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Public Health
Wales

Research Strategy

2015-2018





Integration between public health research, policy and practice will be essential for us to drive forward improvements in population health and wellbeing.



1 Foreword

Public health covers a broad range of activities. These include primary prevention, surveillance and early detection of disease, control and management of communicable diseases and environmental threats, improving healthcare quality, informing policy and implementing interventions and programmes to improve population health and wellbeing.

The public health challenges in Wales are similar to many post-industrial societies, with an ageing population and high prevalence of chronic conditions such as diabetes and cardiovascular disease. Health inequalities persist in many areas, and the gap in healthy life expectancy between the most and least deprived areas is 18 years. For example, 25% of children aged four to five are overweight or obese, while 22% of adults are obese, with higher prevalence in more deprived areas. Similar profiles exist for smoking and binge drinking.

The rising healthcare costs, combined with competing interests on public finances and an ageing population, may result in NHS Wales facing a perfect storm of funding gaps for many health-related services in the future. Difficult decisions about priorities will have to be made. There is a clear need to renew our efforts on primary prevention of ill health, and reduce pressures on the healthcare system by improving population health and wellbeing. This will necessitate adopting the most effective, best-value interventions and programmes based on evidence, abandoning those that have proven to be ineffective, and developing the evidence base in areas where this is lacking through research, innovation and robust evaluation.

Public Health Wales' Integrated Medium Term Plan for 2015-2018 clearly identifies a suite of priority areas for action. Integration between public health research, policy and practice will be essential for us to drive forward improvements in population health and wellbeing. We therefore welcome this research strategy, which aims to develop research capacity and capability within Public Health Wales. Successful implementation of this strategy over the next three years will create an environment that encourages and supports research activity within the organisation, stronger collaborations with partners across the wider public health system, including academia, NHS, industry and third sector partners and a sustainable translational pathway for research evidence into public health policy and practice.



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**Professor
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2 Executive summary

Public Health Wales has published its strategic objectives for 2015-2018, and the overarching strategic aim is to create 'a healthier, happier and fairer Wales'. In order to fulfil these objectives, a multi-sectoral and evidence-based approach which places emphasis on evaluation of current public health activities is required.

This research strategy outlines the priorities and commitments for Public Health Wales to foster a culture that will allow for the generation of new research ideas, and the confidence to use research efficiently and effectively in everyday practice.

The extensive ambition of Public Health Wales is to prioritise research activities that align with the organisation's strategic objectives and tackle the public health challenges we face in Wales. Inequalities in healthy life expectancy, high prevalence of childhood obesity, preparation of services for an increasingly ageing population and the need to reduce the overall consumption of healthcare are all examples of challenges that need to be met by evidence-informed policies. To achieve this aim, Public Health Wales will actively engage with external partners to develop and evaluate innovative new interventions, policies and programmes and also work in different settings (e.g. workplaces, schools, primary care) to improve population health and wellbeing.

This strategy aims to create an environment within the organisation that is conducive to achieving these ambitions. A culture needs to be embedded which; (i) develops and supports research capacity (ii) facilitates the generation of new knowledge (iii) develops and strengthens collaborative relationships and (iv) effectively engages the public in population health research and communicates research findings. The Public Health Wales Research and Development (R&D) office will be actively involved in supporting the delivery of action in these four key areas, although achieving the ambitions of this strategy will require commitment from the whole of Public Health Wales.

The following are a summary of the key actions that Public Health Wales will take to support and promote research activity:

- Developing and supporting Public Health Wales' research capacity by supporting staff to gain training in a comprehensive range of research methods.
- Facilitating the generation of new knowledge through externally funded research and by making available internal funding to pump-prime new and promising research activities and pilot studies.
- Strengthening our public engagement and collaborations with Higher Education Institutions, MRC Centres of Excellence for public health (e.g. DECIPHer) and e-Health research (e.g. CIPHER), Welsh Government, Health Boards, the other NHS Trusts in Wales, Health and Care Research Wales infrastructure, third sector organisations and other agencies such as police, education and social services that have a wider public health interest in Wales to co-produce and drive forward our shared research agenda.
- Increasing the profile of Public Health Wales' research by communicating widely with our stakeholders and promoting the translation of research into public health policy and practice.
- Provide a rigorous governance structure for research across Public Health Wales to ensure quality, ethical integrity and efficiency in its delivery.
- Review and restructure internal investment in research so that it aligns with the organisational objectives of Public Health Wales and offers value for money.



This ambitious research strategy will contribute to improving the health and wellbeing of the Welsh population through evidence-informed public health practice. Critically, this strategy should ensure that the research undertaken within Public Health Wales will help to deliver on the strategic objectives of the Integrated Medium Term Plan (also known as the Strategic Plan), have an impact on policy and practice and lead to improved health and reduced health inequalities. Successful implementation of this strategy will be evidenced by:

- A shared research agenda across the public health system.
- A clear and coherent pathway for external partners to engage with Public Health Wales in research.
- An active public health research community.
- Year on year increase in the number of publications by Public Health Wales staff in peer-reviewed journals.
- At least a 30% increase in external research funding received over the next three years from the baseline levels in 2014.
- A clear and coherent pathway for knowledge mobilisation and communication to facilitate and promote evidence-informed policy and practice.



3 Introduction

Public Health Wales is an NHS organisation providing professional, independent public health advice and services to protect and improve the health and wellbeing of the population of Wales. It was created as a separate NHS Trust in 2009, and is part of an integrated public health system in Wales where the local health boards each employ a Director of Public Health.

3.1 Context for developing a research strategy within Public Health Wales

Public Health Wales' ambition is to achieve a healthier, happier and fairer Wales by working together with various partners. This includes empowering people to protect and improve their own health and wellbeing and reduce inequalities by engaging, informing, advising and speaking up for them. The organisation's strategic priorities for 2015-2018¹ are shown in Box 1.

Box 1. Public Health Wales' strategic priorities for 2015 - 2018

Shared strategic priorities for an integrated approach to public health across NHS Wales:

- Working across sectors to improve the health of our children in their early years.
- Developing and supporting primary care services to improve the public's health.
- Supporting the NHS to improve healthcare outcomes for patients.

Strategic priorities specific to Public Health Wales:

- Adopting and implementing a multi-agency systems approach to achieving significant improvements in our public's health.
- Influencing policy to protect and improve health and reduce inequalities.
- Protecting the public and continuously improving the quality, safety and effectiveness of the services we deliver.

An evidence-based approach is central to achieving these objectives. It will require a system that is sufficiently flexible to identify and make use of the best available evidence in a timely manner, whilst highlighting gaps in knowledge and taking steps to address these through the generation of new knowledge. This will require a renewed emphasis on the evaluation of public health activities, including those of Public Health Wales and of our partners, focusing on population outcomes. This will be achieved through participation in primary² and secondary³ research activity and effective collaboration with partners in health and care and across the public sector, including education, the criminal justice system, local authorities, Welsh Government, Higher Education Institutions (HEIs), industry and third sector organisations.

