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Preliminary review of institutional models for delivering essential public health operations in Europe

ABSTRACT

This document contains a review of the institutional models in place throughout Europe for delivering essential public health operations (EPHOs). It aims to underpin and complement the European Action Plan for Strengthening Public Health Capacities and Services. The report summarizes the available information on the different institutional models for delivering EPHOs, draws conclusions on their strengths and weaknesses, and provides recommendations for strengthening them. It also calls for development of an evidence base to shed light on which institutional models or arrangements are more effective than others, and in which conditions.

Keywords

DELIVERY OF HEALTH CARE – organization and administration
FINANCING, HEALTH
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Executive summary

Background

This report reviews the institutional models in place throughout Europe for delivering essential public health operations (EPHOs). It seeks to underpin and complement the European Action Plan for Strengthening Public Health Capacities and Services. The report summarizes the available information on the different institutional models for delivering EPHOs, draws tentative conclusions on their strengths and weaknesses, and provides recommendations for strengthening them. Three dimensions are examined: the way public health services and activities are organized, the mechanisms in place for financing public health activities, and public health governance structures.

Findings

The review finds a wide diversity in the organization of EPHOs across Europe, affecting governance, provision and financing. While all countries have some basic infrastructure in place for the delivery of public health services at national, regional and local levels they differ in terms of how responsibility is divided among levels, in large part reflecting prevailing administrative structures.

Notwithstanding persisting differences among countries, the scope of public health in Europe has slowly evolved in recent decades from a concentration on sanitary supervision and communicable disease control to one on “new” public health, with an increasing focus on health promotion, disease prevention and intersectoral action including interventions outside the health system. In the post-communist countries across central, eastern and south-eastern Europe, public health services have in many cases been allowed to deteriorate without being replaced with adequate alternatives. Overall in these countries public health is still lagging behind the discipline as now commonly conceived, and there is a clear need to strengthen public health infrastructures in a strategic and coherent way.

Key parameters for assessing the different institutional models for delivering EPHOs across the WHO European Region include responsiveness, efficiency, effectiveness, sustainability, integration, and financing.

Responsiveness

Decentralized governmental structures and decision-making may be more responsive to population needs and expectations. Public health services at the local level are often better informed about and responsive to population health needs. However, a centralized function has the potential to take a more strategic and whole-of-government approach, and to respond to major challenges and risks.

Efficiency

Benefits of decentralization may also be outweighed by advantages of size and economies of scale, so that consolidation or regionalization strategies may sometimes be beneficial in coordinating activities and correcting inequities in resources across communities.

Effectiveness

The current evidence base on cost–effectiveness in public health focuses primarily on specific health promotion and disease prevention interventions rather than on delivery systems as a whole. However, it can inform assessment of the extent to which those public health interventions that are adopted and implemented within different institutional models are cost-effective.

Sustainability

Long-term financing and commitment to the organizational structures for public health are essential to ensuring sustainability. The range of organizations contributing to EPHOs and the scope and nature of their contributions are also crucial. Examples include nongovernmental organizations (NGOs), voluntary or tertiary sector organizations, public health associations and policy think tanks. The sustainability of institutional models can benefit from public health partnerships and coalitions, as well as the alignment of organizational strategies and financial incentives.

Integration

The development of horizontally integrated services is a particular challenge in countries where there are separate vertical public health structures – such as for HIV/AIDS, tuberculosis, or substance abuse, as is the case in many countries of central and eastern Europe – or where many government agencies are responsible for different aspects of public health. It may be necessary to develop pragmatic local solutions that transcend sectoral boundaries, although this can be eased or impeded by budgetary mechanisms. The vertical integration of public health services across different levels of care is another challenge, as public health services are partly integrated with curative services and partly organized as separate activities by distinctive institutions. In many European countries, primary care physicians or specialists are increasingly involved in providing the preventive services that were once the near-exclusive domain of public health, but there remains much variation.

Financing

Expenditure on public health as a percentage of total health expenditure is difficult to ascertain, given definitional issues, but seems to differ greatly across countries, ranging from (an implausible) 0.62% of total health expenditure in Italy to 8.17% in Romania. A lack of financing has been identified as often the most significant barrier to public health programmes and interventions. Lack of stable, sustainable and long-term financing is another challenge in many countries. As a result of the current economic crisis, the financing of public health is in danger in many countries. Many structures for delivering EPHOs in the European Region are already facing substantial cutbacks, and public health programmes and interventions in several countries have been reorganized or scaled down.

Governance

Countries in the European Region have adopted intersectoral policies to varying degrees and in varying ways, but the structures and capacity to support them are often weak. Responsibility for public health is almost invariably divided among ministries, often with unclear lines of communication. There are only a few formal structures to support intersectoral working. Joint budgets and delegated funding, although attracting much interest, are also implemented only very selectively.

Recommendations

While recognizing gaps in evidence, the information collected in this review makes it possible to offer the following recommendations to Member States of the WHO European Region.

Assessment of EPHOs and health needs

- Support objective and comparative assessments of the entire spectrum of EPHOs within Member States.
- Establish and align effective systems for continuous quality improvement of EPHOs with clear lines of accountability.

Prioritization and defining timescales

- Implement formal mechanisms to prioritize activities (such as health targets based on health needs and resources).
- Ensure the establishment and implementation of national health strategies and linked performance assessment for the delivery of EPHOs, standards and targets.

Organizational models of delivering and funding EPHOs

- Improve the horizontal and vertical integration of EPHOs to avoid duplication and improve efficiency and effectiveness.
- Ensure a balanced combination of national, regional and local arrangements to create responsive services that are able to identify risks and tackle inequities.
- Ensure the sustainable and long-term financing of EPHOs including, where appropriate, the use of financial incentives or taxes for public health purposes.

Governance, evaluation and monitoring

- Strengthen regional and local capacities through good governance, clear monitoring and reporting arrangements, and adequate supervision of EPHOs and approaches.
- Where public health activities are devolved to subnational levels, ensure equitable financing and provision.

Intersectoral approach

- Support intersectoral, upstream and integrated approaches to tackle complex public health challenges.

Research

- Support the development of an evidence base to shed light on which institutional models or arrangements are more effective than others, and in which conditions.

Introduction

1. In resolution EUR/RC61/R2 on strengthening public health capacities and services in Europe (WHO, 2011), the WHO Regional Committee for Europe endorsed the development of the European Action Plan for Strengthening Public Health Capacities and Services, to be led by the WHO Regional Office for Europe and submitted to the Regional Committee for consideration at its sixty-second session in September 2012, together with the new European health policy framework, Health 2020.

2. This preliminary review of institutional models for delivering EPHOs aims to underpin and complement the Action Plan. It seeks to provide information on the different institutional models in place throughout Europe for delivering EPHOs and to draw some tentative conclusions on strengths and weaknesses of different institutional models.

3. The term "institutional models" is used here to describe the ways in which the delivery of EPHOs is organized, financed and governed throughout Europe. It covers both the public and private sector, different levels of government, and actors inside and outside the health system. Three key dimensions of institutional models can be distinguished: the way public health services and activities are organized, the mechanisms in place for financing public health activities, and public health governance structures.

4. Countries differ in the balance between centralized and decentralized EPHOs, consistent with their constitutional and governmental arrangements (Saltman et al., 2007). Countries also vary in how they address the vertical and horizontal integration of public health activities across different programmes, sectors and levels of care. One issue gaining increasing attention is the way that primary health care can contribute to the delivery of public health activities, with considerable differences across countries (Aluttis et al., 2012). Public health services in Europe can also be distinguished according to which sector they fall within – in particular local government or specific health authorities – although in practice they are often to be found in many different sectors.

5. Another aspect of institutional models for delivering EPHOs concerns financing. While this aspect has been described as something of a "black box" (Duran and Kutzin, 2010), several key dimensions can be distinguished, including the share of total health expenditure devoted to public health and the mechanisms in place for raising revenues for public health activities. Just as with health financing generally, models in Europe differ greatly and there tends to be a mix of financing sources, with interest from health ministries in taxes earmarked for public health purposes, although not necessarily by finance ministries, which have long been much less enthusiastic about hypothecation.

6. A final aspect of institutional models for delivering EPHOs relates to governance arrangements. These also differ greatly across Europe and include structures for health policy planning and implementation and mechanisms for intersectoral action.

