

# Improving the health of the public by 2040

## Summary of recommendations and progress to date

The full 'Improving the health of the public by 2040' report can be found on the [Academy of Medical Sciences' website](#).

Summary of recommendation	Updates <sup>1</sup>
<p>1. Establish the UK <b>Strategic Coordinating Body for Health of the Public Research</b> (SCHOPR) to help identify research needs and coordinate research activities.</p>	<p><a href="#">SCHOPR</a> was established as a sub-board of the Office for Strategic Coordination of Health Research (OSCHR) in 2018. SCHOPR brings together organisations and funders across all four UK nations with the aim of coordinating activity and stimulating public health research.</p> <p>SCHOPR has undertaken a range of activities including (but not limited to):</p> <ul style="list-style-type: none"><li>• Producing a <a href="#">set of public health research principles and goals</a>.</li><li>• Initiated activities with local authorities and public health practitioners to encourage a research and evidence-based culture. The Chief Medical Officer visited 16 Local Authority (LA) areas, and SCHOPR held a roundtable with LAs (October 2019), which fed into development of £12M NIHR package <a href="#">UK Prevention Research Programme</a>.</li><li>• This package included support for LAs to become research active, including:<ul style="list-style-type: none"><li>◦ <a href="#">Public Health Intervention Responsive Studies Teams (PHIRST)</a></li><li>◦ Embedded posts through the Clinical Research Network</li><li>◦ Calls on unlocking data and methods</li><li>◦ <a href="#">NIHR Population Health Career Scientist Award</a></li><li>◦ <a href="#">Health Determinants Research Collaborations (HDRC)</a></li></ul></li><li>• COVID-19 related activities.</li></ul>
<p>2. Work across stakeholders to <b>maximise the potential of data</b> generated within and outside the health system for health of the public research. Support research to better understand how society can best balance maximising data generated by new digital technologies with safeguarding citizen and commercial privacy.</p>	<ul style="list-style-type: none"><li>• <a href="#">Health Data Research UK (HDR UK)</a> was established in 2018 and acts as the national institute for health data science.</li><li>• In 2019, HDR UK launched the <a href="#">UK Health Data Research Alliance</a> - an independent alliance of leading healthcare and research organisations to establish best practice for ethical use of UK health data.</li><li>• The Office for Life Sciences developed <a href="#">a framework for realising the benefits derived from health data</a>. As part of this, Understanding Patient Data and NHS England have commissioned further public dialogue to explore public and patient views on access to and use of NHS-held health data by other organisations.</li><li>• In April 2022, The Goldacre Review, <a href="#">Better, Broader, Safer: Using Health Data for Research and Analysis</a>, was published. This was followed in June 2022 by the Department of Health and Social Care's <a href="#">health and social care data strategy</a>. Other relevant Government policies that go beyond health and social care include the <a href="#">National Data Strategy (2020)</a> and the <a href="#">2022-2025 roadmap for digital and data</a>.</li><li>• The UKRI <a href="#">Data and Analytics Research Environments (DARE UK)</a> is being developed in response to the UKRI <a href="#">digital research infrastructure strategy</a>. DARE UK aims to deliver a novel national federated digital infrastructure to establish the next generation of trusted research environments.</li><li>• Public Health Scotland published their <a href="#">Digital Strategy</a> in 2021, and the first phase of the <a href="#">Scottish Government's Data Strategy for health and social care</a> will be published by the end of 2022.</li><li>• In 2019, the Wellcome Trust established a five-year programme on <a href="#">data for science and health</a>.</li><li>• The <a href="#">SAIL Databank</a> (based within the Medical School at Swansea University) has widely influenced new systems and enabled the creation of the <a href="#">UK Secure Research Platform (SeRP)</a>, as well as supporting the COVID-19 &amp; the <a href="#">'One Wales'</a> response.</li></ul>

