

# Public Health Innovation and Research in Europe: introduction to the supplement

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**Background:** PHIRE (Public Health Innovation and Research in Europe) was developed for the national member associations and individual researchers of the European Public Health Association (EUPHA) to engage collectively with the health research agenda in Europe. It was co-funded by the European Commission's Directorate for Health and Consumers within the EU Health Programme. It was coordinated by EUPHA in a partnership of eight organizations. This article introduces the Supplement in the European Journal of Public Health presenting the results of PHIRE. **Methods:** PHIRE used mixed methods to collect data across 30 European countries (European Union 27 plus Iceland, Norway and Switzerland). Seven thematic Sections of EUPHA identified eight cross-national public health innovation projects, and Country Informants to report on national uptake and impact of these innovations. Public health was considered broadly—health determinants and interventions, health services and practice. Through EUPHA's member national public health associations, and by direct country contacts, PHIRE described country public health research strategies and structures, reviewed calls and programmes for research in 1 year and organized stakeholder workshops. PHIRE was reported to the European Commission, and the component reports placed on the EUPHA web page. A draft of the Final Summary Report was sent by email for commentary by selected experts. **Results:** PHIRE data from the work packages were organized into eight themes for the Supplement. Through the EUPHA thematic Sections, experts described the uptake and impact of eight innovation projects from the EU Health Programme. National reports indicated a positive impact of the innovations in public health 'markets'. Through national public health associations, 75 programmes and calls for public health research were found for 2010, but systems are not comparable and nor is information exchanged or coordinated. Only a few countries have public health research strategies. Having competitive research funding through Ministries of Health is potentially beneficial. There is limited contact between national and European public health research programmes and calls. Experts who were sent the draft PHIRE Summary Report gave generally positive responses on the validity and usefulness of the results. Dissemination has been achieved through meetings during the study and by electronic means thereafter. **Conclusion:** PHIRE has increased knowledge about public health innovation at national and European levels. Strengthening the public health research system, and demonstrating innovation in public health markets will maximize benefits to Europe's citizens.

PHIRE (Public Health Innovation and Research in Europe) was developed as a collaborative study working through the European Public Health Association (EUPHA) to identify the uptake of public health innovations and assess public health research systems in European countries.<sup>1</sup> The results of PHIRE are reported in this Supplement of the *European Journal of Public Health*. This Introduction describes the following articles and the responses of experts to PHIRE.

## Introduction

At the tenth annual scientific meeting of EUPHA, held in Dresden in 2002, a plenary discussion<sup>2</sup> debated the lack of public health research within the European Union's Sixth Framework Research Programme (2002–2006). Among the speakers, Hans Stein, who for many years was a spokesperson for the German Ministry of Health at European level and advocate for European public health research, described the complex development of the European research programmes,<sup>3</sup> which are led by the European Commission, controlled by politicians (in the European Council and European Parliament) and influenced by a wide range of stakeholders. Public health scientists, Stein proposed, should seek to be more influential in this process, both at national and European levels.

The European Commission's Sixth Framework Research Programme (2002–2006), in support of human genome research, linked medical research together as 'Life sciences, genomics and bio-technology for health'.<sup>4</sup> In a 'cross-cutting' theme, however, 'Research for Policy Support', a call was made in 2004 for a Support Action on public health research.<sup>5</sup> SPHERE<sup>6</sup> (Strengthening Public Health Research in Europe), the successful consortium of 17 partners, was led by the UK Faculty of Public Health, with University College London and EUPHA. SPHERE reviewed public health research at European level and in four European neighbourhood countries, and made bibliometric studies by country of six areas of public health research—health promotion, health services, environmental health, genetic epidemiology, infectious disease control and health management.<sup>7</sup> These showed a 10-fold range in publication rates across EU countries.<sup>8</sup>

Because of the situation identified in the new EU member states, partners from SPHERE followed-up with a proposal to the Seventh Framework Programme's Science in Society call. STEPS (Strengthening Engagement in Public Health Research<sup>9</sup>) addressed the contribution of civil society organizations to health research in these 12 countries.<sup>10</sup> Methods developed in the study were workshops for public health research stakeholders,<sup>11</sup> interviews with respondents in European-level health organizations<sup>12</sup> and systematic description of national health research systems.<sup>13</sup> STEPS

showed that civil society organizations have a strong interest in research—providing evidence for practice, and inclusion of local people in creation of knowledge. The new EU member states also received substantial funding for research through the European Structural Funds, although this rarely appeared to reach public health research.<sup>14</sup>