This research strategy sets out Public Health Wales' commitments to develop and sustain an organisational culture that generates and uses research efficiently and effectively.

4 Our approach to developing a research strategy

Research and development are critical, complementary aspects of improving the performance and efficiency of organisations (Box 2). This strategy focuses on research, although it does cover aspects of developing research capacity and capability. The distinction between research, audit, service evaluation and public health practice can often be subtle and are highlighted in Appendix 1.



Box 2. Definition of research and development in the NHS

- **Research:** Within the NHS, research is defined as the attempt to derive generalisable new knowledge against clearly defined research questions, including studies that aim to generate hypotheses as well as studies that aim to test them.
- **Development:** Consists of work based on existing knowledge obtained from research or practical experience with a view to initiating the manufacture of new products or devices, establishing new processes, policies and services or considerably improving those that already exist, including the development of capacity and capability.

This research strategy has been developed in consultation with Public Health Wales' staff along with external stakeholders. The content of this strategy was informed by:

- A rapid literature review of strategic research documents from the UK and internationally.
- A survey within Public Health Wales that ascertained staff views on the role of research within the organisation, priority areas for research, barriers and enablers for staff participation in research activities and staff developmental needs.
- Four stakeholder consultation workshops, including one with representatives from Higher Education Institutions (HEIs). Discussions included the role of Public Health Wales in research, facilitators and barriers for staff participation in research, and the potential for developing joint research capacity with HEIs.
- Interviews with senior internal and external stakeholders to ascertain their views on what role Public Health Wales should play in research, research priorities, and enablers and barriers to staff participation in research activities.

The key messages from the staff survey, stakeholder consultation events and interviews were used to shape the content of this research strategy.

In the following sections, we describe the framework for research conduct and governance in Public Health Wales, our research priorities and the key actions that we will take to create an environment that supports the generation and use of research in public health policy and practice.

1 Public Health Wales' Integrated Medium Term Plan www.publichealthwales.org/strategy

2 Primary research activity is described as research that involves data collection from study participants, direct observations or experiments.

3 Secondary research activity is described as the summary, collation and/or synthesis of existing research.

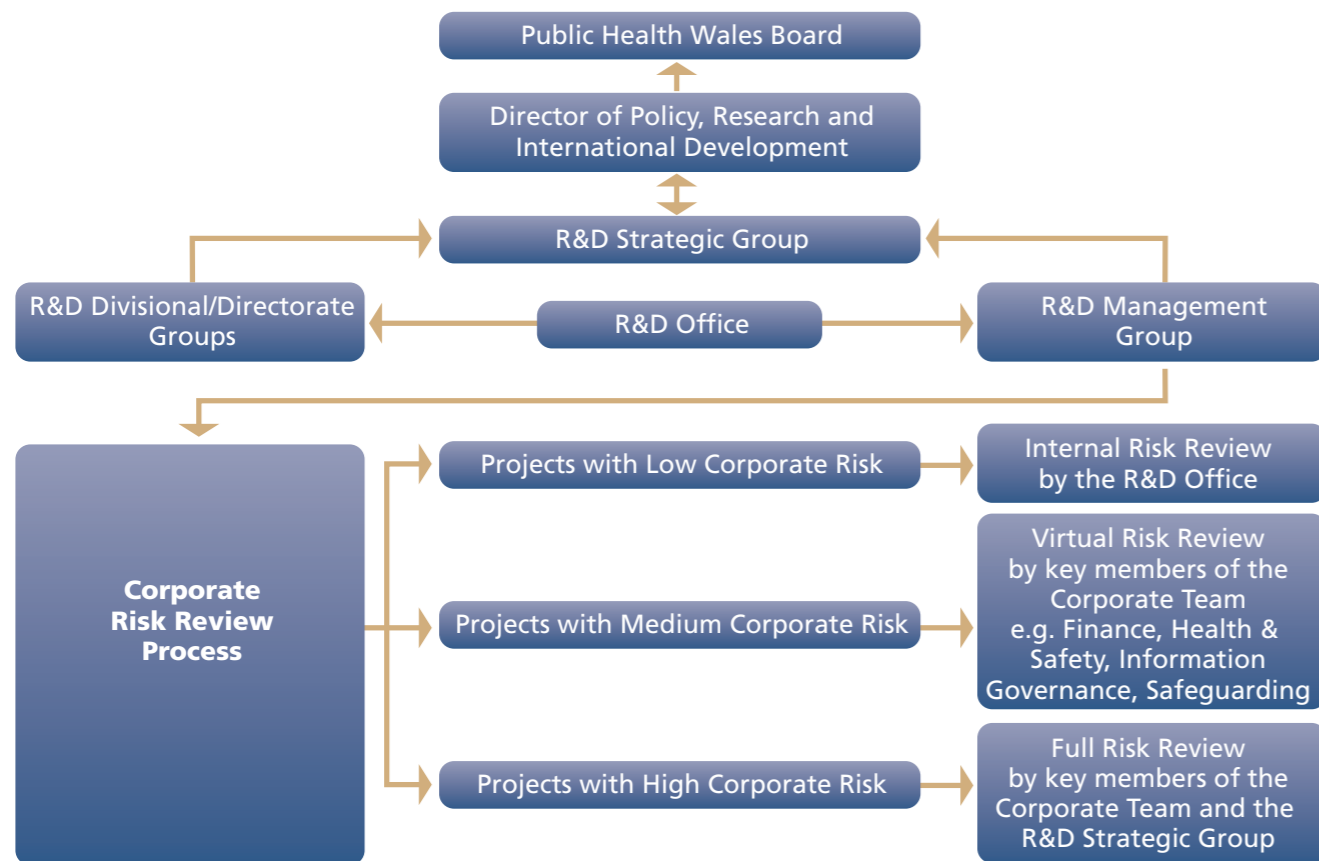
5 Framework for research conduct and governance within Public Health Wales

Public Health Wales’ Research and Development office receives core funding from Welsh Government’s Division of Social Care and Health Research (DSCHR⁴) to support the development and delivery of high quality research activity and deliver central research management and governance functions to ensure Public Health Wales complies with the Research Governance Framework⁵. This includes offering guidance and approval of NHS research permissions for the organisation, managing the research governance process and overseeing the implementation of national policies (Figures 1 and 2). The R&D office is performance managed by DSCHR against key indicators (Table 1).

All Public Health Wales’ research projects are required to undergo a formal corporate risk review process. The R&D office is responsible for assessing the project against risk criteria to categorise the research into

a risk category. The time frame for review will vary depending on the nature of the research project and will be proportionate to the risk associated with the study.

