
Strategies for public health research in European Union countries

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Introduction: 'Health' is an identifiable theme within the European Union multi-annual research programmes. Public Health Innovation and Research in Europe (PHIRE), led by the European Public Health Association, sought to identify public health research strategies in EU member states. **Methods:** Within PHIRE, national public health associations reviewed structures for health research, held stakeholder workshops and produced reports. This information, supplemented by further web searches, including using assisted translation, was analysed for national research strategies and health research strategies. **Results:** All countries described general research strategies, outlining organizational and capacity objectives. Thematic fields, including health, are mentioned in some strategies. A health research strategy was identified for 15 EU countries and not for 12. Ministries of health led research strategies for nine countries. Public health research was identified in only three strategies. National research strategies did not refer to the European Union's health research programme. **Conclusions:** Public health research strategies of European countries need to be developed by ministries of health, working with the research community to achieve the European Research Area.

PHIRE (Public Health Innovation and Research in Europe), led by the European Public Health Association (EUPHA), has studied the uptake of public health innovations in European countries and assessed national public health research systems. This seventh article of nine in the PHIRE Supplement of the *European Journal of Public Health*¹ reports the national health strategies in European countries.

Introduction

The World Health Organization (WHO), in its Strategy on Research for Health,² states 'Each country has a responsibility to develop its own agenda for research in order to respond to the health needs important to its population within its own social, political and environmental setting'. WHO and European Union (EU) member states have supported global meetings for ministers of health and of science,³ and the Council for Health Research and Development has emphasized capacity development,⁴ including funding.

Research and innovation together have an important place in current European policy.^{5,6} The EU Seventh Framework Research Programme allocated around two-thirds of its research funds to cross-national collaborative research on specific themes, totalling around €650 million per annum for health research,⁷ and within this €30 million per annum for public health research.⁸ European research funding has been available for strategic approaches⁹: Research Infrastructures enable collection of European data for open analyses; ERA-NETs enable coordination on topics between national research organizations; and Joint Programming enables researchers across countries to collaborate on specific fields. In Joint Programming for Neurodegenerative Diseases, research priorities range from life sciences to health and social care.¹⁰

A second tranche of European Union funds for research and innovation has been available to national governments through the European Structural Funds. Much of this funding has gone to the new

EU member states. There has been strong emphasis on use of these funds for industry, but little has gone to public health research.¹¹ Yet most European research is undertaken with, and funded by, European country national funds. The EU consults on member states' views of European research themes, but has less knowledge of member states' own research strategies. This article describes the national health research strategies, and compares broad approaches by country.

Methods

PHIRE was a collaborative project with leadership of the EUPHA.¹² In the first phase, country informants reported on national uptake of selected public health innovations, and national public health associations identified public health research programmes and calls and reviewed national public health research systems. In the second phase, materials were provided for national public health associations to hold stakeholder workshops and to make national reports.

This report draws together information on national research strategies and health research strategies within the PHIRE national reports following stakeholder workshops.¹³ To gain information for all EU countries (and Switzerland), they were supplemented through reports on research systems from STEPS,¹⁴ data from the European Commission's webpage ERAWATCH¹⁵ and targeted Internet searches. The available materials were tabulated in comparative form (Supplementary Table S1), and reviewed for health research strategies and public health research strategies, respectively. Results below include quotations from the materials tabulated and indicative years of publication.

Results

Health within broader research strategies

Health research strategies were sought across 27 EU countries and listed by general research strategy and health strategy. For all

Table 1 Countries listed according to health research strategies found

Health a main theme of general research strategy	Health mentioned as a priority in general research strategy with health priorities	Health a priority in general research programme	Health research strategies led by Ministry of Health	Health research programme of Ministry of Health includes public health	No health research strategies
Denmark	Czech Republic	Cyprus	Czech Republic	Czech Republic	Austria
France	Latvia	Italy	Denmark	Italy	Belgium
Germany	Romania	Lithuania	France	UK	Bulgaria
Ireland	Slovakia	Poland	Germany		Estonia
Netherlands			Ireland		Finland
Sweden			Italy		Greece
UK			Sweden		Hungary
			UK		Luxembourg
					Poland
					Portugal
					Slovenia
					Spain

