driving health inequalities. The government’s commitment to the levelling-up agenda and the need to address the economic and social impact of the pandemic, provides a unique opportunity to put tackling health inequalities centre stage. This is not only a matter of fairness and social justice; the economic case for preventative early intervention is also clear. For children, what matters most is giving them the best start in life, including providing effective ante-natal care, tackling parents’ unhealthy behaviours and focusing on early childhood development. This also means revisiting the decision to close children’s centres. However, overcoming deep-seated inequalities also requires targeted improvements in the living and working conditions of adults in lower socio-economic groups.

An undisputable need to increase public health funding

A concerted focus on prevention and health promotion can help increase healthy life years and reduce health inequalities. However, there have been year-on-year reductions in the percentage of healthcare spend on public health services, exacerbated over the past eight years by cuts in the overall public health grant (between 2013-14 and 2019-20 there was a 15 per cent reduction).⁷ This is despite the wealth of evidence and political rhetoric that investment in public health systems, especially in leadership development and in specific prevention services, is fundamental to a resilient and sustainable health economy. As scientific knowledge increases and the ability to track and monitor the health status of individuals improves, failure to invest in public health will be increasingly evident and difficult to justify to the public.

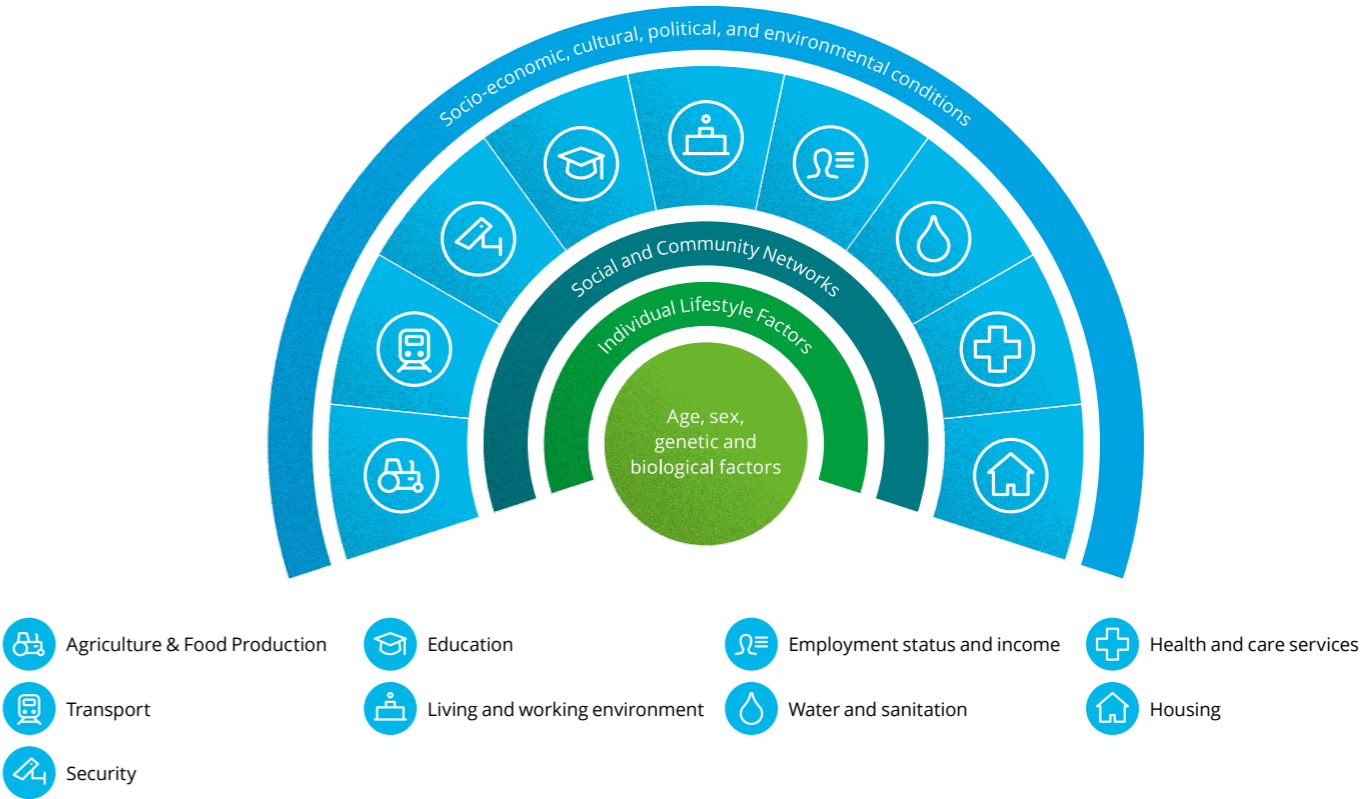
Another important area of budget cuts that have had an impact on the public health system is the total amount of local authority expenditure on services for children and young people which fell by a 48 per cent between 2010-11 and 2019-20, contributing to the closure of almost 1,000 children’s centres and 750 youth centres since 2009.⁸ Furthermore, the wider reductions in the overall local authority budgets since 2010-11, are impacting services that affect the health and wellbeing of the population, for example, housing, transport, leisure centres and green spaces. This is despite evidence that the return on such investment is high and create economic, social and personal value.

Our interviewees were unanimous in believing that more appropriate levels of public health funding are needed. Such funding should also be consistent with the new funding models for ICSs that the government is intending to formalise as part of the proposed Health Act 2022. This funding should also be contingent on supporting new, more efficient and cost-effective approaches to public health, including technology-enabled ways of working, with aligned incentives, measurable performance indicators and clear lines of accountability across all parts of the public health system.

“Policy makers need to reverse the trends on cuts to the public health budget as well as the shocking reduction in expenditure on services for children and young people.”

Director of Public Health

Figure 3. The broad social and economic circumstances that together determine the quality of the health of the population are known as the ‘social determinants of health’



Note. Social determinants are known as ‘the causes of the causes’ of ill health, and encompass the range of social, environmental, political and cultural differences that directly or indirectly impact the health of individuals and populations; and are recognised globally as a core dimension of public health policy and practice and are central to action on health inequalities.

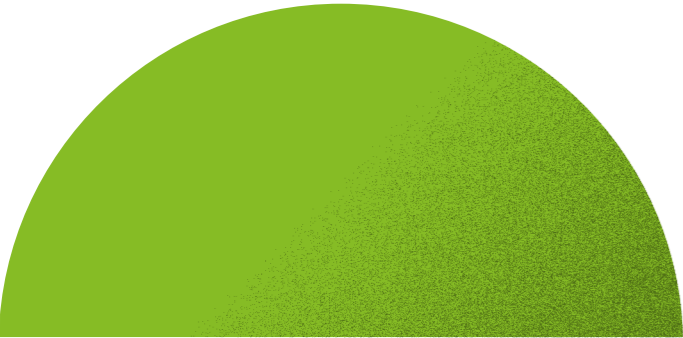
Source: Adapted from Gov.UK

Public health protection and the response to COVID-19

The public profile of health protection has increased in recent years due to a number of unexpected events such as SARS, the Salisbury polonium poisoning and COVID-19. Health protection also needs to be proactive in protecting the public from ongoing health risks such as hospital-acquired infections and antibiotic resistance. All public health systems therefore have to make choices about how to deploy funding and resources, and especially how to prepare for low probability, high impact, events such as a global pandemic. COVID-19 exposed the inadequacy of investment in the health protection infrastructure, such as test, track and trace. Although the pandemic has generated some highly innovative responses, the huge health, social, and economic consequences will leave a long-lasting legacy.