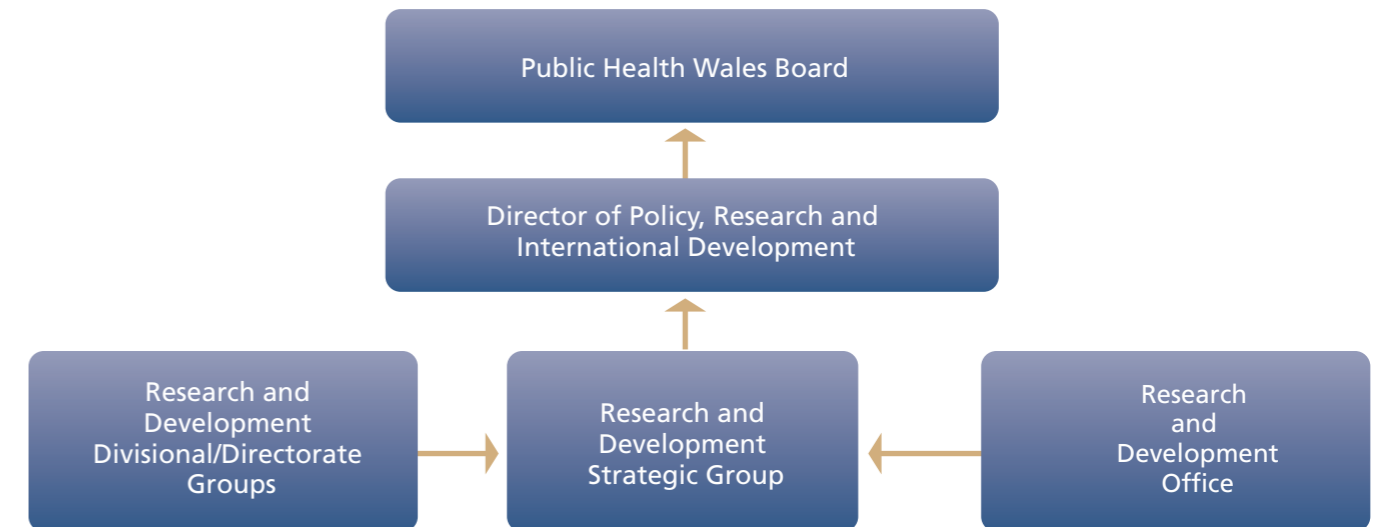
Figure 1. Public Health Wales research governance & management structure showing the corporate risk review process



⁴ Formerly the National Institute for Social Care and Health Research (NISCHR)

⁵ <http://www.hra.nhs.uk/resources/research-legislation-and-governance/research-governance-frameworks/>

Figure 2. Public Health Wales research management structure



A Research and Development Strategic Group has been set up to provide strategic direction and leadership for research within the organisation, and oversight of the research governance process. Research governance involves balancing efficiency with appropriate assurance and risk management. The established processes also reflect feedback from within the organisation on the processes currently in place and have sought to ensure that where possible all avoidable delays in approving research have been removed. The Research and Development Strategic Group is chaired by the consultant leading for research and development, and consists of research leads from each R&D Divisional/Directorate Group⁶. The Research and Development Divisional/Directorate Groups will put in place operational plans to support the implementation of this research strategy and support the prioritisation and development of research topics within each service area.

Table 1. Public Health Wales key performance indicators managed by Health and Care Research Wales

A1. NHS research data tabled at the Public Health Wales Board meeting:

- Minimum of twice a year

A2. R&D representation at the NHS organisation’s Board meeting

A3. Up-to-date R&D strategy for NHS organisation

A4. Inclusion of research in Public Health Wales’ annual return report

B2. Appropriate use of NHS R&D allocations in accordance with the DSCHR, Welsh Government’s guidance

B3. Timely and accurate reporting in accordance with the financial monitoring cycle for NHS R&D allocations

B4. Implementation of AcoRD [Attributing the costs of health & social care Research & Development]

E1. 80 Percent of Health and Care Research Wales Clinical Research Portfolio (CRP) studies receiving NHS research permission within 40 calendar days

E2. 80 Percent of commercially sponsored studies receiving NHS research permission within 40 calendar days

F1. A commercial strategy/policy in place

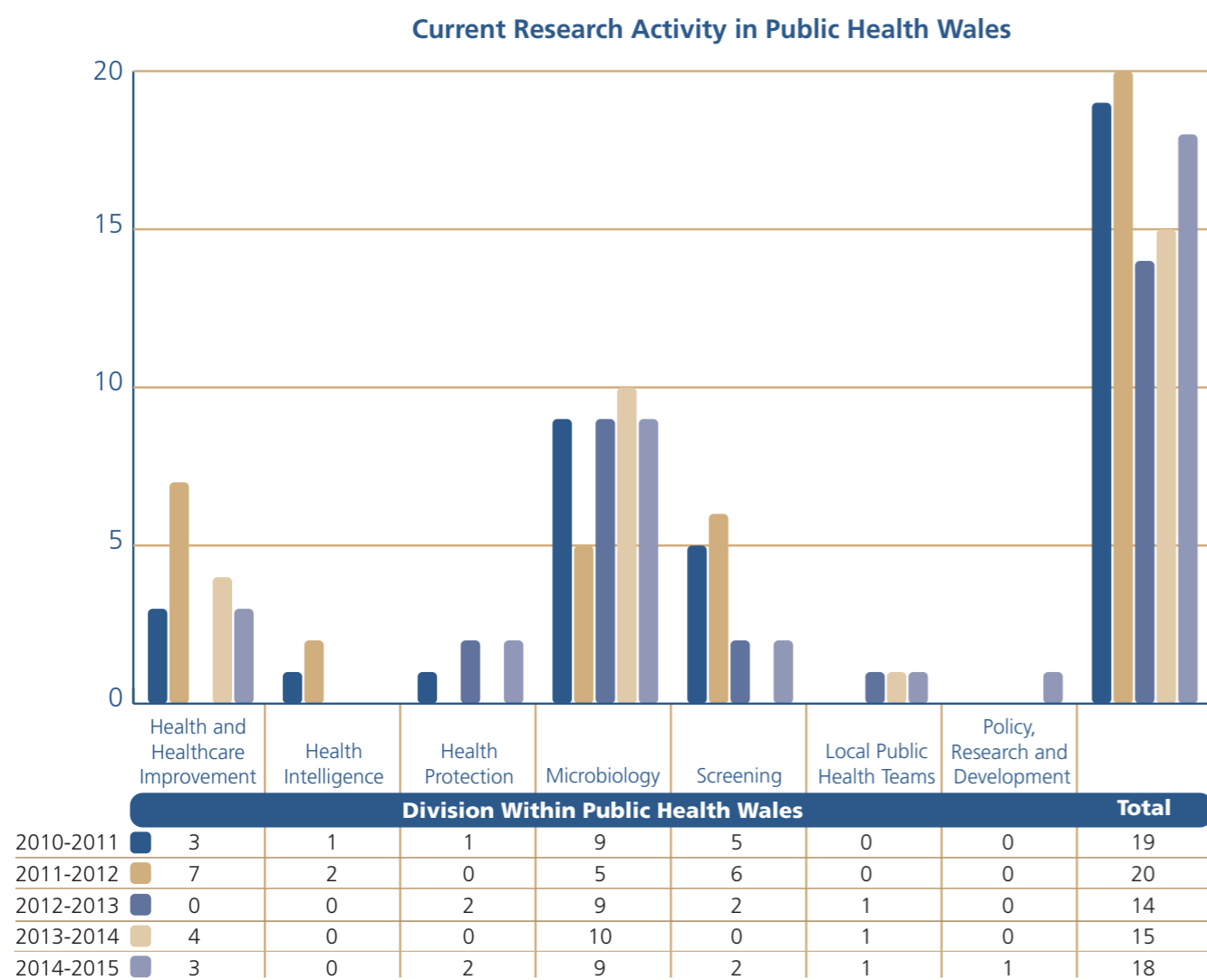
⁶ These R&D Divisional/Directorate Groups are based within the Health and Wellbeing Directorate, Screening Services, Microbiology and Health Protection Divisions and Policy, Research and International Development Directorate.