- The COVID-19 National Core Studies were established as part of the UK's ongoing pandemic response. They are supporting progress towards advancing health data and research infrastructure for the future.
- The UK Longitudinal Linkage Collaboration (UK LLC) project (funded as part of the COVID-19 Longitudinal Health and Wellbeing National Core Study) is developing a new approach for linking longitudinal studies to routine records, working in partnership with longitudinal population studies, biobanks/bioresources across the four nations of the UK, and beyond. The data is held in a Trusted Research Environment, established by the UK Secure Research Platform (SeRP).
- In 2020, OpenSAFELY was established as a secure analytics platform for NHS electronic health records to support urgent research into the COVID-19 emergency.
- The BHF Data Science Centre is a partnership between HDR UK and the British Heart Foundation (BHF).
- Cancer Research UK published a research data strategy in June 2022.
- Our Future Health is a collaboration between the public, charity and private sectors to build the UK's largest health research programme, with the aim of developing new ways to prevent, detect and treat diseases. It is aiming to recruit up to 5 million adults from across the UK to create a diverse cohort of people who have consented to participate in the research.
- Cardiovascular Disease Prevention Audit (CVDPREVENT)  
CVDPREVENT is a national primary care audit that automatically extracts routinely held GP data. This tool provides open access to the data, with clear, actionable insights for those tasked with improving cardiovascular health in England.

3. Higher education institutions (HEIs) and research funders should further enhance training pathways in informatics for health that are open to a wide range of disciplines.

- A preliminary search showed that 23 UK HEIs provide postgraduate courses related to health data and informatics. The majority of these were Masters' level courses.
- In 2020, UKRI ran a funding round called 'Innovation Scholars: Data Science Training in Health and Bioscience'. The scheme was open to UK-based researchers and professionals with proven experience in data science or training provision. Successful applicants received up to two years of funding to deliver innovative training programmes for upskilling health and bioscience researchers in data management and analysis.
- HDR UK provide training to help fill the national data skills gap. Their aims include attracting people from diverse social, academic and professional backgrounds into health data research, and ensuring that researchers at all stages of their careers have access to relevant skills and knowledge.
- Health Education England (HEE) published a report in 2019 called 'Health Informatics Career Pathways Project', commissioned to help understand the landscape for training, recruiting and retaining workers in health informatics.
- In 2019, a meeting Next Generation Public Health was co-hosted by the Fondation Botnar, the London School of Hygiene & Tropical Medicine, and the Wellcome Trust. The Workshop brought together academics and digital health experts to debate how big data and artificial intelligence could enhance public health and the challenges involved. Key recommendations were published in the Lancet Public Health. Further Research and training recommendations for public health data science were published in response.

4.

Higher education institutions should:

1. Incorporate opportunities for learning about health in a wide range of disciplines.
2. Incorporate these broader disciplines into public and population health courses.
3. Consider mechanisms for building joint modules between public and population health and these other disciplines to foster transdisciplinary approaches to learning and research.

No comprehensive review of joint modules and transdisciplinary public and population health courses has been identified or undertaken. Related updates include:

- As part of REF 2021 the Overview report Main Panel A and Sub-panels 1 to 6<sup>2</sup> notes the growing extent of multidisciplinary and “the vitality of the postgraduate research student environment [...] reflecting the progress on training the next generation of applied health researchers and population scientists.”
- Stakeholders working within HEIs note an increased focus on, and culture of, transdisciplinary approaches to learning and research. Stakeholders noted that a number of HEIs offer integrated courses, including:
  - [UCL Health of the Public](#) is a virtual School bringing multiple disciplines together to improve health for all. It offers a Master of Public Health incorporating wide range of disciplines.
  - The University of Cambridge offers a modular programme [MPhil Population Health Sciences](#), which offers joint modules between public health and other disciplines.
  - New MSc Health & Social Policy being developed at Strathclyde University.
  - Note that these courses also relate to recommendation 5.2.
- The Academy is also developing a new transdisciplinary scheme for health of the public research. The scheme will be open to researchers from any discipline or sector who wish to conduct research tackling a health of the public challenge.

5.