Methods

7. This report is based on a documentary analysis of English-language sources relevant to the organization of EPHOs in the WHO European Region undertaken in April 2012. Two main types of document were reviewed. The first type was sources available in the public domain. This included:

- the Health Systems in Transition (HiT) country profiles of the European Observatory on Health Systems and Policies, in particular the sections on the delivery of public health services;
- self-assessments of public health capacities and services undertaken by WHO Member States, supported by the WHO Regional Office for Europe and using a self-assessment tool structured around 10 EPHOs. At the time of writing (April 2012), such assessments had been published in English on Estonia, Uzbekistan and south-eastern Europe;
- articles published in international peer-reviewed journals and indexed on PubMed/Medline: search terms such as "public health", "services", "operations", "organization" and "Europe" were used in various combinations and gave preference to articles published since 2005.

8. The second type of document was not available in the public domain. This included:

- an ongoing study on facets of public health by the European Observatory on Health Systems and Policies that will be published in 2013 (Rechel and McKee, 2013);
- unpublished or draft self-assessments of public health capacities and services undertaken by WHO Member States: these were available in English for Bosnia and Herzegovina, Bulgaria, Croatia, the former Yugoslav Republic of Macedonia, Romania and Slovenia;
- the final report of a study of public health capacity in the European Union (EU), led by Maastricht University and funded by the EU, that is envisaged to be published later in 2012; the study was based on information provided by key informants, complemented by focus group discussions of experts in each of the EU Member States (Aluttis et al., 2012).

9. While aiming for a comprehensive review of available evidence on the organization of EPHOs in the WHO European Region, the report has several limitations. One of the most fundamental challenges faced was that many sources of evidence are incomplete, are based largely on self-assessment and have not been validated by empirical evaluations. Indeed, a forthcoming evaluation of health policy in Europe explicitly identifies the mismatch between these self-reports and objective assessments of successes and failures in health policy (Mackenbach and McKee, 2012).

10. Furthermore, there are major definitional challenges in undertaking comparisons (as it is rarely clear if terminology means the same in different countries, or even in different parts of the same country) and there are large gaps in available data. The diversity of activities included within the term "public health", the many sectors involved in delivering it and the different tiers of government involved mean that it is unusual to be able to find anyone who can provide a comprehensive overview of the situation in any particular country.

11. Consequently, the authors recognize that there are many gaps in this assessment. Although the report paints a somewhat pessimistic picture of the state of public health in Europe, it is worth noting that there are many local initiatives, especially those led by civil society organizations, which it has not been possible to include. However, evaluations of these initiatives are rare and to have included them would have involved an exercise on an entirely different scale from that undertaken to produce this report.

Findings

Historical context and current reform initiatives

12. Looking back over time, and recognizing that there are huge differences across countries, the scope of public health in Europe has slowly evolved in recent decades from a concentration

on sanitary supervision and communicable disease control to one on “new” public health: this has an increasing focus on the main threats to population health, and includes health promotion, disease prevention and intersectoral action including interventions outside the health system.

13. However, it is important to note that public health as a concept is still characterized by a huge diversity of terminologies and interpretations. Across Europe there is no single consensus on the meaning of public health (Kaiser and Mackenbach, 2008) or what it should do (Weil and McKee, 1998). Consequently, there are different understandings among European countries of the tasks and limits of public health services and there are wide differences in the extent to which public health is pursued on national agendas (Aluttis et al., 2012). In view of the differences in the ways that public health services are organized across Europe, the European Action Plan for Strengthening Public Health Capacities and Services puts forward a set of 10 horizontal EPHOs and proposes that they should become the unifying and guiding basis for any European health authority to set up, monitor and evaluate policies, strategies and actions for strengthening public health (WHO, 2011).

14. A number of countries are currently reforming their systems for delivering public health services or operations. Although reforms of public health services in central and eastern Europe have lagged behind reforms in other parts of the health system, particularly in some of the newly independent states of the former USSR (Maier et al., 2009), this area of Europe has witnessed some of the most significant changes to the organization of public health services over the last two decades.

15. In the communist period, public health services in central and eastern Europe were organized according to the model of the sanitary-epidemiological (sanepid) services established in the USSR. These services were highly centralized and hierarchical and were represented at all administrative levels. They were charged with health protection: mainly the control and surveillance of communicable diseases, the monitoring of environmental conditions and the enforcement of sanitary-hygienic regulations (Rechel and McKee, 2006; WHO, 2009b; Maier and Martin-Moreno, 2011).

16. Although the sanepid services made huge progress in the fight against communicable diseases, setting up comprehensive childhood vaccination programmes and leading to the decline of many vaccine-preventable diseases, they were much less effective in the areas of noncommunicable disease, occupational health and environmental health, and health promotion and intersectoral action were largely neglected (WHO, 2009b; Maier and Martin-Moreno, 2011). The prevention of infectious diseases through vaccination was one of the main strengths of the sanepid services and this, after some disruptions in the early 1990s, has to a large degree been maintained, with very high vaccination rates persisting (Maier et al., 2009; Maier and Martin-Moreno, 2011). However, there continue to be great problems in addressing HIV/AIDS and tuberculosis, with poorly integrated vertical structures; whereas in western European countries services are more often integrated into mainstream health care provision.

17. Many of the countries of central and eastern Europe have embarked on reforms since the collapse of communism, usually involving some degree of deconcentration, with the transfer of responsibilities from the centre to the periphery (Gotsadze et al., 2010). Reforms have typically been less extensive in the Commonwealth of Independent States (CIS). In those countries, some (including Azerbaijan, Belarus, the Russian Federation and Ukraine) have largely preserved the sanepidstructure inherited from the Soviet period (Popovich et al., 2011), some (including Kazakhstan, Kyrgyzstan, the Republic of Moldova and Uzbekistan) have built additional structures, and others (in particular Georgia) have set up new public health infrastructures. In Georgia, the high speed of reforms, the privatization of some public health functions and the unclear lines of responsibility following decentralization of public health services have led to

problems in communicable disease control (Armenian et al., 2009; Maier and Martin-Moreno, 2011).

18. However, an understanding of "new" public health, as concerned with the main threats to population health, is still underdeveloped in both central and eastern Europe and in the CIS.Instead, public health services in many countries of the region are more concerned with hygiene, sanitation and communicable disease control, and less with health promotion and intersectoral action for health (Rechel and McKee, 2006; Armenian et al., 2009; WHO, 2009b). Indeed, many post-communist countries struggled with the very concept of "public health", as the term was difficult to translate into local languages (Tragakes et al., 2008).

19. The situation is slightly different in countries of south-eastern Europe, as they had a long-standing public health tradition under the leadership of the AndrijaŠtampar School of Public Health (Rechel and McKee, 2006). There are historically well-developed public health institutions in the form of the institutes of public health and there has traditionally been a comprehensive and high-quality network of public health laboratories. However, the public health structures have in many cases been allowed to deteriorate, suffering from damage during the various wars of the 1990s, underinvestment and the failure to adjust to new public health threats (WHO, 2009b).

20. In central and eastern Europe, health promotion was underdeveloped in the Soviet period (Saltman et al., 2012). Paradoxically, preventive medicine was considered a key strength of the Semashko health system during the Soviet era. While generally adequate in terms of communicable disease control, this approach largely relied on secondary prevention of noncommunicable diseases, aiming to detect diseases through a large number of often ineffective screening initiatives, rather than on primary prevention (Richardson et al., 2008). In a number of countries of the region, such as Belarus (Richardson et al., 2008), this approach has been retained and health promotion tends to be one of the most underdeveloped and underfinanced domains of public health (Maier et al., 2009).

21. It should also be noted that in several western European countries too public health services were for a long time limited to sanitary supervision and communicable disease control and only more recently have efforts been made to increase the prominence of health promotion and disease prevention (Hofmarcher and Rack, 2006). This can be explained in part by the historical context of public health in some of these countries. The discipline of public health emerged in the 18th century with the sanitary movement, complemented later by a focus on hygiene. In some western European countries, reflecting historic, cultural or political factors, efforts to move beyond a medical model of public health through such initiatives as the Ottawa Charter for Health Promotion of 1986 or the WHO Health for All programme are only slowly gaining ground, and some still neglect many aspects of public health (Economou, 2010).

22. In western Europe, social health insurance systems are increasingly involved in the provision of public health services, partially overcoming the previous neglect of health promotion. Several countries, such as Austria and Switzerland, have established new foundations for health promotion (Saltman et al., 2012). In Austria there is now a national competence centre for health promotion, the Fund for a Healthy Austria. However, the provision of health promotion tends to be outsourced to external institutions such as NGOs or foundations (Ladurner et al., 2011). In Switzerland there is a range of small-scale health promotion programmes, many undertaken by NGOs and foundations (OECD and WHO, 2011).

