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Facing the future: opportunities and challenges for 21st-century public health in implementing the Sustainable Development Goals and the Health 2020 policy framework

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Executive summary

1. The Shanghai Declaration[1] emphasized that health and well-being are essential for sustainable development. National health policies, strategies and plans informed by the Sustainable Development Goals (SDGs) and the Health 2020 policy framework of the WHO European Region are vital to achieving health improvement. Every country needs to plan health development within its overall SDG-informed development goals, and to identify investment priorities that will have the greatest potential impact on health and well-being.

2. This paper is about public health and its contribution to these processes. Although often invisible to the general public, public health delivers essential and primary public goods, protects community health, addresses risk factors which are often difficult for the public to visualize and sets the parameters for continuous health system reform and adaptation. It also drives essential research in specific areas, translating research outcomes into benefits for health.

3. However, public health remains an elusive concept, despite its considerable historical achievements. There is a need for a more comprehensive vision for public health and the strengthening of public health to face the challenges of the 21st century.

4. This paper reflects on 21st-century health policy development and public health practice, as a basis for guidance and support for Member States. Public health is a societal function facing complex political, social, economic and environmental challenges to which multisectoral responses are required, involving both vertical and horizontal integration. It needs an institutional base or bases and the services and capacities described in the European Action Plan for Strengthening Public Health Capacities and Services (EAP-PHS) and the essential public health operations (EPHOs).

5. There is growing evidence of the cost–effectiveness of public health interventions. Complex systems approaches are required for implementation, with real-time evaluation and feedback. Public health evidence needs to be made more relevant to, and instrumental in, health development through advocacy and by interfacing effectively with other sectors.

6. Health systems have a key role to play. Thinking about health systems has moved from an exclusive focus on the coordination and integration of individual services according to the needs of individuals and patients, to a broader concept of health systems as drivers of equitable health improvements at the population level. New organizational forms and examples are available, although these need further study and evaluation.

7. Public health practice requires appropriately trained and oriented professionals, who recognize and appreciate the reality that public health policy is set in a world of complexity, ambiguity and politics, in which evidence is important, but insufficient.

[1] The Shanghai Declaration on promoting health in the 2030 Agenda for Sustainable Development. Geneva: World Health Organization; 2016 (http://www.who.int/healthpromotion/conferences/9gchp/shanghai-declaration.pdf?ua=1, accessed 8 May 2018).

Today's public health leaders and practitioners must be able to work and be comfortable and effective in this environment. They must deal with all the determinants of health, interface effectively with other sectors and learn to work within those other sectors' agendas. There are profound and urgent training and development needs in all these areas.

Current challenges and priorities in national health policy development

8. Health is a driver both of development and – given good policies – its outcome. Yet the development agenda has changed. There has been a shift in political perceptions and assumptions following the global financial collapse of 2008–2010, with deep divisions posing threats to political and social cohesion and changing attitudes to health rights and opportunities. However, health can also be a source of societal cohesion and inclusion.

9. Today's health challenges are formidable, including an ageing population; unhealthy lifestyles; the burden of behavioural determinants leading to increased mortality and morbidity from noncommunicable diseases; the rapid transfer of infectious pathogens and the potential for global pandemics; national disasters, conflicts and mass population movements: antimicrobial resistance; injuries; and the health impacts of climate change and environmental pollution.

10. Faced with these challenges, governance structures often appear outdated. They use inadequate development criteria reflecting countries' historical economic and productivity systems. A different developmental paradigm is needed which will prioritize the equitable enhancement of health and well-being.

11. Both the SDGs and Health 2020 make it clear that health and well-being should be addressed in overall development programmes across all sectors of Member States' governance and policy mechanisms. In practice, the aim is to create government priorities, policies and budgets that are health-oriented, based on health impact assessments and focused on sustainability, within the framework of the SDGs.

12. Governments should have a national health policy that is coherent, integrated and focused within the country's overall development priorities. Health policy development requires engagement in political and social structures. It emphasizes multisectoral, whole-of-government, whole-of-society and health-in-all-policies approaches that work with key sectors related to health (education, social sectors, agriculture, transportation, trade, etc.) and with civil society and the private sector, within institutional and organizational structures designed at the country level. Establishing and sustaining such multisectoral efforts will usually require a fundamental shift in thinking and practice.

13. Health policy should deal with what matters for population health, using a complex causal architecture approach.[2] It should use economic arguments more visibly and effectively to demonstrate the cost–effectiveness of investments that improve health and show where investment might be withdrawn if interventions are known to be

[2] Keyes K, Galea S. What matters most: quantifying an epidemiology of consequence. Ann Epidemiol. 2015;25:305–11. doi: https://doi.org/10.1016/j.annepidem.2015.01.016.

ineffective. It should also grapple with people's diverse and ever-changing lifestyles and behaviours and the political, social and commercial influences that affect these.