Through education and training, health and social care practitioners should be:

1. Better equipped with an understanding of the drivers and interventions that affect the health of the public and the relevance to their practice.
2. Able to engage with research and evaluate and use evidence. This should be taken forward by the relevant training and regulatory bodies for each of the professions.

Related updates, although not solely focussed on the workforce, include:

- In 2021, the UK government and devolved administrations published a [10-year vision for Clinical Research Delivery](#), followed by implementation plans for [2021-22](#) and [2022-25](#).
- The NHS Long Term Plan of 2019 and Health and Care Act 2022 aim to provide the frameworks and legislature required to make the health care system better equipped to support prevention of ill-health and tackle health inequalities.
- The Health and Care act requires NHS England and Integrated Care Boards to set out how they plan to promote research and report on progress made.

5.1

The Medical Schools Council, General Medical Council and other relevant stakeholders should undertake a review of competencies within the existing undergraduate medical curricula to identify opportunities to embed, strengthen and develop health of the public training and its broader application in clinical practice.

In 2018, the General Medical Council updated the [Outcomes for Graduates](#) to reflect developments in both the organisation of care and patterns of disease. Within the updated outcomes, a number relate to prevention, population health and its broader application in clinical practice, including (but not limited to): Safeguarding vulnerable patients (7 h), specifically recognise and identify where social deprivation and other factors are contributing to ill health. Applying social science principles (24 a, d), this includes recognising how society influences and determines the behaviour of individuals (incl. health inequalities and the social determinants of health). Health promotion and illness prevention (25), specifically knowledge of population health and the improvement of health and sustainable healthcare to medical practice. Clinical research and scholarship (26 f, j). This includes formulating relevant research questions, designing studies and using evidence from (among others) population science and large-scale public health reviews (and public health data) to inform decisions about the care of individual patients.

Related updates include:

- The Medical Schools Council [Education Leads Advisory Group](#) (ELAG) brings together experts in medical education, curricula design and implementation. ELAG works with stakeholders (including the Royal Colleges) who would like to implement changes in curricula to understand the current practices, and shape these changes so that