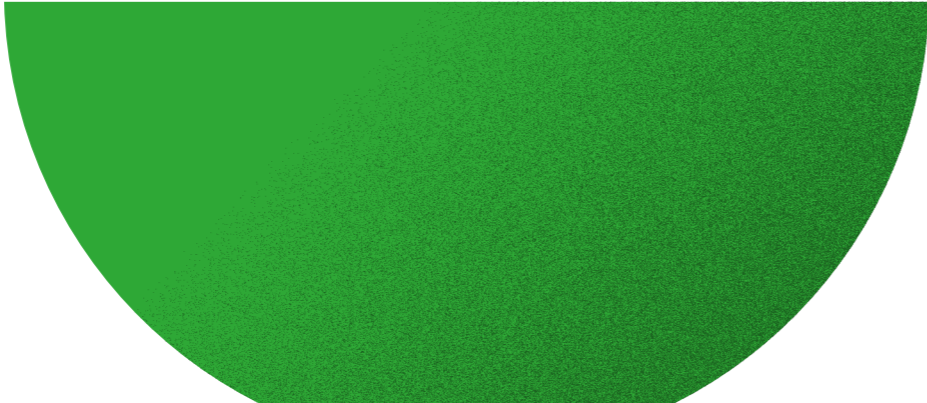
“Health protection requires specialist skills and knowledge across multidisciplinary teams to tackle diverse and evolving threats and reduce the risk of history repeating itself.”

Policy maker



For the past eight years, PHE has been responsible for managing health protection, delivered through regionally based, multidisciplinary health protection and public health teams, involving close working partnerships with the NHS and local government. Our interviewees raised concerns that the health protection system was too fragmented with far too few people in the workforce leading to belated population-wide response. They also identified a lack of vigilance in preparing for pandemics including inadequate surveillance and unclear accountabilities. However, most agreed that, following the establishment of the COVID-19 Genomics UK (COG-UK) consortium and the roll-out of one of the most comprehensive vaccination programmes in the world, the UK public health system has delivered an effective population-wide response to the pandemic.

Interviewees also highlighted the fact that once the surveillance test, track and trace system was up and running, that this has become an important part of the response, especially in identifying the emergence of COVID-19 variants. The establishment of the new UKHSA, which brings together the national public health science and response capabilities to protect against infectious diseases and external health threats, provides an opportunity to build on the lessons learned and the strengths established during the pandemic.



Preventing ill health and promoting healthy behaviours

A concerted and enduring focus on prevention and health promotion can increase healthy life years and reduce health inequalities. However, prior to the pandemic, few if any countries spent more than five per cent of their healthcare budget on prevention. Yet there is a growing body of evidence that shows that investment in prevention is fundamental to a resilient and sustainable health system. However, figures from the Office of National Statistics show that overall funding of preventative care decreased from five per cent in 2013 to 4.5 per cent in 2019.⁹ Constrained resources have meant that the focus has largely been on delivering mandated services, with limited funding available to target prevention activities at local population needs. Consequently approaches to prevention have been varied and linked largely to local decision making.

We asked our interviewees how well prevention, health promotion and other services aimed at prolonging healthy life years were being tackled pre-pandemic. Their responses were mostly neutral or negative with prevention the least well-developed area (see Figure 4).

Prevention is about influencing behaviour and empowering individuals to take responsibility for their own health. People need to understand what constitutes good public health and how to improve it. However, individuals differ greatly in their knowledge about health (health literacy), and their susceptibility to misinformation. Low health literacy is strongly correlated with health inequalities and is associated with poorer health, greater use of medical services, less preventative care, greater difficulty with managing long-term conditions and higher mortality rates. There is a need to improve public access to reliable health information and improve the health literacy of the general public. As health promotion is increasingly delivered digitally, there is also a need to address inequalities in digital literacy.

“Improving health and digital literacy, are key to reducing health inequalities.”

Academic

Prevention also includes early diagnosis and importantly health screening (where early diagnosis focuses on detecting symptomatic patients as early as possible and screening consists of testing individuals to identify those with a specific disease before any symptoms appear. While COVID-19 has negatively affected most health screening programmes, it has raised the profile of diagnostics through the testing regime, and many countries, including the UK, have invested in significant additional testing capacity. COVID-19 has also highlighted the importance of technology in improving the efficiency, and effectiveness of diagnosis. Many of the innovations developed to detect the coronavirus should pave the way for much more effective point of care diagnostics and advanced testing regimes. The lessons learned should also help improve participation in national screening programmes.

However, policy makers also need to focus on understanding and identifying the conditions which cause ill health, such as where people live and the jobs they do. And to make it easier for them by making healthier choices the easier choices. Prevention, therefore, needs both a carrot and stick approach, and policy makers need to align incentives, such as rewards for demonstrating increased physical activity and disincentives, for example, sugar taxes.

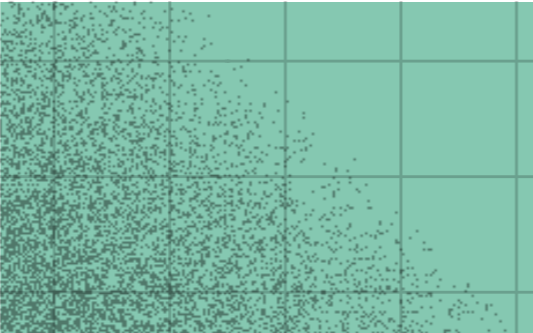
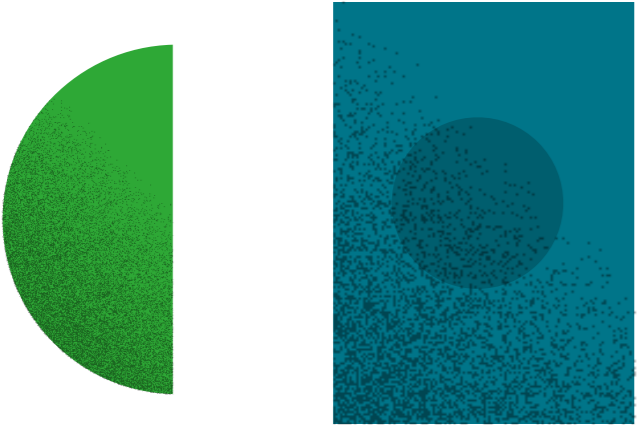
As scientific knowledge increases and the ability to track and monitor the health status of individuals improves, the consequences of failure to invest in prevention will become increasingly evident and difficult to justify to the public. Likewise, poor behaviours will be difficult to ignore. Prevention and its inextricable links to the wider social determinants of health ultimately needs to be based on a new social compact between health and care providers, and other stakeholders, including the public. This will require new models of co-creation and a focus on patient activation and self-management.

Figure 4. How well do you think the following areas were being tackled prior to the COVID-19 pandemic

	Not at all well	Not very well	Neutral	Reasonably well	Very well
Promotion	0%	40%	40%	20%	0%
Prolonging healthy life years	13%	50%	25%	13%	0%
Prevention	20%	30%	50%	0%	0%

59% of interviewees answered this question for at least one of these areas.

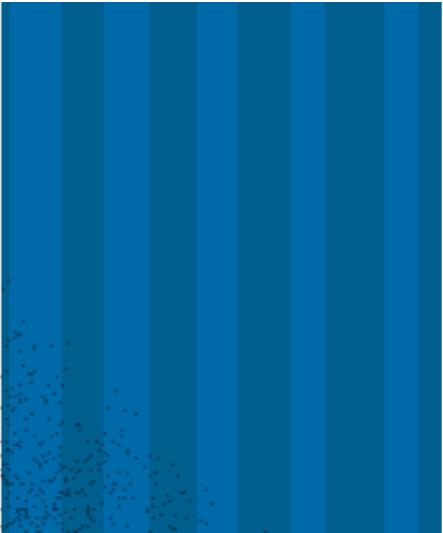
Source: Deloitte analysis of interviews of public health stakeholders conducted between 5 April-19 July 2021



An urgent need to tackle mental health problems

Over the past decade the NHS has increased its efforts to tackle the historical lack of parity in esteem between physical and mental health. However, the focus has been predominantly on improving access to treatment with limited investment in prevention. In July 2019, the Mental Health Implementation Plan (MHIP) provided a new framework to help fulfil the NHS Long Term Plan commitments to improve mental health at the local level. While the Plan identifies a number of achievements, such as expanding access to services for children and young people and having mental health liaison services in hospitals, the only references to prevention were on preventing suicide and homelessness. The MHIP recognises there is still much to do and promised ring-fenced local investments of at least £2.3 billion a year by 2023-24.¹⁰ Nevertheless, 70 per cent of our interviewees said that the failure to tackle mental health is felt most acutely in the problems experienced by local communities and that the approaches so far have been and continue to be inadequate.

