



From Alma-Ata to Astana:

Primary health care – reflecting on the past, transforming for the future

Interim Report from the WHO European Region







From Alma-Ata to Astana:

Primary health care – reflecting on the past, transforming for the future

Interim Report from the WHO European Region

Abstract

The Global Conference on Primary Health Care, taking place on the occasion of the 40th anniversary of the Declaration of Alma-Ata, aims to commemorate and reaffirm the original principles of the declaration while renewing political commitment to placing primary health care (PHC) at the foundation of achieving universal health coverage and the sustainable development goals. This interim report, is one of the six reports developed by each WHO regional office as background documentation for the conference. It analyses PHC progress made in the European region over the past four decades and makes projections for the future of PHC. To develop the report, all 53 European Member States were invited to submit input based on their experiences in PHC innovations, enablers and barriers. By examining the main challenges and opportunities for PHC in the European region since 1978, and taking stock of the lessons that have been learned at both national and regional levels, the report identifies key innovations of PHC models for the 21st century. This provides a base guidance for strengthening health systems around PHC to achieve health for all and ultimately transform the vision set out in the 1978 declaration into a practical reality.

Address requests about publications of the WHO Regional Office for Europe to:

Publications WHO Regional Office for Europe UN City, Marmorvej 51 DK-2100 Copenhagen Ø, Denmark

Alternatively, complete an online request form for documentation, health information, or for permission to quote or translate, on the Regional Office website (http://www.euro.who.int/pubrequest).

Keywords

- 1. PRIMARY HEALTH CARE
- 2. PRIMARY CARE
- 3. DELIVERY OF HEALTH CARE ORGANIZATION AND ADMINISTRATION
- 4. HEALTH SERVICES
- 5. HEALTH CARE SYSTEMS
- 6. EUROPEAN REGION

© World Health Organization 2018

All rights reserved. The Regional Office for Europe of the World Health Organization welcomes requests for permission to reproduce or translate its publications, in part or in full.

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement.

The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by the World Health Organization in preference to others of a similar nature that are not mentioned. Errors and omissions excepted, the names of proprietary products are distinguished by initial capital letters.

All reasonable precautions have been taken by the World Health Organization to verify the information contained in this publication. However, the published material is being distributed without warranty of any kind, either expressed or implied. The responsibility for the interpretation and use of the material lies with the reader. In no event shall the World Health Organization be liable for damages arising from its use. The views expressed by authors, editors, or expert groups do not necessarily represent the decisions or the stated policy of the World Health Organization.

Contents

Foreword	7
Preface	9
Acknowledgements	11
1. Primary health care: achieving health for all	13
2. Fostering PHC in Europe: the evolution of regional health policies	19
3. Translating policies and strategies into reality: innovations in PHC in the European Region	25
4. Transforming for the future: accelerating innovation in PHC	43
5. Conclusions	51
6. References	53

List of Boxes

Box 1.	The Declaration of Alma-Ata	14
Box 2.	The need to adopt evidence-based policies and innovations to improve the health and well-being of women and children	16
Box 3.	Health 2020: a European policy framework and strategy for the 21st century	21
Box 4.	People-centred health systems through integrated and coordinated health service delivery	22
Box 5:	Understanding innovation in health systems: hard and soft innovations	26
Box 6.	PHC Innovation in the Netherlands	34
Box 7.	Innovation in PHC in Scotland to reduce alcohol consumption	35
Box 8.	Transforming individual health services towards integrated, multidisciplinary PHC	36
Box 9.	Developing fit-for-purpose human resources	37
Box 10.	Health financing strategies to support the scale-up of core interventions and services for NCDs	39
Box 11.	Developing and applying health system information solutions for NCDs	40
Box 12.	Foundational conditions for large-scale transformation in health systems	48

Foreword

I am pleased to present the interim European regional report From Alma-Ata to Astana: primary health care – reflecting on the past, transforming for the future, prepared as background documentation for the 40th anniversary of the Declaration of Alma-Ata. In 1978, delegates from 134 countries adopted the declaration, the first international declaration to launch a primary health care (PHC) approach as the key to achieving health for all.

Today, the world is a different place. Though great progress has been made in PHC, conditions beyond and within the health sector have limited the full realization of the vision set forth in the declaration. Still, its guiding principles and values remain as pertinent now as when they were first iterated in 1978. Moreover, we have deepened our understanding of what is necessary to bring this vision forward.

Across the WHO European Region, we have renewed our commitment to uphold the principles established in the declaration. In 2012, European Member States recognized strengthening people-centred health systems as one of four priority areas in Health 2020, the European policy framework for health and well-being. A PHC approach is also at the core of the WHO European Framework for Action on Integrated Health Services Delivery, adopted in 2016.

Yet we still face an unfinished agenda to provide universal access to quality care through a PHC approach. The 40th anniversary of the Declaration of Alma-Ata provides an opportunity we must take advantage of to reaffirm and commit to the values we still hold today. This is especially important in the new context of the 2030 Agenda for Sustainable Development, as a people-centred PHC approach accelerates progress towards the established targets – particularly Sustainable Development Goal 3.8 to achieve universal health coverage as a means of ensuring healthy lives and promoting well-being for all individuals at all ages in all places around the world.

This report advances the European Region's achievement of this goal by taking stock of achievements and failures over the course of the past 40 years so that we may apply the lessons we have learned as we create a future where health systems meet the needs of their communities. Ultimately, it moves us forward by providing key guidance for ensuring that all individuals – in Europe and around the world – have access to the quality PHC services they need while protecting them from health threats and exposure to related financial hardship.

Dr Zsuzsanna Jakab

WHO Regional Director for Europe

Preface

On the occasion of the 40th anniversary of the Declaration of Alma-Ata, the Government of Kazakhstan, the United Nations Children's Fund and WHO co-organized the Global Conference on Primary Health Care on 25–26 October 2018 in Astana, Kazakhstan. The conference aims to commemorate the 1978 declaration, reaffirm its original principles and renew political commitment to placing primary health care (PHC) at the heart of achieving universal health coverage and the SDGs.

To inform the conference's processes and products, a series of background documents have been completed by each WHO regional office. From Alma-Ata to Astana: primary health care – reflecting on the past, transforming for the future is one of six regional reports that provide perspective by looking both back and forward through a PHC lens. They highlight the progress that has been made over the past four decades, consider challenges and opportunities, and provide policy analysis to project what is needed for the future of PHC to achieve health for all by 2030.

In the true spirit of PHC, WHO Regional Director for Europe Dr Zsuzsanna Jakab invited all 53 European Member States to submit their experience of PHC innovations as well as enablers and barriers to improving the health outcomes, equity and efficiency of their health systems. By considering both the challenges and opportunities countries have faced in advancing PHC towards the achievement of health for all, this report offers pragmatic and actionable policy lessons for the European Region and beyond.

This report identifies key innovations of PHC models for the 21st century, guiding principles for transforming PHC, foundational conditions for the large-scale transformation of health systems, and guidance for policy-makers to achieve strategic change.

Through the cross-cutting themes of investment, innovation and inclusion, this report makes clear how Europe can transform PHC to realize the vision set in the Declaration of Alma-Ata, building responsive and resilient health systems that deliver equitable health and financial protection, drive economic growth, and generate wealth for sustainable development for all.

Dr Hans Kluge

Director of the Division of Health Systems and Public Health WHO Regional Office for Europe

Acknowledgements

From Alma-Ata to Astana: primary health care – reflecting on the past, transforming for the future was produced under the overall direction of Dr Hans Kluge (Director, Division of Health Systems and Public Health, WHO Regional Office for Europe) and Dr Pavlos Theodorakis (Senior Adviser, European Centre for Primary Health Care), in coordination with Dr Ed Kelley and Dr Shannon Barkley (Department of Service Delivery and Safety, WHO headquarters, Geneva, Switzerland). Its principal authors were:

- Professor Rifat Atun (Professor of Global Health Systems, Harvard University; Director, Global Health Systems Cluster, Harvard T.H. Chan School of Public Health; and Consultant, Division Health Systems and Public Health);
- Dr Pavlos N. Theodorakis (Senior Adviser, WHO European Centre for Primary Health Care; Regional Focal Point for Europe; and Member, Alma-Ata 40 Technical Coordination Team, WHO headquarters); and
- Dr Hans Kluge (Director, Division of Health Systems and Public Health; and Co-chair, Alma-Ata 40 Technical Coordination Team).

Administrative and project management support to the authors was provided by Ms Briana Rivas-Morello (Consultant, Global Conference on Primary Health Care, Division Health Systems and Public Health).

Most of the Member States of the WHO European Region also contributed tremendously to this report by responding to questions regarding PHC innovations as well as enablers and barriers to improving their respective health systems.

Important contributions were also made by Tino Marti (Technical Officer, WHO European Centre for Primary Health Care), Dr Evgeny Zheleznyakov (Technical Officer, WHO European Centre for Primary Health Care), Melitta Jakab, Health Policy Analyst, Barcelona Office for Health Systems Strengthening, Division of Health Systems and Public Health, WHO Regional Office for Europe and Professor Jose M. Valderas (Professor of Health Services and Policy Research, Exeter Collaboration for Academic Primary Care (APEx) and the National Institute for Health Research Collaboration for Leadership in Applied Health Research and Care, University of Exeter, United Kingdom; and Consultant, Division of Health Systems and Public Health).

Coordination of the production and publication of this report was carried out by Mr Clayton Hamilton (Technical Officer, Public Health Services, Division of Health Systems and Public Health) and Ms Maria Greenblat (Head of Languages and acting Head of Publications, WHO Regional Office for Europe).

Members of the WHO Regional Office for Europe's Executive Management acted as external peer reviewers and provided constructive comments and suggestions.

Finally, Professor Anna Stavdal (President, *World Organization of National Colleges, Academies and Academic Associations of General Practitioners/Family Physicians*, WONCA Europe), Ms Carina Bigot (Programme Manager, Alcohol and Illicit Drugs, Division of Noncommunicable Diseases and Promoting Health through the Life-course), a joint submission from the Child and Adolescent Health Programme and Sexual and Reproductive Health Programme and Dr Joana Lima (Consultant, WHO European Office for Investment for Health and Development) acted as external reviewers and provided constructive comments and suggestions.





1. Primary health care: achieving health for all

1.1. Building the foundations of health for all

The fundamental belief that every human being has the right to enjoy "the highest attainable standard of health" is engrained within the constitution of the World Health Organization (WHO) (1). Countries can realize this aspiration by addressing the social determinants of health, including the provision of universal health coverage (UHC) to ensure that "all people obtain the health services they need without suffering financial hardship when paying for them" (2).

In 1978, 134 countries participating in the International Conference on Primary Health Care in Alma-Ata, Kazakhstan, approved the Declaration of Alma-Ata (3) (see Box 1), setting the ambitious target of "attainment by all peoples of the world by the year 2000 a level of health that will permit them to lead a socially and economically productive life". The Declaration, along with the WHO Global Strategy for Health for All by the Year 2000 (4), stressed the critical role of primary health care (PHC) in achieving this.

Box 1. The Declaration of Alma-Ata

The Declaration of Alma-Ata set a new vision for PHC as the "first level of contact of individuals, the family and community with the national health system, bringing health care as close as possible to where people live and work". Stating that PHC "constitutes the first element of a continuing health care process", it stressed its comprehensive and intersectoral nature and emphasized health promotion, disease prevention, the appropriate treatment of common diseases and public health measures for controlling infectious diseases (3).

Furthermore, the Declaration defined PHC as "essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost that the community and the country can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination". It identified PHC as the key to reaching the ambitious goal of health for all "as part of development in the spirit of social justice" (3).

Yet, while 134 countries signed the Declaration in 1978, it met with significant challenges. Some countries considered its model of PHC to be "poor care for poor people, a second-rate solution for developing countries" (5). For others, the vision of an integrated and comprehensive PHC model was at odds with already-established health-care approaches that favoured targeted interventions. For many, the Declaration's vision seemed unattainable.

One year after the Declaration was adopted, "selective PHC" – comprising a narrow set of interventions believed to be cost-effective and feasible – was proposed as an alternative to the comprehensive, integrated and multisectoral PHC approach set out in the Declaration (5). Nevertheless, in the four decades since, recognition of the importance of the Declaration's original vision for PHC has steadily grown.

1.2. From the Declaration of Alma-Ata to the Sustainable Development Goals

Coinciding with the Commission on Social Determinants of Health's 2008 report *Closing the gap in a generation: health equity through action on the social determinants of health (6)*, WHO revived the Declaration's vision 30 years after it was signed *(5)*.

The vision gained further traction with the release of *The World Health Report. Primary health care (now more than ever) (7)* in 2008 and *The World Health Report. Health systems financing: the path to universal coverage (8)* in 2010, as well as the adoption of World Health Assembly resolution WHA64.9 on "Sustainable health financing structures and universal coverage" *(9)* in 2011, and United Nations General Assembly resolution A/RES/67/81 on "Global health and foreign policy" *(10)* in 2012.

Resolution A/RES/67/81 called for the achievement of "universal coverage in national health systems,

especially through primary health care and social protection mechanisms" (10). It further recognized "that effective and financially sustainable implementation of universal health coverage is based on a resilient and responsive health system that provides comprehensive primary health-care services" including "broad public health measures" (10).

More recently, WHO's 2008–2013 Action Plan for the Global Strategy for the Prevention and Control of Noncommunicable Diseases (11), World Health Assembly resolution WHA62.12 on "Primary health care, including health system strengthening" (12), World Health Assembly resolution WHA69.39 on "Strengthening integrated people-centred health services" (13), and WHO's 13th General Programme of Work 2019–2023 (14), have all stressed the importance of PHC for improving health and achieving UHC.

In 2015, United Nations Member States agreed to the 2030 Agenda for Sustainable Development (15) and its 17 Sustainable Development Goals (SDGs) (16). SDG 3, "Ensure healthy lives and promote well-being for all at all ages", incorporates Target 3.8 to "Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all" by 2030 (16). Target 3.8 reinforces the aspirations of the Declaration of Alma-Ata (3) and the Global Strategy for Health for All (4).

PHC is not only critical to achieving health for all and UHC – it is also the core of any well functioning health system. Health systems with strong PHC are more likely to provide more equitable, effective, efficient and responsive health services, and to improve health outcomes (8,17–20). In turn, improved health contributes to economic growth, social development and wealth creation (21).

In the WHO European Region, where the values of equity and solidarity are strongly upheld, nearly all countries have achieved or made significant progress towards UHC. In the health systems of western European countries, PHC underpins UHC, which is financed through taxes or social insurance. Countries of eastern Europe and central Asia, whose economies and health systems were adversely affected by the dissolution of the Soviet Union, have progressed towards achieving UHC by strengthening their health systems and rooting them in PHC.

1.3. Contextual changes: challenges and opportunities for health systems in Europe

Much has changed in Europe since the Declaration of Alma-Ata was signed 40 years ago, particularly in relation to demographic, epidemiological, political, economic, sociocultural and technological contexts. These changes present five systemic challenges to health systems, to which European Member States must respond systemically with multisectoral policies and action.

- A demographic transition to increasingly older populations. People aged 85 years or more are currently the most rapidly growing section of the population in countries of the European Region (22). This demographic transition has led to an increasing scarcity of human resources for health, which is compounded in many countries by migration of the health workforce.
- An epidemiological transition from infections, perinatal and maternal causes to noncommunicable diseases (NCDs) – such as cardiovascular diseases, cancers, diabetes, chronic respiratory diseases and mental illness – as well as injuries and disabilities. In many individuals, these conditions occur at the same time, leading to

rising levels of multimorbidity that require comprehensive, long-term, people-centred care. This is different from the care currently provided in many health systems, which are typically designed to manage individual disease (23).

