



Public Health
England

Protecting and improving the nation's health

Doing, supporting and using public health research

The Public Health England strategy
for research, development and
innovation

Draft - for consultation only

About Public Health England

Public Health England exists to protect and improve the nation's health and wellbeing, and reduce health inequalities. It does this through advocacy, partnerships, world-class science, knowledge and intelligence, and the delivery of specialist public health services. PHE is an operationally autonomous executive agency of the Department of Health.

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Executive summary

This document is a draft for public consultation.

The executive summary will be written after comments and changes arising from consultation have been made.

Foreword

Public Health England (PHE) is a research-informed organisation that is driving forward the provision and use of evidence for decision-making across our public health system. Research relevant to health and care is thriving due to sustained investment and new, productive relationships among researchers and those who would use their findings. In PHE, while working with other organisations, we have taken a fresh look at the role of research and knowledge - or evidence - in supporting public health locally, nationally and internationally.

Public Health England does not commission research. Our mandate from Government, agreed with the Department of Health, refers to 'undertaking and contributing to research and development in areas relevant to its functions'.

We have 4 core functions:

- protecting the population's health from infectious diseases and other hazards
- improving population health and wellbeing and reducing inequalities
- improving population health through sustainable health and care services
- building the capability and capacity of the public health system

Each of our functions must be underpinned by world-class scientific evidence drawn from a range of sources, including: laboratory and clinical sciences, behavioural and social sciences.

This document sets out PHE's commitment to research, development and innovation; the steps we will take, alone or with partners, to do research, to support research and to use evidence from research. We have published our priorities¹ indicating that 'new evidence and new knowledge...could transform the scope of public health' and making a commitment to ensure that 'credible, evidence-based advice is available on the key issues relating to the public's health'. Our research, development and innovation activities will enable us to do that.

PHE will focus on securing improvements against 7 **priorities**:

- tackling **obesity**, particularly among children
- reducing **smoking** and stopping children starting
- reducing **harmful drinking** and alcohol-related hospital admissions
- ensuring every child has the **best start** in life
- reducing the risk of **dementia**, its incidence and prevalence in 65-75 year olds
- tackling the growth in **antimicrobial resistance**
- achieving a year-on-year decline in **tuberculosis** incidence

The intended PHE, national and global audiences for this document – who we invite to respond to our consultation questions - are:

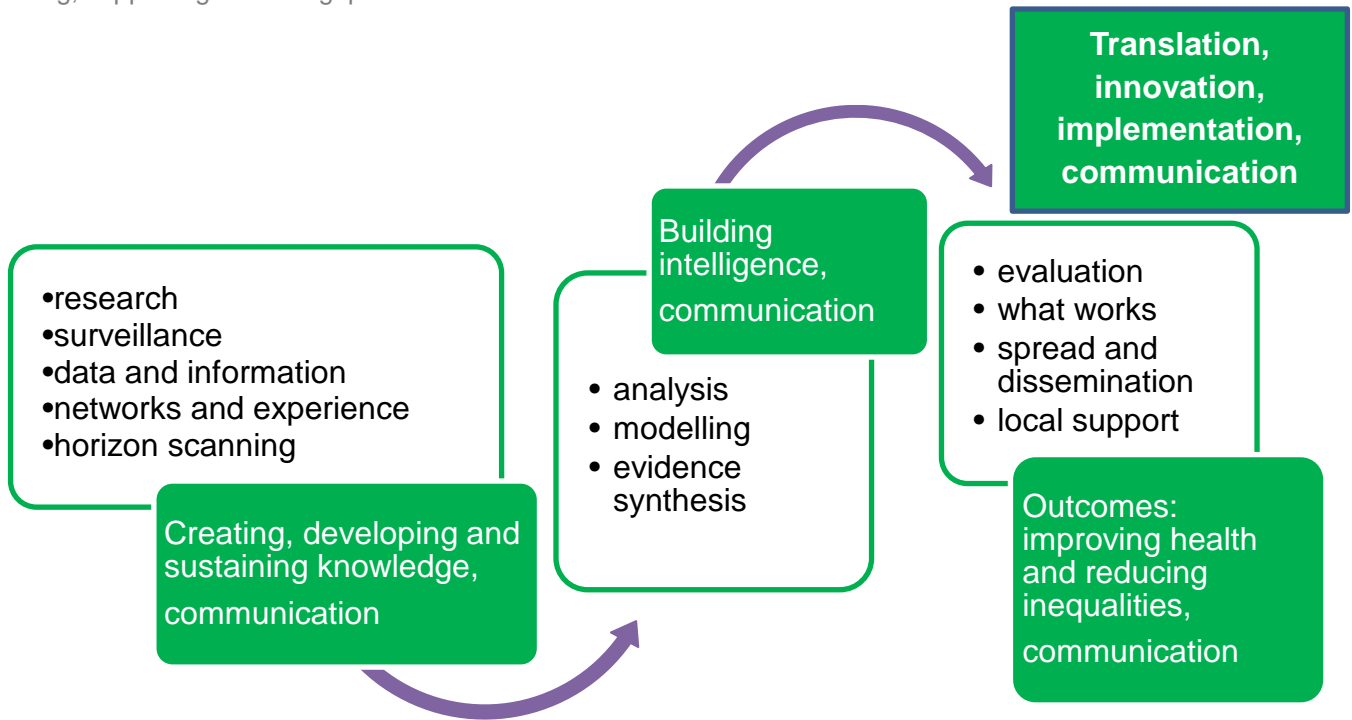
- researchers, health research commissioners and funders
- policy-makers
- local government organisations
- public health practitioners and providers, including primary care practitioners and the voluntary sector
- industry
- the public