The European Commission's own health research programme within the Seventh Framework Research Programme was found to spend <5% of the total on public health research: almost all was for biomedical, clinical and pharmaceuticals research.<sup>15</sup> However, member states together support research to a much larger total than EU funding.<sup>10</sup>

In 2008, as part of organizational development, EUPHA established four pillars, including one for Research, to increase understanding of national public health research systems and impacts. While the European Commission's Directorate for Research and Innovation made no further call for work on public health research, PHIRE was successfully proposed in the 2009 Health Programme of the Directorate for Health and Consumers.<sup>16</sup>

## Process

A major theme of the European Union strategy for the next administrative and financial cycle (2014–2020) is the belief that research contributes to economic and social development through innovation.<sup>17,18</sup> Emphasis has been put on support for industry, particularly smaller companies, and in the health field, this is supported by the network of health research national contact points (previously SMEs-Go-Health, now titled Fit-for-Health<sup>19</sup>). STEPS had shown the importance of civil society organizations engaging in the research agenda,<sup>9</sup> and innovation within the public service sectors.<sup>20</sup> PHIRE therefore addressed both innovation and research. However, public health innovations draw on a range of knowledge and practice, and do not develop simply from a single research project. PHIRE chose to study how several differing innovations were taken up at national level, and to look in parallel at national systems for generating public health research.

The proposal submitted for PHIRE was for 3 years, with partners from different regions of the EU. EUPHA provided the administration and the UK Faculty provided technical leadership. The proposal required 40% of funds to be contributed by partners, and a maximum 60% co-funding from the European Commission. At the Health Programme evaluation, the Commission accepted the proposal, but with a budget reduction by one quarter of the total proposed. To maintain the study, the Consortium regrettably reduced the project length to 30 months, reduced funding for the national public health association members of EUPHA, and joined the collection of country information under the four regional partners, each managing data from seven countries.

PHIRE was constituted with eight partners and seven work packages. The structure was designed to promote engagement between partners and EUPHA. There were two phases, with reporting to the funder at the half-way stage. The final 'deliverables' of PHIRE—the Work Package reports, Country reports and Final Summary Report—were placed on the PHIRE web page of EUPHA.<sup>21</sup>

In Work Package 7, PHIRE partners prepared and agreed a draft Summary Report<sup>21</sup> in the 1-3-25 format recommended for optimum communication of healthcare research results.<sup>22</sup> To know the perceptions of public health scientists to our work, and inform them of the work, the draft Summary Report was emailed, with two short questions, to 130 experts known to be interested in European public health research across all 30 European countries (range 1–10 per country) and to international bodies (including the European Commission). The letter asked respectively about the perceived validity and usefulness of results. There were 38 replies from 20 countries, with 33 (25% of sample) giving comments in enough detail to use.

For dissemination to academic audiences, and contributing to the health research literature, PHIRE results are presented as thematic articles in this Supplement.<sup>23</sup> The standard scientific format of introduction, methods, results and conclusions is used. The authorship of the articles relates to the broad leadership of the topic within the PHIRE partnership, and the contribution in reports. The original material can be found on the PHIRE web page [www.eupha.org/phire](http://www.eupha.org/phire).

## The Supplement

The present article, 'Public health innovation and research in Europe: introduction to the Supplement',<sup>1</sup> provides a history of the study and sets out the eight articles for publication in the European Journal of Public Health Supplement. A strong feature of PHIRE was working through members of the EUPHA, which provided links by expert field and European country. Although there are limitations in the extent and completeness of the data, the majority of experts replying to a consultation on the draft PHIRE Summary Report confirmed both that results appeared valid and useful.

The second article in the Supplement 'PHIRE (public health innovation and research in Europe): methods, activities and assessment'<sup>24</sup> describes the multi-methods approach needed to collect descriptive data from a range of informants across different national systems. Qualitative survey analysis must collect sufficiently rich information while also being able to summarize it. Thematic Section Presidents of EUPHA chose health innovation projects supported by the European Commission, and Country Informants reported on their uptake and impact through an on-line questionnaire. National public health associations (EUPHA members) reviewed information on the health research systems of their countries, held national stakeholder workshops and provided reports. These methods underpin the results in further articles.