		<p>they are necessary, practical, and achievable. In addition, the group works with the General Medical Council on developments in medical education and curricula that may need to be reflected in Outcomes for Graduates. ELAG have worked with a number of stakeholders on a variety of topics related to the health of the public, including:</p> <ul style="list-style-type: none"> <li>○ the Physical Activity Team at the Office for Health Improvement and Disparities (OHID) on the <a href="#">Moving Healthcare Professionals Programme</a>;</li> <li>○ NHS England on medical education and health inequalities;</li> <li>○ the Department for Work and Pensions on work and health in the undergraduate curriculum;</li> <li>○ the University of Oxford Medical Sciences Division around the development of Education for Sustainable Healthcare;</li> <li>○ the Association for Nutrition on the production of tutor and student focused resources, information, case studies and quality assurance services;</li> <li>○ OHID and the Department of Health and Social Care on harmful gambling education for health professionals.</li> </ul> <ul style="list-style-type: none"> <li>• The Faculty of Public Health’s <a href="#">Public Health Educators in Medical Schools</a> (PHEMS) Special Interest Group was involved in the 2018 version of the General Medical Council’s Outcomes for Graduates. In 2019, PHEMS published a revised edition of a consensus statement on the <a href="#">Undergraduate Public Health Curriculum for UK Medical Schools</a>.</li> </ul>
5.2	<p>Higher education institutions and their medical schools should develop and maintain intercalated BSc, Masters and MB-PhD degrees in health of the public to encourage further study and develop further capacity in this area.</p>	<p>At the time of writing, the UK database of intercalated courses recognises a total of 505 possible options for intercalation. Of these, searching “public health” or “health of the public” returns 88 results from 40 HEIs, of which approximately 3/4 were masters level courses and 1/4 BSc level courses. However, this is unlikely to represent an exhaustive list of available intercalated degrees. See also recommendation 4 for relevant Masters courses.</p>
5.3	<p>We recommend that, as proposed in the Royal College of Physicians’ ‘Research for All’, all doctors have appropriate grounding in research and in particular the core principles and methods of quantitative research that underpin health of the public research. All doctors should have opportunities for long-term research throughout the course of their training, preferably linked to an academic department and further opportunities for continuing professional development.</p>	<p>Related updates on progress include:</p> <ul style="list-style-type: none"> <li>• The <a href="#">NIHR-AoMRC Clinician Researcher Credentials Framework</a> has been developed jointly by the NIHR and the <a href="#">Academy of Medical Royal Colleges (AoMRC)</a>, led by the <a href="#">Royal College of Physicians (RCP)</a>, working with HEIs to develop a national framework of Master’s level qualifications. These qualifications provide the networks, skills and confidence needed for healthcare practitioners from any regulated profession to lead and support clinical research delivery. Please note that the Framework is not specific to health of the public research.</li> <li>• In October 2022, NIHR and the AoMRC announced that King’s College London, the University of Exeter and the University of Sheffield secured funding from the DHSC to develop Master of Research and Master of Science extension pathways aligned with the <a href="#">NIHR-AoMRC Clinician Researcher Credentials Framework</a>.</li> </ul>
5.4	<p>The Medical Royal Colleges, led by the Royal College of Physicians and the Faculty of Public Health (FPH), should establish a special interest group to develop a credential in health of the public research. Opportunities for credentialing should be provided for all trainees and not just those who wish to pursue a career in public health.</p>	<p>In 2017, the FPH set up a task group to understand the potential of credentialing. The 2018 FPH Credentialing in Public Health Workshop explored the benefits of developing public health credentials and what needed to be done next to develop them. This was followed by a <a href="#">report</a> to the FPH Education Committee, in which they agreed to continue exploration in 2018 to 2019. The GMC subsequently started a consultation on credentialing in October 2018, which the FPH agreed to provide input to. In June 2019, the framework for <a href="#">GMC credentials</a> was published along with proposals for a phased introduction, working with five early adopters. Health of the public was not explicitly among these five. It is planned that further credentials in other areas will be developed, but it is not specified whether health of the public is intended to be among them. The FPH has opened up its examinations, the Diplomate Examination (DFPH) and the Final Membership Examination (MFPH), as UK recognised qualifications in public health to those not aiming to be fully registered.</p>

In August 2022 the Faculty of Public Health launched the updated public health specialty training curriculum [2022 Public Health Training Curriculum](#). The latest version of the curriculum was informed by a review and consultation process with key stakeholders in Public Health. The FPH Education Committee is undertaking ongoing work to modernise the curriculum based on feedback and needs expressed.

6. Public Health England, Health Education England and their equivalents in Scotland, Wales and Northern Ireland should work with the research community to:

1. Develop regional hubs of engagement between practitioners and researchers to integrate health of the public research and form a UK-wide network.
2. Strengthen the mechanisms for obtaining and providing independent evidence on improving the health of the public and for reviewing the uptake of evidence-based practice guidance.

Public Health England was abolished in 2021 and its functions were re-distributed. At the same time, broader changes occurred in the NHS at a local level, with the creation of Integrated Care Systems. In October 2022 the Academy convened a workshop to explore how the new public health systems in England can better embed research and translate evidence into policy to improve public and population health. [A workshop report](#) was published in December 2022.

As noted in updates against Recommendation 1 [SCHOPR](#) initiated activities with local authorities and public health practitioners to encourage a research and evidence-based culture. These activities fed into the NIHR [UK Prevention Research Programme](#), support for LAs to become research active go some way to addressing Recommendation 6, notably:

- [Public Health Intervention Responsive Studies Teams \(PHIRST\)](#)
- [NIHR Population Health Career Scientist Award](#)
- [Health Determinants Research Collaborations](#)

Examples of hubs of engagement in England were identified, such as the East of England Population Health Research Hub ([EoE PHResH](#)) a collaborative network of population health practitioners, academics and regional research infrastructures in the East of England region. However, stakeholders noted that progress towards a UK-wide network of hubs of engagement has been limited.