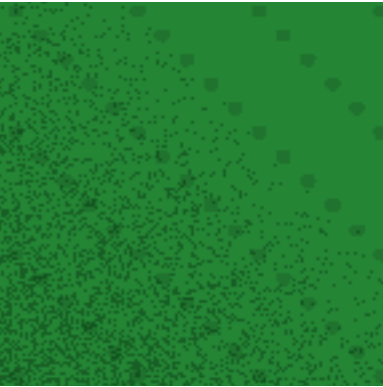
Public health agencies around the world have warned of a tidal wave of mental health problems such as depression, suicide and eating disorders, as a result of the pandemic, a concern that was also highlight by 70 per cent of our interviewees. Furthermore, people in more deprived social groups continue to have poorer and unequal access to services and support. This is illustrated by the fact that children from the poorest 20 per cent of households are four times more likely to have serious mental health problems by the age of 11 than those from the wealthiest 20 per cent. Yet deprived areas continue to receive unequal funding of such services.¹¹



“There is an urgent need to tackle the growing prevalence of mental health problems that have been exacerbated by the pandemic.”

Health care provider

A crucial development is the wave of innovation in digital tools, which together with disruptive technologies (such as machine learning, digital reality, blockchain and the cloud) have provided a more cost-effective opportunity to improve mental health services. However, in making them more accessible and easily scaled, they also increase opportunities for misuse and mistreatment. Digital technologies also raise ethical questions about safety, efficacy, equity and sustainability. Going forward, mental health services will require more resources and will need to institute more equitable access to validated digital tools to address both primary and secondary prevention. This is a role for the public health system and also employers with a stake in the levelling up agenda.



A community level, asset-based approach to public health

Expert opinion on how best to improve public health emphasises the importance of empowering communities to drive and shape health in both direct and indirect ways:

- directly, through the services they provide (such as the provision of good quality early years, mental health, community and health services) and the resources they offer (such as green spaces, sports facilities, active travel initiatives, healthy high streets and good education facilities)
- indirectly, by supporting the development of social capital and cohesion.

Importantly, all communities have health assets provided by the public, private, voluntary, community and social and technology enterprise sectors. By drawing on their collective strengths, communities can improve the health and wellbeing of all their members, but also target those most in need of help and support. Public health teams have a crucial role in harnessing these assets and orchestrating their effective deployment (see Figure 5).

Our research highlighted the importance of an asset-based approach in changing the narrative from characterising neighbourhoods on the basis of deprivation statistics and a reactive deficit-based approach to treating problems, to a focus on the communities’ strengths and enabling and empowering individuals. While reductions in local authority funding have affected quite markedly the wider resources available to the community, especially from the voluntary sector, there are many good practice examples of communities harnessing their local strengths as a way of meeting demand for services in the face of funding cuts. However, this requires commitment from the public who also need to play their part, including adopting healthy behaviours.

“A community level, asset-based approach alongside a new deal with the public is essential if we are to ensure a sustainable and equal future for public health.”

Director of Public Health

The establishment of ICSs as statutory bodies provides an opportunity for public health to influence a broader range of stakeholders to tackle the social determinants of health and create an enabling infrastructure in which local communities can thrive. Many of our interviewees emphasised that for this to be truly effective, public health needs to have a seat at the ICS table. In particular at least one DPH needs to be a member of the local integrated care partnership (ICP). There is also an expectation that the integrated care boards and ICPs will need to work with multi-agency partnerships at place level to influence the wider determinants of health.

A key premise of ICS policy is that much of the activity to integrate care and improve population health will be driven by commissioners and providers collaborating over smaller geographies or places and teams working in communities or neighbourhoods. For the DsPH, this means establishing a relationship with their local primary care network (PCN) who is expected to reduce health inequalities using a population health management (PHM) approach based on disparate sources of data from multiple care and service settings. From April 2022, a requirement to collaborate with other local care organisations will be included in each PCN Network Agreement. The involvement of public health teams in this agenda will be fundamental to the future of public health.

Figure 5. Public health can optimise the use of community assets to empower individuals and create resilient, fairer communities



Source: Deloitte analysis.

Improving the capacity and capability of the public health workforce

The public health workforce has experienced serious recruitment and retention problems since the 2012 reforms. Largely due to funding constraints, many local authorities have not been able to commission the full range of public health services, leaving important gaps in provision. Indeed, the dispersal of the public health workforce to individual local authorities has led to wide variations in capacity and capability, suggesting the need for a more central or collaborative approach to workforce planning and training of the public health workforce.

There is an ongoing requirement for an understanding of public health to be built into the academic and training pathways across the entire health and care workforce. However, given the rapidly expanding knowledge base on good practice approaches to protection and prevention, upskilling the existing workforce and developing the prospective workforce will need to be more agile and utilise the growing range of available e-learning platforms.

The pandemic has also highlighted the need for greater clarity in the roles, responsibilities, and accountabilities of the public health workforce and for stronger authority to be vested in public health leadership at the local level. To build capabilities, local authorities need to work more closely with NHS organisations and the wider public health ecosystem.

Importantly, the workforce challenges evident before the pandemic are now even more acute and require new, more innovative, flexible and sustainable workforce solutions. The creation of ICSs provides an opportunity for public health teams to establish more collaborative, integrated, models of workforce deployment, optimising the use of the skills and talent of other stakeholders in the ICS, including local Health and Wellbeing Boards, as well as the NHS, social enterprises, the voluntary sector, academia, and other local authority service providers.

“The capacity, capability, resilience and adaptability of the workforce is critical to the future sustainability of the public health system.”

Policy advisor

In addition to the technical and scientific skills required, DsPH and their public health teams (teams) will need to develop the following core strengths and capabilities:

- mind-set – focus on purpose, recognising the importance of networks, relationships and collaborations, and the need for compromise in order to deliver higher level goals
- behaviours – demonstrate ethical, value-based behaviours, in order to build trust and create a mutual understanding amongst local authorities, healthcare partners and other stakeholders, including the public
- knowledge – develop a deep understanding of the health and care needs of their local population and how to bring about effective and lasting change
- skills – acquire both technical and interpersonal skills, to inspire others towards the delivery of a common purpose.

Rapid improvements in science and technology are driving innovation

Countries with more effective responses to the COVID-19 pandemic have coordinated approaches that value science, acknowledged the risks posed by the pandemic, worked quickly to implement mitigation strategies and have effective communication strategies. These characteristics helped to build trust with all stakeholders and deliver effective public engagement. Rapid improvements in science, helped accelerate the development of effective vaccines while raising the public profile of health protection. Consequently, vaccines and treatments against other infections, such as malaria, tuberculosis, HIV and cancer, now have a greater chance of success.

For public health services to be effective, however, it is essential to collect and access data through shared electronic health and care records. The pandemic illustrated the role of digital technologies in driving a more data-driven public health response. For this to be realised more widely there is a need for standardisation in data consent processes to improve consistency and familiarity for clinicians and patients and facilitate greater interoperability between datasets. Patients and the public also need to be confident that their data are safe and used appropriately and responsibly.

Our interviewees indicated that new technologies such as genomics and artificial intelligence (AI) could help public health create new health protection and prevention models. In addition, over 80 per cent of our survey respondents suggested that tackling the public health needs of local populations would require access to patient data from digital technologies, point of care diagnostics, real time data on the health status of individuals; as well as access to training in the use of technologies.

