Health systems respond to noncommunicable diseases: time for ambition
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Summary
Abstract

This publication provides a summary of the WHO report Health systems respond to noncommunicable diseases: time for ambition. It highlights pragmatic and actionable policy responses in nine key areas of a comprehensive and aligned health system response to noncommunicable diseases (NCDs): governance, public health, primary care, specialist care, people-centredness, health workforce, financing, medicines, and information solutions. The summary also includes highlights of illustrative country stories from the companion publication Health systems respond to noncommunicable diseases. Compendium of good practices. The summary is oriented towards policy solutions that aim at strengthening the health system response to improve NCD outcomes. The target audience of this summary is national and subnational policy-makers and implementers in the WHO European Region.

Keywords
CHRONIC DISEASE – prevention and control
DELIVERY OF HEALTH CARE
HEALTH CARE REFORM

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Acknowledgements

This publication has been prepared by the WHO Regional Office for Europe with contributions by José Cerezo Cerezo, Amélie Schmitt, Melitta Jakab and Jill Farrington. It was produced under the guidance and direction of Hans Kluge, Director, Division of Health Systems and Public Health and Bente Mikkelsen, Director, Division of Non-communicable Diseases and Promoting Health through the Life-course at the WHO Regional Office for Europe, and Tamás Evetovits, Head, WHO Barcelona Office for Health System Strengthening.

Juan García provided outstanding administrative support. The publication was edited by Charles Robson. This publication was typeset by Lars Moller.

Foreword

The burden of noncommunicable diseases (NCDs) represents one of the major health challenges of our times. These diseases result from fundamental inequities in social and economic determinants of health, in access to timely, high-quality services, in health information, in living environments and in other social factors. In turn, they also act as drivers of disadvantage, leading to intergenerational ill-health and cycles of poverty.

Member States in the WHO European Region have implemented fundamental changes in response to the growing burden of NCDs. We are on the right track, as evidenced by declining rates of premature mortality from NCDs. I am very proud that our Region is on track to meet the Sustainable Development Goals (SDGs) related to NCDs by 2030.

However, improvements are not happening fast enough. Projecting current rates, it may take another six decades for countries in eastern Europe and central Asia to reach the premature mortality levels currently seen in western Europe. Given our current knowledge and experience of what works in addressing NCDs, these deaths are needless and avoidable. Now is the time to set more ambitious goals for the benefit of our children, “leapfrog” over decades of slow-changing chronic disease outcomes and be more assertive about the implementation of the NCD “best buys”.

It gives me great pleasure to present this briefing publication by the WHO Regional Office for Europe, a summary of our comprehensive regional report published in 2018, Health systems respond to non-communicable diseases: time for ambition.

The key messages and good practices set out in the report inspired enthusiasm for action at the high-level meeting on “Health systems respond to NCDs”, held in Spain in April 2018, and they were echoed at the high-level meeting honoring the legacy of the Tallinn Charter: “Health systems for health and wealth”, held in Estonia in June 2018. Key lessons learnt fed into the Global Conference on Primary Health Care in Kazakhstan in October 2018.

We prepared this summary to inspire policy-makers to take ambitious action to strengthen health systems and respond to the challenge of NCDs. The country stories in this summary paint a rich landscape of evolving and learning health systems that increasingly engage with other sectors to inspire, catalyse, join, co-produce, co-implement and monitor health action outside traditional boundaries. These stories show us how Health 2020, the European health policy, is being implemented by a dynamic network of stakeholders acting with unity of purpose to prevent and manage NCDs.

Zsuzsanna Jakab
Regional Director
WHO Regional Office for Europe
NCDs are one of the major health and development challenges of the 21st century. They represent a complex problem with interlinked behavioural determinants, which in turn are further affected by social and structural determinants of health. A complex problem requires a complex and holistic approach to solving it.