- Worsening social determinants of health among disadvantaged groups.

 Addressing widening inequalities in health outcomes requires multisectoral policies (24).
- **Changing sociocultural expectations.** Citizens now expect comprehensive care that is people-centred and responsive to their needs.
- **The global economic crisis.** Since 2008, slow growth in European economies has limited the fiscal space available to many countries for investing in health systems, and prompted many governments to implement austerity measures (25).

However, in addition to these and other challenges, contextual changes bring opportunities. Scientific advances, including the convergence of the biological, data and physical sciences, have produced a renaissance in health technologies and technologies for health. This includes digital technologies and information and communication technologies (ICT) that have the potential to transform health systems to provide more efficient, effective personal and public health interventions.

Yet many of these innovations have not been effectively taken up and used at scale to positively impact the health and well-being of individuals and populations. Inadequate policies and rigidities in health systems result in the continued use of interventions with little or no benefit (see Box 2) (25).

Addressing both the challenges and opportunities of contextual changes requires a holistic vision of health combined with urgent action. While targeting new issues, this work must also take up an unfinished agenda related to maternal, newborn and child health as well as communicable diseases in order to prevent the loss of achievements made in these areas and to protect the rights of affected population groups.

Box 2. The need to adopt evidence-based policies and innovations to improve the health and well-being of women and children

In spite of efforts by European Member States to improve the health and well-being of women and children, several challenges persist. The nature and extent of these challenges vary across countries, but generally include:

- non-evidence-based practices, in particular the indiscriminate use of antibiotics as well as other practices without therapeutic value for expectant mothers with normal pregnancies;
- inappropriate medicalization with unnecessary treatment;
- hospitalization, particularly of newborns, children and expectant mothers;
- increasing commercialization of health care, which increases the risk of rent seeking (the practice of manipulating public policy or economic conditions as a strategy for increasing profits) at the expense of effective care;

- lack of promotion of and support for healthy pregnancies and deliveries, including breastfeeding, and for healthy growth and development for children;
- unmet contraceptive needs, particularly of adolescents, including emergency contraception and safe abortion;
- insufficient sexuality education and counselling; prevention, diagnoses and management of sexually transmitted infections; cervical cancer prevention and early detection; and prevention, management and treatment of infertility; and
- lack of counselling on gender-based violence and counselling and care for sexual health and well-being (25).

Recognizing this, in 1999 the WHO Regional Office for Europe outlined a vision and values for its health-for-all policy in *Health21: health for all in the 21st century (26)*. It stated that health for all can only be realized through effective, efficient, equitable and responsive health systems, underpinned by strong PHC and public health and supported by a whole-of-government and whole-of-society response that fosters health in all policies.

In 2013, the launch of Health 2020, the European policy framework for health and well-being, advanced this work by providing direction for establishing PHC models that are fit for the challenges of the 21st century; achieving health for all; establishing health in all policies; and ensuring health for economic growth and sustainable development (27).

The European Framework for Action on Integrated Health Services Delivery, adopted in 2016, harnessed the health-for-all vision of Health 2020 to place a focus on efforts across government and society to transform health services delivery. It anchored actions in PHC to create people-centred health systems (28).

Now, the impetus for UHC provided by the SDGs (16) and the opportunities and challenges brought on by rapidly evolving contexts present a unique moment for the European Region to develop policies that address emerging challenges and opportunities. European Member States are poised to lead the way in testing and implementing innovative solutions for building the comprehensive, integrated and multisectoral PHC envisioned in the Declaration of Alma-Ata (3).



2. Fostering PHC in Europe: the evolution of regional health policies

2.1. Looking back

The European Region has a rich collection of policies, strategies and resolutions that have been developed in the last decades. These have catalysed the development of equitable, effective, efficient and responsive PHC that has underpinned the expansion of comprehensive UHC and promoted the vision of the Declaration of Alma-Ata (3) that was endorsed in 1978 but not always universally adopted (5).

In 1996, the Ljubljana Charter on reforming health care in Europe articulated a set of principles for health systems to improve health care in Member States (29). These principles have guided regional reform for the last two decades by envisaging European health systems that are "driven by values", "targeted on health", "centred on people", "focused on quality", "based on sound financing", and "oriented towards primary health care" (27). Still applicable today, they continue to set the tone for policies, strategies and resolutions in the European Region.

The Ljubljana Charter was followed by resolution EUR/RC55/R8, adopted in 2005 at the 55th session of the WHO Regional Committee for Europe, to strengthen European health systems underpinned by PHC by mobilizing necessary financial and human resources and by developing and by implementing

country-level strategies for health system reform (30). Resolution EUR/RC57/R1, adopted in 2007 at the 57th session of the Regional Committee, urged Member States to "develop, embed and mainstream policies concerning human resources for health as a component of health systems development" and to orient "workforce planning towards achievement of health for all, in primary health care as a first step" (31). Resolution EUR/RC59/R4 on "Health workforce policies in the WHO European Region", adopted in 2009 at the 59th session of the Regional Committee, subsequently reinforced these principles and objectives (32).

In 2008, the Tallinn Charter on health systems for health and wealth (21) reaffirmed and adopted the values embodied in the Declaration of Alma-Ata (3) and the Ljubljana Charter (29). It committed Member States to improving people's health by strengthening health systems and thereby harnessing the economic and development benefits that good health brings. The Tallinn Charter recognized the essential importance of effective PHC in delivering quality health services for all in order to improve health (21).

In response to the 2008 global economic crisis, which created fiscal constraints for European countries and risks to health systems and health, the 59th session of the Regional Committee upheld the principles of the Tallinn Charter (21) and urged Member States to continue to invest in health systems, ensure access to health services and "protect cost-effective public health and primary health care services" (33).

The economic crisis prompted countries of the European Region – particularly those in which many people were severely affected, such as Greece, Ireland and Portugal (34) – to examine more closely the major challenges facing health systems and to develop appropriate policies to address them. This included renewing the commitment to strengthening health systems and public health capacity; tackling structural issues in health systems by improving linkages between public health and health-care services; strengthening partnerships to enhance intersectoral action; and reviewing the effectiveness of existing public health instruments to ensure their fitness for the future (35).

Several important policies, resolutions and action plans emerged as a result. These included resolution EUR/RC61/R2, adopted in 2011 at the 61st session of the Regional Committee, to develop an action framework to strengthen public health capacities and services in Europe followed by an action plan (36), and, also in 2011, resolution EUR/RC61/R3 to develop an action plan for the implementation of the European strategy for the prevention and control of NCDs that would strengthen the management of NCDs in PHC, including their social and environmental determinants across the life-course and with a particular focus on inequities (37).

In 2012, at the 62nd session of the Regional Committee, Member States adopted the European Action Plan for Strengthening Public Health Capacities and Services (38). It included 10 essential public health operations for countries to develop with support from the Regional Office, and outlined ways to further develop health-promotion and disease-prevention services delivered through PHC.

The Regional Office brought together and further enhanced these policies and resolutions in order to develop the vision, values, main directions and approaches of a new European policy for health (39) in the form of Health 2020 (27).

2.2. Looking ahead

An important feature of the policies, strategies and resolutions consistently promoted and implemented in the European Region is their comprehensive and holistic nature. Together they advance a bold agenda for improving health for all at all ages, and harnessing the benefits of health for economic development, wealth creation and sustainable development.

Health 2020 articulates the vision for PHC in Europe (see Box 3) and provides a unifying, values-based strategy for reaching "the highest attainable standard of health". It points to "universality, solidarity and equal access" as the basis for organizing and funding health systems, and aims at "improving health for all and reducing health inequalities" in Europe through a whole-of-society and whole-of-government approach (27).

Box 3. Health 2020: a European policy framework and strategy for the 21st century

In 2013, all 53 countries of the European Region approved Health 2020, a strategy to "significantly improve the health and well-being of populations, reduce health inequalities, strengthen public health and ensure people-centred health systems that are universal, equitable, sustainable and of high quality" (27).

Health 2020 stresses the importance of health as a major societal resource and asset that is vital for the economic and social development of countries in Europe, and commits Member States to action on the social and environmental determinants of health. It sets two strategic directions: improving health for all and reducing health inequalities; and improving leadership and participatory governance for health (27).

Health 2020 is based on four priority areas for policy action:

- investing in health through a life-course approach and empowering people;
- tackling the European Region's major health challenges of NCDs and communicable diseases;
- strengthening people-centred health systems, public health capacity, and emergency preparedness, surveillance and response; and
- creating resilient communities and supportive environments (27).

Underpinning the third priority area is PHC based on partnerships and people's participation in managing their health using 21st-century tools and innovations such as ICT and social media. Substantially strengthening public health functions and capacities in this way will bolster health protection, health promotion and disease prevention, allowing countries to achieve better and more equitable health outcomes in a cost-effective manner (27).

It commits to a "primary health care approach as a cornerstone of health systems in the 21st century" and "adding value through partnerships" (27). This approach fosters interdisciplinary and intersectoral collaboration – including among sectors concerned with human, environmental and animal health – and involves a diverse set of stakeholders – including civil society – to enhance public health effectiveness and achieve shared goals across the European Region.

Resolution EUR/RC65/13 on "Priorities for health systems strengthening in the WHO European Region 2015–2020" (40), adopted in 2015 at the 65th session of the Regional Committee, identified strategic regional priorities with a renewed commitment to the values of solidarity, equity and participation enshrined in the Ljubljana Charter (29), the Tallinn Charter (21) and Health 2020 (27). It called on Member States to "transform health services to meet the health challenges of the 21st century, moving towards a proactive, people-centred approach involving better coordination and delivery of health promotion, disease prevention, health care and condition management throughout the life-course, aiming at improved quality and health outcomes and reduced health inequalities within a comprehensive continuum of individual- and population-based health services" (40).

Resolution EUR/RC66/15, adopted in 2016 at the 66th session of the Regional Committee, subsequently called for an action plan for strengthening people-centred health systems through integrated and coordinated health services delivery (see Box 4) and through the "design of services along a continuum of care and life-course approach prioritizing the integration of primary health care, community-based services and hospitals" (41).

Furthermore, the resolution urged far-reaching changes and innovation to "create health system conditions to allow service delivery to perform optimally in terms of quality, effectiveness and efficiency and the overall improvement of health outcomes, enabling a sustainable system-wide change by rearranging the accountability mechanism, aligning incentives, preparing a competent workforce, promoting the responsible use of medicines, innovating health technologies and rolling out [electronic] health" (41).

Box 4. People-centred health systems through integrated and coordinated health service delivery

In 1996, WHO defined integrated health care as "the process of bringing together common functions within and between organizations to solve common problems, developing a commitment to a shared vision and goals and using common technologies and resources to achieve these goals" (42). WHO later refined this definition to stress the personal dimension of integration, describing it as the "organization and management of health services so that people get the care they need, when they need it, in ways that are user-friendly, achieve the desired results and provide value for money" (43).

Evidence points to the benefits of integrated service delivery models, including improvements in quality of care and clinical outcomes, greater engagement of patients, improved user satisfaction, and better resource targeting (44). Making health care truly universal will require health systems designed around and for people, as opposed to around diseases and health institutions/organizations.

Integrated, comprehensive, people-centred PHC that fosters community involvement, coordination with public health, and intersectoral collaboration

is critical for transforming health systems to effectively respond to multiple health risks, the social determinants of health, NCDs, physical disabilities, emerging infectious diseases, and the needs of children (including newborns and adolescents) and (expectant) mothers.

Transformed PHC is the engine that drives appropriate integration within health systems. This includes integration in four domains:

- 1. across health services or programmes within a level of care;
- 2. across different levels of care, including primary, secondary, palliative and mental health care;
- 3. across health care, personal care services and public health interventions; and
- 4. across public, nongovernmental and private sector institutions whose actions influence health.

Both intersectoral coordination and the coordination of PHC with public health functions are critical to effectively address NCDs, injuries, multimorbidity and coexisting risk factors. In each of the four domains above, the extent and nature of integration will vary according to contextual factors (45).

In 2016, building on the United Nations high-level meetings on NCDs in 2011 (46) and 2014 (47), the Regional Office developed the new, comprehensive Action Plan for the Prevention and Control of Noncommunicable Diseases in the WHO European Region for 2016–2025 (48). The Plan identifies four priority action areas: governance; surveillance, monitoring and evaluation, and research; prevention and health promotion; and health systems.

It also sets out 11 priority interventions at individual, population and environmental levels, and targeted economic and industrial sectors through multisectoral action to achieve regional and global targets. The targets include reducing premature mortality, reducing the disease burden, improving quality of life and making healthy life expectancy more equitable.

The Plan identifies PHC as the domain through which actions for individual-level interventions will be implemented, within health systems that foster people-centred, coordinated and integrated care across the care continuum using a life-course approach (48).

Also in 2016, Member States at the 66th session of the Regional Committee requested that the Regional Office develop a roadmap to implement the SDGs by 2030. Resolution EUR/RC66/R4, "Towards a roadmap to implement the 2030 Agenda for Sustainable Development in the WHO European Region", called for strengthening collaboration with partners and stakeholders. It provided a "renewed commitment" to Health 2020 and asserted "that health is not only an end in itself, but a means for achieving other goals and targets" of the SDGs. It also acknowledged "the reciprocal benefits between the attainment of SDG 3 and the achievement of all other SDGs" (49).

The following year, in adopting resolution EUR/RC67/9, the "Roadmap to implement the 2030 Agenda for Sustainable Development, building on Health 2020, the European policy for health and well-being" (50), the Regional Committee also agreed to adopt a joint monitoring framework for the SDGs, Health 2020 and the Global Action Plan for the Prevention and Control of NCDs 2013–2020. This would provide "a renewed commitment and an integrated, multisectoral approach to further implementing Health 2020" (50).

Additionally, resolution EUR/RC67/9 requested that the WHO Regional Director for Europe work closely with Member States to "define the best ways to improve intersectoral governance for health, equity and well-being, ensuring equal opportunities and equal conditions for all at all ages", and to "promote regional cooperation in science, technology and innovation in order to enhance knowledge sharing and translation" (50).

Strong and sustained regional leadership, consistent regional policies, the impetus provided by Health 2020 (27), the Tallinn Charter (21) and the SDGs (16), and various contextual changes present a unique opportunity for the European Region to accomplish its bold agenda to establish 21st-century health systems for prosperity and solidarity.

Translating this opportunity into reality will require political will from Member States guided by investment, innovation and inclusion, as noted in the outcome statement of the high-level meeting to mark the 10th anniversary of the Tallinn Charter (*51*). The outcome statement affirms that Member States must:

- focus on **inclusion** by improving health coverage, access and financial protection for everyone;
- focus on **investment** by making the case for investing in health systems; and
- focus on **innovation** by harnessing innovations and systems to meet people's needs (51).

The following section presents dozens of ways that Member States across the European Region are working creatively and across sectors to translate these ideas into action.



3. Translating policies and strategies into reality: innovations in PHC in the European Region

3.1. Innovations in organizational design and governance

Member States have effectively translated the European Region's policies, strategies and resolutions into practice, enabling them to introduce innovations in PHC and health systems to address current and emerging health and social challenges. While these innovations have harnessed new technologies and capabilities in the form of diagnostics, medicines, health technologies, data science and ICT, they have also emphasized so-called soft innovations (see Box 5), particularly in organizational design and governance, financing, resource generation and management, and service delivery. These innovations have paved the way for the development of comprehensive, integrated and people-centred PHC models based on multidisciplinary teams.

Box 5: Understanding innovation in health systems: hard and soft innovations

Innovation is variously defined as "an idea, practice, or object that is perceived as new by an individual or other unit of adoption" (52). While *invention* relates to the generation of an original idea, concept, product, process or a service, *innovation* involves the use of the invention or the modification of an invention through a new process, application or use to create a new product or service.