“Science, genomics, technology, and data are crucial enablers of future innovation.”

Commissioner

Enabling public health teams to access data held by the NHS and local authorities would enable a new wave of intelligent public health where many more health interventions are personalised. However, public health teams will need education and training in using genomics, AI and digital health data. As individuals become more involved as co-creators of their own health, the challenge for public health will also be in equipping them with the skills, knowledge, and confidence to help themselves.

Climate change is a significant threat to public health

There is growing recognition of the importance of climate change and the environment on public health. This led many countries to sign up to the 2015 United Nations 2030 Agenda for Sustainable Development and its Sustainable Development Goals (SDGs), and this has provided an opportunity to embed public health within the goals for reducing global warming and improving the sustainability of the planet. More recently, a landmark report published in May 2021 by the United Nations Environment Programme demonstrated how tackling climate change can protect health. The report found that achieving a 45 per cent reduction of methane emissions within this decade would prevent more than 250,000 premature deaths.¹²

“Climate change is the next biggest threat to public health both nationally and globally making the climate emergency a health emergency.”

Policy maker

The WHO describes climate change as the greatest public health threat of our time; and tackling it the greatest global health opportunity of the 21st century. This is not just a scientific argument but an argument with human health and wellbeing at its core. However, although the challenge is global, it is unequal in its impact affecting some countries more severely than others. In the UK, the NHS and public health have recognised that climate change threatens to undermine years of health gains. Consequently, the NHS has declared its intention to become the world's first net zero national health service, in recognition that poor environmental health contributes to major diseases, including cardiac problems, asthma and cancer. Tackling environmental health has been and will need to remain a key role for public health.

Employers have a responsibility for improving employee health

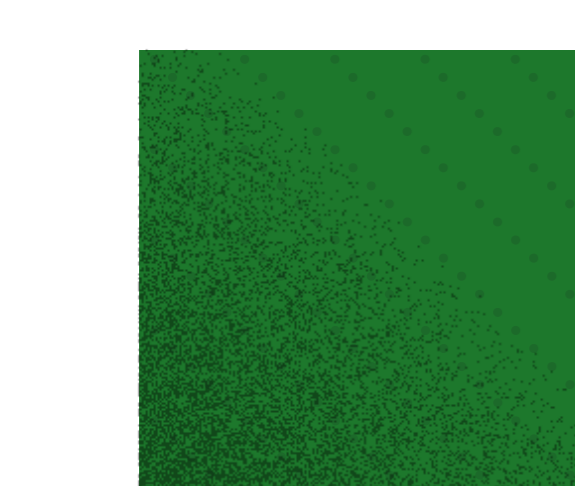
Health is a strong predictor of economic attainment, job prospects and education. In 2018, research conducted by England’s Chief Medical Officer and the Institute for Fiscal Studies found a negative cycle of poor health clustering with poor employment opportunities and low economic productivity, with each of these factors negatively reinforcing the others.¹³ Over recent years employers have increasingly recognised the importance of improving the mental health of their employees. Our 2019 Deloitte report on *Mental health and employers: refreshing the case for investment*, calculated that employer investment in mental health, had an average return of £5 for every £1 spent. However, in the UK, COVID-19 has led to a 65 per cent increase in mental ill-health.¹⁴

While this improved awareness has led employers to increase their focus on both the physical and mental health and wellbeing of their employees, Deloitte’s 2021 Millennial and Gen Z survey shows that stress and anxiety levels remain high and that stigma at work endures with nearly 60 per cent saying they did not tell their employer how they were feeling. More generally, in the face of the disruption caused by COVID-19, respondents noted that striking a healthy work-life balance remains an enduring challenge, but also a major priority when it comes to the workplace, particularly for those in leadership positions. Moreover, only 20 per cent said their employer was doing well and 40 per cent that their employer was doing fairly well in supporting their physical and mental health. Thirty percent ranked their employer as poor. Suggesting that much remains to be done, despite it being a priority for some leaders.¹⁵

“While employers are increasingly taking a greater responsibility for the health and wellbeing of their employees but much more remains to be done.”

A private sector employer

Nearly half of all employees globally reported a decline in their mental and physical health during the pandemic, exacerbated by lockdowns and home working, with women and young people among the groups that have been disproportionately affected. However, the pandemic has also changed employees’ views on flexible working and their work-life balance. This has resulted in a widespread acknowledgement that addressing employee health and well-being is a crucial role for all employers. Increasing numbers of organisations are therefore investing in building a healthy, resilient workforce, often using digital tools (including smartphone apps and wearables) to help. Indeed, employee wellbeing has been front-and centre topic for most business since the realisation that the onset of the pandemic required people to work differently, while also maintaining or improving productivity. Consequently many employers have increased their spending on innovative approaches to supporting the physical and mental health of their employees.



Meaningful change will take time but will realise multiple benefits

COVID-19 has stress-tested the government’s ability to deal with unforeseen events and exposed the impact of the social gradient on the ever-widening health inequalities gap. It has shone a spotlight on the consequences for public health of poor and overcrowded housing, insecure employment and food insecurity. Moreover, that behavioural and attitudinal shifts in health behaviour are possible. We now have a once in a lifetime opportunity to capitalise on the reorganisation of public health services and build on the public’s improved understanding of public health and the need to improve health outcomes for all. However, meaningful change is unlikely if the many challenges are tackled largely through siloed and reactive approaches. Instead leaders need to focus on collaborative approaches to prevention and early interventions with a robust place-based, asset-based approach to deal with the root causes of health inequalities.

COVID-19 has also exposed the shortcomings in public health funding and the need to clarify the roles, responsibilities and accountabilities of the public health workforce. At the same time, it has highlighted awareness of the critical importance of health equity and its crucial links to health and the economy. While these developments have led to innovative solutions and opportunities to work differently, their adoption is as yet fragmented and needs to be scaled up.

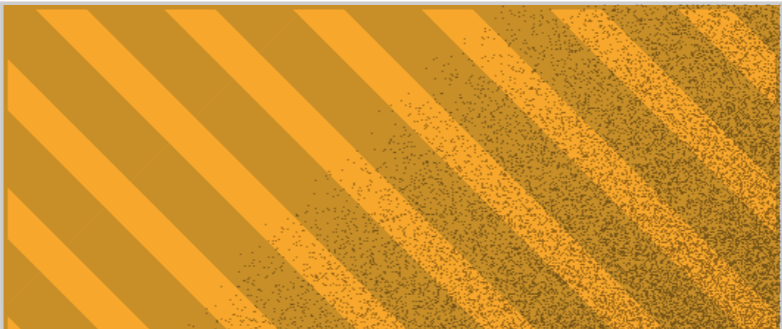
Since inequalities in the UK are deep-rooted and complex, even well-designed policies could take years to have a meaningful effect. Reducing health inequalities through public health will therefore need a long-term, multi-faceted approach, including more certainty of funding and longer commissioning cycles. Longer funding cycles would also encourage collaborative commissioning and lead to service stability and improvements in the quality of services. However, there are short term, high impact actions such as stopping smoking and treating hypertension that can deliver positive outcomes in the shorter term.

More specifically, there is now a general consensus that investment in protection, prevention and promotion is more cost-effective and equitable than dealing with the consequences of health inequalities. There is also agreement that there is no ‘one size fits all’ solution and local systems will have to make choices about their prioritise and how they deploy funding and other resources. The UK government’s current commitment to level up the country by boosting prosperity and widening opportunities provides a crucial lever to close the health inequality gap.

Overall, the pandemic has and will continue to have a negative impact on health and care. But as society and the economy recovers there is a unique chance to change the narrative, enabling policy makers and service providers to adopt new priorities in their efforts to tackle both inequities and inequalities. The pandemic has also re-enforced the importance of robust, reliable data and analysis to inform public health strategy and for technologies to form part of implementation plans. Policy makers should seize the moment and use the impetus created by the pandemic to drive much needed improvements.

