

# DEVELOPING THE PUBLIC HEALTH WORKFORCE

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**Summary:** The development of the public health workforce is a cornerstone in WHO's Action Plan for Strengthening Public Health Services and Capacities. Public health education shall combine Essential Public Health Operations – surveillance; monitoring; health protection and promotion; disease prevention; service delivery; communication and research – with the competences needed within: public health methods; population health and its social, economic and environmental determinants; and man-made systems and interventions to improve population health. An authorised public health profession founded on graduation from comprehensive public health education is needed. The capacity and standards of Schools of Public Health should accordingly be continuously developed.

**Keywords:** *Public Health Workforce, Essential Public Health Operations, Public Health Competences, Public Health Education, Public Health Training, Public Health Professionalisation*

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## Population health challenges and the European Action Plan

Inequity in levels of living plays a dominant role in creating ill-health in Europe.<sup>1</sup> In accordance with the *Health 2020* strategy, social and economic determinants, such as education, employment, and income, should be addressed, e.g. through “upstream” approaches. Fiscal policies should be reconsidered, as they provide us with good measures to influence behaviour through prices and taxation. Public health needs much higher and more stable funding, and resources should be used more effectively in building capacities to sustain population health improvement. This all requires new public health policies with the systematic development and sustainment of a highly professional public health

workforce and strong, comprehensive and coherent public health institutions, brought forward by systematic methods for population health challenge identification and systems planning, implementation, resource allocation, follow-up and evaluation in defined populations and population groups.

The European Action Plan for Strengthening Public Health Services and Capacity emphasises action as indicated by the Essential Public Health Operations (EPHOs).<sup>2</sup> The Plan provides practical solutions, such as how to extend the reach of community care by involving public health services to carry out screening, counselling, population empowerment and health education services.

Across Europe we observe an underuse of designated public health institutions to tackle the increased burden of non-communicable diseases. This is partly due to a mismatch between professional skills and competences and our contemporary health challenges. Moreover, systematic overviews of existing public health services are lacking across Europe, and the WHO Regional Office for Europe thus has started mapping such services and systems based on the list of EPHOs.<sup>8</sup>

### Developing the public health workforce

Education and training play crucial roles in developments towards increased equity in health. The Association of Schools of Public Health in the European Region (ASPHER) is the key independent European organisation dedicated to strengthening the role of public health by improving education and training of public health professionals for practice and research.

Despite the fact that the continued development of the public health workforce is a cornerstone of public health strategies, we have not been able to identify systematic methods implemented in European countries for estimating human capacity needs in public health or for the assessment of relevant educational capacity in public health. Consequently, ASPHER has started the development of principles for public health planning, linking population health challenges with the EPHOs and the competences needed.<sup>9</sup>

Major challenges include: shaping an authorised public health profession, as a central element in the public health workforce; and a comprehensive and coherent public health service system.<sup>10</sup> Today, there are a large number of programmes focusing on separate aspects of public health and, concurrently, the number of vocations covering selected parts of public health is also high.<sup>11</sup> All in all, this creates doubt about what the public health discipline really is, and where decision-makers can turn to get advice. Moreover, as an authorised profession is lacking, in contrast to medical doctors, nurses and other health professionals,

public health as a discipline is invisible in official statistics – a poor situation in the quest for necessary resources.

Public health is mature for professionalisation and has a long history of professional education, training and research. Shaping a public health profession simply would be following the principles of development within other health disciplines, e.g. medicine, nursing and midwifery. A unified profession should be defined based on comprehensive public health education programmes, offering the ability to perform all EPHOs<sup>12</sup> (see Table 1) as well as the core competences of the European list endorsed by WHO member states in 2012<sup>13</sup> (see Table 2), so that professionals can analyse population health challenges; set targets for population groups; identify, select and implement evidence-based and ethically acceptable interventions; and follow-up results.

The comprehensive basic education of public health professionals will form a natural foundation for specialisation and continuing professional development (CPD). Schools of Public Health will play a key role, and the public health workforce will, besides public health professionals, include health professionals doing part-time, selected tasks in public health, and all others, for example, including high-level decision-makers, as well as the police officer on the street and the teacher in the classroom.<sup>14</sup> Other important community-oriented activities should also be developed by the Schools of Public Health, such as functioning as local and national centres for knowledge brokering.