The role of Public Health England in research, development and innovation

Effective research is essential to public health. Research enhances our work and the work of our health partners locally, nationally and internationally. The government, NHS and PHE need relevant and authoritative public health knowledge to carry out their statutory duties.

PHE will work with health partners and others, including local government, voluntary and commercial sectors, to produce and support research to improve health and reduce health inequalities. Our research will focus on meeting population needs (long and short term; national and local; high and low cost; high and low impact) and align research capacity to those needs.

Doing research	Supporting other's research	Using research to fill gaps in knowledge
<p>PHE's work programme includes research into:</p> <ul style="list-style-type: none"> • health protection • health and wellbeing • national knowledge and intelligence <p>PHE resources and expertise are augmented by engagement with academic researchers, national and international health services</p>	<p>PHE directly generates, manages and makes available unique resources, including datasets. We maintain partnerships that co-produce knowledge.</p> <p>PHE works indirectly by advocating and promoting public health research that develops capability and capacity across the whole health system. We promote sound governance.</p>	<p>PHE advises the organisations that fund and commission research to help meet needs and fill gaps.</p> <p>PHE shares findings with users and works with them to design, implement, evaluate and improve public health.</p>



Research, development and innovation within the public health knowledge pathway to which PHE aspires.

Knowledge – evidence - based on valid research enables reliable predictions to be made about the future.

Research is needed to deliver the evidence for realisation of public health priorities.

The public health system in England is complex. It straddles:

- health and social care
- national, regional and local public health actions

The funding mechanisms for research, development and innovation are equally complex, and offer PHE a wide range of potential partners. Given this complexity, it is important to develop a shared narrative about public health knowledge and to recognise the ways in which each participating organisation might engage with the public health knowledge pathway.

Strategic priorities for public health research, development and innovation

The priorities for research, development and innovation are based on a strategic overview of the current public health context. They support, but are not confined to, PHE's priorities. They are relevant to studies that range from molecular systems through individuals, local and national population systems, and to ecosystems. The strategic priorities have been informed by discussions with many partners in public health and their relative importance may change over time.

PHE's priorities for research, development and innovation are:

- **knowledge** - generate new knowledge to improve and protect health
- **infrastructure** - build and share high-quality infrastructure to enable research by PHE and others
- **capacity** - support, develop, excite and inspire public health research capacity in PHE and elsewhere
- **innovation** - accelerate translation of research into policy and practice in public health
- **communication** - communicate widely and openly about how research is contributing to improving and protecting health and wellbeing and reducing health inequalities

Opportunities

Opportunities to support our strategic priorities:

- **exploit and develop technologies** - eg genomics, ICT devices, novel disease biomarkers
- **use and share resources** – health and care data / linked data, health statistics and analysis, the Science Hub
- **recognise the value of people and relationships** – with PHE, local government, academics, the National Institute for Health Research (NIHR), Health Protection Research Units, industry
- **recognise incentives** – use internal PHE funding to stimulate research
- **use and deliver methodologies and knowledge** – implementation science, evaluations, real-world research, smart algorithms, behavioural science, health economics
- **access funding** – other Department of Health or NIHR initiatives, other UK, EU and international health research funders

Key challenges

PHE will:

- build a well-connected public health research system
- create effective links between academia and public health services; use research to drive improvement
- align public health research capacity, capability and resources with the need for evidence
- embed research evidence in public health services; develop expertise and experience in implementation science
- support capacity and capability for evaluation of public health interventions
- support career development in public health research
- engage the general public with public health research

Sustaining a dialogue about public health research

Our view on research is informed by knowledge of the national, regional and local burden of disease and the factors that can be influenced. Through dialogue and consultation with our partners we help set a clear direction, support alignment and avoid gaps or overlaps in public health research.