“In the aftermath of COVID-19 radical changes are in prospect with rebalancing of work life balance, potential flight from cities to smaller more manageable and greener environments and an increasing imperative to address social inequalities that have been allowed to develop in recent decades.”

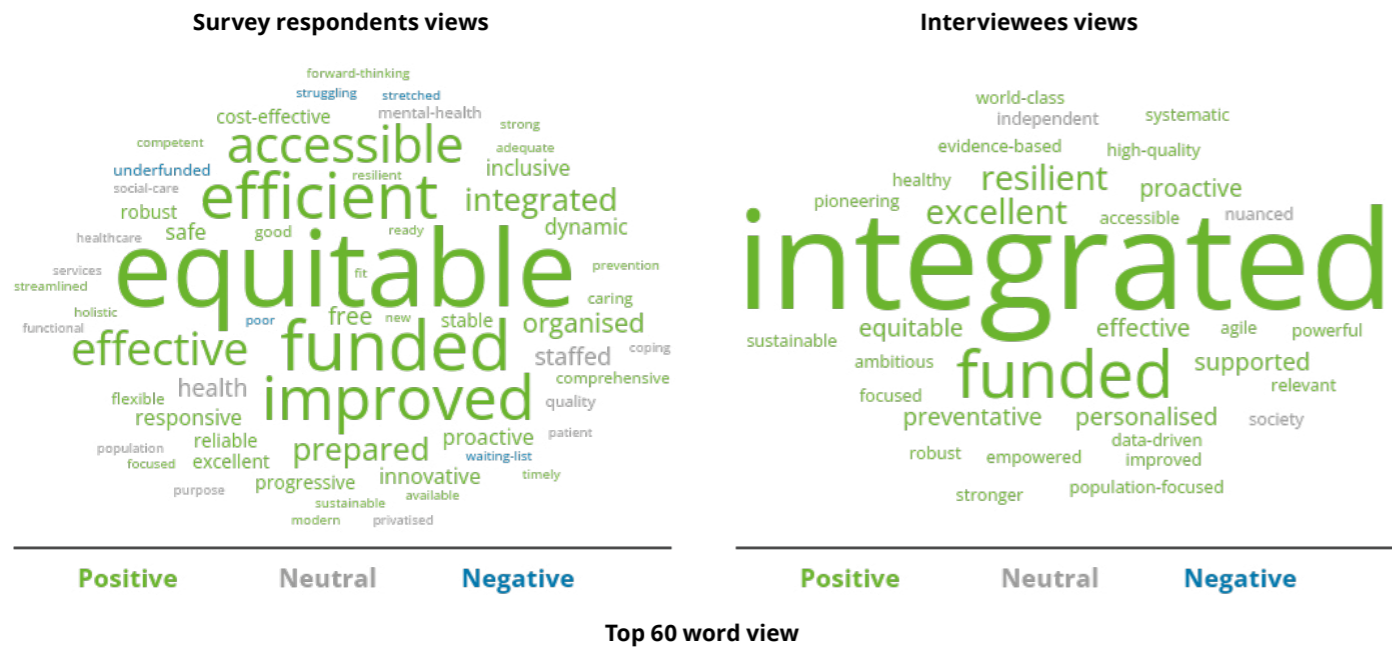
Director of Public Health



In a final question in our research we asked both survey respondents and interviewees what three words they hoped to use to describe the public health system in five years’ time. The responses were almost entirely positive, demonstrating an optimism and ambition among the majority of respondents to work together to deliver a more robust and resilient public health system (see Figure 6).

Among survey respondents, the most frequently mentioned word was equitable, followed by funded, efficient, improved, accessible and effective. Among interviewees the most frequently mentioned word, by far, was integrated, followed by funded, resilient and excellent.

Figure 6 . Thinking ahead five years, what three words would you hope will be used to describe the state of the public health system?



Source: Deloitte analysis of survey of 1,504 health care professionals conducted by M3 between 21-28 April 2021.

Source: Deloitte analysis of interviews of public health stakeholders conducted between 6 April-19 July 2021.

Source: Deloitte analysis of responses from survey and interviewees.

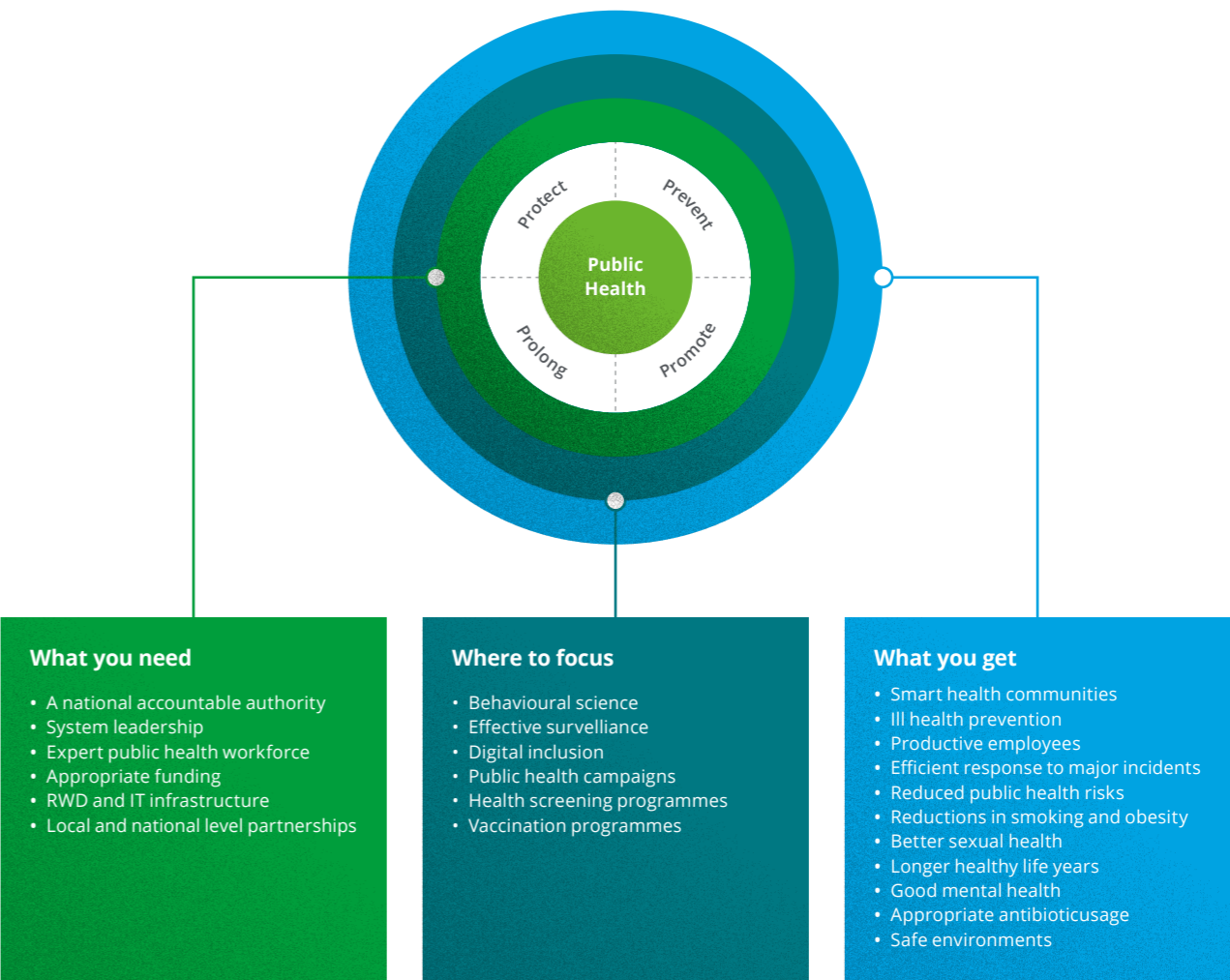
Realising a fairer and sustainable tomorrow

In November 2020 we published a report, The future unmasked: predicting the future of healthcare and life sciences in 2025, which included a prediction on public health, ‘Better public health drives better productivity’ and identified what good public health might look like five years from now (see Figure 7).¹⁶

The actions below are intended to help achieve the vision in our public health prediction by identifying the steps that policy makers, public health teams and other stakeholders need to take to address the challenges that we have identified through our research and realise a more fairer and sustainable future for public health.