Types or archetypes of innovation include product or process innovations (53), administrative innovations, and technical innovations (54). Descriptions of the nature of innovations include radical or incremental innovations (55,56) disruptive innovations (57), and focal or complex innovations (58).

Finally, *soft* innovations, which relate to design, processes, services or policies, are differentiated from *hard* (or technological) innovations *(59)*.

In European countries, innovations in organizational design and governance of health systems have helped to devolve decision-making and enhance local accountability; improve the management of PHC; empower individuals and communities; and promote intersectoral collaboration.

3.1.1. Innovations to devolve decision-making and enhance accountability

Denmark, Finland, Norway and Sweden – all countries that strongly uphold the values of solidarity, social responsibility, equity and universal access – have devolved the responsibility for PHC to municipal governments. This has enabled better integration of health and social care, improved the coordination of services with secondary care, and strengthened preventive activities.

The transfer of decision-making to municipal governments has also enabled better alignment between services and the needs of local communities (60–66). In Sweden, the effective coordination of PHC, public health and social services enabled the development of people-centred, integrated care pathways that shifted services from hospital settings to home-based care (67). In Finland, it allowed for the integrated provision of mental health services (68).

Within two decades, Spain also systematically devolved the responsibility for managing health from the central government to 17 autonomous communities in order to improve the responsiveness of the health system to local needs. In this new model, regional administrations are responsible for managing their own budgets and funding public health services. Health zones are responsible for the provision of PHC and for managing the health workforce (69). The devolution of responsibility has helped to stimulate policy innovation (70), contain health expenditures without widening health-care inequalities (71,72) and improve health outcomes (73).

Similarly, in February 2017, Belgium endorsed the Flanders Reform of Primary Care, which shifted competencies related to the organization of PHC to the regional level. The reforms aim to transition PHC towards people-centred, integrated care by: developing PHC zones; installing the Flemish Institute of Primary Care; strengthening PHC capacity; stimulating multidisciplinary working; coordinating care

and case management for people with complex care needs; engaging informal caregivers as care partners; conducting social mapping to better target interventions; improving communication with citizens and health professionals; and establishing a platform on well-being and health (74).

3.1.2. Innovations to enhance management of PHC

Several European countries have introduced innovations to enhance management of PHC providers in order to improve their performance and achieve better health system outcomes. Estonia and Slovenia have both introduced contracting with independent PHC organizations or family doctors to improve the efficiency, effectiveness and responsiveness of health services (75,76).

In 1993, Croatia introduced a law on health-care mechanisms to position PHC as the cornerstone of the health system and enable family doctors to transition from being public employees to being independent practitioners who can directly contract with the Croatian Health Insurance Institute. The remuneration of physicians changed from fixed salaries to payments based on the scope and volume of services provided. The new model also provides patients with the right to choose their PHC providers. Independent family doctors are now able to expand access to services and introduce changes to improve user responsiveness, for example, by introducing appointment times, scheduling visits by telephone, reducing waiting times for appointments, and instituting out-of-hours telephone advice (77).

In Latvia, the National Health Service contracts independent PHC doctors through a capitation payment with a 13% variable that is conditional upon meeting defined structural and process-based quality criteria, such as increased coverage or improved management of NCDs (78).

In Armenia, performance-related payments have focused on improving productivity in the sector and encouraging doctors to take on new patients and roles they were previously not responsible for (79).

In Denmark, self-employed family doctors are contracted to provide PHC services, and contracts are renegotiated every few years to respond to emerging needs (80). This organizational innovation has enabled Denmark to introduce successful new chronic disease management models (81,82).

Iceland has merged PHC regions into larger clusters to establish stronger service delivery capacity and increase adaptability to local needs, as well as to enhance the recruitment of staff (74).

Since 2005, Tajikistan has focused on strengthening business-planning capacity in district and rural PHC facilities to increase managerial capacity in health institutions, raise awareness on the appropriate use of resources, and improve the quality of services (83).

Local authorities in Hungary are responsible for overseeing PHC services and contracting suitably trained doctors with a special licence that provides them with the right to practise. Each patient has equitable access to and continuity of care with a designated family doctor who provides a comprehensive set of disease prevention, health promotion, diagnostic and treatment services, as well as referrals to secondary care. Supervision is the task of the health authorities organized at regional, county and national levels (74).

3.1.3. Innovations to empower individuals and communities

Regional innovations in governance have emphasized the empowerment of individuals and populations to engage in health and actively participate in the planning and provision of local health services. This shift has also improved transparency and accountability in health systems. For example, Bulgaria (74) Croatia (77), Denmark (80), Estonia (74,75), Hungary (74), the Republic of Moldova (74), Slovenia (74,84), Sweden (85), Ukraine (74) and the United Kingdom (86) provide patients with the right to choose their family doctor.

Many countries across Europe have also focused on responding to the changing health needs and sensitivities of populations, especially those in underserved areas. Turkey has established migrant health centres in areas heavily populated by Syrian refugees in order to provide effective and efficient preventive care and essential health care services, remove language and cultural barriers to access, and improve the overall accessibility of services (74).

3.1.4. Innovations to promote intersectoral collaboration

The whole-of-government, whole-of society approaches to managing health that Health 2020 articulates are now pillars of regional health policies. European Member States have introduced the health-in-all-policies approach along with intersectoral collaboration to reduce health risks, address social determinants of health, reduce inequities and improve health outcomes (87).

In 2003, 47 European Member States were among the 168 countries globally to become signatories to the WHO Framework Convention on Tobacco Control (FCTC) (88). The FCTC commits them to taking coordinated, intersectoral actions to implement increases in tobacco prices through taxation; regulate packaging and labels; conduct educational campaigns; create advertisement bans; and support smoking cessation.

In 2015, the Government of Finland's resolution on the Health 2015 public health programme (89) enabled the introduction of multisectoral actions to address health inequities by raising taxes on tobacco, alcohol, sugar and other products with adverse health effects (90). PHC in Finland also provides community-based health promotion and disease prevention services by collaborating closely with other governmental and nongovernmental organizations in the education, culture, sports and leisure, urban planning and environmental sectors, as well as patient organizations. The Government plans to fully integrate PHC, secondary health services and social services, which will be provided by 18 provinces (74).

In Scotland (United Kingdom), one of the most significant innovations has been the integration of health- and social-care services following the Public Bodies Act of 2014. Since then, the law requires local authorities and health boards to work together to plan and deliver social care, community health services and a proportion of acute services for adults (74).

Since 2013, Northern Ireland (United Kingdom) has seen the establishment of 17 integrated care partnerships that bring together health- and social-care providers, voluntary and community representatives, and service users in collaborative networks to respond innovatively to the needs of local communities. Additionally, general practitioners have developed and established 17 general practitioner federations to support practices in their localities and facilitate the transformation of health and social care services through PHC (74).

In Slovenia, where over 50% of men and women aged 20 years or more are overweight, the Ministry of Health and Ministry of Education have developed intersectoral policies and actions to promote healthy lifestyles, improve the production and distribution of healthy food, and introduce nutrition guidelines in hospitals, schools, resorts and retirement homes. In 2010, the country adopted a national action plan to reduce salt consumption. That same year, the Ministry of Education banned the use of vending machines to distribute food and beverages in all primary and secondary schools (91).

As a means of tackling obesity, the Ministry of Health and Ministry of Sport of Luxembourg have ensured that opportunities to engage in sports are offered to individuals of all ages. They have also engaged the private sector (sports clubs and school canteen suppliers) in local communities. School catering services have started offering healthier foods in canteens, and the media plays an important role in promoting sports and balanced diets (92).

San Marino has established multidisciplinary groups that engage different sectors of public administration to enhance the lifestyle of the new generation. For example, in 2013, it established the Intersectoral Working Group on Health and Education, which uses an intersectoral approach to focus on the management of childhood obesity and the development of healthy lifestyles among adolescents (74).

Monaco has developed an intersectoral alert system for the arrival of highly infectious diseases by sea to ensure that individuals receive appropriate care, health workers are protected from risk and the infectious diseases are halted (93).

European Member States have also been actively pursuing intersectoral policies involving the health, education, transport and environmental sectors to promote physical activity. Notably, the United Kingdom has implemented engineering and infrastructure changes combined with health campaigns to promote human-powered transport options, and has combined these with public health campaigns designed to induce behaviour change. Austria, Israel, Italy and Switzerland have used similar strategies (94).

In 2002, the Transport, Health and Environment Pan-European Programme (THE PEP) (95) was launched to integrate environment and health topics into transport policies. In 2005, the European Network for the promotion of health-enhancing physical activity (HEPA Europe) was also relaunched (96).

3.2. Innovations in financing

European Member States have introduced innovative provider payment methods with performance management systems to develop comprehensive PHC, reorient PHC services towards health promotion and disease prevention, effectively manage NCDs, and improve the quality of health-care services. They have used a combination of risk-adjusted capitation and fee-for-service payments in PHC, often with pay-for-performance schemes as incentives to expand health promotion, improve disease prevention (for example, immunization programmes) and screening (for example, for breast and cervical cancers, for poor development in children, for illness in older citizens, and for chronic diseases), increase quality of care, and develop integrated care models (97–99).

In 2013, Georgia introduced a national UHC programme that aims to protect citizens from catastrophic health expenditures and gives all citizens access to a basic benefit package. As a result, utilization of outpatient services has increased and out-of-pocket payments have declined, thereby improving financial protection (74).

Similarly, in 2016, Ukraine committed to a four-year health system reform programme to transform the country's health-care funding system. The tax-funded system guarantees a basic benefit package to every citizen and permanent resident of Ukraine, as well as refugees. The reform pools all funds under a single national purchaser to contract family physicians (74).

France's National Health Strategy 2018–2022, designed by the Government in consultation with users, has identified the removal of financial barriers to accessing the health system as a priority. In recent years, France has adopted and strengthened several measures towards this end, including the implementation of universal health protection with UHC. Thus far, this has allowed 5.5 million people with low incomes to benefit from free coverage (74).

Countries often introduce new provider payment models with quality improvement programmes and performance benchmarking. The Danish Healthcare Quality Programme, which provides standards for good quality in health care and methodological guidelines for monitoring and accreditation, has developed an extensive database on care processes and outcomes to compare and benchmark the performance of family medicine practices over time (82,100).

Kyrgyzstan's "Den Sooluk" national health reform programme for 2012–2018 has similarly strengthened the quality of care provided through PHC by implementing quality monitoring and improvement systems as well as evidence-based guidelines. These target cardiovascular diseases, maternal and child health, HIV, and tuberculosis in particular (74).

Croatia has introduced a new provider payment method for four core activities in PHC (family medicine, paediatrics, gynaecology and dental care) as a means of improving the efficiency and quality of services as well as strengthening preventive activities. The method combines payment for fixed and variable expenses of PHC centres, a fee-for-service payment system, and performance-related pay for achieving targets set in key performance indicators and for continuous quality improvement (74).

In Lithuania, currently more than half of PHC institutions are privately owned; these provide services for 30% of the population. Private general practitioners are publicly financed through the National Health Insurance Fund, which is based on age-adjusted capitation, geographic-adjustment capitation (for rural inhabitants), and the provision of financial incentives for the established list of services and quality indicators (74).

In 2004, as part of the new contract for general practitioners, the National Health Service (NHS) of England (United Kingdom) introduced the Quality and Outcomes Framework. The Framework is designed to enhance the quality of general practices and PHC in general by providing financial incentives to general practitioners to improve performance related to efficiency, effectiveness, responsiveness of services and health outcomes (101).

The Framework is the largest pay-for-performance programme for health in the world. It simultaneously introduced three innovations that led to improvements in quality of care: better data collection, public release of information on quality of care, and pay for performance. However, its introduction coincided with a national programme of quality improvement in the NHS that included the use of national standards for the management of major chronic diseases, the use of clinical audits to compare the performance of general practitioners, and yearly appraisals of doctors working in the NHS. As a result, it has been difficult to isolate the Framework's direct causal effect (102).

France and Hungary have introduced similar funding approaches with incentives to improve the quality and performance of family medicine and PHC (103,104). France, Germany, the Netherlands and Portugal have also introduced innovative provider payment models in the form of bundled payments (a grouped payment for a collection of services) in order to improve the provision of

coordinated and integrated care for patients with chronic illness (105, 106).

In 2010, the Netherlands expanded nationwide bundled payments that were initially only for diabetes mellitus to include chronic respiratory diseases and cardiovascular risk management. In the new bundled-payment approach, insurers pay a single fee to the care group (a contracted entity of multiple health-care providers often made up of general practitioners) to cover a full range of care services for chronic diseases over a fixed period. Care groups in the Netherlands have full responsibility for the organizational arrangements of service design, which enables innovations in service delivery (107). The scheme has led to improvements in care coordination, care processes and outcomes for diabetes (108,109).

Countries have also used financing innovations to reduce inequalities in access to PHC services. Belgium, France, Germany, Turkey and the United Kingdom provide incentives in the form of higher remuneration, allowances or bonus payments for family doctors working in underprivileged areas (110–115). In Croatia and Montenegro, family doctors working in rural areas receive higher capitation fees than those working in urban areas. Albanian family doctors working in rural areas receive a much higher salary than doctors working near or in cities. The Republic of Moldova, Romania and Serbia provide financial incentives to doctors working in rural areas in the form of free or improved housing (115).

3.3. Innovations in resource generation and management

Judicious resource management by which resources are developed, acquired, managed and allocated is critical for efficient, effective, responsive and equitable health care. Health 2020 sets out resource management as an important policy principle in Europe (27).

The Regional Office has developed wide-ranging policies and strategies for resourcing health systems, especially in relation to developing the future health workforce (116). These policies, which Member States have widely implemented, prompt innovations in:

- training and education to develop a health workforce with the necessary knowledge and skills to position PHC at the centre of health systems;
- the roles and responsibilities of the health workforce to effectively manage current and future health challenges; and
- the use of technological resources, especially information solutions, to augment the role of the health workforce.

Core to health workforce innovations in the European Region are the development of multidisciplinary PHC teams and the extension of the scope and scale of services provided by family doctors, nurses, midwives, medical assistants and other PHC professionals (117,118). These innovations have helped to transition the management of hospital services to strengthen PHC, and have put in place the platforms for the development of high-quality, coordinated, people-centred and integrated PHC services across the care continuum and throughout the life-course.

Many countries have taken measures to ensure the continuous training of the PHC workforce. Slovakia established the Slovak Resident Programme to support postgraduate education of health-care professionals, especially general practitioners. This measure aims to provide an adequate number of general practitioners and paediatricians across the country and ultimately improve the quality of PHC (74).

Czechia established the Primary Care Reform Commission at the Ministry of Health to lead the expansion of general practice in the country and to elaborate on areas of development for PHC, including diagnostic technologies and capabilities, and ICT (74).

In much of Europe, family medicine or general practice is now a well established specialty and/or an academic discipline, with the scope of roles and responsibilities expanded to the management of general health issues and chronic illnesses across the care continuum (117,119–122). However, more needs to be done to better brand the specialty and improve its profile relative to other medical and surgical specialties.

Family doctors in Europe still face many challenges. No minimum standards exist for undergraduate family medicine curriculum, and there is scarce or nonexistent early clinical exposure to PHC in medical schools across Member States. Specialist training programmes in family medicine, where they exist in the European Region, vary considerably in length and content. Regulation of the quality of training, as well as lifelong learning, is deemed insufficient in many contexts. Investment in teaching the teachers of family medicine is inadequate. Few effective policies have been developed to address the migration and emigration of family doctors, or the recognition of their professional identity (123).