The nature of NCDs is well understood: both mortality and morbidity respond well to a reduction in risk factors. Early detection goes a long way to achieving a successful cure or the long-term management of conditions such as hypertension or cervical cancer. When conditions appear, they often do so in multiple forms, requiring a number of health professionals to work together. A fast and well organized response is critical when acute situations arise. Coordinated follow-up care and rehabilitation after acute situations are important for reducing further complications and improving the quality of life. And finally, social support for people living with NCDs and their family members can ease the burden of illness and in turn have a beneficial impact on outcomes.

The social determinants of health greatly affect the emergence of NCD risk factors and diseases in individuals, as well as the success of the health system in addressing them. These characteristics of NCDs have important implications for successful health system responses.

Comprehensive and well aligned health systems responses can make an important difference to addressing these complex and interlinked determinants of NCDs.

The regional report *Health systems respond to noncommunicable diseases: time for ambition*, launched in 2018, articulates the nine cornerstones of such a comprehensive and aligned health system response. Based on a multidisciplinary approach, the report sets out 38 key policy messages with pragmatic and actionable policy responses in these nine strategic policy areas. The report is complemented by a compendium of 22 examples of good practice that showcase successes in the health system response to NCDs in the WHO European Region. The report’s main messages were presented at a high-level meeting hosted by the WHO Regional Office for Europe in Sitges (Spain) that gathered 250 participants from 40 Member States, as well representatives of WHO headquarters, other WHO regional offices and partner organizations. The report was officially launched at the sixty-eighth session of the WHO Regional Committee for Europe in September 2018.

This summary provides highlights of the above report and its compendium of good practices. It aims to inspire action and share successes, by making the potential policy responses and selected country examples easily accessible to policy-makers.
Health systems respond to noncommunicable diseases: time for ambition

Edited by
Melitta Jakab, Jill Farrington
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NCD trends in the WHO European Region: time for ambition

NCDs are the leading cause of mortality, morbidity and disability and the most important public health challenge in the WHO European Region.

If current trends continue, the Region is on the way to achieving and even exceeding other international commitments such as the global NCD target, the NCD-specific Health 2020 target and the SDG commitments.

The unfinished agenda: there are persistent and substantial regional, gender and socioeconomic inequalities.

Not all socioeconomic groups within countries are experiencing the same reductions in premature mortality and improved life expectancy. The burden of NCDs and the lifestyle factors that contribute to them rest more heavily on lower socioeconomic groups, resulting in wide inequalities within countries.

Premature mortality from the four major NCDs is higher for men than women in the whole Region (Fig. 2). Owing to both biological and modifiable gender-related factors, premature mortality from the four major NCDs is higher for men than women in the whole Region. Conversely, women suffer more and longer from NCD-related disability.

Time for ambition: it is possible to accelerate and leapfrog.

Important gains have been made in the WHO European Region, with inspiring success stories. The challenge remains, however, of how to accelerate this decline and reduce inequalities across countries. If the countries of the Commonwealth of Independent States (CIS) continue.
on their present trajectory, it will take them around 50 years to achieve the current mortality levels of the 15 countries that were members of the EU before May 2004 (EU15). Should the middle-income countries in the Region more fully exploit the better knowledge they now have access to, they can accelerate their achievements and leapfrog the prolonged period of slow decline seen in the EU15.

Acceleration is possible: there is great scope to scale up the NCD “best buys”.

WHO has identified a set of core population- and individual-level interventions, also known as “best buys”, for the prevention and control of NCDs that are evidence-based, high-impact, cost-effective, affordable and feasible to implement in a variety of health systems. Population-
Level interventions are grouped in three main areas: prevention of smoking, prevention of the harmful use of alcohol, and improvement of diet and physical activity. Similarly, individual-level interventions are grouped in three different fields: cardiovascular diseases and diabetes, diabetes, and cancer.

All of the NCD best buys remain underimplemented in many countries in the WHO European Region. Being more assertive about full implementation of the best buys creates the potential to accelerate improvements in NCD outcomes.