14. Such health policy-making and implementation are complex and often "messy" processes. While there remains a need for clear scientific evidence and analysis, this must be set against a social and political context of growing complexity and ambiguity. Evidence needs to be effectively communicated and presented to politicians, policy-makers, professionals and the public in terms, and with examples, that they both understand and accept.

15. Overall, health needs to move out of a paradigm narrowly confined to, and based on, health care, into this wider multisectoral framework, which better reflects health as a public priority, deals with all determinants, and focuses on health as an investment, rather than a cost, and as a measure of a good society.

16. A new focus is needed on "upstream" determinants of health, supported by evidence favouring a paradigm shift from a cure-oriented model of health towards a health-promoting and preventive model.[3] Such a model would include improved health outcomes and reduced inequities in health,[4] and be based on evidence of economic value and providing for a progressive shift towards more health-focused development.

17. Health systems are a key component of health policy, and remain under great pressure, in terms of availability, access and delivery. These pressures include demographic changes; the expansion of comorbidities; diagnostic, therapeutic and pharmacological advances; the rising expectations of the public; litigation; the ever-present pressures caused by the need for quality, efficiency and cost-control; and some specific disease burdens, for example HIV/AIDS in the European Region.

18. Conclusion: national health policies, strategies and plans informed by the SDGs and Health 2020 are vital to achieving health improvement. Such policies are set in a world of complexity and ambiguity, remain fragile and are often under threat. Existing evidence is important, but insufficient. It must be made more relevant and become instrumental in health development and the development of national health policies.

The nature of today's public health challenges

19. Modern public health activities must be effective in a world of considerable unpredictability, complexity, ambiguity and uncertainty. Some actions will remain more aspirational, particularly if these require fundamental political and social reorientation; other actions are more tactical and the challenge is to implement them.

20. The breadth of potential public health aspiration and engagement requires prioritization, and a focus on "what matters most" to the health of populations.[5] This

[3] Health at a glance: Europe 2016. State of health in the EU cycle. Paris: Organisation for Economic Co-operation and Development; 2016 (http://www.oecd.org/health/health-at-a-glance-europe-23056088.htm, accessed 8 May 2018).
[4] Marmot M. The health gap: the challenge of an unequal world. London: Bloomsbury; 2016.
[5] Galea S, Annas G. Aspirations and strategies for public health. JAMA. 2016 (http://jama.jamanetwork.com, accessed 8 May 2018).

approach acknowledges that single causal risk factors do not act in isolation, and that understanding the nature of diseases requires an understanding of the nature of causal structures.[6] The political challenge here is to accept responsibility and respond positively to the social and economic dimensions of health experience.

21. While traditional rational, linear approaches to evidence in support of programme development and implementation have often prevailed to date, a "complex adaptive systems" perspective[7] suggests that these are invariably found wanting. While evidence is important, it is inevitably imperfect and incomplete, and action is also needed. Context and relationships also matter; and we learn by doing and through real-time evaluation.

22. As an example, this complexity is manifest in "wicked" issues, such as obesity. Recent studies on obesity suggest that, judging from existing evidence, any single intervention is likely to have only a small overall impact on its own.[8] A systemic, sustained portfolio of initiatives, delivered at scale, is needed to address this condition and its associated health burden.

23. Importantly, such initiatives are considered cost-effective for society: savings on health-care costs and higher productivity outweigh the direct investment required to deliver the intervention, when assessed over the full lifetime of the target population.[9]

24. While education and personal responsibility are critical elements of any programme to reduce obesity, these are not sufficient on their own. Additional interventions are needed that rely less on conscious choices by individuals and more on changes to the environment and societal norms.

25. Such changes require engagement from as many sectors as possible, including the private sector at all points along the food chain. Nevertheless, implementing an obesity abatement programme at the required scale will not be easy.

26. In addition to such analyses, the pervasive phenomenon known as "lifestyle drift"[10] suggests a need to move beyond a single-minded approach to modifiable individual behavioural determinants, affecting specific public health topics such as smoking cessation, obesity and alcohol misuse, towards a more balanced, comprehensive, multideterminant, systems-based approach which takes a life-course perspective and acknowledges the co-clustering of behaviours in particular groups and communities that have complex political, economic, social and environmental causes as well as complex consequences.

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[6] Marshall BD, Galea S. Formalizing the role of agent-based modelling in causal inference and epidemiology. Am J Epidemiology. 2015;181(2):92–9.

[7] Stirling D. Learning and complex adaptive systems. Bloomington (IL): Learning Development Institute; 2014 (http://www.learndev http://www.learndev.org/dl/Stirling_Learning-CAS.pdf.org/dl/Stirling_Learning-CAS.pdf, accessed 8 May 2018).

[8] Overcoming obesity: an initial economic analysis. McKinsey Global Institute; 2014.