The role of the nursing profession in PHC has expanded significantly in the European Region. This, as well the expansion of the role of midwives and other health professionals such as medical assistants, has been critical in the development of enhanced PHC services such as the improved management of chronic diseases, wound care and health promotion activities (118). In more than 10 countries, nurses and midwives can prescribe medicines (123).

Nurses have also played a leading role in the development of community-based health care for services previously provided in hospitals, including lifestyle counselling, the diagnosis of health conditions, and the provision of home-based acute-condition care, post-operative care, rehabilitative care and end-of-life care. As of 2009, 25 countries of the European Region used family-focused and community-based programmes provided by nurses and midwives (123). Community-based nursing is bringing care closer to patients' homes and addressing the health needs of an ageing society while simultaneously increasing patient satisfaction (124).

While the European Region has the highest average nurse-to-population ratio of all the WHO regions, wide variations still exist among countries. Attracting new candidates to the nursing profession and retaining qualified nurses has been a challenge, especially in countries where pay levels for nurses remain low (125).

A number of countries, including Czechia, Estonia (74), Finland, France, Ireland, the Netherlands, Lithuania (74), Poland, San Marino (74), the Russian Federation (126) and the United Kingdom, have developed advanced-practice nursing programmes and programmes to train nurse practitioners to provide health-care services previously only provided by physicians (123, 127, 128).

Countries have also expanded the roles of other health professionals. In the United Kingdom, in addition to supplying medicines, community pharmacists now provide health advice to patients, collaborate closely with general practitioners and other parts of the NHS, and offer a range of public health services through Healthy Living Pharmacies (74).

3.4. Innovations in service delivery

WHO has consistently championed the use of new ICT, including electronic health (eHealth), to "improve care, to increase the level of engagement of patients in their own care, as appropriate, to offer quality health services, to support sustainable financing of health-care systems, and to promote universal access" (129). By 2015, 70% of European Member States had an active national eHealth policy or strategy (130). Countries across Europe, particularly in its western and central parts, use eHealth widely to manage long-term illness (131,132) and to assist older people to live independently and safely (133).

Denmark introduced countrywide digital health records and an eHealth programme enabling the electronic linkage of family doctors to other specialists, pharmacies, laboratories and hospitals via a clinical messaging service with electronic prescriptions and referrals. This provides effective coordination among these services and enhances the continuity of care (134). Denmark has also successfully scaled up home-monitoring of patients with chronic respiratory illness using eHealth (135).

Malta has used digital innovations and ICT solutions to bring health care as close as possible to where individuals live by allowing general practitioners to order and access laboratory and radiological investigations and view hospital patient discharge letters through an application (74).

Turkmenistan has improved the management of NCDs by introducing an electronic document management system in which all citizens have medical cards; a system of telemedicine (the use of ICT to provide clinical care from a distance) linking health-care institutions; and mobile health care that uses text messages containing medical information, reminders, motivational messages and other health-related communications to improve continuity of care (74).

Cyprus has embarked on health system reforms with the introduction of a new model to optimize the provision of services through the expansion of computerization in all health-care centres, thereby enabling the application of clinical protocols and targets with quality control and assurance to improve the efficiency, effectiveness and responsiveness of care (74).

In Israel, the digitalization of health data and the near-universal availability of high-quality, electronic medical records have enabled the development and use of national registries for tracking the incidence and prevalence of conditions such as diabetes. This also enables the generation of predictive scores that help to identify members of populations at risk for developing chronic diseases or health deterioration (74).

Romania's introduction of the National Unique Information System, electronic prescriptions and patient cards regularly used by general practitioners has substantially improved the continuity of care (74).

Greece's national electronic prescription system, introduced in 2010, now covers all prescriptions issued. It provides a powerful tool for improving patient services and health system planning. In 2018, the country made further advances by introducing electronic medical records (74).

At least 24 countries of Europe (mainly in western, central and southern Europe, including Cyprus, Denmark, Finland, the Netherlands and Spain) are using eHealth successfully in the provision of integrated care by multidisciplinary teams for the management of multimorbidity – especially for older people – in PHC across care levels, and for care at home (136). In many countries across eastern Europe and central Asia, such as Kazakhstan (137) and the Russian Federation (138), diverse telemedicine initiatives have proliferated to reach underserved and remote areas with specialized cardiology, pulmonology and neurology care.

Several European Member States, including Estonia, Hungary, the Netherlands, Slovenia and the United Kingdom, have introduced service delivery innovations to establish integrated, comprehensive and people-centred PHC services that include public health interventions at their core.

In 2012, Hungary launched an innovative public health-focused programme for organizing PHC services backed by a virtual care service centre. The model aims to improve the health status of Hungarians and reduce health inequalities with a specific focus on the most disadvantaged regions of the country (139). Clusters of practices, each covering 40 000–50 000 people, bring together multidisciplinary groups of health professionals (including, for example, public health professionals, community nurses, physiotherapists, dietitians and health psychologists) to provide comprehensive PHC services across the care continuum that were previously not provided, and to plan and implement public health services (140).

The former Yugoslav Republic of Macedonia launched an integrated health information system in 2013, allowing PHC doctors to electronically and transparently schedule specialist appointments. This has contributed to increased productivity, reduced wait times and the optimization of health service capacity (141).

The Netherlands has developed one of the most comprehensive, integrated and coordinated PHC services in the world. Embodying the principles, policies and strategies described above, it places a strong emphasis on family medicine, multidisciplinary teams, the effective use of health workforce, innovative health technologies and information systems (see Box 6). PHC provides more than 95% of all episodes of care in the country. Collaboratives of family physicians provide out-of-hours services and coordinated management of chronic illnesses to ensure continuity. Estimates suggest that PHC has been responsible for almost one quarter of the decline in premature mortality achieved in the Netherlands (142,143).

Box 6. PHC Innovation in the Netherlands

In the Netherlands, PHC is underpinned by the principles of patient centredness, equity, evidence-based care and delivery by multidisciplinary teams (144). In addition to family physicians, practice nurses, nurse practitioners and practice staff, PHC teams include community-based health professionals such as district nurses who provide home-based care for older patients and patients with chronic illnesses; midwives who provide most of antenatal, intrapartum and postpartum care in the community; nutritionists; physiotherapists; community pharmacists; and psychologists (145).

The PHC teams coordinate population health and public health interventions using a set of patient registries that enable the successful coverage of populations for health promotion, disease prevention (for example, the immunization of children and adults (146)), screening and proactive risk management (for example, for cardiovascular disease (147,148)).

The Netherlands has also introduced innovative home-based care for the management of chronic illnesses (known as the Buurtzorg Model or "care in the neighbourhood"). Designed by district nurses, it uses ICT and eHealth to integrate home care with social services, PHC, and other formal and informal care providers to deliver high-quality, people-centred services while promoting self-care and independence (149,150). Practice-based PHC research is well

established in the country. All PHC centres are computerized, with strong information systems and eHealth solutions that capture and provide data needed for targeted health service provision, continuous improvement of care, and research to inform policy and practice (151).

Other innovative responses have come from countries facing a high burden of NCD risk factors, such as alcohol consumption. Montenegro has developed a national screening programme at the PHC level for the early detection of harmful use of alcohol in people aged over 15 years, with a specific focus on the most disadvantaged. The programme builds on continued reform efforts to deliver comprehensive, coordinated health services to improve health outcomes and reduce health inequalities. General practitioners carry out screening and refer people to a specialized centre to assess their risk levels. If necessary, people are offered an alcohol brief intervention (ABI) consisting of advice, education, monitoring and referral to specialists for therapy (74).

In 2011, Scotland introduced an alcohol act aimed at reducing alcohol consumption through a ban on quantity-based discounts, restrictions on the display and promotion of alcohol in Scotland's off-trade sector, and minimum unit pricing. It also established a national ABI programme as a key priority for the Scottish National Health Service. Within two years of its introduction, 80 000 ABIs were being delivered annually. Delivery rates have stayed around this level in subsequent years (152,153) (see Box 7).

Box 7. Innovation in PHC in Scotland to reduce alcohol consumption

As part of a comprehensive alcohol strategy with actions on price, availability, marketing, public awareness of alcohol as a risk factor and treatment interventions, Scotland introduced its national ABI programme. The programme identifies priority areas in health settings with the best-established evidence base, in PHC (where around 60% of ABIs are delivered), in emergency medicine, and in antenatal care, where there is an ethical case to be made for the delivery of ABIs (154, 155).

The country provided financial incentives for the delivery of ABIs in PHC settings, set and monitored targets, and held local health authorities accountable for progress. It also made financial investments in staff training, ICT and new support staff. Improvements in indicators of alcohol harm have followed the introduction of a comprehensive national alcohol strategy and the ABIs. One year after the introduction of its alcohol act, the country saw a 2.6% decrease in per adult off-trade alcohol sales. Multisectoral implementation has involved the health and education sectors, the police force and the private sector (154,155).

In addition to the benefits of the ABI programme for patients, the initiative has enabled thousands of health professionals to become better informed about the impact of alcohol on their patients and practices. It has also raised awareness of effective population-level alcohol policy interventions, which are discussed within trainings (154,155).

The innovations emerging in the European Region in response to the high and rising burden of NCDs illustrate how countries are translating regional policies and strategies into effective action. Countries shared their experiences of these innovations in April 2018 in Sitges, Spain, at the high-level meeting Health Systems Respond to NCDs: Experience in the European Region. The event provided a cross-country learning opportunity and informed a regional agenda for action to effectively manage NCDs (154).

These innovations have centred on the transformation of individual health services towards integrated, multidisciplinary PHC (see Box 8), the development of human resources to manage current and emerging challenges (see Box 9), health financing strategies to support the scale-up of core NCD interventions and services (see Box 10), and the development and application of health system information solutions for NCDs (see Box 11) (155).

Box 8. Transforming individual health services towards integrated, multidisciplinary PHC

Beginning in 1985, Catalonia transformed its PHC services by establishing health areas composed of around 20 000 people and managed by multidisciplinary PHC teams of family doctors, paediatricians, dentists, paediatric and PHC nurses, nurse aides, social workers and care clerks. These teams provide comprehensive, community-oriented services including diagnostic and therapeutic activities, disease prevention services and health promotion education. They use new technologies that enable the management of many chronic conditions to shift from hospitals to PHC settings (156).

Since 2013, PHC professionals in Spain have been trained in teams in which nurses and physicians work together in the same units and learn to collaborate with each other very early in their careers. Training includes activities on preventive medicine and health promotion – essential areas of expertise for the entire multidisciplinary team (74).

One of the main objectives of the first period of Austria's health reform plan (for 2013–2016) was to provide PHC services to 1% of the population (80 000 individuals) through newly established multidisciplinary PHC teams. The second reform period (for 2017–2021) aims to establish 75 additional PHC centres and networks to cover 10% of the population (74).

Estonia has developed a successful family medicine-centred PHC model that provides comprehensive services, enabling the shift of care for NCDs from hospitals to PHC settings. The country is further transforming its PHC system by transitioning to group practices with multidisciplinary PHC teams and developing appropriate incentives to achieve an optimal scale of activities, improve patient centeredness, provide integrated management for the seamless transition of patients between services, and enhance the continuity and coordination of care. The new group practices will operate within zones and engage in intersectoral collaboration with local authorities to manage population health and social determinants (157).

In 1999, Bulgaria introduced the Health Care Establishments Act, enabling

the provision of outpatient services by single and group practices of general practitioners, medical and dental centres, and independent medical diagnostic centres (74).

Bosnia and Herzegovina improved quality and continuity of care by transforming existing health centres in the Republic of Srpska into family medicine centres with multidisciplinary teams. The country has focused intensively on training family doctors, nurses and other health professionals to refurbish and transform health centres and improve accountability (74).

Andorra has similarly developed interdisciplinary PHC teams consisting of family physicians, diabetes care nurses, PHC nurses, social workers, chiropodists, dietitians, dentists and psychologists (156).

In 2010, Turkey introduced the family medicine model, enabling the delivery of continuous, comprehensive, and quality PHC by a family health unit comprising a family physician and family health officer working together as a team. It has since enabled the equitable provision of PHC services, expanded the scope of care that is free of charge, and ultimately increased countrywide utilization of PHC services with improvements in equity, efficiency, health outcomes, financial protection and user satisfaction (74).

In 2017, Greece introduced a law establishing multidisciplinary local health teams to work on two levels of PHC (local health units and health centres that include multiple medical specialties), and establishing the population's mandatory registration with family doctors. By the end of 2018, 120 local health teams will be functioning, providing disease prevention, health promotion, and community-based outreach activities. These reforms have addressed major bottlenecks in the Greek health system by improving access, defragmenting care, improving continuity and enhancing the quality of services (74).

Box 9. Developing fit-for-purpose human resources

Human resources are critical to efficient and effective health systems and in managing NCDs. Health workforce policies and strategies are necessary for countries to attract, recruit and retain the right number of health workers with the right skills and competences.

In 2015, the Department of Health and Social Care in England used systems thinking and modelling to examine demand patterns related to NCDs and long-term conditions up to the year 2035 in order to ascertain the skills, competences and number of human resources required to meet future needs (158).

Uzbekistan has used health education policies to retrain specialists to become general practitioners, helping to staff rural and underserved areas in the country (159).

Germany's master plan for medical studies until 2020 contains measures aimed at attracting more medical graduates to PHC in underserved and rural areas by,

for example, granting or supporting 10% of study placements for applicants who, after completing their studies and continuing medical education in general practice, will undertake work in rural areas for up to 10 years. The plan also contains measures to further strengthen general medicine education (74).

In 2012, Switzerland launched a master plan for family medicine and basic medical care, which has since introduced multiple measures to strengthen PHC relating to compensation, academic presence, research, and education and training to attract talented young professionals (74).

Azerbaijan has introduced family physicians onto the country list of medical positions. In collaboration with Turkey, the country has also implemented a family medicine train-the-trainers programme for PHC physicians and nurses in pilot districts as part of PHC reform (160).

Many countries have adjusted their current training programmes to enable physicians to spend more time in family and general practices. In 2017, Romania expanded its three-year postgraduate curriculum to four years, while in 2018 Greece expanded its curriculum from four years to five (74). Similarly, Estonia will soon extend its three-year residency programme to four years (74).

Most countries in the European Region have developed human resources and financing policies to expand the scope of tasks performed by nurses in PHC, especially for health promotion, disease prevention and the management of long-term conditions including NCDs (161). In particular, task-shifting to nurse practitioners and other advanced-practice nurses has enabled these professionals to assume monitoring and regular check-ups, routine treatment, and secondary prevention of common or stable NCDs (162,163).

In 2002, Slovenia introduced health promotion centres in all community health centres across the country as part of the national programme on the prevention of cardiovascular diseases. The major role of these centres, which have integrated previously dispersed activities, is to provide lifestyle interventions against key risk factors for NCDs. At the same time, general practices became responsible for preventive check-ups and the referral of at-risk patients to health promotion centres where they can receive lifestyle interventions free of charge (74).

In 2011, Slovenia also introduced family medicine "model practices" in these centres, which introduced a part-time registered nurse to the team of family physicians to perform screenings for chronic disease risk factors, provide preventive counselling, and help navigate patients with chronic diseases through the health system. Almost all PHC practices have now adopted this approach, which has contributed to more than half of the adult population being screened for lifestyle and risk factors for cardiovascular diseases (74).

Box 10. Health financing strategies to support the scale-up of core interventions and services for NCDs

Countries in the European Region have developed innovative funding mechanisms to facilitate intersectoral action to manage NCDs, risk factors for NCDs and the social determinants of NCDs (155). Finland has provided national funding to local authorities to develop intersectoral collaboration and activities for promoting physical, mental and social well-being, and for reducing inequalities in well-being and health. In Lithuania, the State Public Health Promotion Fund is able to use some of the revenues from alcohol excise duty to finance projects related to NCDs (155).