23. Some of the most successful health promotion activities have been implemented in the Nordic countries (Glenngård et al., 2005). In Finland health promotion and disease prevention have been a main focus of health policy for decades, one example of which is the often-cited North Karelia project (Vuorenkoski et al., 2008). In Denmark, however, action on tobacco

consumption and obesity has remained rather weak until recently – although this is changing with the recent action against foods containing trans fats – while alcohol consumption is also high (Strandberg-Larsen et al., 2007).

Organization of public health services

Organizational structures

24. Public health encompasses a very broad area of societal action, involving many actors (Rechel and Brand, 2013). Tobacco control efforts, for example, include action that goes far beyond the traditional health sector and involve agriculture, trade, education, fiscal policy and law enforcement, at the local, national and global levels (Allin et al., 2004). Given the variety of EPHOs, they are generally not performed by a single institution. Instead, the provision of public health services in Europe is characterized by a multitude of actors from both the public and private sectors. At the country level, these include dedicated public health agencies, national institutes of public health, other agencies working on public health, state organizations outside the health system, and health care providers in general.

25. The area of occupational health can serve as another example of the many actors involved in public health in Europe. Responsibilities fall under the remit of ministries of labour, social affairs and/or employment, ministries of health, public health institutes or occupational health institutes (Koppel et al., 2008; Albreht et al., 2009; Bryndova et al., 2009; WHO, 2009b). Some countries (Croatia, Serbia and the former Yugoslav Republic of Macedonia) have a dedicated Institute of Occupational Health (WHO, 2009a; WHO, 2009b). Institutional models for occupational health and safety services differ widely, as do coverage levels.

26. In some countries there are legal requirements for every enterprise to provide occupational health and safety, in others only large and medium-size enterprises are required to do so, and in still other countries there are no legal requirements at all (Kim et al., 2013). Long before the creation of the EU, many western European countries had developed strong occupational health and safety programmes and infrastructures, based on a dialogue between social partners (Kim et al., 2013). However, even in those countries there is substantial variation, as some have accorded occupational health and safety low priority (Rachiotis et al., 2010).

27. In the Soviet period, occupational health was a major concern of the sanepid systems in central and eastern Europe. However, the transition to market economies, the dissolution of large state enterprises, a general lack of transparency and accountability, a lack of genuine social dialogue, and indiscriminate privatization of public services led to a weakening of occupational health and safety structures (Kim et al., 2013). The 12 countries joining the EU since May 2004 (EU12), despite their occupational health and safety systems being harmonized with EU directives, still lag behind the 15 countries belonging to the EU before May 2004 (EU15) and there is wide variation in national laws and practices (Kim et al., 2013). Often, the private sector has the lead responsibility for occupational health but, as in Estonia, there may be concerns about the degree of governmental oversight (Koppel et al., 2009).

Overall legal framework

28. In most countries in Europe there is an overall legal framework defining responsibilities for many public health services and operations. In the study on public health capacity in the EU, 26 of 27 countries reported having legislation fully or partially in place that defined responsibilities for setting up structures to protect and promote the health of the population (Aluttis et al., 2012). However, in Austria, no clearly defined modern public health structure could be identified, nor is there a national priority-setting process or national health targets,

although in part this may reflect devolution of responsibility to the regions or "Länder" (Ladurner et al., 2011).

29. Yet even where formal responsibilities have been outlined, this does not automatically imply a well-functioning system, as implementation may be incomplete. In addition, while many countries have clear responsibilities with regard to traditional public health issues such as communicable disease control, hygiene and immunization, responsibilities were less clearly established for many of the "new" aspects of public health, such as behavioural and social determinants of health and health inequalities (Aluttis et al., 2012).

30. Brief mention is required of the several examples within the WHO European Region where national governments do not exert complete authority over all the territory within their internationally recognized borders. Examples include parts of Georgia, Azerbaijan, the Republic of Moldova and Cyprus, while similar issues arise in relation to the territories occupied by Israel since 1967. In all cases, some arrangements for some basic public health functions – such as reporting of infectious disease outbreaks – exist, but with varying degrees of effectiveness (McKee and Atun, 2006).

Level of decentralization

31. Throughout Europe countries generally have a basic infrastructure in place for public health service delivery at national, regional and local levels, maintaining relevant public health activities and formally granting virtually universal access to the population. However, there is great diversity in the ways in which EPHOs are organized and delivered (Aluttis et al., 2012; Rechel and Brand, 2013). One of the main ways in which the organization of public health services differs across Europe is how far responsibility has been devolved to subnational levels, which is in large part affected by the size of the country and its population, and the underlying constitutional, political and administrative framework (Rechel and Brand, 2013).

32. While all countries have some national public health capacity – such as reference laboratories and statistical offices – in federal or highly decentralized systems the majority of public health services are mainly the responsibility of the regional or even local level. Examples include Belgium, Denmark, Finland, Italy (see Box 1), Spain, Sweden, Switzerland and the United Kingdom (Allin et al., 2004; Glenngård et al., 2005; Vuorenkoski et al., 2008; Lo Scalzo et al., 2009; García-Armesto et al., 2010; Gerkens and Merkur, 2010; Boyle, 2011; OECD and WHO, 2011; Anell et al., 2012). In Austria and Germany the Länder have almost complete autonomy in most aspects of public health but they delegate some tasks to local authorities and regional health insurance funds (Allin et al., 2004; Busse and Riesberg, 2004; Hofmarcher and Rack, 2006).

Box 1. Regional differences in public health structures in Italy

As Italian regions have exercised their autonomy very differently, northern regions have been more successful in establishing effective structures for public health, programme delivery and health monitoring, than regions in the south. Regional variations reflect differences in contextual, political, economic and cultural factors, as well as differences between regional health systems.

Source: Aluttis et al., 2012.

33. In contrast, in the remaining European countries the national authorities are predominantly responsible for planning and organizing public health services, although administration and implementation is often delegated to lower levels of administration. The

health system in Ireland used to be characterized by a degree of decentralization, but has since been centralized, including its public health services (McDaid et al., 2009).

34. Even in federal or decentralized systems, however, the Ministry of Health or another umbrella public health body usually provides the overall strategic framework, and is responsible for drawing up legislation and regulations on the various aspects of public health, as well as for monitoring population health and coordinating activities between national and local levels (Allin et al., 2004; Armenian et al., 2009; Lo Scalzo et al., 2009). There are also national agencies in charge of research, public health expertise, surveillance and health promotion (Rechel and Brand, 2013).

35. In all European countries, communicable disease surveillance and control is vested at the national level, reflecting responsibilities under the International Health Regulations. International cooperation is crucial in communicable disease control (Rowe and Rechel, 2006), and the European Centre for Disease Control, established by the EU in 2005, supports epidemiological surveillance activities at the European level and runs an early warning and response system. However, few countries in Europe have a single national body to review screening practice and policy, and population registers for call, re-call and follow-up of patients are also comparatively rare (Holland et al., 2006).

36. There is also considerable variation between European countries in terms of how and whether public health research is coordinated and funded. One of the differences relates to the position of public health research within general science funding. Finland has several institutes which are administratively under the Ministry of Social Affairs and Health, even after the recent merger of STAKEs and KTL. Most are government agencies, but all derive most of their core funds from the state budget (Ricciardi et al., 2013). Similar public health research institutes exist in other countries, such as the Robert Koch Institute in Germany, the National Institute for Public Health and the Environment (RIVM) in the Netherlands, and the Institute of Health Carlos III in Spain (Ricciardi et al., 2013). All of these increasingly depend on project grant income.

37. National coordination and leadership of public health activities can pose a major challenge for decentralized health systems, as was noted, for example, in Switzerland, where cantons have a very high degree of autonomy (OECD and WHO, 2011). Decentralization can also have implications for health information systems (see Box 2).

Box 2. Implications for health information systems

Almost all European countries have national health information systems that collect, analyse and report data on population health (Brand et al., 2008). However, the nature of these health information systems and the availability of data and indicators differ considerably. This is partly due to the specific historical and cultural context in which they developed, different policy priorities, and differences in the availability of resources among countries – overall, poorer countries often have poorer health information systems (Verschuuren et al., 2013). Whether health systems are centralized or decentralized can also have a significant influence on the organization and functioning of health information systems. In Belgium (a federal state), for example, some data are collected at the federal level and some at the level of the communities. A similar situation occurs in Spain, where autonomous regions are in charge of data collection (Verschuuren et al., 2013). In these cases, a functioning nationwide system requires negotiations with the regions and the involvement of many different institutes. This problem of scattered data ownership also applies to several non-federal states, such as the Netherlands (Kilpeläinen et al., 2008).