**Health system barriers undermine efforts to scale up the best buys.**

Health system barriers can significantly undermine a country’s health system response to NCDs. The WHO European Region has a wide regional variation in the health system response to NCDs. And yet, there are common patterns in the most frequently identified health system barriers that stand in the way of scaling up the NCD best buys (Fig. 3). Beyond health system factors, political commitment and socioeconomic opportunities also play an important role in addressing the NCD burden.
Fig. 3. Nine health system barriers

1. Weak governance for sustained intersectoral action
2. Mismatched public health services and public health goals
3. Stand-alone primary care services with narrow task profiles
4. Unbalanced distribution of specialist care
5. Provider-centred health systems
6. A health workforce not fit for current and future NCD needs
7. Financing misaligned with service delivery objectives
8. Ineffective coverage of and adherence to NCD medication
9. Underuse of information solutions
Towards a comprehensive and aligned health system response to NCDs

Scaling up the NCD best buys requires a more comprehensive and better aligned health system response in line with values cherished in the WHO European Region: universality, solidarity and equity. Health systems are complex, with interlinked functions. Simplistic approaches, silver bullets and one-size-fits-all approaches are unlikely to improve outcomes. Comprehensive multipronged approaches, moving forward simultaneously and strengthening different health system functions, are the way to go.

A comprehensive and aligned health system response to NCDs has nine cornerstones (Fig. 4). Effective health system stewardship for NCDs requires stronger governance arrangements to ensure coherence across the different settings where NCD policies are developed, whether inside or outside the health system. In order to scale up the NCD best buys in a people-centered manner, there is a need for an ambitious transformation in how we deliver public health, primary care and specialist services, with a sharpened focus on outcomes, coordination, continuity, comprehensiveness and change management strategies. This service delivery transformation can be further supported through aligned strategies related to the health workforce, health financing, medicines policy and information solutions.

An important way of accelerating health system development is through better alignment of functions. One example often encountered is the inertia in the education of the health workforce to catch up with service delivery needs in public health and individual health care. Overcoming this inertia and aligning training programmes with the necessary present and future competency mix presents huge opportunities for improving service delivery; conversely, if overlooked it will constitute a major barrier to success. Another example is incentive arrangements in health service delivery, where the sum of incentives in most European health systems continue to reinforce specialist care and undervalue health promotion and primary care.

Aligning financial incentives to support the full spectrum of service delivery, and not by level of care, offers an important opportunity for changing service delivery modalities and scaling up core NCD interventions and services.
Fig. 4. Nine cornerstones of a comprehensive and aligned health system response to NCDs

| 1 | Strengthened **governance** ensures coherent policy frameworks and sustainable intersectoral action on NCDs, connecting national, regional and local levels |
| 2 | Well resourced **public health services** lead health promotion and disease prevention activities with an focus on equity |
| 3 | **Multiprofile integrated primary health care** proactively manages community health and well-being |
| 4 | Adequately **regionalized specialist services** provide efficient and timely care for acute conditions |
| 5 | **People-centredness** is reflected in all health system functions |
| 6 | A **fit-for-purpose health workforce** delivers people-centred interventions and services based on evidence |
| 7 | Adequate and prioritized **health financing** ensures that coverage of important services and incentives are aligned with service delivery goals |
| 8 | Access to quality **medicines** is ensured through reliance on comprehensive coverage and pricing policies and on promotion of generics |
| 9 | **Information solutions** serve population health management, condition management in primary care, coordination across providers for seamless care, and self-management |
Strengthened governance arrangements can ensure coherent policy frameworks and sustainable intersectoral action for NCDs, connecting national, regional and local levels. A major governance challenge is to develop mechanisms to align multilayered policies and accountability frameworks, focused on improving key outcomes and reducing inequalities. Stronger capacities are needed in the health system to create bridges across sectors and stakeholders, in order to catalyse bolder action to implement the population best buys and address social determinants of NCDs.

**1. Engage stakeholders throughout the policy cycle to ensure greater commitment and accountability for outcomes.**
- Align multilayered policies (Fig. 5).
- Establish a participatory governance mechanism for engaging stakeholders throughout the different stages of the policy cycle.
- Complete the full policy cycle with the engagement of stakeholders.
- Establish clear accountability frameworks.