In England, the Greater Manchester Combined Authority pooled funds for health and social care to develop integrated, intersectoral actions to manage long-term illness. The Authority is also working with the Department for Work and Pensions to help deliver services and support health and employment needs, especially for those with long-term musculoskeletal and mental health conditions (155).

Health Promotion Switzerland receives funding from an annual surcharge on health insurance premiums to fund intersectoral projects that align with its strategic goals (for example, to promote healthy diets, physical activity and mental health). The Austrian Health Promotion Fund and the recently established Lithuanian State Public Health Promotion Fund have established similar schemes (155).

Countries have also used provider payment methods to create incentives for PHC providers to coordinate and effectively manage individuals who have one or more long-term conditions. For example, Austria, France, Germany and Hungary have introduced pay-for-coordination for the management and prevention of NCDs (106).

In 2006, Estonia introduced the Quality Bonus Scheme, a voluntary pay-for-performance scheme linked to evidence-based practice guidelines for managing NCDs. It also introduced information systems that measure the performance of family physicians as part of a comprehensive approach to strengthening PHC. The modest performance incentive (2% of the budget allocated for PHC) provided as a financial reward to family physicians aimed to stimulate the scale-up of early detection and management of cardiovascular diseases and diabetes. The behaviour change that followed stemmed from the incentive itself as well as the information that became available to family physicians as a result (164). The lessons from the programme enabled the Estonian Government to consider transitioning its PHC model from small practices with one or two family physicians to group practices comprising multidisciplinary teams.

Other countries are introducing large-scale financing and service-delivery innovations. For example, Hungary has introduced a novel care-coordinator model covering 2 million people (20% of Hungary's population) in which eligible providers – such as general practitioners or polyclinics providing secondary-level

outpatient services – are responsible for coordinating integrated care pathways across levels of care as well as providing care at their specific level. In turn, the providers receive a fixed per capita fee, a pay-for-performance fee for the documented introduction of prevention programmes, and a share of any savings derived from improving the efficiency and effectiveness of care and reducing hospitalizations (155).

Box 11. Developing and applying health system information solutions for NCDs

Countries have used information systems, data analytics and modelling to better identify individuals at risk of illness and those at risk of worsening health who may become major users of health-care resources (typically people with multiple long-term conditions). This is done to prioritize and better target resources and interventions.

Israel has been using risk stratification and predictive modelling to identify individuals at high risk of deteriorating health and to develop new care models to direct highly personalized interventions at the PHC level to prevent the deterioration of health status and admission and readmission to hospitals (165–167).

The Veneto Region in Italy has also introduced predictive modelling for improved case identification and risk stratification for better care coordination at the PHC level, as well as targeted case management of those at risk (168). Similarly, the Lombardy Region has used risk stratification for case-finding for patients with NCDs and comorbidities, to improve their care coordination and to boost the continuity of care in PHC settings (155).

Spain has long used risk stratification for case finding and to inform the provision of targeted, integrated care and personalized case management for those with multimorbidity and complex chronic conditions (169). Catalonia (170) and the Basque Country (171), two of Spain's autonomous communities, have also used predictive modelling for resource allocation – specifically risk-adjusted per capita payments.

Catalonia, Denmark, Estonia and Israel, all of which have developed country/ region-wide digital health information systems, have also established health information exchange systems that connect digital health records across health-care providers to enable the provision of coordinated and integrated care. Catalonia and Denmark are also using the health information exchange systems to make personal digital records and mobile applications prescribed by health professionals available to patients to help them self-manage long-term illnesses (155).

By 2015, 62% of Member States included telehealth (the provision of health care at a distance, including surveillance, health promotion and public health functions) in their policies or strategies; 83% used teleradiology; 72% used remote patient monitoring; and 63% used telepathology services. Countries

have applied telehealth for the management of chronic conditions, including for cardiology, echocardiography, cerebrovascular stroke, diabetic retinopathy and for the treatment of diabetic ulcers (130).

Scotland has successfully established five acute telestroke networks for the management of acute cerebrovascular stroke and the timely provision of thrombolysis when needed. Norway has introduced a mobile phone application for the self-management and telemonitoring of diabetes mellitus, with supervision and health coaching interventions provided by health professionals (172).

Belarus launched a national diabetes registry in 2008 that covers more than 96% of patients diagnosed with diabetes. Health professionals in each region can access the reports. This has contributed to the allocation of resources based on demand and led to the overall improvement of health service planning (173).

Four decades after the Declaration of Alma-Ata was signed (3), countries of the European Region face opportunities for innovation combined with a strong impetus for improving health and well-being and leveraging these for economic growth and sustainable development. The question for policy-makers, therefore, is not *if* they should transform their health systems to be more resilient, effective and people-centred, but *how*. The following section details key features and organizing principles of innovative PHC models, questions and considerations to guide strategic change, and key insights from those experienced in leading large-scale health system transformation.



4. Transforming for the future: accelerating innovation in PHC

4.1. Features of innovative PHC models in Europe

European Member States have successfully introduced innovative PHC models to improve the equity, efficiency, effectiveness, responsiveness and resilience of their health systems; to enhance health outcomes; to improve user satisfaction; and to reduce financial risk. As such they are well positioned to intensify and accelerate these innovations and to share lessons learned both regionally and globally.

While each of these models has specific characteristics reflecting the diverse contexts in which they were developed and introduced, they also share many features. The following 10 key features characterize the innovative PHC models that have emerged in the European Region (174,175).

- **1. People centeredness**. This is a holistic orientation emphasizing the individual as a whole rather than focusing on discrete diseases.
- 2. Integration. This includes integrating discrete interventions for diseases in order to move towards people-centred holistic care and public health, as well as integrating health promotion, disease prevention, diagnosis, treatment and care interventions through multidisciplinary teams capable of managing multimorbidity.
- **3. Coordination**. This includes coordinating individual care across service domains through integrated care pathways across the care continuum; coordinating action at individual

and population levels with personal and public health interventions throughout the life-course; and coordinating intersectoral action to address the social determinants of health.

- **4. Comprehensiveness**. This entails providing a core set of interventions across the care continuum, including health education and promotion, screening, disease prevention, diagnosis, management of acute and chronic conditions (including mental illness) and multimorbidity, and palliative and end-of-life care.
- **5. Continuity**. This involves providing continuity of care across the life-course for individuals, families and populations.
- **6. A focus on the population**. This implies a sense of responsibility for the health and well-being of the population, including the social determinants of health.
- **7. Participation**. This involves empowering multidisciplinary health teams, individuals and communities to participate in the choice, design and delivery of services.
- **8. Accountability**. This is key for the efficient provision of high-quality, safe and responsive service with measurable outcomes that are transparent and publicly available.
- **9.** A solid evidence base. This is enabled by a culture of rigorous research, professional development, the use of guidelines and integrated care pathways, and decision support systems.
- **10. Integration of technology.** This means utilizing appropriate technology, data and analytic solutions to provide integrated and seamless information on individuals in order to improve the effectiveness, efficiency, responsiveness and appropriateness of care.

4.2. Organizing principles for transformed PHC

In addition to the 10 features of innovative PHC models outlined above, ministers and policy-makers experienced in leading transformative change have pointed to 11 important organizing principles for transformed PHC. These principles are useful for countries to consider when transitioning to innovative, comprehensive, people-centred and coordinated PHC models (174,175).

- 1. A strategic approach to transformation with careful sequencing of changes. A clear strategy helps to establish a vision for PHC and engage stakeholders to jointly define challenges and generate solutions to address them. This should be combined with carefully sequenced implementation based on local realities, capabilities and ongoing learning.
- 2. A clear narrative for transforming PHC. A clear narrative is critical for communicating the rationale for transforming PHC, articulating the benefits to stakeholders and creating legitimacy for change. A narrative that conveys hope, a sense of mission and a can-do attitude to all those involved in the change process can help build coalitions of supportive stakeholders and create momentum for transformation.
- **3. Visible and sustained leadership.** Sustained political and managerial leadership is key to the introduction of new legislations and policies, the implementation of strategic

change and the institutionalization of transformational change in PHC.

- **4. A view of PHC as the core of the health system.** The mistaken view that PHC is a "basic" or "essential" set of services has held back its development. PHC underpinned by family doctors and multidisciplinary PHC teams must be at the core of health systems to address current and future health system challenges and to harness the opportunities that innovations offer.
- **Flexible approaches to organizational design.** Flexible organizational design is important to stimulate innovation, encourage the emergence of new models of PHC and create an opportunity to engage a diverse group of providers to offer PHC services. Innovation in organizational design is key to enhancing patients' choices of PHC providers, and for developing effective, efficient, responsive and equitable health-care services.
- 6. Empowered PHC teams and communities that engage in decision-making with a clear sense of accountability. Empowering PHC teams and communities helps to improve participation in decision-making, autonomy, responsiveness to population health needs and local accountability. Clear responsibility for patients by a designated PHC team or family doctor is an important principle that is well engrained in successful PHC models.
- 7. Equitable and efficient resource allocation. Transformations in PHC can only be achieved and sustained if appropriate priority-setting and resource-allocation mechanisms are developed to ensure the appropriate distribution and application of resources. This must take into account current and future health needs and demand patterns, inequities related to the social determinants of health, and the distribution and supply of health services. Several countries in the European Region have developed equity-enhancing resource allocation mechanisms to distribute financial and other resources to areas where they are most needed, without undermining existing service provision.
- 8. Effective use of provider payment methods to create incentives for improving performance. Provider payment methods can effectively create incentives in order to shape the scope and content of PHC and enhance performance by, for example, fostering integration, enhancing the effectiveness and efficiency of services, and improving health outcomes.
- 9. Multidisciplinary teams fit for current and future challenges. Multidisciplinary teams, often led by family doctors, underpin successful PHC models. These typically bring together practice-based teams (for example, general practitioners, family physicians, paediatricians, gynaecologists and practice nurses, as well as managerial and administrative staff) and community-based health professionals (for example, midwives, health visitors, specialist community nurses, nutritionists, optometrists, physiotherapists and community pharmacists).
- **10.** A shift from reactive management of illness to proactive management of health and its determinants. PHC transformation should involve a fundamental shift to models that promote health and well-being across the care continuum and throughout the life-course, mitigate risks, and effectively manage the social determinants of health. These models should empower and engage individuals and communities as partners in health, rather than view them as passive recipients of health-care services. Realizing such a fundamental shift will require, inter alia:
 - a change in reward systems to incentivize improved health of individuals and populations;

- the creation of PHC networks that are large enough to take a population view but small enough to provide people-centred services; and
- the expansion of PHC's role in the assessment, prioritization, strategic planning and implementation of public health and intersectoral interventions, with control of population-level resources for the local health system.
- **11. Ongoing evaluation and learning.** Ongoing evaluation and learning are critical for developing a flexible and informed approach to transforming PHC that takes into account evolving contexts and implementation processes. Learning is essential for responding to implementation challenges as they arise, and for reviewing underlying assumptions and stakeholders' responses to transformations.

4.3. Questions and considerations to guide strategic change

Strategic change involves systemwide considerations (for example, new policies, priorities and the reallocation of resources) as well as operational modifications at the institutional level (for example, in departments of ministries of health or in financing or provider institutions). Policy-makers should consider the following five important questions in relation to strategic change to ensure the successful transformation of PHC.

- 1. Why is change needed? A clear narrative should articulate the reason for strategic change for example, a new social contract with the citizens, the ambition of new leadership, existing performance gaps in the health system, new policies or a response to emerging challenges. The narrative should identify the scale and urgency of the problem, communicate the benefits of the proposed strategic change and articulate what success will look like.
- 2. What should change? The narrative for change should communicate a legacy goal, such as improving health outcomes, reducing inequalities or providing financial protection. This goal should be combined with a plan of change, SMART targets (targets that are simple, measurable, achievable, realistic and time-bound) and actions to achieve them. The targets should balance visible short-term tactical wins with longer-term strategic results in order to gain support and legitimacy.
- **3.** Who will be involved in the change? The individuals leading strategic change are critical to its success, as are the stakeholders they consult with and engage throughout the process. Assessment of the team's readiness (ambition, willingness, motivation) and capability (skills, practical knowledge, influence) is key, as are the clear definition of roles and responsibilities and collective action to develop a coalition of stakeholders to ensure sustained transformation.
- **4. How will change happen?** A theory of change should consider how change can be introduced, iteratively refined and sustained over time. Yet, while planning is key, resource allocation must be balanced between planning change and undertaking the actual work of transformation.

5. When will change happen? Achieving strategic change will require a sense of urgency with an ambitious yet realistic timeline, and effort to ensure the achievement of milestones, targets and sustained change. Progress should be regularly reviewed and communicated to all members of the transformation team as well as the stakeholders whose ongoing support is critical for sustainability.

In practice, even carefully conceived policies and plans for strategic change can fall short of their goals if:

- they lack a clear narrative to justify the transformation;
- the legacy goals or targets are not clearly set or communicated;
- stakeholders are not clearly identified or engaged to develop a winning coalition supporting change and, as a result, resistance emerges;
- messages are not reinforced over time;
- there is no sense of ambition or urgency, so that people revert to business as usual;
- there are no early tactical wins to gain legitimacy and broad support for the strategic change;
- there is no theory of change, so that change is rushed and poorly understood; and/or
- there are no established routines to measure, assess and communicate progress so that change gets overtaken by other events.

4.4. Large-scale transformational change in European health systems: experience and insight from ministers and policy-makers

Ministers of health and senior policy-makers in the European Region who have successfully led large-scale transformational change in health systems have identified the importance of developing a *receptive context* for large-scale transformation (174,175). This entails understanding and, where possible, managing the *external* context of transformation, including: threats and opportunities brought about by environmental pressures, changes in the broader economy, politics, sociocultural expectations, technology, and critical events and crises. It also entails understanding and managing the *internal* context of transformation, namely: the quality and coherence of policy, the key people leading change, the organizational culture and managerial–clinical relations (176) (see Box 12).

Box 12. Foundational conditions for large-scale transformation in health systems

To effectively foster a receptive context for change for large-scale transformation in health systems, ministers of health and policy-makers have pointed to the following eight foundational conditions:

- 1. strategic alignment with a clear vision;
- 2. a systemic approach to change;
- 3. acknowledgement of the connections between the *whys*, *whats* and *hows* of change;
- 4. engagement with professional cultures;
- 5. enabling environments with an inspiring and embracing narrative of change;
- 6. support for new leadership approaches based on distributed and adaptive leadership;
- 7. increased patient and public engagement; and
- 8. support for the development and implementation of evidence-informed policy (174, 175).

A number of consistent themes have emerged from ministers' and policy-makers' shared experience of leading transformational change. These themes underscore the importance of:

- setting out a long-term vision;
- adopting a systems perspective of transformation;
- developing a narrative to communicate the transformation;
- invoking adaptive change by creating receptive contexts for change;
- using evidence-based health policies and management;
- effectively engaging a critical mass of stakeholders especially patients and the public;
- conducting a political mapping exercise;
- balancing top-down and bottom-up implementation approaches;
- choosing among "big bang", "punctuated equilibrium" and "incremental change" approaches to transformation;

- recognizing that scaling-up is an unsolved issue in large-scale transformation;
- establishing ongoing evaluation to communicate and disseminate results, especially the early wins; and
- putting in place strong project management and using ICT (174,175).



5. Conclusions

Now more than ever, there is a need to transform PHC to meet growing health and social challenges and to reduce widening inequalities in the European Region by upholding the principles of the Declaration of Alma-Ata.