[9] Sassi F. Obesity and the economics of prevention. Paris: Organisation for Economic Co-operation and Development; 2010 (http://www.oecd.org/els/health-systems/obesity-and-the-economics-of-prevention-9789264084865-en.htm, accessed 8 May 2018).

[10] Popay J, Whitehead M, Hunter DJ. Injustice is killing people on a large scale – but what is to be done about it? J Public Health (Oxf). 2010;32(2):150–6.

27. In response to such challenges, success can only be achieved through programmes which are systematic and scaled-up, driven by public health intelligence and informed by evidence, with sound infrastructure, business plans and programme management.

28. Such complex programmes for population-level change will not all be delivered through conventional services, and may well involve three points of intervention:
    - population level (healthy public policy, legislation, regulation, licensing);
    - systematic and scaled intervention through services (health, social and third-sector); and
    - systematic community engagement, including the private productive sector (about which attitudes often differ – it may be thought of either as a partner or as an antagonistic element).

29. Real-time evaluation allows interventions to be tracked and adjusted continuously as required, based on the results of monitoring against clear and measurable process and outcome indicators. To date, evaluative research has often not provided sufficiently rapid feedback to be useful for policy analysis or change.

30. Evaluative research is, however, an issue of which academics are increasingly aware and which they are actively seeking to address by clarifying, and giving greater attention to, pathways for the co-production and co-design of research in tandem with those at whom it is targeted.

31. Conclusion: the complex political, social, economic and environmental challenges of the 21st century require multifaceted, multilevel policy interventions, involving both vertical and horizontal integration. In the health field, there is growing evidence of the cost–effectiveness of such interventions. Complex systems approaches are required, with real-time evaluation and feedback.

New scientific and policy thinking

32. New thinking shapes today's health policy-making. An example is the current focus on the impact of health determinants and experiences. It is increasingly clear that human beings are affected throughout the life course by genetic, epigenetic and intrauterine legacies, by environmental exposures, by nurturing family and social relationships, by behavioural choices, by social norms and opportunities which are carried into future generations, and by historical and structural contexts. These diverse and inequitable trajectories are strongly influenced by policies, environments, opportunities and norms created by society.

33. These findings make the case for coherent policies that proactively address the totality of human life across ages and generations. Action must focus on the period before conception, pregnancy, fetal development and the most vulnerable life stages, focusing particularly on early-life-prevalent causes such as material deprivation, poor early childhood education and child adversity.[11] There is an increasing consensus that

[11] Ludwig J, Phillips DA. Long-term effects of head start on low-income children. Ann N Y Acad Sci. 2008;1136:257–68.

it is these early life, upstream and macropolicy-related factors that are the critical drivers of many adult outcomes.

34. A second example is ecological public health,[12] now developed further as the concept of planetary health, focusing on the requisites for planetary sustainability[13] needed to deal with some of today's major public health issues, such as climate change, air pollution and the social and economic impacts of trade policies and agreements.

35. A third example is the science of epigenetics. The expectation has been that the knowledge generated from systems biology, epigenomics and gene–environment interactions may be used to advance understanding of biology and the pathophysiology of common diseases and improve population health.

36. There has been much enthusiasm about the potential for so-called "personalized medicine" or "precision medicine", treating each person as an individual rather than as part of a group with which they share common health-related characteristics.[14] While, at the population level, the potential benefit is that genetic profiling will improve the prevention of common diseases, prospects for concrete applications remain a matter for the future.[15,16] However, the potential for public health genomics remains, with the development of technologies identifying individuals who would benefit from specific interventions, based on their risk.[17]

37. There are significant implications for the public health workforce in terms of knowledge and understanding of genomic science and its application.

38. Conclusion: new approaches include those drawn from the present focus on the interactions between the individual and the environment across the life course, ecological public health and epigenetics. There are substantial public health workforce implications in terms of knowledge and understanding.

How can health systems policy respond?

39. How should health systems policy respond to these public health and health policy challenges and priorities? An illustration of leading-edge thinking can be found in an article published in *Health Affairs* on "Applying a 3.0 transformation framework to

[12] Ecological public health: the 21st century big idea? An essay by Tim Lang and Geof Rayner. BMJ. 2012;345:e5466. doi: https://doi.org/10.1136/bmj.e5466.
[13] Lancet planetary health [website]. London: Elsevier; 2018 (www.thelancet.com/planetary-health, accessed 8 May 2018).
[14] It should be noted that the term "personalized medicine" can also refer to an approach to health that takes account of personal values and preferences, and places the person at the centre of his/her own care.
[15] Smith GD, Ebrahim S, Lewis S, Hansell AL, Palmer LJ, Burton PR. Genetic epidemiology and public health: hope, hype, and future prospects. Lancet. 2005;366(11):1484–98.
[16] Cleeren E, Van de Heyden J, Brand A, Van Oyen H. Public health in the genomic era: will Public Health Genomics contribute to major changes in the prevention of common diseases? Arch Public Health. 2011;69:8 (http://archpublichealth.com/content/69/1/8, accessed 8 May 2018).
[17] Zimmern R, Stewart A. Public health genomics: origins and basic concepts. Ital J Public Health. 2006;3(3-4):9–15.

guide large-scale health system reform".[18] This summarizes new approaches to public health implementation, describing three stages of thinking.