In Scotland, stakeholders identified examples of networks and engagement between researchers, practitioners and decision-makers, including (but not limited to):

- The Public Health Evidence Network (set up in 2015) linking key organisations (e.g., HEIs, public health, NHS) to co-ordinate activities and develop evidence to support policy makers.
- Collaborations between Public Health Scotland and researchers within HEIs during COVID-19 were used to provide key evidence for decision-makers (i.e. [EAVE II](#) on vaccine effectiveness and [UNCOVER](#) network responding to requests from policymakers for evidence reviews).
- Ongoing work to develop the Public Health Scotland research strategy; focus on extending evidence networks (alignment with regional hub models).

7. Each Government department should review how it obtains evidence and advice on health and health equity, in order to ensure that impact on health and health equity is incorporated in the development of all relevant policies. These reviews could be led by the departmental Chief Scientific Advisers and supported by the Health of the Public Policy Fellowships we propose in recommendation 9.

One of the goals of OHID is to “inform a new cross-government agenda which will look to track the wider determinants of health and reduce disparities. OHID will bring expert advice, data and evidence together with policy development and implementation to ensure action on improving health is better informed, more effective and more joined-up.”

Although not specific to Government departments, relevant progress in this area includes:

- NHS England and NHS Improvement have developed the [Core20PLUS5](#) to inform action to reduce healthcare inequalities at both national and system level. The approach defines a target population – the ‘Core20PLUS’ – and identifies ‘5’ focus clinical areas requiring accelerated improvement.
- In November 2022, guidance was published by the NHS National Public Health team to support integrated care boards (ICBs) in providing a quality public health function across the ICS. The checklist [Delivering a quality public health function in integrated care boards](#) is endorsed by NHS England, the Association of Directors of Public Health, the Local Government Association and the Faculty of Public Health.

- UK Research and Innovation's (UKRI) first five-year (2022-2027) [strategy, transforming tomorrow together](#) sets out long-term priorities on how UKRI's vision for research and innovation will be delivered in the UK. UKRI's strategic themes include a focus on health inequalities, understanding the causes and effects of place-based disparities and finding solutions that "promote prosperity and improve outcomes for people and communities across the UK."

8.

All major policies and programmes that address health and health equity, as well as those that affect the key drivers of health and health equity, should have independent effectiveness and economic evaluation of their short-, medium- and long-term impacts built in from the start.

There is limited information in the public domain related to this recommendation. Stakeholders identified some evidence that drivers of health and health equity evidence are being considered by decision-makers across policy areas, including:

- The Cabinet Office and Department of Health and Social Care [Advancing our health: prevention in the 2020s](#) consultation document.
- The [National Food Strategy](#) a Government-commissioned independent review into the food system, which incorporated recommendations across a range of policy areas.

In Scotland, stakeholders identified examples of progress against recommendation 8, including:

- Minimum unit pricing for alcohol (MUP) came into effect in Scotland 2018. The MESAS (Monitoring and Evaluating Scotland's Alcohol Strategy) [MUP Evaluation Portfolio](#) comprises a number of research studies that are being undertaken to assess the impact of MUP. A report bringing together the evaluation findings will be published in 2023.
- Ongoing work in Scotland to advance the use of Health Impact Assessments undertaken by [The Scottish Health and Inequalities Impact Assessment Network \(SHIAN\)](#).

9.

**'Health of the Public Policy Fellowships'** should be developed to build reciprocal relationships, mutual understanding and long-term networks between researchers and policymakers. These Fellows should be based in the most relevant parts of Government departments.