Forty years after its conception, the Declaration remains an enlightened and forward-thinking vision for countries that can help illuminate the path to achieving health for all. WHO's reinvigorated emphasis on PHC and commitment to the SDGs that target the achievement of UHC offer a unique opportunity to realize this vision.

Notwithstanding challenges, experience in the European Region demonstrates the feasibility of transformative innovations to create comprehensive, integrated, people-centred PHC that incorporates public health and forms the core of health systems.

Through investment, innovation and inclusion, countries can transform PHC to build responsive and resilient health systems that are fit for the 21st century – health systems that deliver equitable health and financial protection, drive economic growth, and generate wealth for sustainable development while leaving no one behind.



6. References

- 1. Constitution of the World Health Organization. New York: United Nations; 1946 (http://apps.who.int/gb/bd/PDF/bd47/EN/constitution–en.pdf?ua=1, accessed 4 September 2018).
- World Health Assembly resolution WHA 58.33. Sustainable health financing, universal health coverage and universal health insurance. Geneva: World Health Organization; 2005. http://apps.who.int/medicinedocs/documents/s21475en/s21475en.pdf, accessed 4 September 2018)
- 3. Declaration of Alma-Ata. International Conference on Primary Health Care: Alma-Ata, USSR, 6–12 September 1978. Geneva: World Health Organization; 1978 (http://www.who.int/publications/almaata_declaration_en.pdf, accessed 4 September 2018).
- 4. Global strategy for health for all by the year 2000. Geneva: World Health Organization: 1981 (http://iris.wpro.who.int/bitstream/handle/10665.1/6967/WPR_RC032_ GlobalStrategy_1981_en.pdf, accessed 4 September 2018).
- 5. Chan M. Return to Alma-Ata. Lancet. 2008;372(9642):865–6. doi: 10.1016/ S0140-6736(08)61372-0.

- 6. Commission on Social Determinants of Health, World Health Organization. Closing the gap in a generation: health equity through action on the social determinants of health. Final report of the Commission on Social Determinants of Health. Geneva. (http://apps. who.int/iris/bitstream/handle/10665/43943/9789241563703_eng.pdf, accessed 4 September 2018)
- 7. The world health report. Primary health care (now more than ever). Geneva: World Health Organization; 2008 (http://www.who.int/whr/2008/en/, accessed 4 September 2018).
- 8. The world health report. Health systems financing: the path to universal coverage. Geneva: World Health Organization; 2010 (http://apps.who.int/iris/bitstream/handle/10665/44371/9789241564021_eng. pdf?sequence=1, accessed 4 September 2018).
- 9. World Health Assembly resolution WHA64.9. Sustainable health financing structures and universal coverage. Geneva. (http://apps.who.int/iris/handle/10665/3564, accessed 4 September 2018).
- 10. United Nations General Assembly resolution A/RES/67/81. Global health and foreign policy. New York: United Nations, 2012. http://www.un.org/en/ga/search/view_doc.asp?symbol=A/RES/67/81, accessed 4 September 2018).
- 11. 2008–2013 action plan for the global strategy for the prevention and control of noncommunicable diseases. Geneva: World Health Organization, 2013. http://apps.who.int/iris/bitstream/handle/10665/44009/9789241597418_eng.pdf, accessed 4 September 2018).
- 12. World Health Assembly resolution WHA62.12. Primary health care, including health systems strengthening. Geneva: World Health Organization; 2009 (http://apps.who.int/medicinedocs/documents/s17694en/s17694en.pdf, accessed 4 September 2018).
- 13. World Health Assembly resolution WHA69.39. Strengthening integrated, people-centred health services. Report by the Secretariat. Geneva: World Health Organization; 2016 (http://apps.who.int/gb/ebwha/pdf_files/WHA69/A69_39–en.pdf, accessed 4 September 2018).
- 14. Draft thirteenth general programme of work, 2019–2023. Report by the Director-General. Geneva: World Health Organization; 2018 http://apps.who.int/gb/ebwha/pdf_files/WHA71/A71_4-en.pdf?ua=1, accessed 4 September 2018).
- 15. United Nations General Assembly resolution A/RES/70/1. Transforming our world; the 2030 Agenda for Sustainable Development. New York: United Nations; 2015 (http://www.un.org/en/development/desa/population/migration/generalassembly/docs/globalcompact/A_RES_70_1_E.pdf, accessed 4 September 2018).
- 16. Sustainable Development Goals [website]. New York: United Nations; 2015 (https://sustainabledevelopment.un.org/sdgs, accessed 4 September 2018).
- 17. Everybody's business. Strengthening health systems to improve health outcomes. WHO's framework for action. Geneva: World Health Organization; 2007 (http://www.who.int/healthsystems/strategy/everybodys_business.pdf, accessed 4 September 2018).

- 18. What are the advantages and disadvantages of restructuring a health care system to be more focused on primary care services? Copenhagen: WHO Regional Office for Europe; 2004 (http://www.euro.who.int/__data/assets/pdf_file/0004/74704/E82997.pdf, accessed 4 September 2018).
- 19. Starfield B, Shi L, Macinko J. Contribution of primary care to health systems and health. Milbank Q. 2005;83(3):457–502. doi: 10.1111/j.1468–0009.2005.00409.x.
- 20. Kringos DS, Boerma W, van der Zee J, Groenewegen P. Europe's strong primary care systems are linked to better population health but also to higher health spending. Health Aff (Millwood). 2013;32(4):686–94. doi: 10.1377/hlthaff.2012.1242.
- 21. The Tallinn charter: health systems for health and wealth. Copenhagen: WHO Regional Office for Europe; 2008 (http://www.euro.who.int/__data/assets/pdf_file/0008/88613/E91438.pdf, accessed 4 September 2018).
- 22. Christensen K, Doblhammer G, Rau R, Vaupel JW. Ageing populations: the challenges ahead. Lancet. 2009;374(9696):1196–208. doi: 10.1016/S0140–6736(09)61460–4.
- 23. Atun R. Transitioning health systems for multimorbidity. Lancet. 2015;386(9995):721–2. doi: 10.1016/S0140–6736(14)62254–6.
- 24. Organisation for Economic Co-operation and Development (OECD) Centre for Opportunity and Equality. Understanding the socio-economic divide in Europe. Paris: OECD; 2017 (https://www.oecd.org/els/soc/cope-divide-europe-2017-background-report. pdf, accessed 4 September 2018).
- 25. Howitt P, Darzi A, Guang-Zhong Y, Ashrafian H, Atun R, Barlow J et al. Technologies for global health. Lancet. 2012;380(9840):507–35. doi: 10.1016/S0140–6736(12)61127–1.
- 26. Health21. The health for all policy framework for the WHO European Region. Copenhagen: WHO Regional Office for Europe; 1999 (http://www.euro.who.int/__data/assets/pdf_file/0010/98398/wa540ga199heeng.pdf, accessed 4 September 2018).
- 27. Health 2020. A European policy framework and strategy for the 21st century. Copenhagen: WHO Regional Office for Europe; 2013 (http://www.euro.who.int/__data/assets/pdf_file/0011/199532/Health2020–Long.pdf?ua=1, accessed 4 September 2018).
- 28. The European framework for action on integrated health services delivery: an overview. Copenhagen: WHO Regional Office for Europe; 2016 (http://www.euro.who.int/_data/assets/pdf_file/0010/317377/FFA-IHS-service-delivery-overview.pdf, accessed 20 September 2018).
- 29. The Ljubljana charter on reforming health care in Europe. Copenhagen: WHO Regional Office for Europe; 1996 (http://www.euro.who.int/__data/assets/pdf_file/0010/113302/E55363.pdf?ua=1, accessed 4 September 2018).
- 30. WHO Regional Committee for Europe resolution EUR/RC55/R8. Strengthening European health systems as a continuation of the WHO Regional Office for Europe's country strategy "Matching services to new needs". Copenhagen: WHO Regional Office for Europe; 2005 (http://www.euro.who.int/__data/assets/pdf_file/0010/88093/RC55_eres08. pdf?ua=1, accessed 4 September 2018).

- 31. WHO Regional Committee for Europe resolution EUR/RC57/R1. Health workforce policies in the European Region. Copenhagen: WHO Regional Office for Europe; 2007 (http://www.euro.who.int/__data/assets/pdf_file/0009/74556/RC57_eres01.pdf?ua=1, accessed 4 September 2018).
- 32. WHO Regional Committee for Europe resolution EUR/RC59/R4. Health workforce policies in the WHO European Region. Copenhagen: WHO Regional Office for Europe; 2009 (http://www.euro.who.int/__data/assets/pdf_file/0010/68950/RC59_eres04.pdf?ua=1, accessed 4 September 2018).
- 33. WHO Regional Committee for Europe resolution EUR/RC59/R3. Health in times of global economic crisis: implications for the WHO European Region. Copenhagen: WHO Regional Office for Europe; 2009 http://www.euro.who.int/__data/assets/pdf_file/0005/68945/ RC59 eres03.pdf?ua=1, accessed 4 September 2018).
- 34. WHO Regional Committee for Europe resolution EUR/RC63/R5. Health systems in times of global economic crisis: an update of the situation in the WHO European Region. Copenhagen: WHO Regional Office for Europe; 2013 (http://www.euro.who.int/__data/assets/pdf_file/0005/217733/63rs05e_HealthSystems.pdf, accessed 4 September 2018).
- 35. WHO Regional Committee for Europe resolution EUR/RC60/R5. Addressing key public health and health policy challenges in Europe: moving forwards in the quest for better health in the WHO European Region. Copenhagen: WHO Regional Office for Europe; 2011 (http://www.euro.who.int/__data/assets/pdf_file/0018/122229/RC60_eRes5.pdf?ua=1, accessed 4 September 2018).
- 36. WHO Regional Committee for Europe resolution EUR/RC61/R2. Strengthening public health capacities and services in Europe: a framework for action. Copenhagen: WHO Regional Office for Europe; 2011 (http://www.euro.who.int/__data/assets/pdf_file/0017/150623/RC61 Res 02.pdf?ua=, accessed 4 September 2018).
- 37. WHO Regional Committee for Europe resolution EUR/RC61/R3. Action plan for implementation of the European strategy for the prevention and control of noncommunicable diseases 2012–2016. Copenhagen: WHO Regional Office for Europe; 2011 (http://www.euro.who.int/__data/assets/pdf_file/0017/150614/RC61_Res_03.pdf?ua=, accessed 4 September 2018).
- 38. WHO Regional Committee for Europe resolution EUR/RC62/R5. European action plan for strengthening public health capacities and services. Copenhagen: WHO Regional Office for Europe; 2012 (http://www.euro.who.int/__data/assets/pdf_file/0006/173616/RC62rs05–EAP–ENG.pdf?ua=1, accessed 4 September 2018).
- 39. WHO Regional Committee for Europe resolution EUR/RC61/R1. The new European policy for health Health 2020: vision, values, main directions and approaches. Copenhagen: WHO Regional Office for Europe; 2011 (http://www.euro.who.int/__data/assets/pdf_file/0004/150619/RC61_Res_01.pdf?ua, accessed 4 September 2018).
- 40. WHO Regional Committee for Europe resolution EUR/RC65/13. Priorities for health systems strengthening in the WHO European Region 2015–2020: walking the talk on people centredness. Copenhagen: WHO Regional Office for Europe; 2015 (http://www.euro.who.int/__data/assets/pdf_file/0007/288376/65rs05e_HSS_150750.pdf, accessed 4 September 2018).

- 41. WHO Regional Committee for Europe resolution EUR/RC66/15. Strengthening people-centred health systems in the WHO European Region: framework for action on integrated health services delivery. Copenhagen: WHO Regional Office for Europe; 2015. (http://www.euro.who.int/__data/assets/pdf_file/0016/319111/66rs05e_IHSD_160764. pdf, accessed 4 September 2018).
- 42. Integration of health care delivery. Report of a WHO study group. Geneva: World Health Organization; 1996 (http://apps.who.int/iris/handle/10665/38408, accessed 4 September 2018).
- 43. Integrated health services what and why? Technical Brief No. 1, 2008. Geneva: World Health Organization; 2008 (http://www.who.int/healthsystems/service_delivery_techbrief1.pdf, accessed 4 September 2018).
- 44. Atun R, de Jongh TE, Secci FV, Ohiri K, Adeyi O, Car J. Integration of priority population, health and nutrition interventions into health systems: systematic review. BMC Public Health. 2011;11:780. doi: 10.1186/1471–2458–11–780.
- 45. Atun R, de Jongh T, Secci F, Ohiri K, Adeyi O. Integration of targeted health interventions into health systems: a conceptual framework for analysis. Health Policy Plan. 2010;25:104–11. doi: 10.1093/heapol/czp055.
- 46. High-level meeting on prevention and control of non-communicable diseases [website]. New York: United Nations; 2018 (http://www.un.org/en/ga/ncdmeeting2011/documents. shtml, accessed 4 September 2018).
- 47. High-level meeting on the comprehensive review and assessment of the progress achieved in the prevention and control of non-communicable diseases [website]. New York: United Nations; 2018 (https://www.un.org/en/ga/president/68/events/hlm_ncd. shtml, accessed 4 September 2018).
- 48. Action plan for the prevention and control of noncommunicable diseases in the WHO European Region. Copenhagen: WHO Regional Office for Europe; 2016 (http://www.euro.who.int/__data/assets/pdf_file/0008/346328/NCD-ActionPlan-GB.pdf?ua=1, accessed 4 September 2018).
- 49. WHO Regional Committee for Europe resolution EUR/RC66/R4. Towards a roadmap to implement the 2030 Agenda for Sustainable Development in the WHO European Region. Copenhagen: WHO Regional Office for Europe; 2016 (http://www.euro.who.int/_data/assets/pdf_file/0010/319096/66rs04e_SDGs_160763.pdf, accessed 4 September 2018).
- 50. WHO Regional Committee for Europe resolution EUR/RC67/9. Roadmap to implement the 2030 Agenda for Sustainable Development, building on Health 2020, the European policy for health and well-being. Copenhagen: WHO Regional Office for Europe; 2017 (http://www.euro.who.int/_data/assets/pdf_file/0008/345599/67wd09e_SDGroadmap_170638.pdf?ua=1, accessed 4 September 2018).
- 51. Health systems for prosperity and solidarity: leaving no one behind. High-level meeting: Tallinn, Estonia, 13–14 June 2018. Outcome statement. Copenhagen: WHO Regional Office for Europe; 2018 (http://www.euro.who.int/__data/assets/pdf_file/0008/373688/tallinn-outcome-statement-eng.pdf, accessed 4 September 2018).