- The first era, from the 1850s to the 1960s, had a biological focus, emphasizing the diagnosis and management of acute diseases.[19] The aim was to improve life expectancy. Patients were passive, inexperienced and deferential.
- The second era, from the 1950s to the present day, focused more on the reduction of chronic disease, improvements in modifiable behavioural determinants and the integration and coordination of care at the level of the individual. Here, the patient becomes an active partner in care.
- The third era, from 2000 onwards, focuses on creating capacities to achieve goals in equitable health improvement, health over the life-course and the development of community-accountable health development systems at the population level, which are responsible both for service delivery to individuals and for equitable health improvement in the population as a whole. Here, individuals and communities are co-designers of health, using the concepts of health literacy and empowerment to become involved on their own behalf in health policy and service development, and aligning different interests and capacities to develop new paradigms and shared policy commitment. The consistency and alignment between this approach and Health 2020 approaches is striking.

40. Some new models are emerging,[20,21,22,23,24,25] although these are at an early stage of development and evaluation. Crucially, these models focus on improving health outcomes for geographically defined populations, including dealing with upstream socioeconomic, environmental, behavioural and developmental determinants of health. Within these models, multiple health and human service sectors share leadership, create a common purpose, and align and distribute accountability for addressing social and developmental conditions.

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[18] Halfon N, Long P, Chang DI, Hester J, Inkelas M, Rodgers A. Applying a 3.0 transformation framework to guide large-scale health system reform. Health Aff (Millwood). 2014;33(11):2003–11.

[19] Earlier achievements in sanitary engineering systems, such as water, sanitation and housing, had a significant impact on mortality, including child mortality, but public health had limited visibility and was not a key determinant of the way such systems changed over time.

[20] Schulte T, Pimperl A, Hildebrandt H. Comparing accountable care organizations in the public sector of the US healthcare system to the integrated care system Gesundes Kinzigtal in Germany and potential lessons learned. Int J Integr Care. 2015;15(5). doi: http://doi.org/10.5334/ijic.2157.

[21] Ádány R, Kósa K, Sándor J, Papp M, Furjes G. General practitioners' cluster: a model to reorient primary health care to public health services. Eur J Public Health. 2013;23:529–30. doi: https://doi.org/10.1093/eurpub/ckt095.

[22] La sanità d'iniziativa in Toscana: un primo bilancio a tre anni dall'adozione [Health initiatives in Tuscany: an initial assessment three years post-adoption] (https://www.ars.toscana.it/it/aree-dintervento/problemi-di-salute/malattie-croniche/news/2139-la-sanita-d-iniziativa-in-toscana-un-primo-bilancio-a-tre-anni-dall-adozione.html, accessed 8 May 2018).

[23] Nalin M, Baroni I, Romano M, Levato G. Chronic related groups (CreG) in Lombardy. Eur Geriatr Med. 2015;6(4):325–30. doi: https://doi.org/10.1016/j.eurger.2015.03.005.

[24] Ham C. Making sense of integrated care systems, integrated care partnerships and accountable care organisations in the NHS in England. In: King's Fund [website]. London: King's Fund; 2018 (http://www.kingsfund.org.uk/topics/integrated-care/accountable-care-organisations-explained?gclid=CPyo9I-FoswCFZadGwod0OAPAA accessed 8 May 2018).

[25] Local partnerships to improve health and care. In: NHS England [website]. Leeds: NHS England; 2018 (https://www.england.nhs.uk/systemchange/, accessed 8 May 2018).

41. These new approaches hold promise, but further evaluation is required before their application is extended. Each is context-specific, and replicability may be limited, pointing to the need for local interpretation and the use of local capacities and assets.

42. All these new approaches have the following requirements in common:
    - political and governmental commitment as a driving force that stimulates the implementation process;
    - local infrastructure;
    - a physical or virtual organization that supports horizontal alignment and integration of medical, public health and population health services and support;
    - financing arrangements that expand the concept of value to include the creation of health and well-being as a social investment; and
    - the development of new forms of health-related information and information management, which measure population health trajectories and demonstrate return on health investments by linking investments to health, community and economic outcomes.

43. It is notable that these new models generally rely less on structures and organizational arrangements than on relationships and functions. While governance is clearly important, systems leadership requires greater attention to soft skills, such as relationship building, negotiation, conflict resolution and political astuteness, and less attention to organizational structures and overly formal governance arrangements which too often absorb and divert attention and energy that should be devoted to making the arrangements work better.[26]

44. Conclusion: consider new health system concepts, incorporating them into Member States' policy thinking and implementation. In addition to focusing on the coordination and integration of individual services around the needs of individuals and patients, thinking about health systems needs to consider the role of health systems as drivers of equitable health improvement at the population level. Careful reflection, planning and resourcing will be required to incorporate these concepts.