Vertical and horizontal integration

38. The many actors involved in the delivery of public health activities make horizontal and vertical integration pivotal (Mays et al., 2010). The horizontal integration of services is a particular challenge in countries where separate vertical public health structures are in place, such as for HIV/AIDS, tuberculosis, or substance abuse in many countries of central and eastern Europe (Koppel et al., 2008; Koppel et al., 2009; Duran and Kutzin, 2010; Gotsadze et al., 2010). The poor integration of public health activities was noted as a particular problem in Armenia. There, more than half a dozen government ministries and many state agencies have a substantial role in public health, while the Ministry of Health covers only some public health services. In addition, some public health activities are provided by international organizations and national NGOs. There is no overriding central state authority responsible for the integration, coordination and oversight of all public health authorities in Armenia (Armenian et al., 2009).

39. Integration of public health services can sometimes be easier at the local level (Koppel et al., 2009). In Spain, for example, following the decentralization of competences on public health, the integration of different inspectorates and administrations was achieved at the regional level (García-Armesto et al., 2010).

40. The vertical integration of public health services across different levels of care is another challenge, as public health services are partly integrated with curative services and partly organized as separate activities by special institutions. In many European countries, primary care physicians or specialists are increasingly involved in providing preventive services, such as immunizations, health check-ups or screening, and are also responsible for the notification of communicable disease (Saltman et al., 2012). There is, however, considerable variance in how far these physicians provide health promotion and advice on unhealthy lifestyles (Aluttis et al., 2012), which is an area that has been found particularly lacking in south-eastern Europe (Rechel and McKee 2006; WHO, 2009b).

41. Nevertheless, most preventive services, such as immunization or screening, are provided at the level of primary health care. In Croatia, for example, vaccines for childhood and adolescent immunizations are administered by primary care paediatricians (public and private), family physicians or general practitioners (GPs) (private and public), and school health physicians (WHO, 2007b). In Germany, the administration of preventive services by office-

based physicians has even been described as a factor in the low prestige of public health services (Busse and Riesberg, 2004).

42. Primary health care reforms in some countries in central and eastern Europe have also diminished the role of primary health care in public health. In some countries of the region, a decline in home visits and preventive check-ups has been noted, as these were not incentivized for newly independent primary health care providers (Rechel et al., 2012). In Croatia, following the partial replacement of medical centres by independent GPs, some of the public health functions they previously provided were taken over by institutes of public health, such as epidemiological and school health services (WHO, 2007b).

43. Countries that seem to have achieved a better integration of public health services into primary care include Denmark, Estonia, Finland, Portugal, Spain and Sweden (Glenngård et al., 2005; Barros and de Almeida Simoes, 2007; Strandberg-Larsen et al., 2007; Vuorenkoski et al., 2008; Koppel et al., 2009; García-Armesto et al., 2010; Anell et al., 2012). Those in secondary care increasingly recognize their role in public health,exemplified by the Health Promoting Hospitals initiative (Whitehead, 2004).

Administrative set-up

44. Another way in which public health services differ across Europe is their administrative set-up. In several countries, such as the Netherlands or Germany, many core public health services are subordinated to local government; in others, such as the United Kingdom, they exist as separate bodies subordinated to local health authorities, although in England public health functions are (highly controversially) being divided among a central government agency, local government, and the National Health Service (McKee et al., 2011). In south-eastern European countries, national and regional public health institutes play a key role in the planning and provision of EPHOs (WHO, 2007c; WHO, 2007d).

Financing mechanisms

Share of total health expenditure spent on public health

45. The financing of public health activities has been described as a “black box” (Duran and Kutzin, 2010). Many actors and sectors are involved, some costs fall on private enterprises and are unaccounted for, and the very definition of public health activities used to differ not only from one country to the next, but even between the Organisation for Economic Co-operation and Development (OECD), WHO and Eurostat (Allin et al., 2004; Sensenig, 2007). Some definitions included personal health services delivered by public health agencies, while others only included population-based services (Sensenig, 2007). Only in 2011 has a global standard of health accounts been published (OECD et al., 2011). While this is a major achievement, much expenditure on public health falls outside the activities that these accounts capture (de Bekker-Grob et al., 2007).

46. While recognizing these limitations, available health accounts data provide some rough estimates for expenditure on prevention and public health for most countries of the WHO European Region (see Table 1). According to the WHO global health expenditure database, expenditure on prevention and public health varied in 2010 from 0.62% of total health expenditure in Italy to 8.17% in Romania (Global health expenditure database, 2012). This suggests considerable room for increased financial allocations to public health in many European countries. Unsurprisingly, in the study on public health capacity in the EU, the lack of adequate resource provision was identified as often the most significant barrier to the effective implementation of public health programmes and interventions (Aluttis et al., 2012).

Table 1. Reported expenditure on prevention and public health as % of total health expenditure, WHO European Region, 2003–2010

	2003	2004	2005	2006	2007	2008	2009	2010
Albania	1.57				4.86	2.85	2.66	3.00
Armenia	0.61	0.90	3.86	5.15	3.90	4.47	4.69	
Austria	1.77	2.02	1.91	1.90	1.91	1.76	1.68	1.68
Belarus								3.81
Belgium	2.27	2.26	2.16	2.36	2.73	3.16	2.74	2.74
Bosnia and Herzegovina		2.70	2.69	2.67	2.35	2.63	1.86	2.43
Bulgaria	3.45	3.86	3.01	3.45	3.86	4.10	3.46	3.46
Croatia	0.00	0.00	0.00	0.00	0.00	0.00	0.65	0.68
Cyprus	0.58	0.55	0.55	0.61	0.64	0.64	0.69	0.71
Czech Republic	1.68	1.96	1.67	2.08	2.19	2.59	2.60	2.60
Denmark	2.26	2.20	2.12	2.02	0.89	0.92	2.16	2.16
Estonia	2.19	1.97	2.31	2.54	2.70	2.71	2.32	2.90
Finland	4.81	4.89	5.05	5.10	5.40	5.42	5.26	5.25
France	2.02	2.04	1.97	1.95	1.98	1.96	2.15	2.15
Georgia	2.20	2.27	1.80	1.12	1.15	0.64	1.20	1.61
Germany	3.23	3.26	3.23	3.29	3.51	3.59	3.54	3.54
Hungary	4.77	4.30	4.25	4.06	4.00	3.86	4.25	4.25
Iceland	1.39	1.45	1.51	1.49	1.58	1.54	1.43	1.44
Ireland	2.32	2.96	2.96	3.00	2.95	2.97	2.98	2.97
Israel	0.92	0.85	0.77	0.70	0.65	0.66	0.66	0.64
Italy	0.71	0.62	0.56	0.56	0.60	0.62	0.61	0.62
Kyrgyzstan		2.20		2.38	2.97	4.73	4.07	4.06
Latvia	2.73	0.98	0.25	2.86	1.40	1.43	2.90	2.90
Lithuania	3.42	1.72	1.69	1.18	1.74	1.17	1.13	1.13
Luxembourg	1.77	1.47	2.06	1.68	1.90	1.72	1.75	1.75
Malta	1.59	1.52	1.43	1.33	1.45	1.13	1.32	1.33
Montenegro		0.57	0.56	0.68				
Netherlands	4.89	4.49	4.33	4.58	4.66	4.51	4.01	3.85
Norway	1.93	1.94	1.91	1.90	1.99	2.07		2.11
Poland	3.30	1.68	2.28	2.31	2.22	2.19	2.14	2.14
Portugal	1.97	1.89	1.94	1.66	1.66	1.79	1.80	1.80
Republic of Moldova							4.35	7.56
Romania	6.16	6.63	6.73	5.32	6.58	5.80	8.17	8.17
San Marino[a]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Serbia	8.70	8.02	7.43	7.33	7.05	6.68	7.49	6.33

	2003	2004	2005	2006	2007	2008	2009	2010
Slovakia	1.64	2.73	2.28	4.29	4.71	4.61	4.62	4.61
Slovenia	3.42	3.65	3.54	3.58	3.72	3.63	3.57	3.58
Spain	2.23	2.25	2.27	2.29	2.37	2.27	2.58	2.58
Sweden	3.10	3.06	3.29	3.07	3.34	3.45	3.64	3.63
Switzerland	2.28	2.20	2.18	2.16	2.32	2.47	2.52	2.52
Tajikistan	0.94	0.92	1.32		2.19	3.03	2.78	2.84
Turkey	4.67	5.11	4.97	4.91	5.38	5.57	5.54	5.54
Ukraine	3.68	3.68	3.47	3.65	3.50	3.39	3.08	3.16

Source: Global health expenditure database, 2012.