5.1 Current research activity in Public Health Wales

Currently, the Research and Development office strives to capture all research activity, particularly where individuals are engaged in projects based primarily in other organisations or projects commissioned by Public Health Wales from academic and other partners. From April 2010 – March 2015, 85 projects within Public Health Wales were granted NHS research permissions to begin. Public Health Wales funded over half of this research, the majority of which was undertaken within the Public Health Services Directorate and lower levels of research activity took place within the Public Health

Development Directorate. Currently, the Microbiology and Screening Divisions have the most recorded research activity within Public Health Wales (Figure 3). Strengths in Microbiology and Screening Services should be built upon to increase research income within these areas and learning should be shared across all of Public Health Wales. Public Health Wales’ ambition is to increase the capture of external funding for research projects, by supporting the development of staff to become research active and take on the role of Principal Investigator in relevant population health research projects. The key actions Public Health Wales will take to facilitate research are outlined in section 7.

Figure 3. Projects that were granted research permission across Public Health Wales (April 2010 – March 2015)



Public Health Wales works in partnership with HEIs in Wales and has developed research partnerships with other organisations. For example, recent collaborations with Public Health Wales staff as Chief Investigator or Co-Investigators include:

- A research project on violence and crime in Wales with the South Wales Police and Crime Commissioner’s Office.
- A review of the harms that alcohol consumption causes to others (i.e. not the drinker) with Public Health England.
- An Economic and Social Research Council funded Electronic Longitudinal Alcohol Study in Communities (ELASiC) with Cardiff, Swansea and Bristol Universities. <http://www.cardiff.ac.uk/violence-research-group/research-projects/alcohol-misuse>
- A National Awareness and Early Diagnosis Initiative Cancer Research UK funded study to pilot the evaluation of the Tenovus health check: a targeted cancer awareness intervention for people from deprived communities with Cardiff University and Tenovus (ABACus). <http://medicine.cf.ac.uk/primary-care-public-health/research/healthcare-communication/development-and-pilot-evaluation-tenovus-health-check/>
- A commercially funded, multi-centre study (EXTEND) sponsored by Astellas Pharma Europe Ltd which involves NHS organisations in Wales and England, and also involves Switzerland, Norway, Russia and Turkey. <https://clinicaltrials.gov/ct2/show/NCT02254967>



- A NIHR-HTA funded multi-NHS site novel peer-support intervention using Motivational Interviewing for breastfeeding maintenance (Mam-Kind). <http://www.nets.nihr.ac.uk/projects/hta/131805>
- The National Centre for Population Health and Wellbeing Research funded by Health and Care Research Wales. The Centre has the aim of co-ordinating multi-institutional, multi-disciplinary, multi-agency health and social care research, collaboration with policy and practitioners, and public involvement across Wales (Box 3). <http://www.healthandcareresearch.gov.wales/national-centre-for-population-health-and-wellbeing-research/>

Box 3. National Centre for Population Health and Wellbeing Research

The National Centre for Population Health and Wellbeing Research (NCPHWR) brings together public health expertise from:

- Public Health Wales
- Swansea, Cardiff and Bangor Universities

The NCPHWR aims to make a significant impact upon the health and wellbeing of the population of Wales through applied research. The Centre will achieve these aims by addressing the multiple challenges in generating an evidence base for public health policies, services and interventions, and implementing these on a scale that makes a population level impact. NCPHWR will co-ordinate multi-institutional, multi-disciplinary, multi-agency health and social care research, collaboration with policy and practitioners, and public involvement across Wales. It is recognised that involving and engaging the population of Wales is crucial for the public to be enthusiastic owners of and participants in research. Accordingly, workshops will take place with Involving People network members with the intention of proposing and agreeing mechanisms for public involvement in study design and delivery. NCPHWR will have a research focus in two policy priority areas: (a) children and young people; and (b) the promotion and maintenance of health through an extended working life.

Public Health Wales is leading on knowledge transfer and will facilitate NCPHWR to work with the Public Health Network Cymru to support engagement and collaboration with practitioners in Public Health Wales, local health teams, Health Boards, Local Authorities, third sector organisations and other key stakeholders.

The Centre presents an excellent opportunity to strengthen Public Health Wales' links with academia, industry and the third sector. It will aid Public Health Wales in making a greater impact on the health and wellbeing of the population of Wales through collaborative research and timely translation of research findings to policy and practice.

NCPHWR was launched on the 14th May 2015 along with four other centres of research excellence and three research units in Wales. The NCPHWR programme was awarded through a competitive tendering process and is funded by DSCHR at £2.25M over three years in the first instance.

6 Generating new knowledge to protect and improve population health and wellbeing and promote sustainable health care

6.1 Research priorities 2015 – 2018

The broader public health challenges for Wales are laid out in the Chief Medical Officer for Wales' report for 2014 and reflected in the 2015-2018 Public Health Wales Strategic Plan. These include the need to tackle persistent inequalities in healthy life expectancy, childhood obesity, reduce the overall consumption of healthcare and prepare services and communities for the challenges of an increasingly ageing population.