Implementation to date of relevant policy instruments

Health 2020

45. The SDGs, Health 2020 and EAP-PHS, considered together within an aspirational human rights framework, offer a real strategic opportunity to move thinking about health and development to a new phase.

46. The monitoring of the Health 2020 targets and indicators shows that Member States have made good progress since 2012 and that the European Region is on track to reach the Health 2020 targets. Some examples: life expectancy has now reached 78 years (74 years for men and 81 years for women); healthy life expectancy at birth across the Region has now reached 68 years; the trend in mortality from major

[26] Hannaway C. Plsek P, Hunter DJ. Developing leadership and management for health. In: Hunter DJ, editor. Managing for health. Routledge: Abingdon; 2007:161–4.

noncommunicable diseases for people aged 30–69 years is declining for both sexes; infant mortality is 6.7 per 1000 children born alive. The proportion of infants vaccinated against rubella has reached 94%, and the proportion of the Region's population with improved sanitation facilities has reached 93%.

47. While this progress is welcome, it is uneven, and substantial inequalities remain within and across countries. Further progress will depend on careful health policy development and improvements in governance and leadership, based on the human right to health and the values of equity and gender equality. Appropriate legislation and institutional capacity are required to replace compartmentalized, bureaucratic divisions with new horizontal and place-based approaches to tackling all of today's health determinants – political, economic, social, environmental, cultural and commercial.

48. Particularly important will be collaboration and coordination within the United Nations system, the European Union and its institutions, the Organisation for Economic Co-operation and Development, the Global Fund to Fight AIDS, Tuberculosis and Malaria and the GAVI Alliance, supported by the new WHO Framework of Engagement with Non-State Actors. Also important are relationships with the private productive sector, mediated for example by the World Bank and regional development banks.

The EAP-PHS

49. The Regional Committee for Europe adopted the EAP-PHS in September 2012. The EAP-PHS was supported by 10 EPHOs and a self-assessment tool to assist Member States in assessing their current state of practice against the EPHOs, as well as charting improvements.

50. A review was carried out in 2016,[27] on the basis of the self-assessment carried out by Member States using the tool. For many Member States, the resulting reports provide the only comprehensive documentation detailing the strengths and weaknesses of public health capacities and services. The results showed that while there had been good progress in strengthening public health capacities, more needed to be done, including the development of common understanding, visibility and marketing, creating societal support and consensus, communication, training of the essential workforce, and the development of health literacy in the wider society.

51. It was clear that political will for change is more important than the availability of a usable tool to effect that change. Encouragingly, in some countries the self-assessment results were well integrated into the policy cycle, with the development of comprehensive strategies to revitalize public health services. However, in other countries, the assessment was less important, or only marginally important; nevertheless, these countries also succeeded in adopting meaningful reforms and public health legislation.

[27] Lessons learned from Member State assessments of Essential Public Health Operations. Copenhagen: WHO Regional Office for Europe; 2016 (EUR/RC66/Inf.Doc./4; http://www.euro.who.int/__data/assets/pdf_file/0006/317994/66id04e_EPHOAssessments_160576.pdf?ua=1, accessed 8 May 2018).

52. Overall, countries demonstrated a broad and growing recognition of the importance of public health, with strong institutions and professionals advocating for programmes and policies that promote and protect population health and prevent disease. These professionals will build the foundation for leadership and momentum for change in the future.

A new vision for public health in the 21st century

53. Given the new thinking about health and health systems, where does public health fit in?[28] What is its role and contribution to the transformation of health systems?

54. Today, public health remains an elusive and often contested concept. The term "population health" may be preferred by some, aiming to maximize value and equity for populations and the individuals within them, and focusing on populations defined by common needs rather than by institutions and specialties.[29] This wish to adopt a perspective much broader than health care and medicine leads others to prefer terms such as "health improvement" and "health and well-being", which are nonexclusive and emphasize a broader approach than is sometimes perceived by the use of the term "public health".[30]

55. That said, public health is a term that has long been widely used, and will continue to be used in this paper. In simple terms, it means just what the words say, namely the health of the public. It may be referred to as:

- an outcome of equitable improvements in health and well-being;
- a function embracing all of government and society to pursue this aim; and
- a set of specialist functions.

An outcome of equitable improvements in health and well-being

56. At the core of the concept of public health is the human right to health, which governments have a duty and responsibility to pursue under international law. Governments are required to establish the equitable promotion of health and well-being as a function of governance for health, and to do this they need to provide functioning public health capacities and services and a functioning health system.