Table 2 Examples of public health research within national strategies

Country	Reference
Denmark	Ministry of Health. Danish health research: status and perspectives. Copenhagen, 2008. Capital Region of Denmark. Future European challenges: aims for European health research. Copenhagen, (no date)
France	Inserm (National Institute for health and medical research). Our strategy for life and health sciences 2010–5. Paris, 2010.
Germany	BMBF (Federal Ministry of Education and Research). Health research framework programme of the Federal Government. Berlin, 2010. BMBF (Federal Ministry of Education and Research). Health Research: Scientific Research for the People. Bonn, 2001.
Ireland	Health Research Board. The future of Irish health research. Dublin, 2009. Hiney, M, Curran, B and Clarke P (2011) Review of population health research and health services research in Ireland. Health Research Board, Dublin.
The Netherlands	NWO (Netherlands Organization for Scientific Research). Growing through knowledge. NWO Strategy 2011–14. The Hague, 2010.
Sweden	Swedish Council for Working Life and Social Research. Research on people's working life, public health and welfare. Research strategy 2009–2012. Stockholm, 2008. Källestål C and Swanberg I. Part 2: An inventory of Swedish public health research. <i>Scandinavian Journal of Public Health</i> 2005; 35(Suppl 65):17–45.
UK	Department of Health. Best Research for Best Health: A New National Health Research Strategy. The NHS contribution to health research in England. London, 2006. National Institute for Health Research. Public health research programme implementation plan 6.9. http://www.nihr.ac.uk/files/pdfs/Implementation%20Plan%206.9%20Public%20Health%20Research%20Programme%20%28PDF%29.pdf (1 October 2013, date last accessed)

countries, except Portugal, there was a general strategic document setting out the broad approach to funding and support to research. Countries were tabulated by health research strategy (Table 1). Health research strategies or priorities within programmes were identified for 15 countries. Health was within general research strategies in six countries; four countries without formal strategies had health research priorities; and there were health priorities within general research programmes of four countries. A further two countries, as well as six included in the previous groups, had research strategies and programmes led by ministries of health. No health research strategies or priorities with programmes were found for 12 countries. Examples of national health research strategies are shown in Table 2.

Health was identified within general research strategies in six countries. In **Denmark**, 'Health and Prevention' (including the sub-topics 'Chronic disease between prevention and rehabilitation' and 'Healthy Lifestyles—what creates change?') was one of six themes in the strategy. In **France**, the National Research and Innovation Strategy had 'Health, care, nutrition and biotechnology' as one of three priority areas. The Science Council of Ireland publication 'Towards better health; achieving a step change in health research in Ireland' (2006) identifies health research as a key function within the Irish health service. The **Netherlands** Organization for Scientific Research (NWO) Strategy (2010) has 'six themes' of which the first is 'Healthy Living: prevention, cure and long-term care'. In **Sweden** the Research Council Research

strategy includes the Scientific Council for Medicine and Health 'subject list': 'Tomorrow's challenges include aging population and lifestyle-related diseases, and need for competence in health economics, epidemiology and records research, as well as 'coordinating centres of excellence'. The **UK** Medical Research Council strategic plan 'Research changes lives' has broad aims, including 'research priorities likely to deliver improved health outcomes; bringing benefits to all sections of society; and international health research'. No strategy could be found in some other countries with otherwise strong health research activity, including **Finland** and **Spain**.

In four countries, the national research strategies and priorities identified health research priorities. The **Czech Republic** Research Policy Priority area 5 considers the 'healthy population to be a cornerstone of an economically, socially and humanly successful society'. **Latvia** set nine priority areas for 2006–9, including 'medicine', and priorities for 2010–3 include 'health: preventive, treatment, diagnostic means and methods, biomedical technologies'. The **Romania** Ministry of Education's National research, development and innovation strategy (2007–13) has nine priority areas, including 'health'. In **Slovakia**, the 2007 Long-term Plan of the State Science and Technology Policy by the Year 2015 put 'Health—quality of life' as the first of 12 substantive thematic priorities: however, an update in 2011 (the Fenix Strategy) said that '12 thematic research priorities mean no priority' and

recommended that 'top quality research in any field of science' should be supported.

General research programmes also revealed health priorities. The **Cyprus** Research Promotion Foundation DESMI programme has health research as one of five themes. **Italy's** National Programme of Research 2010–2 has a chapter for 'health and life sciences'. The **Lithuanian** Research Council National Research Programmes in 2008 included 'chronic non-infection diseases' as one of five programmes (and another was 'safe and healthy food'). **Poland** has moved from non-focused research, in 2011, adopting the National Research Program (KPB), which has seven broad R&D priorities, including 'lifestyle diseases, innovative drugs and regenerative medicine'.

Strategies for health research led by ministries of health

The **Danish** National Board of Health supports 'research focusing on the effects, organization and implementation of various initiatives to prevent disease and promote health. This applies to population-based initiatives and those oriented towards individual people'. Priorities for international cooperation include quality of health care, health technology, environment and health, research on interventions, controlling non-communicable diseases, health information technology, organization of health systems and combating social inequality in health. The Danish capital region also has a health research strategy.