[a] San Marino reported throughout as 0.00, which may reflect incomplete data.

Note: As discussed in the text, these figures should be treated with great caution.

47. There are also large variations in expenditure within countries. In Italy, absolute and relative expenditure on public health varies considerably across regions. Although there is guidance from the national Ministry of Health that 5% of regional health expenditure should be allocated to public health, regions are free to adjust this share (Lo Scalzo et al., 2009).

Sources of funds

48. Turning to sources of financing, a breakdown of public and private expenditure on public health reveals that public sources are the main source of financing in many countries, but that private expenditure is substantial in several countries, amounting to 2.3% of total health expenditure in the Netherlands and 2.7% in Slovakia (OECD, 2011). Increasing the role of private sources of funding has been a deliberate policy in some countries, including some in central and eastern Europe, south-eastern Europe and the CIS, where laboratories derive additional income from commercial activities (WHO, 2009b; Duran and Kutzin, 2010; Gotsadze et al., 2010). In Slovenia, for example, institutes of public health now derive some of their funding from fees for services, which has led to a market orientation and is considered to have undermined their public health orientation (WHO, 2009a). In several countries of the CIS, including Armenia and Kyrgyzstan, the introduction of charges for public health inspections has led to a disproportionately high number of inspections (Duran and Kutzin, 2010).

49. With regard to the public financing of those aspects of public health activities linked to the health system, countries differ in terms of sources of financing (with a main divide between taxation and social insurance-based financing), and (when tax-based) in which administrative level pays for public health activities. It has been suggested that countries with social health insurance models of funding have less comprehensive national public health activities than those with tax-based systems, due to the more population-oriented approach of the former systems (Allin et al., 2004). However, financing arrangements are much more complex than this dichotomy suggests and also differ depending on the type of public health activity (see Box 3).

Box 3. Funding streams for public health in Estonia

In Estonia, services and programmes for public health are financed through budgetary allocations to the Ministry of Social Affairs and the national health insurance fund, as well as other ministries and municipal and private sources. The Estonian Health Insurance Fund funds health check-ups tailored to various risk groups, both as part of specially targeted disease prevention projects and within the health system generally. National strategies are mostly financed through state budget allocations, but some cross-sectoral public health strategies are financed to a significant degree through other ministries. For example, the National Strategy for Prevention of Cardiovascular Diseases 2005–2020 has been financed largely by other ministries, including the Ministry of Education and Research. In addition to the nationally organized services, the larger municipalities finance some preventive services according to local needs. Some funding for public health also comes from the European Social Fund, as well as international agencies such as the Global Fund to Fight AIDS, Tuberculosis and Malaria. The percentage of state health budget allocations devoted to public health almost doubled between 1999 and 2006, reaching 11.1% in 2006, but funding remains fragmented.

The sums allocated to particular programmes are ring-fenced and defined in the state budget, and therefore are transparent and allow for planning of activities. Systematic health promotion activities were launched in Estonia in 1993, when the Ministry of Social Affairs decided to create a system for financing national and community-based health promotion projects. The demand-driven system was financed from an earmarked share of the budget of the Estonian Health Insurance Fund and managed by a committee of experts making funding decisions and coordinating evaluation. The objective was to create demand for health promotion at the national and county levels, and to help to build capacity and competence in health promotion. Applications for health promotion projects are submitted once a year on a competitive basis. Since 2002, project applications need to include criteria for outcome measurement.

The principal weakness of disease prevention programmes could be said to be the structure of their financing. Each programme or strategy is allocated funds on an annual basis, leaving them potentially open to being undermined by short-term budgetary considerations. This form of funding also impedes longer-term planning; a significant weakness in the financial framework for disease prevention. Another challenge is that some services are not funded or subsidized for the uninsured, such as some screening programmes and general health counselling from GPs, with potential implications for inequalities in health. Some types of service also have high co-payments for groups of the population who may have major difficulty paying, such as some drug addiction services (from providers who do not have contracts with National Institute for Health Development) and all alcohol addiction services.

Source: Koppel et al., 2009.

50. In some countries, such as France (Sandier et al., 2004), the multiplicity of funding sources was noted as a weakness of disease prevention and health promotion activities. The lack of stable funding for these activities was also noted in the countries of south-eastern Europe, where funding is often allocated on an ad hoc basis and in some cases largely relies on international agencies, leading to haphazard planning and a lack of overall strategies. Furthermore, the financing mechanisms for many disease prevention and health promotion activities aimed at noncommunicable diseases are not linked to the health financing system as a whole; for example, funded through the national health insurance fund (WHO, 2009b). Lack of output-based financing of public health services has been identified as another weakness (WHO, 2009a).

51. While some countries with health insurance systems fund public health activities from insurance funds, in many of these countries most public health functions are funded separately from taxation. Germany is an example of the first category of countries. Most preventive measures aimed at individuals – such as immunizations, screening programmes and health check-ups – are carried out by office-based physicians and paid from the sickness funds' benefit package, while population-based health promotion activities are also paid for by the sickness funds (Busse and Riesberg, 2004). In Croatia too, the national vaccination programme is completely covered by the Health Insurance Institute (WHO, 2007b).

52. In contrast the Netherlands, which like Germany largely relies on health insurance to pay for curative health services, finances prevention activities through general taxation (Schäfer et al., 2010). The countries of central and eastern Europe and the CISalso use taxation-based budgetary funding from the central level to fund public health services (Gotsadze et al., 2010), with no significant reforms since the fall of communism (Duran and Kutzin, 2010). However, even in these countries a mix of public financing sources seems to be common, such as in the Czech Republic, where preventive services provided by GPs (vaccinations and screening) are covered by the benefit package of the health insurance fund, but the Ministry of Health provides direct, tax-based funding to public health services, such as specialized health programmes (Bryndova et al., 2009).

53. Austria also relies on a mix of financing sources: two-thirds of the cost of vaccines is borne by the federal government, and one-sixth each is paid by the Länder and the social health insurance institutions. The costs of administration, distribution and administering are paid by the Länder. The financing of health promotion activities also uses a mix of federal and Länder funds (Hofmarcher and Rack, 2006). In south-eastern Europe, funding for core public health functions, such as vaccination, comes directly from the central state (WHO, 2009b).

54. In many European countries (including Austria, the Netherlands, Denmark, the Czech Republic, and the United Kingdom), payment of primary health care providers is calculated on a mixed system, based on the number of registered patients (capitation), fee for service, payment for implementation of certain programmes, and payment for performance (Fujisawa and Lafortune, 2008; Katić et al., 2012). Performance or programme-based payment usually involves targets, some of which are related to public health activities. In Sweden, for example, some county councils use a small performance-based element of payment (2–3% of the total payment) that is partly dependent on the provision of preventive services (Anell et al., 2012). In south-eastern Europe, several countries have adopted such combined payment systems (Rechel et al., 2012). In Montenegro, 10% of the earnings of primary health care teams are directly related to implementing prevention programmes (Ostojić and Andrić, 2012).

55. One model that has attracted much interest is the Quality and Outcomes Framework introduced for family medicine in the United Kingdom in 2004 (Katić et al., 2012). According to this Framework, extra funds are paid to GP practices for meeting a range of criteria, some of which relate to disease prevention (Boyle, 2011), although evidence for its effectiveness is contested.

56. While in many countries preventive services are covered by the main public financing body – such as in Estonia by the national health insurance fund (see Box 3) – in others, such as Armenia (Armenian et al., 2009), a lack of incentives to practice preventive medicine among physicians has been noted, as well as the existence of out-of-pocket costs to consumers. The challenge of putting health promotion activities on a sustainable financial basis has been noted in several countries. The problem is particularly acute where funding mechanisms are not linked to health financing as a whole, but rather are ad hoc or based on external funding (Bayarsaikhan and Muiser, 2007; WHO, 2009b). To address this issue, a system of financing health promotion

projects was established in Estonia in 1995, mainly from the Estonian Health Insurance Fund, which was quite exceptional in international practice (see Box 3).

Earmarked taxes for public health

57. Some countries have introduced earmarked taxes for public health activities. One example is Austria, where revenue from tobacco tax must be used for preventive check-ups and health promotion measures (Hofmarcher and Rack, 2006). Bulgaria has committed itself to devoting 1% of resources received from excise duties on tobacco and alcoholic beverages to programmes for limiting the consumption of tobacco, alcohol and illicit drugs (WHO, 2009b).