57. In this context, how are public health and its contribution to the equitable improvement of health and well-being to be defined precisely? This paper uses the definition of public health first put forward by Winslow in 1920, adapted by Acheson in 1988, and used in both Health 2020 and EAP-PHS, namely "the science and art of preventing disease, prolonging life, and promoting health through the organized efforts of society".

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[28] Marks L, Hunter DJ, Alderslade R. Strengthening public health capacity and services in Europe: a concept paper. Copenhagen: WHO Regional Office for Europe; 2011 (http://www.euro.who.int/__data/assets/pdf_file/0007/152683/e95877.pdf, accessed 8 May 2018).

[29] Muir Gray JA. How to practise population medicine. Oxford: Offox Press; 2016 (http://www.offoxpress.com/how-to-practise-population-medicine.html, accessed 30 May 2018).

[30] See Chapter 2 of Hunter DJ, Marks L, Smith KE. The public health system in England. Bristol: Policy Press; 2010.

58. This definition is widely, although not universally, accepted internationally and has important characteristics. It is generic and does not require any form of institutional mechanism; it refers to both science and art, describing public health as a combination of knowledge (always imperfect) and action; it reflects the core purposes of preventing disease, prolonging life and promoting health; and it emphasizes the fact that public health is an organized, whole-of-society function. The definition establishes public health as a function within the fabric of society and points to an inclusive approach to equitable health improvement, extending through society, government and institutions in a way that we now know to be a strong contributing factor for human and societal growth and development.

A function of government and society

59. The public health function is thus an organized, multisectoral, societal function, involving government as well as other dimensions of society (civil society, the media, etc.). Ultimately, because of the government's responsibility for the human right to health, the function rests with government. In practice, leadership may be delegated to the ministry of health or another responsible organization or organizations.

60. The public health function is far more than simply an expert, professional or service function. It must avoid being, or becoming, overly narrow and, while scientifically sound, it should avoid spurious scientism. The public health function should be an advocate for the paradigm shift towards a focus on health, well-being, health promotion and disease prevention, provide a strong and consistent voice on behalf of vulnerable populations and address health inequities.

61. The public health function needs a locus. It will be for Member States to decide where the leadership should lie, and at what level. The public health function will be needed centrally, regionally and locally. The identity of the locus and the organization(s) involved will differ from country to country, depending on the context and other prevailing circumstances. National institutes of public health may play a major role, as centres of knowledge, expertise, research, postgraduate and continuing education and capacity-building. Universities, schools of public health, medical schools and wider academia have similarly important roles to play, as do collaborative professional organizations working internationally. It is worth mentioning that some of these institutions are already WHO collaborating centres.

62. However, for consistency with the horizontal, networked view of governance for health found in Health 2020, the responsible organization should be close to the decision-making levels of government in the country, working with different sectors and communities and with all determinants of health, and not merely close to the health system alone. Here, the role of health ministers is crucial, with support from heads of state, presidents and prime ministers. A supportive civil service, efficient public health functions and capable intersectoral and interagency institutions and processes are also required.

A set of specialist functions within the health system

63. This broad public health function includes specialist capacity providing many technical public health services. These services provide a range of public, specific, organizational forms for delivering the 10 EPHOs in a given Member State.

64. The EPHOs are shown in Table 1 below. They deal with the full range of determinants of health: genetic, political, social and economic, environmental, commercial, cultural and health system. This requires interconnected, horizontal and networked governance for health – open, collaborative and consensual.

65. There are overlaps with the wider public health function at the societal level (for example, health promotion to tackle the social determinants of health) and with individual-level health and social services which have clear population as well as individual benefits (for example, immunization and screening services, health protection and the response to health hazards and emergencies, elements of the workforce serving both population and individual health objectives, and research).

66. The aim is the successful and equitable promotion of health and well-being as a matter of public policy. This requires stronger leadership and governance for health from the ministry of health and the health sector, whole-of-government, whole-of-society and health-in-all-policies approaches, and the genuine involvement of the productive sector. Also needed is alternative thinking on ways to define and pursue developmental objectives.

67. Conclusion: the public health functions to be established are:

- an organized societal commitment at the highest level throughout society to the outcome of improved health and well-being;
- the institutional commitment and capacity to create and sustain an organized, multisectoral, societal function, involving government as well as other dimensions of society (civil society, the media, etc.); and
- the commitment and resources to deliver a set of organized, specialized EPHOs.

Table 1. The 10 EPHOS grouped by functional category

Intelligence EPHOs	
EPHO 1	Surveillance of population health and well-being
EPHO 2	Monitoring and response to health hazards and emergencies
Core services delivery EPHOs	
EPHO 3	Health protection, including environmental, occupational and food safety and others
EPHO 4	Health promotion, including action to address social determinants and health inequity
EPHO 5	Disease prevention, including early detection of illness
Enabler EPHOs	
EPHO 6	Assuring governance for health and well-being
EPHO 7	Assuring a sufficient and competent public health workforce
EPHO 8	Assuring sustainable organizational structures and financing
EPHO 9	Advocacy, communication and social mobilization for health
EPHO 10	Advancing public health research to inform policy and practice

68. Recommendation: public health should be seen as a desired societal outcome; a function of government and society informing whole-of-government, whole-of-society and health-in-all-policies approaches to equitable health improvement; and a specialist capacity providing a series of EPHOs.