The **French** strategic plan (for life sciences and health research together) priorities are: the aging population; degenerative and non-communicable diseases; environmental factors; new infectious diseases; management of rare diseases and efficiency and fairness of the health system where 'acceleration of medical innovation increases the need for regulation'. Thematic areas supported by GIS-IReSP (French Institute for Public Health Research) within Inserm were health services research, health public policies and health determinants.

The **German** Programme Health Research: Scientific research for the people, set by the Federal Ministry of Education and Research (BMBF) in 2001 together with the Federal Ministry of Health, presented four areas for action: Effective fighting of diseases, research on the health care system, health research in cooperation with industry and science, strengthening of the research landscape through structure optimization and innovation. The Health Research Framework Programme (2010) has six thematic areas: the structural challenge; individualized medicine; prevention and nutrition; health care; the pharmaceutical industry, biotechnology and medical technology; international cooperation in health research.

In **Ireland**, the health research board is organized under the Ministry of Health. Its strategic Business Plan 2010–4 goals are as follows: biomedical research, within a coherent health research system; population health sciences research and health services research; national health information systems; and synthesizing evidence, and promoting the application of knowledge. Ireland has also made a comprehensive review of public health research

In the **Netherlands**, NWO—the national research council—directly supports research on the molecular basis and epidemiology of disease, and research related to medical or health technology assessment. NWO together with the Ministry of Health supports ZonMW (Netherlands Organizations for Health Research and Innovation) across a series of 'Themes', including integrated care; ICT and e-health; rare diseases and orphan drugs; mental health; pregnancy and birth; youth; elderly; palliative care; sports, exercise and nutrition; participation; diversity; and efficiency.

The **Swedish** Council for Working Life and Social Research (FAS) has 'Targeted investments in the core areas of public health and social sciences', which include migration and ethnicity, alcohol and drugs, functional impairment, intervention research on the

effects of social measures, implementation of evidence-based knowledge, health economics research on health care systems, as well as environmental, social policy and social insurance, disability and drug abuse research.

In the **UK**, the National Institute for Health Research for England coordinates commissioning boards for programme areas, including: Evaluation, Trials and Studies; Health Technology Assessment (with a board for prevention within the National Health Service); Health Services & Delivery Research; Research for Patient Benefit; Clinical Research; Biomedical Research Centres and Public Health Research (for research on health interventions outside the healthcare system). There are similar strategies for research in the devolved nations (Northern Ireland, Scotland and Wales).

Two further countries have research programmes under the ministry of health with strategic direction towards public health. The **Czech** Republic's ministry of health has the Departmental Research and Development Programme III covering health care applied research (including diagnostics, therapy and prevention, and with 12 subsections and boards. Subsection 9 priorities are for health risks, way of life and prevention. Subsection 12 priorities are health care, health policy, health care systems. The **Italy** Ministry of Health annual call for health research in the National Health System (SSN) reserves part of the budget by law (e.g. for rare diseases, stem cell, food security and for the National Institute of Health), and also has an open call with applications assessed competitively by international evaluation. The **UK** has a specific public health research programme (for non-health service interventions) and a health services research programme within the Ministry of Health's overall research programme

Discussion

There was considerable variation in the quality of national information available. The analysis revealed a continuum of research strategies over three levels: general research strategies; research strategies including health; and public health research supported by Ministries of Health. Fifteen of the 28 countries had identifiable health research strategies, or priorities in programmes, and three for public health research. Health research strategies were not found in 13 countries, including two countries (Finland and Spain) with high health research outputs, but where funds are mainly allocated through intermediate national organizations. Comparison of national health research structures and financing is reported in an accompanying article.¹⁶

The European Union has strong programmes for health research, in contrast to health systems where the EU member states maintain control and policy ('subsidiarity'). Health research must also have national (and local) relevance. There could be benefits in linking national health research strategies in relation to the European Union strategy. North American examples of health research strategies developed across multiple constituencies include the consultation and report (2006) by the US Centers for Disease Control,¹⁷ and the consultation and Health Research Roadmap (2009) of the Canadian Institute for Health Research.¹⁸

With varying levels of research capacities within individual countries, research strategies must contribute to supporting, valuing and modernizing existing research programmes and capacities, as well as exploring new approaches and disciplines for health research, including the balance of medical and social sciences. Greater involvement of ministries of health and advisers with broad policy perspectives will also help strengthen for health research.

Conclusion

Just over half of European countries have health research strategies. Fewer are led by their Ministries of Health or have specific public health research strategies. Information on national health research

strategies should be improved through collaboration between countries and coordination with the European Union's health research strategy. Further work would make comparisons of the research themes within the health research strategies, particularly those led by Ministries of Health, which have contact with health systems, in relation to policy and service needs. EUPHA can provide a framework for continued data collection, comparison and analysis.

Supplementary Data

Supplementary data are available at *EURPUB* online.

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