Our aim is to create a consensus on priorities for future research. This consensus can then be used to develop detailed plans in specific research areas, deploying skills, experience, and make effective use of research infrastructure and other resources.

We can also help develop the products, practices or services necessary to innovate in the public health by engaging with our stakeholders.

Through consultation and conversation we are enabling a greater understanding of the role of research, development and innovation in public health. We are helping to resolve pressing public health problems by more effectively applying knowledge from research.

The structure for this dialogue has been inspired by the Francis Crick Institute's research strategyⁱⁱ. This dialogue has three key, mutually-dependent actors:

- research commissioners and funders
- researchers
- research users



Next steps

Next steps to optimise the value of this strategy are:

1. **Consult and respond** - we invite responses to consultation questions set out at the end of this document, from which we will review the responses and reconsider our strategy.
2. **Continue our progress** - PHE will:
 - establish an international advisory board to guide our research, development and innovation, in line with our strategy
 - inspire staff in all parts of PHE to engage in research, development and innovation, highlighting our progress and achievements
 - within PHE we will raise the profile of the resources and support available for research, development and innovation
 - define our objectives in forming partnerships with research funders, academic, policy makers, industry, service commissioners and providers
 - determine what research is needed to support PHE's policies and priorities

Key tasks (i)

There are a number of key tasks to undertake towards the implementation of this strategy, in line with our strategic priorities. These will be elaborated further in an action plan, to be developed following our public consultation phase.

Knowledge	Support:	our staff in PHE to engage as fully as possible in research that is recognised nationally and internationally for its high quality and impact
	Ensure:	that the highest standards of research governance, including information governance, are in place in all PHE research activities
	Work with:	our partners in health research in government, academia and industry to develop and sustain a system that is recognized internationally for its leadership and productivity in high quality public health research
Infrastructure	Work with:	research funders to optimize access to high quality infrastructure for public health research and research project/programme funding to address important gaps in public health evidence
	Develop:	the concept of the ‘Science Hub’ with regard to research and providing academics and industry access to appropriate elements of PHEs large-scale infrastructure
Capacity	Develop:	a public health workforce initiative to support science and research aimed at improving the effectiveness and cost-effectiveness of public health, protecting the public and reducing health inequalities
	Implement:	a network of academics in public health research who support the achievement of PHE’s strategic objectives
	Provide:	tools, training, access to expertise, data and other resources to support public health practitioners to evaluate public health interventions

Key tasks (ii)

Innovation	Work with:	our partners in public health services and research to prioritise research that meets their needs and to implement research findings to improve health, protect the public and reduce health inequalities
	Strengthen:	links among professionals in public health policy, practice and academia with regard to research, development and innovation
	Engage:	the private sector in relevant areas, for example in digital health, to consider possible routes to deploying knowledge from research

Communication	Engage:	stakeholders in ongoing dialogue to develop and refine thematic and cross-cutting research questions and possible actions to support research and disseminate them widely
	Support:	PHE researchers to contribute to the global body of high quality peer reviewed research literature
	Develop:	public communications strategies that motivate, inspire, enthuse and educate people about public health research, including opportunities for their direct involvement
	Highlight and celebrate:	PHE's unique research assets and contributions to excellent research

Consultation questions

1. Are our stated challenges and opportunities the correct ones?
2. Is the knowledge pathway a useful model?
3. Are the next steps appropriate for finalising this strategy?
4. Are the key tasks likely to enable implementation of this strategy with partners across the public health research landscape and are there any others that we have missed?

We invite all stakeholders to comment on how their own research is contributing, or could contribute, to achieving one or more of our strategic priorities.

References

i Evidence into action: protecting and improving the nation's health. October 2014. Strategic document setting out Public Health England's priorities for the next 5 years. PHE publications gateway number: 2014404PDF, 1.91MB, 28 pages

<https://www.gov.uk/government/news/evidence-into-action-protecting-and-improving-the-nations-health>

ii Discovery without boundaries. Strategy 2013

http://www.crick.ac.uk/media/131115/tfc_full_document_for_web_single_pages.pdf