New research is needed to find innovative ways to achieve effective and efficient change in this complex environment. We need to understand the attitudes, behaviours and factors that drive unhealthy behaviours and perpetuate health inequalities. Critically, such understanding must be translated into evidence-based and evaluated action for change. Public Health Wales will actively engage with partners in developing and testing new procedures, interventions, policies and programmes, working in different settings (e.g. in schools, workplaces) to improve health and wellbeing outcomes. In doing this, we will support and encourage the use of the Secure Anonymised Information Linkage (SAIL) databank for the evaluation of public health programmes and policies⁷. To realise this ambition we will prioritise research activities that have clear alignment with the organisation's strategic priorities while ensuring that we are still capable of responding to emerging issues.

The key actions Public Health Wales will take to facilitate research are outlined in section 7.

6.2 Principles underpinning research

Through working together with experts nationally and internationally, Public Health Wales will develop the research capacity and capability required to provide professional, scientific and implementation expertise and advice to the public and our partners in the public health system. In so doing, the research that Public Health Wales supports and participates in should aspire to follow the principles outlined in Box 4.

Box 4. Principles underpinning research

Public Health Wales will develop and engage in high quality research that:

- Is expected to make a difference to public health outcomes.
- Is conducted in an ethical manner and in accordance with the appropriate research permissions.
- Is relevant to current research priorities (see section 6.1).
- Uses a range of methods appropriate for the purpose of the research (including quantitative, qualitative and mixed methods).
- Fosters research collaborations internally and externally across different agencies, disciplines and partnership working with government departments wherever possible.
- Is conducted collaboratively with those likely to be affected by the research by linking researchers with policy-makers, practitioners and the public.
- Is aligned with the strategic priorities for Public Health Wales as outlined in the Public Health Wales Strategic Plan.
- Is appropriately funded to ensure timely delivery and dissemination of research outputs.

⁷ The SAIL databank brings together the wide range of routinely-collected healthcare data in Wales for longitudinal research, development and evaluation. <http://www.saildatabank.com/>

6.3 Commercial research strategy

Public Health Wales is engaged in commercial activities, both as a research site and by seeking to increase revenue through the marketing of our services. Through the development of a Commercial Unit, we will further explore and exploit opportunities for joint ventures and partnerships, via a greater business focus with social enterprises and the wider commercial sector including pharmaceutical companies.

Public Health Wales will also continue to work with Health and Care Research Wales to identify opportunities for commercial research. By informing Health and Care Research Wales of our research activities, we will be able to work with them to develop a commercial research portfolio. Ongoing work will be directed toward improving knowledge transfer between research and commercial opportunities. Better translation of research into commercial outcomes is a key part of building our capacity. Public Health Wales will increase research income by:

- Working with commercial partners to maximise external income (grants, support services and commercial income)
- Ensuring transparency in financial costings and management and resource allocation. This includes ensuring all commercial and non-commercial research is costed in line with relevant costing templates.
- Working with Health and Care Research Wales in identifying further opportunities to enhance collaboration between publicly funded research agencies and industry.

This will support our intention to further enhance and develop our international reputation through the delivery of high impact research.



7 Creating an environment that supports research in Public Health Wales

While there are currently limited enablers for staff to participate in research⁸, there is a clear recognition from the Public Health Wales Board and throughout Public Health Wales of the importance of encouraging a research culture. There are already pockets of research excellence and projects that involve working across the directorates and divisions, which should be seen as beacons to share and grow such expertise.

7.1 What our survey told us

Respondents to the survey circulated within Public Health Wales perceived a lack of organisational support for participation in research and very limited opportunities to engage in research in some specialisms. Securing protected research time was seen as a key barrier, as well as a perceived lack of mentors for research who can advise and provide guidance. Staff development through training in research methodologies, data analysis and interpretation, the use of routinely collected health and social care datasets, information and research governance processes were identified as priority areas to enable participation in high quality research studies.

7.2 Actions to support research

In order to achieve better integration of research in delivering Public Health Wales' vision for a healthier, happier and fairer Wales, this research strategy highlights four key areas for action:

- Developing and supporting Public Health Wales' research capacity.
- Facilitating the generation of new knowledge.
- Strengthening public engagement and collaborations with Higher Education Institutions, MRC Centres of Excellence for public health (DECIPHER) and e-Health research (CIPHER), Welsh Government, Health Boards, the other NHS Trusts in Wales, Health and Care Research Wales infrastructure, third sector organisations and other agencies such as police, education and social services that have a wider public health interest in Wales to co-produce and drive forward our shared research agenda.
- Increasing the profile of Public Health Wales' research by communicating widely with our stakeholders and promoting the translation of research into public health policy and practice.

7.3 Developing and supporting Public Health Wales' research capacity

All staff involved with the development and delivery of public health services should have the appropriate level of research skills to enable them to access and use the evidence base and contribute to generating evidence that informs their practice. Using the evidence base and engaging with research activity is key for the organisation to achieve its commitments. It is recognised that people in the organisation have different levels of research skills, and that all need to be given the opportunity to develop these further to contribute to the evidence base within their service area.

What our staff think:

- “I think we should be enabling staff to engage with the research as part of their role but in partnership with others... senior staff [should] encourage a climate in which research is part of their role.”
- “We can guide our appraisers to support and encourage people they are appraising.”
- “We should think about research that is more applied and relevant to the priorities of the organisation. We need much greater scrutiny of the research methods and the application to practice it.”

⁸ A theme identified in the Public Health Wales' staff research survey.

Developing the research skills of staff will also benefit Public Health Wales in other ways such as raising the reputation and value of the organisation to a wider audience and encouraging the recruitment and retention of high-quality staff. Undertaking research can also increase the research literacy of the workforce, allowing greater interpretation and application of research findings to bring about service improvements. Research contributions by Public Health Wales staff can offer a different perspective to academic or industry organisations and provide novel approaches, thereby enhancing the depth and quality of public health research and its impact. The benefits for staff who undertake research are summarised in Box 5.

Box 5. Benefits to Public Health Wales' staff who undertake research

There are considerable benefits for Public Health Wales' staff who undertake research. These include:

- Opportunities to partake in rewarding and empowering activities.
- Development of transferable skills.
- New career opportunities
- Opportunities for staff to influence policy.
- Networking opportunities.
- Potential for the formation of new relationships and partnerships.

In order to develop and support our research capacity, Public Health Wales will:

- 1.1. Support and encourage regular journal clubs within and across divisions.
- 1.2. Support staff to gain training in a comprehensive range of quantitative and qualitative research methods, data analysis and interpretation, the use of routinely collected health and social care datasets and research governance processes. Where appropriate, staff will be supported to gain qualifications in a variety of areas such as public health, mathematical modelling, statistics, health informatics, epidemiology and genomics.
- 1.3. Develop research roles for public health professionals from non-medical and medical backgrounds to promote equity and reflect the multi-disciplinary nature of public health.
- 1.4. Develop the high level capacity required to provide statistical and health economics support within Public Health Wales and through collaboration with HEIs. This will include mapping the capabilities and capacities that already exist and considering how to utilise these skills in the most effective way to support costed evaluation of the impact of public health activity.
- 1.5. Provide guidance for appraisers and appraisees in the appraisal and revalidation cycles to support research objectives as part of their personal development plans and encourage research to routinely feature in the Public Health Wales' Performance Appraisal Development Review.