- 52. Rogers EM. Diffusion of innovations. Fourth edition. New York: The Free Press; 2010.
- 53. Utterback JM, Abernathy WJ. A dynamic model of process and product innovation. Omega. 1975;3(6):639–56. doi: 10.1016/0305–0483(75)90068–7.
- 54. Damanpour F. Organizational innovation: a meta-analysis of effects of determinants and moderators. Academy of Management Journal. 1991;34(3):555–90. doi: 10.5465/256406.
- 55. Dewar RD, Dutton JE. The adoption of radical and incremental innovations: an empirical analysis. Management Science. 1986;32(11):1422–33. doi: 10.1287/mnsc.32.11.1422.
- 56. Ettlie JE. Organization strategy and structural differences for radical versus incremental innovation. Management Science. 1984;30(6):682–95. doi: 10.1287/mnsc.30.6.682.
- 57. Christensen C. The innovator's dilemma. Boston: Harvard Business School Press; 1997.
- 58. Ferlie E, Fitzgerald L, Wood M, Hawkins C. The nonspread of innovations: the mediating role of professionals. Academy of Management Journal. 2005;48(1):117. doi: 10.5465/amj.2005.15993150.
- 59. Stoneman P. Soft innovation. Economics, design, and the creative industries. Oxford: Oxford University Press; 2010.
- 60. Olejaz M, Juul Nielsen A, Rudkjøbing A, Okkels Birk H, Krasnik A, Hernández-Quevedo C. Denmark: health system review. Health Syst Transit. 2012;14(2):1–192.
- 61. Vuorenkoski L, Mladovsky P, Mossialos E. Finland: health system review. Health Syst Transit. 2008;10(4):1–168.
- 62. Kokko S. Integrated primary health care: Finnish solutions and experiences. Int J Integr Care. 2009;9:e86.
- 63. Johnson JR. Health systems in transition: Norway. Copenhagen: WHO Regional Office for Europe on behalf of the European Observatory on Health Systems and Policies; 2006 (http://www.euro.who.int/__data/assets/pdf_file/0005/95144/E88821.pdf, accessed 4 September 2018).
- 64. Anell A, Glenngard AH, Merkur S. Sweden: health system review. Health Syst Transit. 2012;14(5):1–159.
- 65. Johansson L. Decentralisation from acute to home care settings in Sweden. Health Policy. 1997;41(Suppl.):S131–43.
- 66. Saltman R, Bankauskaite V, Vrangbaek K (editors). Decentralization in health care. European Observatory on Health Systems and Policies Series. Copenhagen: WHO Regional Office for Europe; 2007 (http://www.euro.who.int/__data/assets/pdf_file/0004/98275/E89891.pdf, accessed 4 September 2018).
- 67. Ahgren B, Axelsson R. A decade of integration and collaboration: the development of integrated health care in Sweden 2000–2010. Int J Integr Care. 2011;11(Spec Ed):e007.

- 68. Lehtinen V, Taipale V. Integrating mental health services: the Finnish experience. Int J Integr Care. 2001;1:e26.
- 69. Martin-Moreno JM, Alonso P, Claveria A, Gorgojo L, Peiró S. Spain: a decentralised health system in constant flux. BMJ. 2009;21(50):338. doi: 10.1136/bmj.b1170.
- 70. Lopez-Casasanovas G. Organizational innovations and health care decentralization: a perspective from Spain. Health Econ Policy Law. 2007;2(Pt 2):223–32. doi: 10.1017/S1744133107004070.
- 71. Costa-Font J, Gil J. Exploring the pathways of inequality in health, health care access and financing in decentralized Spain. Journal of European Social Policy. 2009;19(5):446–58. doi: 10.1177/0958928709344289.
- 72. Costa-Font J, Pons-Novell J. Public health expenditure and spatial interactions in a decentralized national health system. Health Econ. 2007;16(3):291–306. doi: 10.1002/hec.1154.
- 73. Cantarero D, Pascual M. Analysing the impact of fiscal decentralization on health outcomes: empirical evidence from Spain. Applied Economics Letters. 2008;15(2):109–11. doi: 10.1080/13504850600770913.
- 74. Based on correspondence with European Member States leading up to the occasion of the 40th anniversary of the Declaration of Alma-Ata. Copenhagen: WHO Regional Office for Europe; 2018.
- 75. Atun RA, Menabde N, Saluvere K, Jesse M, Habicht J. Introducing a complex health innovation primary health care reforms in Estonia (multimethods evaluation). Health Policy. 2006;79(1):79–91. doi: 10.1016/j.healthpol.2005.12.005.
- 76. Albreht T, Klazinga N. Privatisation of health care in Slovenia in the period 1992–2008. Health Policy. 2009;90(2–3):262–9. doi: 10.1016/j.healthpol.2008.10.007.
- 77. Hebrang A, Henigsberg N, Erdeljic V, Foro S, Vidjak V, Grga A et al. Privatization in the health care system of Croatia: effects on general practice accessibility. Health Policy Plan. 2003;18(4):421–8.
- 78. Mitenbergs U, Taube M, Misins J, Mikitis E, Martinsons A, Rurane A et al. Latvia: health system review. Health Syst Transit. 2012;14(8):1–191.
- 79. Richardson E. Armenia: health system review. Health Syst Transit. 2013:15(4):1–99.
- 80. Pedersen KM, Andersen JS, Snodergaard J. General practice and primary health care in Denmark. J Am Board Fam Med. 2012;25(Suppl. 1):S34–8. doi: 10.3122/jabfm.2012.02.110216.
- 81. Wadmann S, Strandberg-Larsen M, Vrangbaek K. Coordination between primary and secondary healthcare in Denmark and Sweden. Int J Integr Care. 2009;9:e04.

- 82. OECD Health Division. OECD reviews of health care quality: Denmark. Executive summary, assessment and recommendations. Paris: OECD; 2013 (https://www.oecd.org/els/health-systems/ReviewofHealthCareQualityDENMARK_ExecutiveSummary.pdf, accessed 4 September 2018).
- 83. Ministry of Health and Social Protection of Population of the Republic of Tajikistan, WHO Regional Office for Europe. Review of the National Programme on the Development of Family Medicine 2011–2015 in Tajikistan. Copenhagen: WHO Regional Office for Europe; 2016 (http://www.euro.who.int/__data/assets/pdf_file/0018/314433/Review-of-the-National-Programme-on-the-Development-of-Family-Medicine-2011-2015-in-the-Republic-of-Tajikistan-rev1.pdf, accessed 20 September 2018).
- 84. Albreht T, Turk E, Toth M, Ceglar J, Marn S, Pribakovic Brinovec R et al. Slovenia: health system review. Health Syst Transit. 2009;11(3):1–168.
- 85. Anell A. Choice and privatisation in Swedish primary care. Health Econ Policy Law. 2011;6(4):549–69. doi: 10.1017/S1744133110000216.
- 86. International profiles of health care systems, 2010. New York: The Commonwealth Fund; 2010 (https://www.commonwealthfund.org/sites/default/files/documents/___media_files_publications_fund_report_2010_jun_1417_squires_intl_profiles_622.pdf, accessed 4 September 2018).
- 87. Ollila E, Stahl T, Wismar M, Lahtinen E, Melkas T, Leppo K. Health in all policies in the European Union and its Member States. Brussels: European Commission; 2006 (http://ec.europa.eu/health/ph_projects/2005/action1/docs/2005_1_18_frep_a4_en.pdf, accessed 4 September 2018).
- 88. WHO Framework Convention on Tobacco Control. Geneva: World Health Organization; 2005. http://whqlibdoc.who.int/publications/2003/9241591013.pdf, accessed 4 September 2018).
- 89. Government resolution on the Health 2015 public health programme. Helsinki: Ministry of Social Affairs and Health of Finland; 2001 (http://pre20031103.stm.fi/english/eho/publicat/health2015/health2015.pdf, accessed 4 September 2018).
- 90. Puska P, Stahl T. Health in all policies the Finnish initiative: background, principles, and current issues. Annu Rev Public Health. 2010;31:315–28. doi: 10.1146/annurev. publhealth.012809.103658.
- 91. Noncommunicable diseases prevention and control in the South-eastern Europe Health Network. An analysis of intersectoral collaboration. Copenhagen: WHO Regional Office for Europe; 2012 (http://www.euro.who.int/__data/assets/pdf_file/0009/164457/e96502.pdf?ua=1, accessed 4 September 2018).
- 92. Meeting report of the Third High-level Meeting of Small Countries. Health and sustainable development: the inherent advantages of small countries. Copenhagen: WHO Regional Office for Europe; 2016 (http://www.euro.who.int/__data/assets/pdf_file/0020/334271/ Meeting-report-of-the-Third-High-level-Meeting-of-Small-Countries-Monaco.pdf?ua=1, accessed 20 September 2018).

- 93. Small country case stories on intersectoral action for health. Copenhagen: WHO Regional Office for Europe; 2016 (http://www.euro.who.int/__data/assets/pdf_file/0010/325990/ ISA-Compendium-case-studies.pdf?ua=1, accessed 20 September 2018).
- 94. Dombois OT, Kahlmeier S, Martin-Diener E, Martin B, Racioppi F, Braun-Fahrlander C. Collaboration between the health and transport sectors in promoting physical activity: examples from European countries. Copenhagen: WHO Regional Office for Europe; 2006 (http://www.euro.who.int/__data/assets/pdf_file/0010/87499/E90144.pdf, accessed 4 September 2018).
- 95. Transport, Health and Environment Pan-European Programme [website]. Geneva: United Nations Economic Commission for Europe; 2013 (https://thepep.unece.org, accessed 4 September 2018).
- 96. HEPA Europe (European network for the promotion of health-enhancing physical activity) [website]. Copenhagen: WHO Regional Office for Europe; 2013 (http://www.euro.who.int/en/health-topics/disease-prevention/physical-activity/activities/hepa-europe, accessed 4 September 2018).
- 97. Thomson S, Foubister T, Mossialos E. Financing health care in the European Union: challenges and policy responses. Copenhagen: WHO Regional Office for Europe on behalf of the European Observatory on Health Systems and Policies; 2009 (http://www.euro.who.int/_data/assets/pdf_file/0009/98307/E92469.pdf, accessed 4 September 2018).
- 98. Kringos DS, Boerma WG, Hutchinson A, van der Zee J, Groenewegen PP. The breadth of primary care: a systematic literature review of its core dimensions. BMC Health Serv Res. 2010;10:65. doi: 10.1186/1472-6963-10-65.
- 99. Charlesworth A, Davis A, Dixon J. Reforming payment for health care in Europe to achieve better value. London: Nuffield Trust; 2012 (https://pdfs.semanticscholar.org/df55/b6426541793565195b58ebc1585235e87718.pdf, accessed 4 September 2018).
- 100. Christiansen T. The Danish Health Care Quality Programme. Berlin: Health Policy Monitor; 2009 (https://pdfs.semanticscholar.org/8f9e/e8fcf81aca2072248a64d5a77b9aeeecae0a. pdf, accessed 4 September 2018).
- 101. Campbell SM, Reeves D, Kontopantelis E, Sibbald B, Roland M. Effects of pay for performance on the quality of primary care in England. N Engl J Med. 2009;361(4):368–78. doi: 10.1056/NEJMsa0807651.
- 102. Roland M, Guthrie B. Quality and Outcomes Framework: what have we learnt? BMJ. 2016;354:i4060. doi: 10.1136/bmj.i4060.
- 103. International profiles of health care systems, 2011. New York: The Commonwealth Fund; 2011 (https://www.commonwealthfund.org/sites/default/files/documents/___media_files_publications_fund_report_2011_nov_1562_squires_intl_profiles_2011_11_10.pdf, accessed 4 September 2018).
- 104. Gaál P, Szigeti S, Csere M, Gaskins M, Panteli D. Hungary: health system review. Health Syst Transit. 2011;13(5):1–266.

- 105. Busse R, Blümel M, Scheller-Kreinsen D, Zentner A. Tackling chronic disease in Europe. Copenhagen: WHO Regional Office for Europe on behalf of the European Observatory on Health Systems and Policies; 2010 (http://www.euro.who.int/__data/assets/pdf_file/0008/96632/E93736.pdf, accessed 20 September 2018).
- 106. OECD Health Policy Studies. Better ways to pay for health care. Paris: OECD; 2016 (https://read.oecd-ilibrary.org/social-issues-migration-health/better-ways-to-pay-for-health-care_9789264258211-en#page1 accessed 4 September 2018).
- 107. Struijs JN, Baan CA. Integrating care through bundled payments lessons from the Netherlands. N Engl J Med. 2011;364(11):990–1. doi: 10.1056/NEJMp1011849.
- 108. de Bakker DH, Struijs JN, Baan CB, Raams J, de Wildt JE, Vrijhoef HJ et al. Early results from adoption of bundled payment for diabetes care in the Netherlands show improvement in care coordination. Health Aff (Millwood). 2012;31(2):426–33. doi: 10.1377/hlthaff.2011.0912.
- 109. Struijs JN, de Jong-van Til JT, Lemmens LC, Drewes HW, de Bruin SR, Baan CA. Three years of bundled payment for diabetes care in the Netherlands. Impact on health care delivery process and the quality of care. Bilthoven: Dutch National Institute for Public Health and the Environment (RIVM); 2012 (https://www.rivm.nl/bibliotheek/rapporten/260013002.pdf, accessed 4 September 2018).
- 110. Impulseo I: funding for the installation of GPs. Brussels: Institut national d'assurance maladie-invalidité (INAMI); 2010.
- 111. Atun R, Aydin S, Chakraborty S, Sumer S, Aran M, Gurol I et al. Universal health coverage in Turkey: enhancement of equity. Lancet. 2013;382(9886):65–99. doi: 10.1016/S0140-6736(13)61051-X.
- 112. Ozegowski S, Sundmacher L. Ensuring access to health care Germany reforms supply structures to tackle inequalities. Health Policy. 2012;106:105–9. doi: 10.1016/j. healthpol.2012.04.002.
- 113. Chevreul K, Berg Brigham K, Durand-Zaleski I, Hernández-Quevedo C. France: health system review. Health Syst Transit. 2015;17(3):1–218.
- 114. Targeted enhanced recruitment scheme [website]. London: National Health Service (NHS) England; 2018 (https://www.england.nhs.uk/gp/gpfv/workforce/building-the-general-practice-workforce/recruitment/, accessed 4 September 2018).
- 115. Attracting and retaining health workers in the Member States of the South-eastern Europe Health Network. Copenhagen: WHO Regional Office for Europe; 2011 (http://www.euro.who.int/__data/assets/pdf_file/0013/152203/e95774.pdf, accessed 4 September 2018).
- 116. WHO Regional Committee for Europe resolution EUR/RC67/10. Towards a sustainable health workforce in the WHO European Region: framework for action. Copenhagen: WHO Regional Office for Europe, 2016 (http://www.euro.who.int/__data/assets/pdf_file/0011/343946/67wd10e_HRH_Framework_170677.pdf?ua=1, accessed 4 September 2018).

- 117. Kringos DS, Boerma WGW, Hutchinson A, Saltman RB (editors). Building primary care in a changing Europe. Copenhagen: WHO Regional Office for Europe on behalf of the European Observatory on Health Systems and Policies; 2015 (http://www.euro.who.int/__data/assets/pdf_file/0018/271170/BuildingPrimaryCareChangingEurope.pdf, accessed 4 September 2018).
- 118. Delamaire M, Lafortune G. Nurses in advanced roles: a description and evaluation of experiences in 12 developed countries. OECD Health Working Papers, No. 54. Paris: OECD; 2010 (https://www.oecd-ilibrary.org/docserver/5kmbrcfms5g7-en.pdf, accessed 4 September 2018).
- 119. Oleszczyk M, Svab I, Seifert B, Krzton-Krolewiecka A, Windak A. Family medicine in post-communist Europe needs a boost. Exploring the position of family medicine in healthcare systems of central and eastern Europe and Russia. BMC Fam Pract. 2012;13:15. doi: 10.1186/1471-2296-13-15.
- 120. Rechel B, McKee M. Health reform in central and eastern Europe and the former Soviet Union. Lancet. 2009;374(9696):1186–95. doi: 10.1016/S0140-6736(09)61334-9.
- 121. Krzton-Krolewiecka A, Svab I, Oleszczyk M, Seifert B, Smithson WH, Windak A. The development of academic family medicine in central and eastern Europe since 1990. BMC Fam Pract. 2013;14:37. doi: 10.1186/1471-2296-14-37.
- 122. European Union of General Practitioners/Family Physicians (UEMO). UEMO response on the European workforce for health. Lisbon: Portuguese Medical Association; 2009 (http://ec.europa.eu/health/ph_systems/docs/uemo_en.pdf, accessed 4 September 2018).
- 123. Busher A, Sivertsen B, White J. Nurses and midwives: a force for health. Survey on the situation of nursing and midwifery in Member States of the European Region of the World Health Organization. Copenhagen: WHO Regional Office for Europe; 2009 (http://www.euro.who.int/__data/assets/pdf_file/0019/114157/E93980.pdf, accessed 4 September 2018).
- 124. Moving care to the community. An international perspective. London: Royal College of Nursing; 2013 (https://www.rcn.org.uk/about-us/policy-briefings/pol-1213, accessed 4 September 2018).
- 125. Buchan J, Aiken L. Solving nursing shortages: a common priority. J Clin Nurs. 2008;17(24):3262–8. doi: 10.1111/j.1365-2702.2008.02636.x.
- 126. Lessons from transforming health services delivery: compendium of initiatives in the WHO European Region. Copenhagen: WHO Regional Office for Europe; 2016 (http://www.euro.who.int/__data/assets/pdf_file/0014/303026/Compendium-of-initiatives-in-the-WHO-European-Region-rev1.pdf, accessed 20 September 2018).
- 127. Groenewegen PP. Update on nurse practitioners. Berlin: Health Policy Monitor; 2008.
- 128. Debout C, Chevallier-Darchen F, Petit dit Dariel O, Rothan-Tondeur M. Undergraduate nursing education reform in France: from vocational to academic programmes. Int Nurs Rev. 2012;59(4):519–24. doi: 10.1111/j.1466-7657.2012.01016.x.