Figure 7. Better public health drives better productivity

A resilient public health system protects the public, prevents disease and prolongs healthy life expectancy



Priority actions for a fairer and sustainable future for public health

The case studies in the companion reports to this executive overview illustrate that change is achievable especially if stakeholders are prepared to learn from what has worked well elsewhere and collaborate across professional and institutional boundaries. Successful initiatives share an evidence-based, well-coordinated, partnership approach with local gatekeeping points to access services. They include planning for stronger protection and prevention and building healthy cohesive communities that use all the public health assets at their disposal.

Actions for national and local governments and the new public health agencies

The planned reform of public health and the creation of the two new agencies (UKHSA and OHID) provide an opportunity to re-prioritise public health services and address health inequalities in more coordinated and collaborative ways. However, priorities also need to be reflected in all relevant national and local policies and programmes if the complex problems of the most socially and economically disadvantaged citizens are to be addressed effectively. Actions by governments to strengthen the intrinsic resilience of communities should include:

- designing policies based on proportionate universalism, where policies are directed at everyone but provide the strongest support to the most disadvantaged
- providing adequate public health funding based on an economic evaluation of joint strategic needs assessments and reliable evidence about the cost and benefits of interventions with accountabilities, measurable performance indicators and aligned incentives across all parts of the system
- determining how public health funding might operate alongside the new integrated health and social care budgets in order to optimise outcomes. This would enable new models of integrated, citizen-centric funding to be allocated to aid the planning, commissioning and provision of local public health services, avoid cost-shifting and ensure incentives are aligned in a way that helps optimise public health outcomes

- stimulating academia and industry to generate new innovations and scientific and genomics research and insights to support health protection, prevention and promotion initiatives
- sharing academic and real-world evidence on the effectiveness of interventions to encourage local authorities to develop new models of interventions which recognise that the return of investment in social programmes, such as early childhood interventions, can take years to become apparent
- providing public services at a local level, based on a single citizen identifier, to enable real-time monitoring of the effects of public health interventions. Standardising data protocols between NHS, social care and public health providers for collecting, recording and sharing public health data and monitoring performance aligned to the national deprivation index
- the processes of recruiting, appointing and developing senior leaders to new ICS roles during 2021-22 is crucial for their future success, for public health there is a need to ensure that DsPH are represented on the ICSs ICP with a remit to ensure that reducing health inequalities is part of every policy and ICS leaders are held directly accountable for their actions, including improving equity by reducing health inequalities
- utilising the creation of ICSs to formalise place-based partnerships, including parity in decision making for local authorities, that builds on pre-existing relationships and structures such as Health and Wellbeing Boards, to create an enabling infrastructure in which local communities can thrive, including sharing of population health data.

Actions for public health directors and their teams

Public health directors and their teams along with other public health providers from the private, charitable and voluntary sectors should prioritise actions that support new patterns of collaborative working across professional, institutional and organisational boundaries. Actions include:

- participating pro-actively on Health and wellbeing boards and with local PCNs and the ICPs seeing them as key partnership vehicles for collaborative action to address health inequalities at a community and ‘system’ level respectively
- obtaining access to health and social care data as well as information on the social determinants to enable both the planning and provision of services, tackle service fragmentation and poor data interoperability and establish an integrated approach to health protection, prevention and promotion
- applying insights gained from social determinants of health scores and other predictive models to inform decision-making and proactive prescribing of evidence-based interventions
- using population health data and developing a range of health and wellbeing indicators at community level with regional and national benchmarks
- developing a place-based directory of community assets and work collaboratively across sector boundaries by involving all public health stakeholders in joint decisions to improve health outcomes

- using digital technologies to connect public health teams with their local communities and adopting evidence-based engagement strategies that target individual needs
- identifying effective ways of engaging people, grounded in behavioural science, invest in improving the health and digital literacy of local population and design digital access so that individuals can be supported in managing their own health more effectively to optimise engagement and improve outcomes for different segments of the population
- building sustainable, trusted relationships with individuals across local communities including taking regular soundings and obtaining feedback from the different population groups on what would make a difference to them. Matching these wants to appropriate services, including social prescribing
- identifying individuals from across public health and community teams to act as gatekeepers to services in order to reduce the multitude of services and professionals undertaking repetitive assessments of individuals and families with high levels of health, social and economic need
- focusing relentlessly on measurably improving health outcomes.

Other actions

Individuals and families should be encouraged to engage in the co-design and co-delivery of interventions, which are based on individual skills and capabilities and supported by initiatives to improve the health literacy of citizens. While this is generally easier for those less affected by social disadvantages, tailored interventions can help all individuals build the confidence to engage with their own health and wellbeing, for example by encouraging active participation in programmes offered by local communities.

Academic research partnerships play an important role in developing robust, reliable, ongoing research to unravel the complex interconnections between the social determinants of health and health outcomes. Actions include the need for a clear strategic research focus on:

- developing and applying innovative analytical tools for public health, including research into public health economics and behavioural science
- aggregating and segmenting population data to obtain a real-time picture of the population being served
- continuous tracking and analysis of outcomes of interventions, including the return on investment.

Third sector and private sector provider organisations need to participate in enduring and sustainable relationships to support the use of social prescribing as well as to counteract consequences of poor working conditions on the health of employees and neighbourhoods. Providers can also be important ‘anchor institutions’ in local economies addressing the wider determinants of health, such as income and job security, through their employment and procurement practices. Anchor organisations working alongside local authorities can work towards providing opportunities to local populations as part of a ‘place-based approach’. Community link – workers, can build stronger relationships with local communities and primary care networks in addition to the role they play in implementing population health management initiatives. To be effective, third sector and voluntary organisations need to negotiate long term settlements with commissioners so that they can:

- engage in sustainable business practices that reduce the environmental impact on health and safety
- improve workplace safety and job security
- participate in public-private partnership interventions that address the social determinants of health.

Regulatory bodies need to shift their focus from simply assessing operational and financial performance at specific points in time, to focussing on ways to address complex issues whose outcomes will emerge over a number of years or even decades. Organisations such as the Care Quality Commission (CQC) need to regulate equity of care across a population by developing a well-led framework for public health when inspecting ICSs from 2022.

All stakeholders should consider the role of analytics and digital technology to help provide more efficient and cost-effective support across the range of interventions, including:

- using financial modelling tools to assess fund flows and the return on investment of health and social interventions
- population health management analytics tools based on information sharing for addressing population health needs and problems more effectively
- integrating analytics and interoperable IT across all public services
- increasing transparency through data visualisation tools and dashboards that monitor system performance and indicate high-risk areas in real time
- applying sophisticated machine learning and software models that predict risks at an aggregate population and individual level
- deploying data-driven triggers that automate communication with citizens, making use of behavioural insights and choice architecture to optimise citizen engagement
- developing digital platforms to make resources and knowledge more accessible, encouraging adoption of strategies that have worked elsewhere
- providing education and training to citizens in the use of digital technology.