The Policy Research and International Development Directorate will:

- 1.6. Strengthen and streamline systems for research management and governance, ensuring the implementation of the R&D Strategic and Divisional/Directorate Groups.
- 1.7. Develop a model that supports research activity within local public health teams.
- 1.8. Develop a standard set of criteria to evaluate the viability of internally funded research projects and a network of academics that can be called-upon to provide scientific peer-review for quality assurance.
- 1.9. Raise awareness of the research governance processes and the support that is available for research activity within Public Health Wales.
- 1.10. Develop a virtual research community for Public Health Wales, linkages with other similar networks to share examples of good practice, promote networking, avoid duplication and increase understanding of the types of research and development and public engagement activities that individuals may seek to include in their job plans.
- 1.11. Develop a series of staff development workshops focussed on research methodologies, public involvement and engagement in research and practical skills such as writing up research for publication in peer-reviewed journals.
- 1.12. Liaise across Public Health Wales divisions to help identify research needs, prioritising and supporting these as appropriate and in line with Public Health Wales Operational Plans as they relate to each division, including ensuring research is also linked with academic, Welsh Government policy objectives, other public sector and third sector partners.

7.4 Facilitating the generation of new knowledge

Through the recently launched National Centre for Population Health and Wellbeing Research, Public Health Wales will take a lead role in ensuring the research agenda is linked into and works to support improvements in public health across Wales. As well as ensuring that established and emerging areas of research in health protection and screening continue to develop, we will prioritise research that supports the shared priority areas across the public health system⁹ particularly in the areas of childhood obesity, smoking, improving mental health and wellbeing and reducing inequalities. Cross-cutting issues include developing the role of nurses and midwives in primary and secondary prevention activities, the effectiveness and cost-effectiveness of services delivered by Public Health Wales and establishing evidence informed and evaluated approaches to multi-agency working.

What our stakeholders said:

“The big health challenges are things like childhood obesity, smoking, and healthy ageing... we don't know what the evidence base is around how we keep people healthy in older age. I would like Public Health Wales to be engaged more in making a change to the population's health, with an emphasis on introducing programmes or activities with communities, and working with different public sector organisations that will actually drive improvements.”

“The research strategy should be multi-professional, where clinical academic roles are developed for nurses and midwives and allied health professionals, linking with the universities, the schools of medicine, nursing and the allied health. I think there are opportunities to do shared work between service and education, the higher education side.”

“There are particular lifestyle issues for example, poverty and obesity, which are a particular concern for us to do something about. So the position that we're in, in terms of policy making, is that we need to reduce the overall consumption of healthcare.”

In order to facilitate the generation of new knowledge, Public Health Wales will:

- 2.1. Provide a framework for systematic implementation and robust evaluation of public health activity, including measuring cost-effectiveness, and understanding the impacts on population health and wellbeing.
- 2.2. Encourage and support collaborative projects that use routinely collected health and social care data and record linkage to evaluate public health programmes and policies.
- 2.3. Support research that informs implementation and scaling up of programmes that work.
- 2.4. Adapt and better utilise our systems for identifying and tracking diseases and exposures to infectious and environmental hazards to facilitate research.
- 2.5. Engage with HealthWise Wales¹⁰ and use opportunities to engage with the public and carry out population health research within this framework.
- 2.6. Make available internal funding to pump-prime new and promising research activities or pilot studies.

The Policy Research and International Development Directorate will:

- 2.7. Encourage staff to develop research proposal ideas based on their public health practice experience and, where appropriate, support them in developing research bids to external funders e.g. through the organisation of workshops and seminars, and links with the Research Design and Conduct Service (see Box 6).
- 2.8. Facilitate connections with national and international research funders so that Public Health Wales and its partners are informed about opportunities to access research income.
- 2.9. Provide access to tools, advice and information that promotes and supports research and evaluation for public health practitioners across all sectors in Wales through Public Health Network Cymru.

7.5 Developing and strengthening collaborative relationships

Public Health Wales can deliver primary research as a strong, effective and active partner working in collaboration with others, both nationally and internationally, to secure external funding, deliver research outputs, and translate new knowledge into policy and practice. This will be facilitated within a context that acknowledges the differences between academic research and service delivery, identifying joint working that is mutually beneficial.

Many funders of research require universities to demonstrate the applied impact of their research, which creates an opportunity for multi-disciplinary research teams that include participation from Public Health Wales. Through the National Centre for Population Health and Wellbeing Research and other strategic research collaborations, Public Health Wales will help to ensure a coherent public health research agenda that maximises added value and avoids duplication.

A sustainable model for student work placements, shared postgraduate supervision, staff secondments and joint appointments with HEIs is needed to enable academics to work with Public Health Wales' staff to develop research portfolios and increase research grant capture from external sources. This should also provide academics with an insight into Public Health Wales service areas, demonstrating areas where research outputs can potentially be translated into practice.

Public Health Wales has a role in training specialty registrars. We will strengthen the provision of academic supervision and training placements through collaboration with HEIs. We will continue to support the annual training conference as an event that showcases the research activity that specialty registrars have been engaged with at the academic-service interface.

Public Health Wales will expect research publications and research grant submissions to clearly acknowledge the support provided by Public Health Wales, including authorship for Public Health Wales staff commensurate with input and in accordance with guidelines for authorship. For research grant applications, the role of Public Health Wales staff should be clarified in advance, with appropriate costs included for staff time and services provided.

In order to develop and strengthen collaborative relationships, Public Health Wales will:

- 3.1. Widen collaborative partnerships with academia to include all HEIs in Wales and promote collaborative research opportunities that extend beyond the academic-service interface to include links with Welsh Government, local authorities and local Health Boards.
- 3.2. Encourage and support national and international collaboration in areas of strategic importance to ensure access to the most innovative ideas, technologies and information that will have an impact on population health and wellbeing in Wales.
- 3.3. Engage with representatives from HEIs (including academics specifically involved in the training of allied health professionals) to further develop a sustainable model for student work placements, shared postgraduate supervision and staff secondments to provide protected time on a finite piece of work over a clearly defined period of time with Public Health Wales' Professional and Organisational Development team.
- 3.4. Strengthen the academic-service interface with joint appointments between Public Health Wales and HEIs where possible, with a planning cycle of 3-5 years to help create stability with HEIs and promote staff retention.
- 3.5. Support Public Health Wales staff to secure Principal Investigator (PI) or co-PI status on projects as appropriate to ensure that Public Health Wales receives the resource required to participate in and deliver on research and are involved with agreements about intellectual property and data sharing.
- 3.6. Strengthen collaboration with local Health Boards in the generation and delivery of research, utilising Health Boards as test beds for primary research that addresses the wider determinants of health and inequalities.