58. With the exception of taxes on tobacco and alcohol, where some countries – such as the United Kingdom – view them explicitly as a means of reducing consumption (although many still use them simply as a means of revenue generation) the use of fiscal instruments to influence behaviours relevant to public health is not yet widespread. However, some countries are leading the way, such as Denmark, which has introduced a tax on foods containing trans fats (Breda et al., 2013) and Finland and France with taxes on high-sugar soft drinks.

Level of government

59. Countries in Europe also differ with regard to which level of government provides tax-based funding for public health activities. In general, subnational levels play an important financing role in federal or decentralized systems, where funding levels can be affected by local budgets (see Box 3).

60. In Finland, for example, municipalities are responsible for funding immunizations, and are also the main funders of health promotion activities, but central budgetary allocations are made as well (Vuorenkoski et al., 2008). In Denmark, vaccination programmes are also financed by the regions (Strandberg-Larsen et al., 2007), while in Belgium two-thirds of the cost of vaccines is borne by the federal government and one-third by the communities (Gerkens and Merkur, 2010). In almost all countries of central and eastern Europe and the CIS, tax-based funding comes from the central government, but there are exceptions, such as Poland, which has introduced co-funding from local government (Gotsadze et al., 2010).

Impact of economic crisis

61. As a result of the current economic crisis, the financing of public health is in danger in many countries, as the long-term benefits of public health interventions are often overlooked (Martin-Moreno et al., 2012). Many structures for delivering EPHOs in Europe are already facing substantial cutbacks, and public health programmes and interventions in several countries – including Bulgaria, Latvia and the United Kingdom – have been scaled down (Aluttis et al., 2012). Some examples of the financial pressures experienced by EPHOs are given in Box 4.

Box 4. Examples of EPHOs under pressure

Latvia: closure of public health infrastructure

Until 2009, the lead organization for public health in Latvia was the Public Health Agency. However, this agency was closed down in September 2009. The government justified this action with the need to reduce public expenditure. In 2010, the government discontinued provision of public health promotion activities to the population. As a consequence, the system of public health protection in Latvia has been seriously jeopardized, which is likely to have negative implications for the health and well-being of the Latvian population.

Bulgaria: insufficient financial contributions to public health programmes

Bulgarian public health programmes are underfinanced. Even promised funds are often withheld and programmes remain unfinished. Currently, the sole priority of national health policy seems to be the economic effectiveness and quality of hospital services.

Germany: public health as a "soft" political item

In times of economic hardship, measures for health promotion or disease prevention are often the first that are in danger of being downsized in Germany. Cost containment in the medical sector dominates the national debate. Furthermore, since life expectancy of the population is high and continues to grow, many politicians do not see the need for developing a comprehensive public health agenda.

Source: Aluttis et al., 2012

Governance structures

Health policy planning and implementation

62. The study on public health capacity in the EU found that virtually all EU Member States have a designated high authority with a mandate and responsibility for public health-related matters. However, in Austria (a federal country) there is no clearly designated high authority, public health framework, strategy or plan (Ladurner et al., 2011), while in Latvia the dissolution of the national Public Health Agency resulted in the disintegration of the public health system (Aluttis et al., 2012).

63. Many, but not all, countries have developed medium- to long-term public health strategies (see Box 3). In Armenia and the former Yugoslav Republic of Macedonia, for example, there is no comprehensive national strategy for public health (WHO, 2007e; Armenian et al., 2009). An overall vision for public health is also lacking in Estonia (Koppel et al., 2009) and Uzbekistan (Ministry of Health of the Republic of Uzbekistan, 2011).

64. In Slovenia, public health services are mainly designed, implemented and monitored by the network of institutes of public health, which includes the national institute and nine regional institutes. There is a lack of clear strategy for public health, as well as a lack of well-defined targets and an overall public health mission. This weakness affects every area of the delivery of public health services and results in a lack of strategic thinking around major organizational issues, including the roles, functions and working relationships among all major stakeholders and actors responsible for public health services. At the same time, however, there are some strengths in the organization of public health within the Ministry of Health, which includes a Directorate of Public Health, established in 2000. The Directorate has given an important voice to public health within the Ministry (WHO, 2009a).

65. The introduction of legislation securing smoke-free public places and workplaces in Ireland in 2004 is an example of public health leadership that operated through a strong coalition between different political and professional interests against powerful opposition from the hospitality sector and the tobacco industry (see Box 5).

Box 5. Smoke-free public places and workplaces in Ireland

Ireland was one of the first European countries to adopt legislation to ban smoking in workplaces, on 29 March 2004. The commissioning and public launch of two national strategy papers, one on a tobacco-free society (2000) and one on the harmful effect of second-hand smoking (2003), paved the way for this law. The papers were publicly and forcefully launched and intensively discussed in academic, civil and political circles. The Health Minister also made tobacco the top priority on his agenda and engaged passionately in the debate. There was strong support for a legislative initiative to ban smoking in workplaces from the general public, the political parties represented in parliament and nongovernmental institutions.

The effective alliance of advocates helped to feed a mass media campaign in favour of a tobacco ban in workplaces. In time, the preparation of the draft legislation created a cascade of support for the legislation and gradually watered down opposition that mainly came from the hospitality sector. An important success factor was consistency in the message by decision-makers that this was about protecting employees from second-hand smoking. This is an example of a successful public health leadership coalition involving politicians, the public and the media that showed what could be done, inspiring the public health community across Europe.

Source: WHO, 2005b.

66. The diversity of health systems in Europe extends to their arrangements for public health leadership at the national level. Political leadership depends on the priority of health within government and the organizational division of responsibilities between sectors. Some countries in Europe have a separate minister for public health, although their status varies. For example, the creation of the post of Minister for Public Health by the last United Kingdom government simply involved the renaming of a minister of state (below cabinet level), although it did have considerable symbolic importance.

67. The extent to which public health institutions can show leadership depends on whether they are able to speak out and act independently, or at least at arm's length from government. This is also true for NGOs, such as many patient associations, which campaign with great influence in many countries (Jakubowski et al., 2013).

68. Another potentially important leadership role (both political and technical) is the position of the Chief Medical Officer or Director General for Health. This role is most developed in the four constituent parts of the United Kingdom, as well as in Ireland, Sweden and Norway. For example, in England the Chief Medical Officer is the government's principal medical adviser and the professional head of all the medical profession. In most other EU countries, the Chief Medical Officer or equivalent post has a much more limited profile (Jakubowski et al., 2010).

69. The variety of organizational settings and mandates means a wide span of responsibilities and roles in public health, which can be limited to surveillance of communicable diseases, as in Austria and in Germany, or extend to the control of communicable and noncommunicable diseases, epidemic and crisis response, and the implementation of the International Health Regulations (Jakubowski et al., 2013).

Intersectoral governance

70. Intersectoral action is necessary for public health practice. Environmental health, occupational health, food safety, health promotion and health impact assessment all require intersectoral working (see Box 6). Although the Ministry of Health is usually the lead agency in health promotion and protection, many other ministries play very important formal or informal roles in public health issues. In the study on public health capacity in the EU, ministries for the following areas were consistently reported to be involved in public health-related activities in collaboration with the Ministry of Health: environment, social affairs, agriculture, transportation, education, science, justice and, finance (Aluttis et al., 2012).

Box 6. Areas where intersectoral action is apparent

Environmental health

Environmental determinants are a contributor to the burden of disease and, by definition, are shaped by those responsible for the environment, ranging from communities to housing, transport, agriculture, employment and others, but not necessarily including health systems (Leonardi, 2013). But public health departments at local and national levels are among the key actors in environmental health (MacArthur, 2002). Environmental health issues, such as air or water quality, are variously the responsibility of ministries of the environment, ministries of health, ministries of agriculture, ministries of social affairs, or a combination of those.

Food safety

Mechanisms for inspection of food production and supply also differ across Europe. In many countries in central and eastern Europe this is undertaken by sanitary or veterinary inspectorates, ministries of health, ministries of agriculture, ministries of social affairs or ministries of the environment (Tragakes et al., 2008; WHO, 2009b; Gotsadze et al., 2010; Ministry of Health of the Republic of Uzbekistan, 2011). In many western European countries there are dedicated food safety or consumer protection agencies (Busse and Riesberg, 2004; Sandier et al., 2004; WHO, 2009b). Some of these national agencies or authorities have full responsibility for all elements of the food chain “from farm to fork” (Breda et al., 2013).