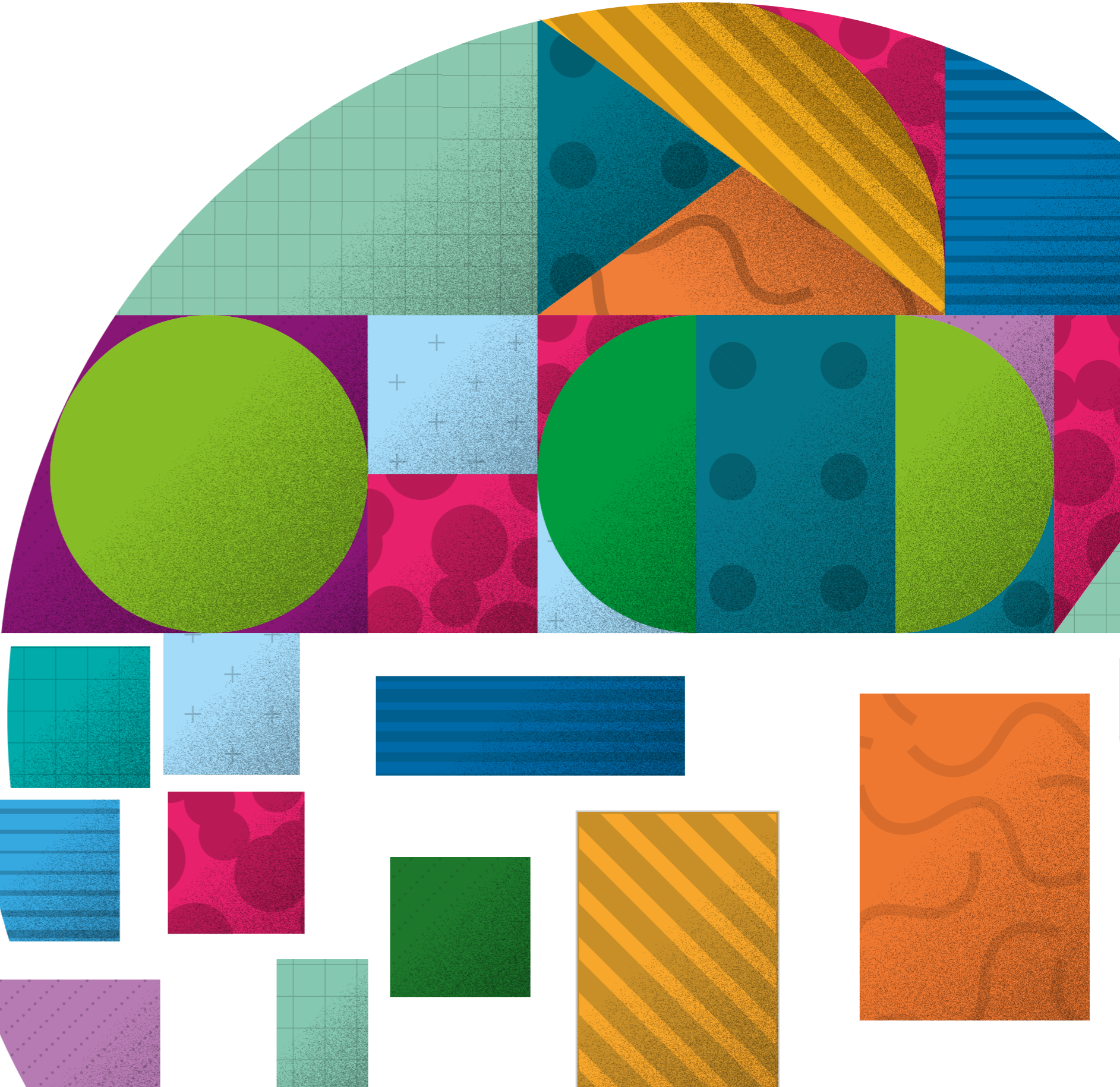
Alongside this report we have published five companion reports which have enabled us to share the primary research findings, good practice case examples and relevant published literature that underpin the findings in this overview. These reports are:

- Identifying the gap: Understanding the pre-existing complexities and current challenges of public health
- Bridging the gap: Protecting the health of the nation from public health threats
- Negating the gap: Narrowing health inequalities by preventing ill health and promoting healthy behaviours
- Removing the gap: Ensuring a place-based, resilient and fairer future for public health
- Evaluating the role of employers in tackling the gap: Improving the health and productivity of employees

Methodology annex

Our methodology comprised an extensive literature review and analysis of public health data; a survey of 1,500 frontline healthcare professionals across the UK; and 85 interviews with stakeholders with an interest in public health, including public health specialists, academics, policy makers and employers. We also obtained insights from Deloitte colleagues.

Our research was aimed at gaining in-depth insights on the challenges facing public health pre COVID-19, the strengths and weaknesses of the public health system including its response to the pandemic, and the requirements for a sustainable and resilient future public health system.

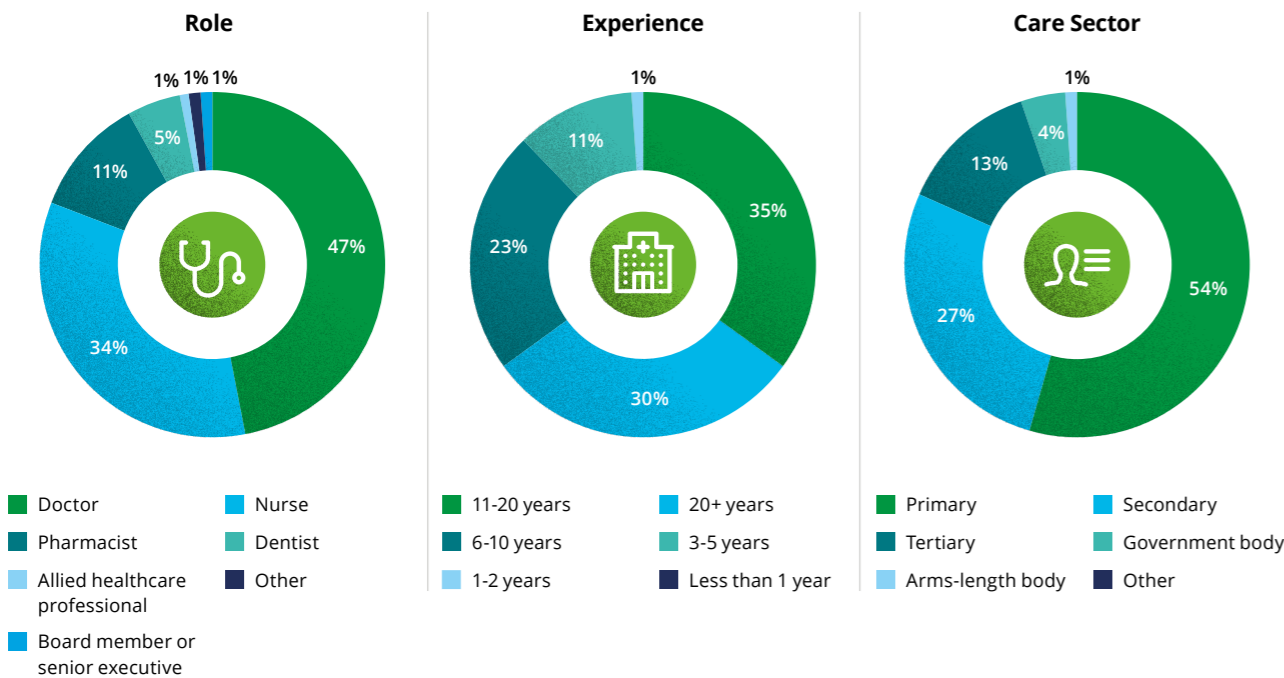


Stakeholders interviewed for the report

Our methodology comprises of:

- extensive literature reviews and analysis of datasets across the UK to understand key public health issues, as well as policies and practices driving public health transformation
- a survey of 1,504 clinical staff across the UK, including doctors, nurses, allied health professionals, board members, pharmacists, dentists and others. The survey was conducted between 21-28 April 2021 by M3 Global Health on behalf of Deloitte (see Figure 8)
- semi-structured interviews with 85 senior stakeholders across the public health and healthcare ecosystem, including directors of public health, policy makers, individuals working at arm's length bodies, commissioners and funders, academics, and voluntary sector organisations (see interview list below). Interviews were conducted between 6 April 2021 and 19 July 2021.