The third article 'Civil society engagement in innovation and research through the European Public Health Association'<sup>25</sup> addresses the study design of engaging European public health scientists and practitioners through EUPHA. The thematic interests of the EUPHA Sections matched the public health topics within European Commission's Health Programme, and Section members contributed as expert Country Informants. EUPHA has member associations in almost all EU countries, and in a majority of countries the associations contributed to PHIRE—although limited co-finance from PHIRE was a reservation for some associations. The national reports, though varied in completeness, gave important material for the articles in the Supplement. PHIRE demonstrated a basis for further capacity building and data collection through EUPHA.

The fourth and fifth articles are concerned with innovation. While innovation follows research, PHIRE was able to make a longitudinal study of the uptake and impact of public health innovations that were funded for demonstration and dissemination by the European Union's Public Health Programme in 2003–2005. The fourth article 'Tracking uptake of innovations from the European Union's Public Health Programme'<sup>26</sup> reports the perceptions of 108 Country Informants (CIs) on the impact and uptake of innovations. Seven of the eight innovation projects were considered by at least 70% of the CIs to be of high or moderate relevance. Some projects had impacts within the policy cycle in particular countries. Some projects had greater visibility at local level. The results emphasize the need to track and examine the uptake of public health innovations across Europe.

The fifth article 'Impact of innovations in national public health markets in Europe'<sup>27</sup> was based on the PHIRE reports from 11 countries. Innovation is of increasing economic interest in European countries. PHIRE identified 35 descriptions of impacts in national public health markets, but also found 10 descriptions of limited uptake where there were competing existing practices. This analysis encourages further investigation of how public

innovations develop and disseminate across Europe and within countries. In comparison with pharmaceuticals, for example, understanding of the characterization, marketing and implementation of innovations in public health is at an early stage.

The sixth article 'Programmes and calls for public health research in European countries',<sup>28</sup> drawing on work in the first phase of PHIRE, provides a 'snapshot' of public health research programmes and calls in 2010. This was a time of public budget cuts in Europe—in several countries, particularly in Eastern Europe, there were no calls or programmes recorded for that year. For some countries, it was difficult to isolate public health research programmes and calls within broader health research, but in others there were clearly defined programmes and calls, including in relation to the major diseases. The work showed the need to develop classifications and databases for public health research databases, to increase exchange between countries and to research more directly at key public health questions.

The seventh and eighth articles, drawing from the national workshop reports, supplemented with internet searches, describe national public health research strategies and structures, respectively. The seventh article, 'Strategies for public health research in European countries'<sup>29</sup> shows that, although all European countries undertake health research, only a minority have health research strategies and still fewer relate these to public health research priorities. In many countries, there is only weak communication and collaboration between Ministries of Health and other health research stakeholders.

The eighth article 'Competitive funding and structures for public health research in European countries'<sup>30</sup> draws together PHIRE data on national health research systems. Funding for 'discovery' and 'intervention' health research through Ministries of Science is mainly for biomedicine. Public health research appears stronger in countries with funding from the Ministry of Health and independent organizations. However, financial information at national level for systematic comparisons is weak, and the proportion of funds going to research directly through universities rather than competitively, is unknown. The balance between biomedical and public health research will also be a significant issue for Horizon 2020.

The final article 'National action for European public health research'<sup>31</sup> draws the findings from PHIRE together at European level. PHIRE has explored national innovation and research programmes and systems where there has previously been little information: PHIRE is also concerned through EUPHA to address the European level. Only a minority of Ministries of Health had contributed to developing Horizon 2020, and Ministries of Science have not presented a vision of collective public health research. Yet public health knowledge in one country has applications for other countries. Cross-national studies offer both stronger and faster results, and also provide variety of social and political contexts for understanding both health determinants and the impacts of interventions.