Implications for modern public health practice

69. The goals of public health practice will be the planning and organization of innovation and improvement strategies for health and well-being, as well as the nurturing of a learning system (a key component of systems theory) and a community of practice that can guide diverse actors, agencies and sectors towards common health-optimizing goals.

70. To achieve these goals, the modern public health function must work in a horizontal and distributed way, identifying matters of public health concern and crafting the public health narrative. It must work effectively within a multisectoral framework. It must understand and work within the required components of governance, including transparency, accountability, participation, integrity and policy capacity. It must tackle health inequalities, focusing on promoting equality in health, and deal with all the determinants of health: political, commercial, social, environmental, genetic, systemic and cultural.

71. Much innovative practice has been developed at local and community levels, which offer opportunities for innovation in promoting upstream approaches and approaches that support a strong role for civil society. Implementation networks, such as the WHO European Healthy Cities Network, the European Network of Health Promoting Schools and the European Network for Workplace Health Promotion, create approaches to tackling the co-clustering of determinants in ways that may be more difficult to attain at the national level.

72. New challenges, such as the recent influx of migrants into Europe, have created agendas and opportunities for promoting public health action. Migration is one of the defining features of the 21st century, and progress in that area can contribute to the achievement of the SDGs. Here, much innovative practice has already been developed at the local level.

73. Conclusion: the modern public health function must work within a horizontal, networked environment, dealing with all the determinants of health, effectively engaging with other sectors and working within their agendas.

Today’s public health workforce

74. Public health practice now needs a workforce with different qualifications and multidisciplinary skills. The question of who should comprise this public health workforce, how it should best be equipped, and the type of leadership needed to deal with today’s challenges, must be considered carefully by Member States. While, in

one sense, everyone is involved, several studies[31,32] have suggested three main groups in the multidisciplinary workforce: all those involved in the broad remit of public health practice; those with specific health-professional and clinical functions; and those institutionally trained, public health managers who can focus on the national burden of disease and provide the technical drive to deliver the EPHOs.

75. Skills will be needed in systems leadership, using influence rather than direct control, and coping with the often unforeseeable demands and pressures of complexity, ambiguity and paradox. Much of the authority of health leaders in the future will reside not only in their position in the health system, but also in their ability to convince others that health and well-being are highly relevant in all sectors. Such leadership will have the capacity to work across sectors and be adaptive. It will make use of modern public health approaches, demonstrating skills in needs assessment, impact assessment and the creation and use of information, evidence and capacities in evaluation.

76. As noted earlier, soft skills, such as relationship building, influencing, negotiating and political astuteness, will be important, although they are often the hardest to acquire and deploy effectively. Leadership will be not only individual, but also institutional, collective, community-centred, place-based and collaborative within supportive national and international networks.

77. The acquisition of today's public health competencies has considerable implications for training and development, involving broad-based undergraduate, postgraduate and on-the-job training. Competency-based models of thinking about the capacities and training of the workforce need to be developed. Public health needs to be an attractive career option.

78. Schools of public health have an important role to play in familiarizing students with the vision, aims, objectives and main fields of public health action, including the United Nations 2030 Agenda for Sustainable Development and Health 2020, and creating a wide range of educational opportunities for the expansion of health literacy and understanding among both health professionals and the public. The framework for action towards a sustainable workforce in the European Region, endorsed by the Regional Committee for Europe at its 67th session,[33] and the Agenda for Action to strengthen public health services are taking this work forward.

79. Also required are new generations of public health scientists and researchers to focus on today's public health priorities, integrating risk factor epidemiology with broader

[31] Centre for Workforce Intelligence and Royal Society for Public Health. Understanding the wider public health workforce. London: Centre for Workforce Intelligence; 2015 (https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/507752/CfWI_Understanding_the_wider_public_health_workforce.pdf, accessed 22 May 2018).

[32] Report of the Chief Medical Officer's project to strengthen the public health function. London: Department of Health; 2001.

[33] Towards a sustainable health workforce in the WHO European Region: framework for action. Copenhagen: WHO Regional Office for Europe; 2017 (EUR/RC67/10; http://www.euro.who.int/en/about-us/governance/regional-committee-for-europe/67th-session/documentation/working-documents, accessed 8 May 2018).

platforms of ecological and environmental assessments,[34] and illuminating the mechanisms through which risk factors are operative.[35]

80. Conclusion: today's public health workforce should be broadly based, and needs new and refashioned skills to succeed and work within the complex and multifaceted environment of the 21st century.