Social inequalities

Policy actions on health and social inequalities have also been developed in a range of sectors other than health, addressing mainly social inclusion and poverty in countries such as the Czech Republic, Estonia, Ireland, Norway, Slovenia, Belgium, Poland, Spain, England, and Finland. Many of these actions on social inclusion have been triggered by policies and actions at the EU level (Needle and Chiotan, 2013).

71. Many countries in the WHO European Region have adopted intersectoral policies, often influenced by the Health for All policy promoted by the WHO (Wismar and Martin-Moreno, 2013). Several exercises to map intersectoral policies have been conducted, focusing on different countries and issues (van de Water and van Herten, 1998; Busse and Wismar, 2002; Wismar and Busse, 2002).

72. By 2005, a considerable number of countries had defined and adopted Health for All policies, while others were in the process of drawing up such policies. Many countries with

Health for All policies at the national level had also adopted subnational policies (WHO, 2005a). This mapping exercise was updated in 2011 in support of the development of the new WHO European Health Policy, Health 2020. Preliminary results showed a continuous uptake of Health for All policies. Since the last mapping exercise in 2004, 32 countries had either formulated Health for All policies for the first time or renewed existing policies (Wismar and Martin-Moreno, 2013).

73. While formal policies are in place in most European countries, structures and capacities for intersectoral action seem to be lagging behind and are not yet consistently developed. In the study on public health capacity in the EU, capacities for intersectoral collaborations were generally viewed as weak (Aluttis et al., 2012). While some countries, such as Finland or Sweden, have well-developed intersectoral structures (Allin et al., 2004; Glenngård et al., 2005), others sometimes engage in operational collaboration, but lack formalized and permanent structures (Rechel and Brand, 2013).

74. In the study on public health capacity in the EU, established mechanisms for intersectoral working across governmental sectors (in particular with regard to tackling the social determinants of health and health inequalities) were reported to be relatively weak in 23 of 27 countries. Only in Finland, Lithuania and the Netherlands were capacities reported to be fully developed.

75. A systematic institutionalization of the Health in All Policies concept (such as through legislation) was reported to require further development (Aluttis et al., 2012). Legal mechanisms and policies in place to support such partnerships linking different actors were reported as fully developed in Belgium, Lithuania, Luxembourg, Sweden, Latvia, Finland and the Netherlands. On the other hand, they were essentially non-existent in Austria, France, Germany, Greece, Hungary, Ireland, Malta and Poland (Aluttis et al., 2012).

76. Self-assessments of public health capacities and services in south-eastern Europe noted that formalized and permanent structures for intersectoral collaboration were not widely established in the region. Many countries had not yet developed robust strategic or operational mechanisms between departments and ministries (WHO, 2007c; WHO, 2007e; WHO, 2009b). In Slovenia this was attributed to the lack of targets and clear strategies (WHO, 2009a).

77. An exception is Bulgaria (see Box 7), which reported established mechanisms for all cases of intersectoral cooperation, including national councils, standing interdepartmental councils, advisory councils, standing expert groups and working groups (WHO, 2007a).

78. In general, intersectoral action is still underdeveloped in many countries of the CIS (Maier and Martin-Moreno, 2011), with the possible exception of national HIV/AIDS strategies and programmes. In Armenia, draft laws and policies are routinely submitted to the Ministry of Health for comments on their impact on health, but there is no formal mechanism for Health in All Policies (Maier et al., 2009). In Uzbekistan, intersectoral action among ministries, agencies and organizations was reported as insufficient in the areas of occupational health, environmental health, nutrition and disease prevention, with the greatest challenges at the regional and local levels. So far there is no specific cross-sector agency or coordinating committee on public health issues at the national level, although the establishment of such a mechanism is envisaged (Ministry of Health of the Republic of Uzbekistan, 2011).

Box 7. Example of intersectoral action in Bulgaria

The Food and Nutrition Action Plan 2005–2010 in Bulgaria aims to achieve changes in the national diet to reduce both the risk of nutrient deficiencies and diet-related chronic diseases, with a special emphasis on counteracting obesity. This is being implemented through an intersectoral approach through the National Coordination Council, set up for that purpose. The Council includes the Ministries of Agriculture, Education, Economic, Labour and Social Policy, and the Agency for Youth and Sport, as well as representative associations of food producers and the municipalities. Particular attention is paid to women of reproductive age and in pregnancy, as well as to lower income groups.

Source: WHO, 2007a; WHO, 2009b.

79. A number of governance structures for intersectoral action can be distinguished (Mulgan, 2010; Wismar and Martin-Moreno, 2013).

- Ministerial linkages bring together senior decision-makers to discuss health. There are different approaches to establishing policy coherence at cabinet level (Den Broeder and Wismar, 2012). In the United Kingdom, the Treasury plays a major role through agreed policy frameworks with each ministry (Smith, 2008). There are also examples of issue-driven ministerial linkages like in the French cancer plan of President Chirac (Paris and Polton, 2008) and the subsequent plan initiated by President Sarkozy (Wismar and Martin-Moreno, 2013).
- Cabinet subcommittees offer an intersectoral structure that can facilitate dialogue and collaboration at government level. There are standing and ad hoc committees. Health or certain aspects of health may be pursued by subcommittees that do not have health in their name, such as a cabinet subcommittee on sustainability (Metcalfe and Lavin, 2012).
- Public health ministers are another way to establish ministerial linkages, even though not necessarily at the cabinet table. The mandate of public health ministers can vary. Tessa Jowell, as the first person to be designated as Public Health Minister in the United Kingdom, had an eminent role in forging the tobacco control policy which affected policies beyond the Ministry of Health. However, as noted above, the creation of her post simply involved the renaming of an existing post as minister of state, subordinate to the Secretary of State for Health and outside the cabinet. In Sweden, the post of Public Health Minister was created in the context of a national health policy that was entirely focused on the social determinants of health (Hogstedt et al., 2004). The occupant of this post had responsibility for policy, with access to a high-level national steering committee composed of directors general from key national state agencies and a representative of regional and local authorities (Pettersson, 2010). However, this position has now been discontinued (Wismar and Martin-Moreno, 2013).
- Parliamentary committees can also facilitate intersectoral action. The United Kingdom House of Commons Health Select Committee inquiry into health inequalities showed that parliament can be an important advocate for Health in All Policies. Beyond partisan boundaries, the basis for a cross-party consensus was developed in parliament (Earwicker, 2012). However, the extent to which parliamentary committees can fulfil such a role will depend upon the constitutional separation of powers.
- Intersectoral committees are one of the most frequently used intersectoral governance structures (see Box 8). However, these committees are often unpopular among participants and can become a mechanism for delay or even sabotage. Intersectoral committees work well on "bureaucratic issues", for which a political consensus has been achieved (Greer, 2012).

Box 8. Example of intersectoral action in Estonia

The Estonian Food development plan was initiated by the Ministry of Agriculture and approved by the Government in December 2005. Under the direction of the Minister of Agriculture, a broad-based council has been established to coordinate the preparation and implementation of the development plan, which focuses on increasing consumer awareness of the safety and quality of food, the components of a healthy diet and traditional food products.

Source: Koppel et al., 2009.

- Joint budgets from different public sources of financing are an intersectoral structure that can facilitate the funding of health-related activities. Joint budgets are used in England and to some extent as pilots in Sweden. A particular challenge is accountability, which in many countries prevents ministries from developing joint budgets (McDaid et al., 2008; McDaid, 2012; Wismar and Martin-Moreno, 2013).
- Delegated finance is an intersectoral governance structure that pools resources outside the ministry and allows for financing sources outside the government. Examples for this are the health promotion foundations in Switzerland and Austria. While health promotion foundations have sometimes been criticized as an institutional duplication that undermines established health promotion agencies, there is evidence to suggest that they help to increase the resources spent on health promotion (Schang et al., 2011; Schang and Lin, 2012). Germany also planned to establish a health promotion foundation, with an annual budget of €250 million, but the foundation failed twice to gain approval in parliament (Wismar and Martin-Moreno, 2013).
- Public consultation is a governance structure that aims to reach out and engage with the wider public (Gauvin, 2012). There are different methods for doing this. Austria, for example, used a public consultation process to discuss a new intersectoral public health policy. With more than 4000 inputs from individuals, NGOs and stakeholders it was considered a relatively well-received consultation. The European Commission, as part of its general decision-making process, submits all legislative and major proposals to a public consultation process.
- Health conferences organized by the national, federal or regional government are another governance structure that helps to reach out to stakeholders (see Box 9). Examples can be found in Austria, Germany and France. The best evaluated system is in North-Rhine Westphalia, where the state health conference is mirrored by health conferences in the municipalities. Evaluation has been favourable, showing its relevance in agenda-setting, coordination and joint implementation (Brand and Michelsen, 2012).
- Public private partnerships (PPPs) can facilitate industry engagement for health. The EU Platform on Diet, Physical Activity and Health is an example of such a PPP, facilitating joint action between the European Commission, industry and a large number of NGOs. Some countries have mirrored these EU-based activities with similar, sometimes more focused, national PPPs (Kosinska and Palumbo, 2012). However, these partnerships are coming under increasingly critical scrutiny. They are extremely attractive to industry partners – in particular in the food, alcohol, and leisure sectors – which can use them to obtain access to ministers and promote an image of corporate social responsibility. The desirability of getting the producers of potentially harmful substances to limit the adverse effects of their products voluntarily is self-evident, but the feasibility of doing so is not. The tactics adopted by some of the leading food and alcohol corporations are similar to those traditionally associated with the tobacco industry, such as the insistence (in the face of overwhelming evidence) that the main driver of rising levels of obesity is inadequate physical activity rather than sugar consumption (Basu et al., 2012). Consequently, the public health community is increasingly calling for engagement with industry to be backed up by the realistic threat of legislation.