## Results of the Retrospective Assessment

In writing the final materials, a PHIRE draft Summary Report<sup>22</sup> was written and circulated to 130 experts across the 30 European countries. Replies were gained from 33 respondents to two questions. Question 1 asked: 'From your perspective, do the findings of PHIRE seem valid?' There were 26 respondents answering yes to this question, and most respondents provided fuller replies; the most common reservation expressed was the subjectivity of the viewpoints recorded by PHIRE. Question 2 asked: 'Are these useful recommendations for European public health innovation and research?' Twenty-three respondents said 'yes' or equivalent to this question, and several described the usefulness of the results, but some expressed reservations and uncertainty. The full responses are found at the PHIRE web page.

The PHIRE Summary Report<sup>21,22</sup> made three sets of recommendations:

- *European countries should identify public health research within national health research systems, clarify and improve levels of funding, and align research calls and programmes with national health plans.*

PHIRE found insufficient information on public health research within European countries. Strengthening the country systems and giving voice to the public health science is crucial for the development of evidence-based practice and policy.

- *European countries should promote innovation and research through health and civil society organizations working in the public interest and taking the place of commercial organizations elsewhere in the economy.*

Both European countries and the European Union are giving emphasis to linking research and innovation with industry and the commercial sector. Public health research creates knowledge that is non-commercial but vital for the welfare of society. PHIRE urges that research and innovation funding should go to support not-for-profit public services and civil society organizations as much as for-profit 'small and medium enterprises' (SMEs).

- *European countries, within Horizon 2020, should prioritize health promotion, health care and health determinants research and innovation, and coordination mechanisms including through the European Research Council, Research Infrastructures, ERA-nets, Joint Programming and national-level Structural Funds.*

Horizon 2020 has set out a large field of topics for health research, and has instruments and funds for coordination of research between countries, and across academic disciplines. Member states, through Horizon 2020 programme committees, should use these instruments for building cross-national public health research.

## Discussion

An overarching theme from PHIRE has been the need for better information and coordination. The European research programme for 2007–2013 developed several mechanisms for strengthening the European Research Area, including national ministry networks (ERA-nets), Joint Programming (sharing national thematic programmes) and Infrastructures (developing shared facilities and databases)<sup>32</sup>: none of this was directed towards public health.

It is unclear to the public health research community where decisions are made within the Research Directorate. The Programme Committee for Health Research meets twice yearly with representatives from each member state, but there is little feedback or national consultation from its members. Inter-service communication between the European Commission Research Directorate and the Directorate for Health and Consumers is unclear, beyond the guideline that the Research Directorate supports research, and the Health Directorate supports demonstration and implementation. STEPS and PHIRE were not funded by the Seventh Framework Health Research Programme, and therefore do not show in the report on public health research supported by the European Commission.<sup>33</sup>

The European Union has given emphasis to participation of industry in research and innovation.<sup>34</sup> Health services are around 10% of economic activity across European countries, and continue to grow. The pharmaceutical and medical devices industries supply the health sector, and are significant investors in research. But the objectives of public health research at population level, for both discovery and interventions, are different—towards prevention, health promotion and the efficiency and effectiveness of health systems. European and national policies for health research and innovation must give more emphasis to research for public goods as well as patents, and more interest in delivering health sector

improvements through public and not-for-profit services. In Horizon 2020, the Directorate of Research's project 'Fit-for-Health'<sup>19</sup> could promote assessment of public health innovations across countries and feed this knowledge into the European public health section of the research programme.<sup>35</sup>

A Work Package on dissemination is mandatory within the template of the European Commission Directorate for Health and Consumers Health Programme. PHIRE undertook dissemination during the project by several means—the EUPHA newsletter, emails, website, database and the conference. The full materials of PHIRE, including the database of country reports, are placed on the EUPHA web pages.<sup>21</sup> The Summary Report<sup>22</sup> and this Supplement<sup>1</sup> have been created to enable dissemination of the results from PHIRE. The European Agency for Health and Consumers, which commissions and monitors the EU Health Programme projects, is working with EUPHA on a day pre-meeting at the November 2013 European Public Health conference. This Supplement of the European Journal of Public Health will be presented there, and then available for dissemination through electronic pages of the European Journal of Public Health.

## Conclusion

Through EUPHA and its partners, PHIRE has identified important aspects of the European public health research system, particularly at national level. Given the importance of creating the evidence base for public health policy and practice, and extending the boundaries of discovery in population sciences, researchers, civil society organizations, practitioners, policy makers and research commissioners should work together to maximize returns from health research programmes. These links must be within countries, across countries and together with European programmes.

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