Box 6. The Research Design and Conduct Service

The Research Design and Conduct Service

The Research Design and Conduct Service (RDCS) is a free service available to researchers with NHS contracts who are looking to win funding to do research. RDCS provides expert advice and guidance on all aspects of compiling high quality funding applications. They have four core consultants and can additionally draw on all of the staff of the South East Wales Trials Unit to act as consultants to provide specific guidance or to help when there are capacity issues. To date RDCS has consulted on well over 150 projects and have been involved in winning over £1.65M in funding. They have a national remit in supporting Public Health Wales and have strategic links with them, as well as a regional remit to support researchers based in South East Wales.

The Policy Research and International Development Directorate will:

- 3.7. Raise awareness about the Research and Development office in Public Health Wales with external stakeholders and take on the role of a 'one-stop shop' to explore research collaborations within the organisation. This includes bringing together relevant Public Health Wales staff and external partners with similar interests for grant writing.
- 3.8. Use the International Health Co-ordination Centre to identify and initiate international research collaborations and partnerships.
- 3.9. Ensure staff in Public Health Wales link to and benefit from external support services such as the Research Design and Conduct Service (Box 6).
- 3.10. Continue to support the annual all Wales training conference for public health specialty registrars, and encourage the placement of specialty registrars in HEIs.

¹⁰ HealthWise Wales is a Health and Care Research Wales initiative for a Welsh National Population cohort study, which will engage with the population of Wales and encourage them to become actively involved in research to improve health and wellbeing, and provide a platform for research, policy and service development and evaluation. <http://www.healthwisewales.gov.wales/>



7.6 Effectively communicating what we know

Effective communication of the research agenda both within the organisation and with stakeholders and the public is important in order to promote and support research. Public and stakeholder engagement needs to be embedded into the culture of Public Health Wales. The new paradigm for prevention is through co-production, therefore innovative methods of engaging the public in developing the research agenda and generating data to inform future policies and programmes is needed. All teams need to understand their own public and stakeholder engagement priorities. Consideration should be given at the earliest stage to public engagement in the co-production of research proposals.

Robust, independent research is instrumental in helping to shape policy and to ensure that the benefits to population health are maximised. Equally, the empirical assessment of implemented policy is necessary in order to help ensure policy improves health and reduces health inequalities. Public Health Wales will continue to work with the Welsh Government to empirically assess the impact of policy in delivering improved services.

Knowledge mobilisation is concerned with ensuring that knowledge, generated through research, data analysis, innovation or evaluation, is used in policy and practice to inform decision-making. Public Health Wales is developing a strategy for knowledge mobilisation which aims to ensure that knowledge is utilised across the public health system to best effect (Figure 4). The Knowledge Mobilisation Strategy focuses on a number of key themes which will be developed into work-streams within an implementation plan: culture and leadership; systems and processes; workforce development; partnerships with key stakeholders. The strategy will interface with others, such as this research strategy, enabling knowledge 'outputs', such as those from research activity or evaluation, to be systematically picked up and proactively disseminated and to ensure that we learn from them.

What our stakeholders said:

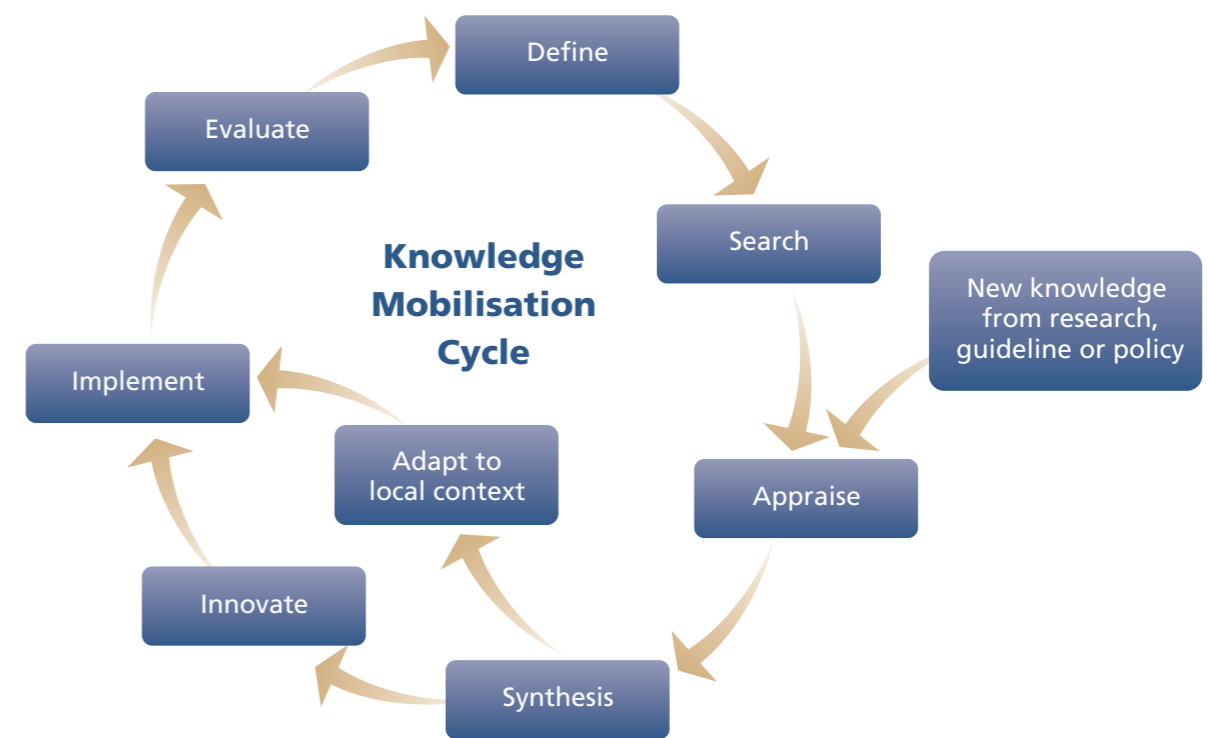
“It’s getting more difficult for people to do research in conjunction with local public health teams. There are opportunities for us and we should be thinking about identifying some of those niche areas that people can do research in.”

“It’s important to consider the area of co-production. We see a considerable number of community-based programmes facing up to some of the more serious issues, be they diet, exercise or community programmes which look at economic, social or cultural development; they’re all the wider determinants, which have health as a by-product.”