Box 9. Examples of intersectoral governance structures

Germany: health boards

The German health system includes federal legislation and governmental regulations at the regional (Länder) and local levels. Many regional governments have implemented so-called Gesundheitskonferenzen (health boards), which provide a round-table forum for all major stakeholders of the health system to discuss and agree on non-binding (public) health issues. These conferences form a platform for public health coordination on the basis of consensus, and in some regions health targets have been formulated and agreed upon. Although their actual impact needs further investigation, they provide a forum for all stakeholders from public health and provide a good governance mechanism in a largely pluralistic health system.

Poland: multistakeholder involvement in the national strategy for health

For the period 2007–2015, a National Health Programme has been developed to define Poland's strategies and policies with regard to (public) health. The programme involves more than 30 organizations from different sectors, including governmental agencies and civil society.

Source: Aluttis et al., 2012.

80. The use of intersectoral governance structures, however, varies widely among countries. Public health ministers are only found in a handful of countries and are often characterized as a more recent development in intersectoral governance. Systematic use of national or state health conferences is reported only from few countries. Joint budgets and delegated funding, although attracting much interest, are implemented only very selectively (Wismar and Martin-Moreno, 2013).

Conclusions

81. This review has sought to identify and assess institutional models for delivering EPHOs in Europe. However, the authors had difficulty in finding even the most basic information about the organization of public health activities for a number of countries, and the available information is largely based on self-reports and unvalidated. Although the WHO Regional Office for Europe has supported evaluations of public health services, so far these cover only a fraction of European countries. Furthermore, many of these assessments have remained in draft form only and the quality and objectivity of the assessments differ greatly. The study on public health capacity in the EU was another major source of information, but it did not cover all aspects of EPHOs in depth and was based on key informants. The country reports of the European Observatory on Health Systems and Policies complemented the picture, but the information they provide on public health structures also varies considerably.

82. The material presented in this report nevertheless allows some tentative conclusions. The first is that basic institutional structures for delivering EPHOs are still not universally present in the countries of the European Region. In many countries areas for further development can be identified. In the context of the current economic crisis, there are widespread fears that it will not be possible to maintain existing structures (Rechel et al., 2011). Furthermore, it needs to be emphasized that institutional models alone are insufficient to bring about improvements in the absence of sufficient funding and political will.

83. Another key conclusion that emerges from this review is the wide diversity that exists in the organization of EPHOs across the European Region, affecting governance, provision and financing. The review suggests, for example, that some of the federal or decentralized systems of public health face problems in ensuring equity across regions. However, decentralization can also help to make public health services more responsive to local needs (Mays et al., 2009). A more systematic comparison and evaluation of public health structures in Europe is needed to identify which organizational structures and financing arrangements are most effective and efficient.

84. WHO's renewed focus on and commitment to strengthening public health capacities and services calls for a comprehensive approach, centred on strategic actions that reflect modern public health practice. The European Action Plan for Strengthening Public Health Capacities and Services, led by the WHO Regional Office for Europe, sets out major avenues for action. Based on the findings of this review, the Action Plan proposes a series of actions for assuring sustainable organizational structures and financing to be taken forward both by Member States and the Regional Office. The key objective is the achievement of the Action Plan itself, including the EPHOs, and Member States may wish to consider introducing mechanisms to enable them to monitor and assess the progress on a continuous basis.

85. Much more research is clearly needed on the organization of public health in Europe, starting from a description of current practice and extending to an assessment of what works best and why. Ultimately, public health structures will have to be assessed in terms of the improvements of population outcomes they achieve (Brand et al., 2006). However, it is exactly this information that seems to be almost entirely missing. Not only are there very few assessments of the effectiveness of disease prevention programmes in the medium term, as was noted in Estonia (Koppel et al., 2009), but broader evaluations of organizational reforms are also generally lacking (Maier and Martin-Moreno, 2011). Crucially, empirical evidence on the effectiveness or efficiency of different public health structures is so far lacking, with uncertainties surrounding the impact, effectiveness and efficiency of different governing structures and financing arrangements (Mays et al., 2009).

86. This review highlights several research gaps and uncertainties in the current understanding of how EPHOs are organized, financed, and delivered across the European Region, and what factors influence the effectiveness, efficiency, responsiveness and sustainability of these services. The complexity of institutional models for delivering EPHOs requires innovative research designs along with rigorous analytic approaches that draw on multiple disciplinary and methodological perspectives. Continued efforts to improve the evidence base on institutional models for delivering EPHOs require sustained commitment to building robust data resources at local, regional and national levels. Public health institutions, as well as researchers from a broad spectrum of disciplines, need to be directly engaged in the conceptualization, design, and conduct of research in this area.

Recommendations

87. While recognizing gaps in evidence, the information collected in this review makes it possible to offer the following recommendations to Member States of the WHO European Region.

Assessment of EPHOs and health needs

- Support objective and comparative assessments of the entire spectrum of EPHOs within Member States.

- Establish and align effective systems for continuous quality improvement of EPHOs with clear lines of accountability.

Prioritization and defining timescales

- Implement formal mechanisms to prioritize activities (such as health targets based on health needs and resources).
- Ensure the establishment and implementation of national health strategies and linked performance assessment for the delivery of EPHOs, standards and targets.

Organizational models of delivering and funding EPHOs

- Improve the horizontal and vertical integration of EPHOs to avoid duplication and improve efficiency and effectiveness.
- Ensure a balanced combination of national, regional and local arrangements to create responsive services that are able to identify risks and tackle inequities.
- Ensure the sustainable and long-term financing of EPHOs including, where appropriate, the use of financial incentives or taxes for public health purposes.

Governance, evaluation and monitoring

- Strengthen regional and local capacities through good governance, clear monitoring and reporting arrangements, and adequate supervision of EPHOs and approaches.
- Where public health activities are devolved to subnational levels, ensure equitable financing and provision.

Intersectoral approach

- Support intersectoral, upstream and integrated approaches to tackle complex public health challenges

Research

- Support the development of an evidence base to shed light on which institutional models or arrangements are more effective than others, and in which conditions.

Provisional outline of a future study

88. Our review has indicated the lack of sound empirical evidence on the different public health structures in place in the WHO European Region, with gaps relating to many countries and public health functions, and little information on responsiveness, effectiveness, efficiency and sustainability. A more systematic comparison and evaluation of public health structures is needed to identify which organizational structures and financing arrangements work best.

89. One of the main messages from this overview is that if policy-makers in Europe want to improve the delivery of EPHOs and learn from the experience of others, they must invest significant resources simply to describe what is already happening. Another conclusion from the review is that the kind of evidence that is collected needs to be improved, with a need to move beyond information provided by key informants and ministries of health towards more objective sources of information.

90. Based on these conclusions, the authors propose the creation of an evidence base to shed light on which institutional models or arrangements are more effective than others, and in which

conditions. A provisional outline of a future study that addresses some of the gaps in knowledge is given below.

- Setting: five countries from across Europe, including one each from western Europe, northern Europe, south-eastern Europe, central Europe, and the CIS. An alternative option could be a study involving twelve countries with a more narrow analytical focus on the costs and benefits of different organizational set-ups.
- Methods: documentary analysis complemented by interviews with key stakeholders.
- Duration: two years.
- Human resources: two full-time staff in a coordinating institution, three or four researchers working full-time in each of the countries covered; input from an international advisory committee.
- Approximate costs: USD 1.5 million.

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