### The first Bologna Cycle: European public health bachelor programmes

Bachelor programmes in public health represent a relatively new phenomenon, indicating the integrity of public health as a discipline in its own right, e.g., not necessarily demanding a medical background. Moreover, in response to the increased demand from the public health labour market, over the last two decades a number of bachelor programmes have been developed across Europe. In 2011–12, 18 Schools of Public Health delivered 977 bachelor degrees, with a

median of 55 per institution.<sup>15</sup> By 2014, 25 of ASPHER member schools could report that they provided bachelor programmes.<sup>16</sup>

The expectations of present and potential employers of a public health workforce, however, are still largely unknown, and still relatively little is known about the academic structure of the programmes, and about labour market needs and the actual provision of bachelor degrees. The documentation of roles, practices and competences produced in bachelor programmes still appears to be unsystematic across Europe.<sup>17</sup>

In 2012, ASPHER's survey found that there was a need to: develop more bachelor programmes in English; develop more programmes offered within networks of educational institutions; increase student and teacher mobility; develop more distance learning; and also develop more specific topics within comprehensive public health programmes.<sup>18</sup>

### The second Bologna Cycle: European public health Masters programmes

The second Bologna cycle – the Masters programmes – constitutes the classical domain of the European Schools of Public Health. The number of programmes has increased substantially over the years, and in 2012 there were more than 80 Masters programmes in European countries, 47 of them in the Bologna format.<sup>19</sup> The subjects most often offered were: epidemiology and statistics, health systems and management, and environmental/occupational exposure, while newer fields, like public health genomics, global health, and health economics, were more rare.

European Schools of Public Health are relatively small units with a median full time equivalent of 20 teaching staff members – a relatively restricted capacity. Moreover, nearly four-fifths of the Schools also deliver teaching in other health programmes. The 66 Schools participating in the 2012 survey (participation rate, 82.5%) produced 3035 graduates (previous year), where 1851 were Masters degrees and 1309 of these in the Bologna format.<sup>20</sup> The relatively low priority of teaching global health contrasts with the fact that a fifth of the total enrolment was made up

**Table 1:** Chapters of WHO Europe's Essential Public Health Operations

Chapter number and content/theme
1. Surveillance of population health and well-being
2. Monitoring and response to health hazards and emergencies
3. Health protection including environmental, occupational, food safety and others
4. Health promotion including action to address social determinants and health inequity
5. Disease prevention, including early detection of illness
6. Assuring governance for health and well-being
7. Assuring a sufficient and competent public health workforce
8. Assuring sustainable organisational structures and financing
9. Advocacy, communication and social mobilisation for health
10. Advancing public health research to inform policy and practice

Source: <sup>8</sup>

of international students, and this points to the need for more programmes aiming at global public health.

Originally, the classic Master of Public Health (MPH) was developed as an effective means to educate public health professionals based on a bachelor degree or a Masters degree within a health discipline. MPH programmes are now open to students without such backgrounds, and this naturally poses challenges to the classic MPH concept and its competency profile. Moreover, MPH programmes intended to follow bachelor programmes will have to take into consideration that bachelors in public health will already possess the competences provided by the classic MPH programme. Thus, there is a need to differentiate the MPH concept while ensuring the continued comprehensiveness of the combined (1 and 2) Bologna cycles in public health education.

### The Third Bologna Cycle: European public health doctoral programmes

In 2012, 22 educational institutions enrolled 381 doctoral students (range, 3–80; median, 10 students).<sup>9</sup> During the preceding 12 months, 20 institutions graduated 207 students (success rate, 55.6%; range, 1–70; median, 6 graduates). The principles and organisation of doctoral programmes, however, vary considerably across European countries. To achieve uniform standards in the quality of doctoral programmes in Europe, ASPHER's Working Group on Doctoral

Programmes and Research Capacities has issued recommendations for PhD programmes in public health.<sup>10</sup>