Related updates, although not solely related to 'Health of the Public Policy Fellowships', include:

- The NIHR School for Public Health Research (SPHR) announced that applications for [Transdisciplinary Placements in public health research](#) are open until October 2023. The scheme will offer short placements (6 - 8 weeks) aimed at those currently working outside of public health, but in a relevant field, who want to gain experience of academic public health research.
- NIHR Population Health Career Scientist Awards (PHCSA) are jointly run by the NIHR Public Health Research (PHR) Programme and NIHR Academy. The award is aimed at senior researchers from a range of disciplines, who wish to become a population/public health leader and make the transition to reader or professor level. The scheme is open to applicants from across the four UK countries.
- In 2019, NIHR SPHR offered pre- and post-doctoral fellowships [NIHR School for Public Health Research Fellowships](#). Fellowships aligned were offered across the eight academic centres aligned to the SPHR research programmes and aimed at individuals with a strong academic record who wanted to develop a career in public health research.
- In 2020, Health Education England launched the first [Population Health Fellowship for NHS healthcare staff in England](#). The Fellowship was aimed at those working in health and care from a non-population health background. The intention of the scheme was to develop a network of professionals from a non-population health background with population health skills to benefit place-based healthcare systems across England. To date four cohorts have been recruited to the scheme.
- In 2021, [ESRC policy fellowships 2021](#) were announced by the Economic and Social Research Council (ESRC) and Arts and Humanities Research Council (AHRC) (jointly funded). The [pilot programme](#) enables early and mid-career academic Fellows to work in central and devolved government departments on key policy areas.
- In Northern Ireland, the HSC Public Health Agency R&D Division offers a range of [research training fellowship awards](#). The scheme is open to all specialties including non-medical specialties.

10.

Research funders should consider mechanisms to explore joint working between health of the public researchers and the commercial sector.

We have identified limited progress (in the public domain) in relation to this recommendation. Related updates include:

- In 2018, the UK Prevention Research Partnership (UKPRP) published guidance to support researchers collaborating with industry. The purpose of the guidance was threefold: (1) to empower academia to work in partnership with industry where there are benefits for public health; (2) to ensure academic scientists can operate independently of the industry partner and; (3) to support academic scientists to manage collaborations in an open and transparent way.
- Former director of the NIHR Health Research Programme, Prof. Martin White (and colleagues), published a number of papers on this topic in relation to the food industry [What role should the commercial food system play in promoting health through better diet?](#) ; [Building consensus on interactions between population health researchers and the food industry](#) ; [What principles should guide interactions between population health researchers and the food industry?](#)

11.

Research funders should support research into:

1. Strengthening and developing methods of engagement between researchers and the public.
2. Strengthening and developing methods of communicating health messages that are appropriate to the values, culture and norms of different sectors of society.

Particular focus should be given to groups that do not traditionally engage in research and those most at risk of poor health.

- Key stakeholders in health and social care research have come together to sign a [Shared Commitment to Public Involvement in Health and Social Care Research](#). The aim is to support the research community to carry out public involvement through guidance, policies, systems, and incentives.
- In May 2022, the MRC conducted a [survey on public involvement in research](#). The survey will feed into a public involvement review that will inform the development of the MRC's new strategy.
- In 2019, UKRI published their [vision for public engagement](#). They will commission research, pilot new ways of working, support new collaborations and collect evidence to help understand how best to incentivise and support researchers with engagement, measure impacts, and systematically involve society in discussions.
- The Wellcome Trust provides [public engagement support for researchers](#) through dedicated public engagement funding and training workshops.
- The National Co-ordinating Centre for Public Engagement provides a range of funding opportunities to support public engagement activities in the health and life sciences.
- As of spring 2022, the NIHR is [commissioning research into the most effective forms of health communication and public health messaging](#) to use during infectious disease outbreaks.
- The Medical Research Foundation is inviting MRC and Foundation-funded researchers to apply for the [Changing Policy and Practice Award](#). The aim of this award is to support the dissemination of medical research beyond the scientific peer reviewed press.
- The Health Foundation undertook work with the FrameWorks Institute to design [more effective ways of talking about the wider determinants of health](#). Guides and toolkits published on how to [explain the wider determinants of health in the UK](#), as well as a communications toolkit for people working in public health on [how to talk about the building blocks of health](#).

## References

1. This update is a summary, rather than a comprehensive overview, of all progress against recommendations.
2. REF main Panel A Medicine, Health and Life Sciences (incl. UOA 2 Public Health, Health Services and Primary Care).