“Public Health Wales has got to bring money in for research and be part of more multi-site activities in the UK and Europe. [Public Health Wales] should be involved in partnering and collaborating in a more organised, proactive and strategically led way.”

Figure 4. The knowledge mobilisation cycle highlighting various stages of the process.

A population health need or change process is initially identified and assessed together with existing knowledge, where this exists. Implementation may involve changes to practice followed by evaluation to determine effectiveness of the outcomes.



In order to effectively communicate what we know, Public Health Wales will:

- 4.1. Encourage and support staff (including specialty registrars) to publish their work in peer-reviewed journals and other peer-reviewed media.
- 4.2. Revisit the format for the Public Health Wales staff conference and explore the potential for a conference programme that includes the service-academia interface, linking with academic partners.
- 4.3. Support staff to present their research findings at national and international conferences.
- 4.4. Encourage staff to develop plans to improve public engagement and consult with and involve public and patients throughout their research.
- 4.5. Facilitate conferences, seminars and workshops promoting evidence-based practice for practitioners and researchers working on public health priorities in all sectors in Wales.

The Policy Research and International Development Directorate will:

- 4.6. Produce a monthly Research and Development bulletin and utilise the Public Health Network Cymru and Public Health Wales internet to advertise research news and funding opportunities.
- 4.7. Put in place systems to better capture outputs from the research that Public Health Wales has been involved with, including plans for implementation and monitoring the uptake of research findings into practice.
- 4.8. Signpost to all relevant new and emerging evidence and research where appropriate through existing organisational web sites and communications platforms and through the newly launched Public Health Network Cymru website (www.publichealthnetwork.cymru) (www.rhwydwaithiechydycyhoedd.cymru)

7.7 What will success look like?

Successful implementation of this research strategy alongside the Public Health Wales Strategic Plan will enable Public Health Wales to demonstrate the impact of its activity on promoting equality in health and wellbeing outcomes in the population. Public Health Wales will establish a research track record with partners and position ourselves to be able to increase our research income from Europe and blue-chip funders in the future.

Specifically, there will be:

- At least 75% of all our research activity aligned with the strategic priorities for Public Health Wales as outlined in the Public Health Wales Strategic Plan, and be directly applicable to enabling the organisation to deliver on these priorities¹¹.
- Research projects carried out in Public Health Wales will employ rigorous methods to ensure that they are delivered to the highest standards and produce high quality outputs.
- A shared research agenda across the public health system that is synergistic with the National Centre for Population Health and Wellbeing Research.
- A clear and coherent pathway for external partners to engage with Public Health Wales on research.
- An active public health research community.
- Year on year increase in the number of publications by Public Health Wales staff in peer-reviewed journals.
- At least a 30% increase in external research funding over the next three years from the baseline levels in 2014.
- A clear and coherent pathway for knowledge mobilisation and communication to facilitate and promote evidence-informed policy and practice.

8 Conclusion

This research strategy will contribute to Public Health Wales' ambition to protect health and improve the physical, emotional and social health of the nation through evidence-based public health practice and policy.

Over the next three years, Public Health Wales will work with other funders of health and social care research and HEIs to support and accelerate the translation of research into practice and policy and large-scale implementation of cost-effective interventions and programmes.

Public Health Wales will make efficient use of available resources and undertake joint working initiatives wherever possible. Collaborations will continue to be sought to ensure complementarities with academia, local authorities, Welsh Government as well as public, private and third sector organisations. Funding opportunities will be explored for areas of strategic importance from various sources nationally and internationally to strengthen the science and knowledge base. A delivery plan will be developed that includes a framework for evaluation against which we will review and refresh this strategy in 2018.

9 Acknowledgements

This research strategy is the product of contributions and ideas from the following stakeholders. Public Health Wales would like to thank all who participated in the development of the strategy and hope that such broad-based support continues throughout its implementation.

- Aberystwyth University
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- Cardiff Metropolitan University
- Cardiff University
- National Institute for Health Research
- Division of Social Care and Health Research (formerly NISCHR).
- Public Health England
- Research Design & Conduct Service
- South East Wales Trials Unit
- Swansea University
- Tenovus
- Welsh Ambulance Services NHS Trust
- Welsh Government

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Journalists wishing to contact Public Health Wales should call 029 2034 8755 (24 hours). There is a communications officer on call at all times. Public Health Wales welcomes correspondence in Welsh or English.

¹¹ As we transition to Public Health Wales wider strategic aims as outlined in the Public Health Wales' Strategic Plan it is anticipated that there will be a period where ongoing research or activities to which we are committed but which do not fit the Strategic Plan, will need to progress to their natural end. There is also research income generated in Public Health Wales e.g. from testing assays etc which can lead to new diagnostic tests that does not easily map on to the Strategic Plan but are central to the lab's day to day activities.

Appendix 1

Differentiating research, service delivery, surveillance and monitoring in public health¹²

	Research	Service delivery	Service evaluation and audit	Surveillance and monitoring
Aims and objectives	Derive generalisable new knowledge through studies designed to generate and test hypotheses to answer clearly defined questions.	Provide social and health care to protect, treat or prevent ill health and promote good health.	Define current care to find out if you are doing planned activity. Assess the impact and effectiveness of the activity to inform delivery of best care.	Continuous, systematic collection, analysis and interpretation of health-related data with dissemination to stimulate action. This can be used for the planning, implementation, and evaluation of public health practice. Surveillance can serve to warn about impending public health emergencies, monitor progress towards specific goals or monitor the epidemiology of health problems to allow priorities to be set and to inform public health policy and strategies.
Design and Allocation	Randomisation i.e. clearly defined sampling with allocation to groups.	May involve some group allocation but treatment should remain unaffected and based upon best evidence.	No randomisation as allocation will have been decided before service evaluation begins.	Although surveillance can be used to document the impact of an intervention, or track progress towards specific goals, it does not involve intervention and so there is no allocation to groups.
Method and data collection	Test hypotheses following established methods. This may involve collecting data and can include treatments, samples and investigations additional to routine care.	Allied health professional and practitioner led delivery of services. Systematic statistical methods may be used.	Measure current services and programmes. Can involve analysis of existing data or evaluation of services by interview or questionnaire.	Systematic statistical methods including sampling or analysis of collected data or interview/questionnaire to those exposed.
Ethics	Research will often involve Research Ethics Committee review, unless it solely involves analysis or linkage of previously anonymised data.	No Research Ethics Committee review is usually required.		

¹² Definition of health based upon WHO and Health Research Authority research definitions
<http://www.hra.nhs.uk/documents/2013/09/defining-research.pdf> http://www.who.int/topics/public_health_surveillance/en/