In balance with the European Action Plan,<sup>2</sup> research training is an important component in the development of the public health workforce. It allows public health practitioners and decision-makers to base their recommendations and decisions on the knowledge of up-to-date, cost-effective and ethically responsible scientific evidence. Research in public health demands the application of the methods of all public health main disciplines, not least the methodological disciplines, e.g. epidemiology, statistics, and qualitative methods, besides more specific disciplines e.g., medicine, sociology, anthropology, psychology, nutrition, geography, organisational theory, leadership, economy, law, and ethics. Besides a comprehensive public health background (Bologna Cycles 1 and/or 2), it may require contributions from, and thus collaboration with, researchers from various disciplines and sub-disciplines – with all the challenges involved in inter-disciplinary teamwork, due to differences in terminology, methods used, varying approaches to publications.

Excellence in public health research will strengthen the role of public health in Europe and support funding. Within the health sciences, public health research is rather under-funded, lacking strategic systematics and, all in all, not complying with the need to develop sufficient cost-effective and ethically responsible

public health interventions. Public health needs to be competitive with regard to publications in high-impact journals and grant applications. This must be comparable with related disciplines such as biomedicine.

The creation of a European network in research training among ASPHER member schools is imminent, supported by other European public health associations.

### The Bologna Cycles: Exit Competences

With regard to the exit competences for all three Bologna cycles, employers of the public health workforce from 30 European countries in ASPHER's survey stated a highly significant difference for all EPHOs, between the current competency profile of their employees and the required profile, whereas the schools' exit estimates were, on the average, in between.<sup>11</sup>

As the relatively small and often fragmented European Schools of Public Health often do not have the capacity to offer all relevant public health fields at the highest quality, a high degree of mobility of lecturers and students in collaborating networks will be essential, based on mutual acknowledgement of modules – an old ASPHER desideratum. Another supportive strategy will include the further development of distance learning and an increased use of social media, relating also to improved offers for CPD.<sup>12</sup> Blended learning, which combines in-classroom, problem-based learning, in-field and online-learning, probably will be the best option for the future development of education and training programmes in public health.

Public health graduation does, however, not ensure a sustainable level of income. Public health graduates and specialists in many European countries miss career pathways, and many face considerably low pay and reputation. Although in some countries of the European region, public health education is becoming progressively more inter-disciplinary, there is still a long way to go before public health education is, in general, strongly established based on modern public health concepts.

**Table 2:** Chapters of European Core Competences for Public Health Professionals and for MPH Education

Chapter content/theme
Methods in public health
Population health and its social and economic determinants
Population health and its material – physical, radiological, chemical and biological – environmental determinants
Health policy; economics; organisational theory and management*
Health promotion: health education, health protection and disease prevention
Ethics
* Including leadership

Source: <sup>6</sup>

## Conclusion

### The public health policy perspective:

Developing the public health workforce, including shaping the public health profession, is a cornerstone for strategically planned population health development in European countries; however, co-ordinated, systematic estimation of public health workforce needs and the resulting education and training needs appear missing or insufficient. Therefore European countries should strive to establish mechanisms to support rational assessment and planning of the development of their public health workforces, including shaping a public health profession with adequate authorisation in parallel with other health professions, and in balance with the development of their systems for public health services provision. This includes taking the responsibility for the health of local, regional and national populations. In this process, Schools of Public Health should be sustained to develop into strong centres for public health research, knowledge brokering and consultancy for decision makers and European countries should substantially increase their support to funding of public health research, including research conducted in relation to doctoral programmes.

### The more specific educational and training perspective:

Schools of Public Health should organise into networks, so that complete rather than fragmented public health education and training can be offered at a relevant

level of quality. Schools of Public Health must implement the use of information technology for teaching and research, as well as introducing new subjects, e.g. global public health. Furthermore, teacher and student mobility within Europe and interactions with other parts of the world are of utmost importance. Public health bachelor and doctoral programmes still lack the fundamental systematic identification and declaration of their competences, an EPHO profile, as part of the development of the public health professional profile. Research should be high on the agenda in education and training to support the development of more cost-effective and ethically responsible, evidence based types of public health intervention in the future.

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