Institutional implications for Member States

81. Countries are already seeking to strengthen institutional mechanisms and practices for health at both national and local levels. The mid-term reviews of Health 2020 and EAP-PHS prepared for the 66th session of the Regional Committee in 2016 provide a more detailed overview of implementation since 2012. Further efforts to encourage and strengthen implementation of both policy frameworks offer the possibility of an even more determined approach, to operational implementation, at regional, Member State and local levels.

82. Policies and institutional mechanisms for the equitable improvement of health and well-being may be considered at two levels: (a) an overall national SDG-inspired developmental level – including health and well-being as a priority in both the government programme and the national development plan – normally chaired by the president or prime minister or a designated representative and (b) the health level – including integrated health policy development and technical issues such as noncommunicable diseases, the International Health Regulations (2005), tobacco, antimicrobial resistance, etc. – normally chaired by the minister of health and supported by the prime minister or the latter's deputy.

83. In this context, countries will wish to strengthen the public health function and the contribution and delivery of public health practice, in accordance with EAP-PHS, taking account of the perspectives for public health development outlined in this paper.

84. Conclusion: countries will continue to develop their SDG and Health 2020 health policy context, as well as their institutional mechanisms to support whole-of-government, whole-of-society and health-in-all-policies approaches, while strengthening the public health function and public health practice.

Institutional implications for the Regional Office for Europe

85. Health 2020 has already been established as the instrument binding together the work of the Regional Office. With the degree of alignment and integration acknowledged between the SDGs, Health 2020 and the EAP-PHS, the Regional Office is now well placed to become a leading European focus of expertise and practice aiming to realize modern 21st-century public health.

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[34] Krieger N. Methods for the scientific study of discrimination and health: an ecosocial approach. Am J Public Health. 2012;102(5);936–44. doi: 10.2105/AJPH.2011.300544.

[35] Petersen ML, Sinisi SE, van de Laan MJ. Estimation of direct causal effects. Epidemiology. 2006;17(3):276–84. doi: 10.1097/01.ede.0000208475.99429.2d.

86. The Regional Office has recognized that public health provides a coherent perspective linking all of its work. The Regional Office is a public health organization, and its multidisciplinary staff are, in the broad sense, public health practitioners. Public health may be seen as a connecting horizontal thread running through and across the whole Office, with which individual programmes and technical areas dealing with the various determinants of health are associated.

87. Integrated approaches are needed for SDG, Health 2020 and EAP-PHS implementation, using United Nations systems and processes accordingly, to integrate health into national development thinking and planning. To achieve this goal, coherence across the Regional Office between technical areas, and approaches and mechanisms of work, is needed.

88. This approach should emphasize a more consistent and integrated approach to assisting Member States in implementing the SDGs, Health 2020 and EAP-PHS, and contributing to health policy development at both national and local levels.

89. In response to increasing demand from countries to facilitate multisectoral action for health in a comprehensive and coordinated way, the organizational structure in the Regional Office and WHO country offices has already been aligned with expertise in the social, economic and environmental determinants of health, health equity and good governance being brought together within the Policy and Cross-Cutting Programmes and Regional Director's Special Projects unit of the Regional Office, which also hosts work on the SDGs.

90. In addition, an internal task force has been established within the Office to align work on the SDGs, Health 2020 and its components, and EAP-PHS, also working closely with other divisions which house the various determinants to ensure co-clustering.

91. Conclusion: 21st-century public health provides a coherent and inclusive frame of reference for the institutional development of the Regional Office as a public health organization. Much work has already been done to align the work of the Office across the determinants of health.

Conclusion

92. Health 2020 is a health policy which is fully integrated and consistent with the SDGs. The implementation of both the SDGs and Health 2020 requires a focus on all the determinants of health: political, commercial, social, environmental, genetic, systemic and cultural, conducted in a coordinated and integrated way, and the achievement of policy coherence through whole-of-government, whole-of-society and health-in-all-policies approaches.

93. National health policies, strategies and plans informed by the SDGs and Health 2020 are vital to achieving health improvement. Every country needs to plan health development within its overall SDG-informed development goals, and to identify investment priorities that will have the greatest potential impact on health and well-being.

94. The elusive concept of public health needs to be better understood. It faces complex political, social, economic and environmental challenges to which multisectoral responses are required, involving both vertical and horizontal integration. The goals of public health practice will be the promotion of health and well-being overall, focusing on promoting equality in health, planning and organizing innovation and improvement strategies for health and well-being, as well as nurturing a learning system and a community of practice that can guide diverse actors, agencies and sectors towards common health-optimizing goals.

95. To achieve these goals, modern public health systems must work in a horizontal and distributed way, identifying matters of public health concern and crafting the public health narrative. They must work effectively within a multisectoral framework. Public health, as a function of society, needs an institutional base or bases, and the services and capacities described in EAP-PHS and the EPHOs.

96. Public health provides a coherent and inclusive frame of reference for the institutional development of the Regional Office as a public health organization.

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