- 129. World Health Assembly resolution WHA66.24. eHealth standardization and interoperability. Geneva: World Health Organization; 2013 (http://www.who.int/ehealth/events/wha66_r24-en.pdf, accessed 4 September 2018).
- 130. From innovation to implementation: eHealth in the WHO European Region. Copenhagen: WHO Regional Office for Europe; 2016 (http://www.euro.who.int/__data/assets/pdf_file/0012/302331/From-Innovation-to-Implementation-eHealth-Report-EU.pdf?ua=1, accessed 4 September 2018).
- 131. Dobrev A, Meyer I, Müller S, Kubitschke L, Hammerschmidt R, Korte WB et al. Coping with an ageing population learning from good eHealth and telecare practices. The eCare Benchmarking Study. Final study report. Luxembourg: Publications Office of the European Union; 2013 (http://www.healthyageing.eu/sites/www.healthyageing.eu/files/resources/The%20eCareBenchmarkingstudy-Finalreport.pdf, accessed 4 September 2018).
- 132. Benchmarking deployment of eHealth among general practitioners. Final report. Luxembourg: Publications Office of the European Union; 2013 (https://ec.europa.eu/digital-single-market/en/news/benchmarking-deployment-ehealth-among-general-practitioners-2013-smart-20110033, accessed 4 September 2018).
- 133. Carretero S. Technology-enabled services for older people living at home independently: lessons for public long-term care authorities in the EU Member States. Luxembourg: Publications Office of the European Union; 2015 (http://publications.jrc.ec.europa.eu/repository/bitstream/JRC96022/lfna27256enn.pdf, accessed 4 September 2018).
- 134. Protti D, Johansen I. Widespread adoption of information technology in primary care physician offices in Denmark: a case study. Issue Brief (Commonw Fund). 2010;80:1–14.
- 135. Telemedicine a key to health services of the future. National Action Plan for Dissemination of Telemedicine in brief. Copenhagen: Danish Government; 2012 (https://en.digst.dk/media/14145/telemedicine_uk_pdfa_03_11_12.pdf, accessed 4 September 2018).
- 136. Melchiorre MG, Papa R, Mieke Rijken M, van Ginneken E, Hujala A, Barbabella F. eHealth in integrated care programs for people with multimorbidity in Europe: insights from the ICARE4EU project. Health Policy. 2018;122:53–63. doi: 10.1016/j.healthpol.2017.08.006.
- 137. Hamilton C. Good practice brief. Telemedicine in Kazakhstan: bridging the urban–rural divide in delivering prevention, diagnosis and treatment of noncommunicable diseases. Copenhagen: WHO Regional Office for Europe; 2018 (http://www.euro.who.int/__data/assets/pdf_file/0010/367273/gpb-hss-ncds-kaz-eng.pdf, accessed 20 September 2018).
- 138. Popovich L, Potapchik E, Shishkin A, Richardson E, Vacroux A, Mathivet B. Russian Federation: health system review. Health Syst Transit. 2011;13(7):1–190.
- 139. Adany R, Kosa K, Sandor 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(4):529–30. doi: 10.1093/eurpub/ckt095.

- 140. Kosa K, Sandor J, Dobos E, Papp M, Furjes G, Adany R. Human resources development for the operation of general practitioners' cluster. Eur J Public Health. 2013;23(4):532–3. doi: 10.1093/eurpub/ckt097.
- 141. Milevska Kostova N, Chichevalieva S, Ponce NA, van Ginneken E, Winkelmann J. The former Yugoslav Republic of Macedonia: health system review. Health Syst Transit. 2017;19(3):1–160.
- 142. van Weel C, Schers H, Timmermans A. Health care in the Netherlands. J Am Board Fam Med. 2012;25(SUPPL. 1):S12–7. doi: 10.3122/jabfm.2012.02.110212.
- 143. van Uden CJ, Giesen PH, Metsemakers JF, Grol RP. Development of out-of-hours primary care by general practitioners (GPs) in The Netherlands: from small-call rotations to large-scale GP cooperatives. Fam Med. 2006;38(8):565–9.
- 144. European primary care. Publication No. 2004/20E. The Hague: Health Council of the Netherlands; 2004 (https://www.gezondheidsraad.nl/sites/default/files/european_primary_care_final.pdf, accessed 4 September 2018).
- 145. Schafer W, Kroneman M, Boerma W, van den Berg M, Westert G, Deville W et al. The Netherlands: health system review. Health Syst Transit. 2010;12(1):i1–228.
- 146. Jansen AG, Sanders EA, Nichol KL, van Loon AM, Hoes AW, Hak E. Decline in influenza-associated mortality among Dutch elderly following the introduction of a nationwide vaccination program. Vaccine. 2008;26(44):5567–74. doi: 10.1016/j. vaccine.2008.08.003.
- 147. El Fakiri F, Hoes AW, Uitewaal PJ, Frenken RA, Bruijnzeels MA. Process evaluation of an intensified preventive intervention to reduce cardiovascular risk in general practices in deprived neighbourhoods. Eur J Cardiovasc Nurs. 2008;7(4):296–302. doi: 10.1016/j. ejcnurse.2008.01.002.
- 148. van den Donk M, Bobbink IW, Gorter KJ, Salomé PL, Rutten GE. Identifying people with metabolic syndrome in primary care by screening with a mailed tape measure: a survey of 14,000 people in the Netherlands. Prev Med. 2009;48(4):345–50. doi: 10.1016/j. ypmed.2009.02.004.
- 149. Huijbers P. Neighbourhood care: better home care at reduced cost. Vienna: Interlinks; 2011.
- 150. Nederland B. Buurtzorg Nederland. Omaha: Omaha System Community of Practice; 2010 (http://omahasystemmn.org/documents/2010-10-04ArtikelBuurtzorglnHetEngels.pdf, accessed 4 September 2018).
- 151. Glanville J, Kendrick T, McNally R, Campbell J, Hobbs FD. Research output on primary care in Australia, Canada, Germany, the Netherlands, the United Kingdom, and the United States: bibliometric analysis. BMJ. 2011;342:d1028. doi: 10.1136/bmj.d1028.
- 152. Schölin L, O'Donnell A, Fitzgerald N. Financial incentives for alcohol brief interventions in primary care in Scotland. Edinburgh: Scottish Health Action on Alcohol Problems; 2017 (http://www.shaap.org.uk/images/remuneration-report-web.pdf, accessed 4 September 2018).

- 153. Fitzgerald N, Platt L, Heywood S McCambridge J. Large-scale implementation of alcohol brief interventions in new settings in Scotland: a qualitative interview study of a national programme. BMC Public Health. 2015;15:289. doi: 10.1186/s12889-015-1527-6.
- 154. High-level regional meeting Health Systems Respond to NCDs: Experience in the European Region, 16–18 April 2018, Sitges, Spain [website]. Copenhagen: WHO Regional Office for Europe; 2018 (http://www.euro.who.int/en/media-centre/events/events/2018/04/high-level-regional-meeting-health-systems-respond-to-ncds-experience-in-the-european-region, accessed 4 September 2018).
- 155. Jakab M, Farrington J, Borgermans L, Mantingh F (editors). Health systems respond to noncommunicable diseases: time for ambition. Copenhagen: WHO Regional Office for Europe; 2018 (http://www.euro.who.int/__data/assets/pdf_file/0009/380997/hss-ncd-book-eng.pdf?ua=1, accessed 4 September 2018).
- 156. Dedeu T, Marti T. Good practice brief. Multiprofile primary health care teams in Catalonia, Spain: a population-based effective model of services delivery. Copenhagen: WHO Regional Office for Europe; 2018 (http://www.euro.who.int/__data/assets/pdf_file/0009/366498/HSS-NCDs-Policy-brief-cat.pdf, accessed 20 September 2018).
- 157. Atun R, Gurol-Urganci I, Hone T, Pell L, Stokes J, Habicht T et al. Shifting chronic disease management from hospitals to primary care in Estonian health system: analysis of national panel data. J Glob Health 2016;6(2):020701. doi: 10.7189/jogh.06.020701.
- 158. Edwards M. Good practice brief. Horizon scanning future health and care demand for workforce skills in England, UK: noncommunicable disease and future skills implications. Copenhagen: WHO Regional Office for Europe; 2017 (http://www.euro.who.int/__data/assets/pdf_file/0005/356495/HSS-NCDs_Policy-brief_ENGLAND_Web.pdf, accessed 4 September 2018).
- 159. Ahmedov M, Azimov R, Mutalova Z, Huseynov S, Tsoyi E, Rechel B. Uzbekistan: health system review. Health Syst Transit. 2014;16(5):1–137.
- 160. Ibrahimov F, Ibrahimova A, Kehler J, Richardson E. Azerbaijan: health system review. Health Syst Transit. 2010;12(3):1–115.
- 161. Maier CB. The role of governance in implementing task-shifting from physicians to nurses in advanced roles in Europe, U.S., Canada, New Zealand, and Australia. Health Policy. 2015;119(12):1627–35. doi: 10.1016/j.healthpol.2015.09.002.
- 162. Maier C, Aiken LH. Task shifting from physicians to nurses in primary care in 39 countries: a cross-country comparative study. Eur Journal Public Health. 2016;26(6):927–34. doi: 10.1093/eurpub/ckw098.
- 163. Maier C, Aiken L and Busse R. Nurses in advanced roles in primary care. Policy levers for implementation. Paris: OECD; 2017 (https://www.oecd.org/els/health-systems/ltem-2a-Nurses-advanced-roles-Maier-University-Technology.pdf, accessed 4 September 2018).
- 164. Good Practice Brief. Pay-for-performance in Estonia: a transformative policy instrument to scale up prevention and management of noncommunicable diseases. Copenhagen: WHO Regional Office for Europe; 2015 (http://www.euro.who.int/__data/assets/pdf_file/0005/287096/Good-practice-brief-pay-for-performance-in-Estonia.pdf, accessed 4 September 2018).

- 165. Press Y, Hazzan R, Clarfield AM, Dwolatzky T. A semi-structured computerized screening interview for the assessment of older patients in the primary care setting. Int J Disabil Hum Dev. 2009;8(3):259–66. doi: 10.1515/ljdhd.2009.8.3.259.
- 166. Shadmi E, Flaks-Manov N, Hoshen M, Goldman O, Bitterman H, Balicer RD. Predicting 30-day readmission with preadmission electronic health record data. Med Care. 2015;53(3):283–9. doi: 10.1097/MLR.000000000000315.
- 167. Balicer RD, Afek A. Digital health nation. Israel's global big data innovation hub. Lancet. 2017; 389(10088):2451–3. doi: 10.1016/S0140-6736(17)30876-0.
- 168. Netti Tiozzo S, Gallina P, Avossa F, Alba N, Schievano E, Guerra LM et al. Assessment of patient's and health professional's experience of integrated care: preliminary results from a pilot survey in Veneto Region Italy. Int J Integr Care. 2016;16(6):A27. doi: 10.5334/ijic.2970.
- 169. Monterde D, Vela E, Clèries M. Adjusted morbidity groups: a new multiple morbidity measurement for use in primary care. Aten Primaria. 2016;48(10):674–82. doi: 10.1016/j. aprim.2016.06.003.
- 170. Dueñas-Espín I, Vela E, Pauws S, Bescos C, Cano I, Cleries, M et al. Proposals for enhanced health risk assessment and stratification in an integrated care scenario. BMJ Open. 2016;6(4):e010301. doi: 10.1136/bmjopen-2015-010301.
- 171. Orueta JF, Nuño-Solini R, Mateos M, Vergara I, Grandes G, Esnaola S. Predictive risk modelling in the Spanish population: a cross-sectional study. BMC Health Serv Res. 2013;13(1):269. doi: 10.1186/1472-6963-13-269.
- 172. Widespread deployment of telemedicine services in Europe. Report of the eHealth Stakeholder Group on Implementing the Digital Agenda for Europe. Brussels: European Commission; 2014 (http://ec.europa.eu/information_society/newsroom/cf/dae/document.cfm?doc_id=5167, accessed 4 September 2018).
- 173. Better noncommunicable diseases outcomes: challenges and opportunities for health systems. Belarus country assessment. Copenhagen: WHO Regional Office for Europe; 2015 (http://www.euro.who.int/__data/assets/pdf_file/0014/301181/Better-NCD-outcomes-challenges-opportunityes-HSS-Belarus.pdf, accessed 20 September 2018).
- 174. Health system transformation: making it happen. Expert meeting: Madrid, Spain, 17–18 December 2015. Copenhagen: WHO Regional Office for Europe; 2015 (http://www.euro.who.int/__data/assets/pdf_file/0014/318020/Madrid-Report-HST-making-it-happen.pdf?ua=1, accessed 4 September 2018).
- 175. Leading health system transformation to the next level. Expert meeting: Durham, United Kingdom, 12–13 July 2017. Copenhagen: WHO Regional Office for Europe; 2017 (http://www.euro.who.int/__data/assets/pdf_file/0008/369971/Leading-health-systems-transformation-to-the-next-level-report-eng.pdf, accessed 4 September 2018).
- 176. Pettigrew A, Ferlie E, McKee L. Shaping strategic change the case of the NHS in the 1990s. Public Money & Management. 1992;12(3):27–31. doi: 10.1080/09540969209387719.

The WHO Regional Office for Europe

The World Health Organization (WHO) is a specialized agency of the United Nations created in 1948 with the primary responsibility for international health matters and public health. The WHO Regional Office for Europe is one of six regional offices throughout the world, each with its own programme geared to the particular health conditions of the countries it serves.

Member States

Albania

Andorra

Armenia

Austria

Azerbaijan

Belarus

Belgium

Bosnia and Herzegovina

Bulgaria

Croatia

Cyprus

Czechia

Denmark

Estonia

Finland

France

Georgia

Germany

Greece

Hungary

Iceland

Ireland

Israel Italy

Kazakhstan

Kyrgyzstan

Latvia

Lithuania

Luxembourg

Malta

Monaco

Montenegro

Netherlands

Norway

Poland

Portugal

Republic of Moldova

Romania

Russian Federation

San Marino

Serbia

Slovakia

Slovenia

Spain

Sweden

Switzerland

Tajikistan

The former Yugoslav

Republic of Macedonia

Turkey

Turkmenistan

Ukraine

United Kingdom

Uzbekistan



Email: eurocontact@who.int Website: www.euro.who.int