Figure 8. Demographic characteristics of survey respondents



External stakeholders interviewed

- **Professor Sushma Acquilla**, Independent Chair of Birmingham Perinatal and Infant Mortality Task Force, Birmingham City Council
- **Dr Mohammad Al-Ubaydli**, CEO, Patients Know Best
- **Professor Kate Ardern**, Director of Public Health, Wigan Council
- **Professor John Ashton**, Former North West Regional Director of Public Health
- **Andrew Attfield**, Associate Director for Public Health, Barts Health NHS Trust
- **Angela Baker**, Deputy Director, Health and Wellbeing, Public Health England South East
- **Gil Baldwin MBE**, Non Executive Chairman, Simplyhealth
- **Dr Sandeep Bansal**, Founder and CEO, Medic Creations
- **Paul Batchelor**, Faculty of Medicine UCLan; Fellowship Lead, College of General Dentistry; Dental Lead, National Association of Primary Care (NAPC)
- **Sir David Behan CBE**, Chair, Health Education England
- **Rachel Boon**, Group Head of Health and Wellbeing, Royal Mail
- **Peter Bradley**, Director of Public Health, Government of Jersey
- **Kate Brown**, Director of Corporate Affairs, Transport for Greater Manchester
- **Amanda Burleigh**, Senior Clinical Advisor, Midwifery Consultant, Public Health Practitioner
- **Dan Burningham**, Mental Health Programme Director, North East London CCG
- **Francesca Chiara**, Director Antimicrobial Resistance Stewardship, Center for Infectious Disease Research and Policy (CIDRAP)
- **Dan Clarke**, Group Health & Wellbeing Development & Systems Manager, Royal Mail
- **Andrew Cooke**, Operations Director, Bruntwood Works
- **Dr Claire Cope**, Head of Policy, The Academy of Medical Sciences
- **Dr Shaun Davis**, Global Director of Compliance & Sustainability, Royal Mail
- **Dr Hanine Estephan**, Managing Director, Axyzi
- **Dr Tom Fowler**, Deputy chief scientist, Genomics England
- **Professor Kevin Fenton**, Regional Director PHE London and Regional Director Public Health NHS London, Public Health England
- **Dr Ellis Friedman**, Director, EHIF Consultancy Ltd
- **Carole Furlong**, Director of Public Health, Harrow Council
- **Pamela Gellatly**, CEO, healthcare rm
- **Siobhan Grant**, Consultant in Dental Public Health, Yorkshire & Humber, Public Health England
- **Dr Joanne Hackett**, Head of Genomic and Precision Medicine, IQVIA
- **Professor Donna Hall**, Chair, New Local Government Network, Bolton NHS Foundation Trust, Integrated Care System advisor to NHSE, Former Non-executive advisor, Birmingham City Council
- **Dr Jane Halpin**, Chief Executive Officer, Herts & West Essex ICS & CCGs
- **Christine Hancock**, Director, C3 Collaborating for Health
- **Professor Dominic Harrison**, Director of Public Health, Blackburn with Darwen Borough Council
- **Jake Harrison**, Health and Life Science policy sector advisor, Confederation of British Industry (CBI)
- **Gregor Henderson**, Strategic Adviser for Mental Health, Public Health England
- **Ben Howlett**, Managing Director, Public Policy Projects
- **Zafar Iqbal**, Associate Medical Director Public Health, Midlands Partnership NHS Foundation Trust

- **Jo Ireland**, Head of Customer and Community Services, Scarborough Borough Council
- **Professor Dame Anne Johnson**, President, Academy of Medical Sciences
- **Geoff Little OBE**, Chief executive, Bury Council
- **Chris Lovitt**, Deputy Director of Public Health, City of London and Hackney Council
- **Dr Catherine Ludden**, Director of Operations, COG-UK
- **Jim McManus**, Director of Public Health, Hertfordshire County Council and Vice President, Association of Directors of Public Health
- **Paul Meads**, Chief Operating Officer, Noé Group
- **Lottie Moore**, Policy and Partnerships Analyst, Public Policy Projects
- **Jose Luis Álvarez Morán**, Epidemiology and Public Health Coordinator, Médecins Sans Frontières
- **Professor Kelechi Nnoaham**, Executive Director of Public Health, Cwm Taf Morgannwg University Health Board
- **Adam Noach**, Strategic Analytics, Vitality UK
- **Paul Ogden**, Senior Adviser, Local Government Association
- **Chris Oglesby**, Chief Executive, Bruntwood
- **Nick Pahl**, CEO, Society of Occupational Medicine
- **Dr Corrine Parsons**, Occupational Health and Ergonomics Manager, Royal Mail
- **Dr Jonathan Pearson-Stuttard**, Public Health Physician and Epidemiologist, Head of Health Analytics, Lane Clark & Peacock
- **Dr Sanjay Pooran**, Specialist Public Health Physician / Fellow Geneva Centre for Security Policy
- **Nathan Post**, Public Health Specialist, Médecins Sans Frontières
- **Krishna Ramkhelawon**, Director of Public Health, Southend-on-Sea Borough Council

- **Abdul Razaq**, Interim Consultant in Public Health at Lancashire County Council
- **Professor Wendy Reid**, Chief Executive, Health Education England
- **Alexia Roberts**, Head of People, Bruntwood
- **Dr Duncan Robertson**, Lecturer, Loughborough University
- **Leena Sankla**, Director of Public Health & Lifestyle Services, Solutions 4 Health
- **Dr Vatshalan Santhirapala**, MD MRCP MPH MBA, Digital Innovation Strategy Lead, Guy's and St Thomas' NHS Foundation Trust
- **Dr Stefan Serban**, Specialist Registrar in Dental Public Health, Public Health England
- **Professor Sam Shah**, Chief Medical Strategy Officer, Numan
- **Dr Heema Shukla**, Director, Global Health Capacity Ltd
- **Ed Smith**, Chairman of Assura Plc, Former Chairman, NHS Improvement, Former Pro-Chancellor and Chairman of Council ,University of Birmingham
- **Dr Dimitrios Spyridonidis**, Associate Professor, Warwick Business School
- **Jason Strelitz**, Director of Public Health, London Borough of Newham
- **Ruth Tennant**, Director of Public Health, Solihull Metropolitan Borough Council
- **Phil Veasey**, Public Health Consultant, London Borough of Newham
- **Simon Warburton**, Transport Strategy Director, Transport for Greater Manchester
- **Steve Warrener**, Finance director, Transport for Greater Manchester
- **Dr Michael Craig Watson**, Trustee, The Institute of Health Promotion and Education
- **Professor Lawrence Young**, Professor, University of Warwick

Internal Deloitte stakeholders interviewed

- **Sir Howard Bernstein**, Former Chief Executive, Manchester City Council and Former Head of Paid Service for the Greater Manchester Combined Authority; currently a Strategic advisor, Deloitte
- **Vineta Bhalla**, Public Health Lead and Clinical Consultant
- **Morag Childs**, Risk Advisory Partner, responsible for internal audit, risk management and corporate governance work in the public sector with a focus on the health sector
- **Fiona Downing**, Public Sector, Health Partner, focused on transforming commissioning organisations and Lead for Public Sector, Supply Chain team.
- **Catherine Hammons**, Senior Manager, Healthcare Technology practice

- **Caroline Hope**, Partner, Public Sector Consulting, Lead for social care.
- **Pete Lock**, Director, UK Health Practice, Deloitte, Lead for the health practice in Scotland
- **Ed Roddis**, Director, Public Sector Insight Lead
- **Gillian Russell**, Finance Partner and Lead for the Government and Public Sector Industry Audit and Risk Advisory and the Government CFO programme
- **Rebecca George OBE**, Retired Partner, Deloitte, previously responsible for leading Deloitte's EMEA Public Sector practice across 25 countries; Immediate Past President of the BCS, the Chartered Institute of IT, Independent Chair of the Skills Reform Board, previously Non-Executive Chair of the T-level Reform Programme Board and Board member for the City Mental Health Alliance

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