**2. Engage in intersectoral action through sustainable governance arrangements.**
- Mobilize information, evidence and knowledge tools to create the preconditions facilitating intersectoral governance.
- Secure resources, capacity and know-how for the sustained production and use of information, evidence and knowledge tools.
- Institutionalize strategies to build political support and pressure using information, evidence and knowledge tools, as well as capitalizing on political leadership.
3  Apply good governance principles to guide the relationships between the government, the private sector and other non-state actors.

- Facilitate good governance of the relationship between government and the private sector, building on the values-based approach of Health 2020.
- Prioritize public regulation of private sector involvement in the governance of NCD determinants over regulation through partnership or self-regulation by industry.
- Establish measurable and identifiable public health benefits as the purpose of the relationship between government and private sector for governance of the commercial determinants of health.
- Ensure that the rules of any interaction with non-State actors are formally stated, with a clear delineation of roles and responsibilities and accountability frameworks.
- Include mechanisms for transparency and management of conflicts of interest in arrangements for governance of cooperation with the private sector.

4  Ensure governance coherence across sectors and between levels of government.

- Include local and regional government levels at all stages in the policy cycle.
- Support local and regional initiatives to tackle the determinants of NCDs, including intersectoral initiatives, with resources, capacity development and political support.

“Governance must be integrated, intersectoral and value-based. It must facilitate the engagement of stakeholders across the policy cycle, and then manage the cycle to show the results of the policy package with clear accountability.”
Regional Report, page 111.

“A commercial determinant of health refers to a good or a service where there is an inherent tension between the commercial and the public health objective, such as tobacco, alcohol and certain food products. … Safeguards must be put in place when building a relationship with the private sector, making sure that public health remains the main purpose of the relationship.”
National health and development policies

Disease or risk-factor-specific policies

Local level or setting-specific policies

Health system strengthening policies

National health and development policies

Disease or risk-factor-specific policies

Fig. 5. Aligning policies in complex policy cycles
Hungary

The Public Catering Decree: intersectoral public health action to improve nutrition and address social inequalities

Description and impact

- The Public Catering Decree regulates the implementation of food-based standards and information in educational settings, inpatient care facilities and some social and child protection services.
- This tool is one component of a set of public health measures to address the root causes of obesity with a social and equity perspective.
- Three years after the introduction of the Decree, the school meals and nutrition environment has improved and there is evidence of a positive change in the attitude of the food industry.

Lessons learned

- Voluntary actions alone are not enough to catalyse changes in the food environment or in dietary behaviour; binding legislation is also required.
- A complex policy tool that affects health, social and equity issues requires strong, aligned, intersectoral cooperation among government bodies, professional organizations, civil society, the food industry, local governments, schools and families.
- The merge of health, social affairs, education, youth and sport into the single Ministry of Human Capacities facilitated intersectoral cooperation.
- Robust communication activities led to better understanding and acceptance of the Decree.

The Netherlands

The Centre for Healthy Living: building sustainable capacity and alliances for effective health promotion

Description and impact

- The Centre for Healthy Living aims at improving the quality and efficiency of health promotion and ensuring coherence among health-promoting organizations in the Netherlands.
- The Centre serves as the national hub for expertise on health promotion, gathering and disseminating knowledge through a web portal that includes evidence-based information aligned with local needs.
- It provides tailored face-to-face support, training and coaching to local professionals and authorities in different settings such as schools, nurseries or workplaces.
- It makes systematic, inclusive and intersectoral assessments of the quality of health-promoting interventions.
- Each month, an average of 19 000 individuals access the Centre’s web portal.

Lessons learned

- The success of the alliances created by the Centre, at the interface of local policy and national expertise, relies on its independent mandate, the support and stewardship role of the Government, and the fundamental principle of “co-creation”.
- The accessible, highly structured web format in which the best available evidence is presented encourages the uptake of informed approaches by health promotion professionals and local policy-makers.
- The process for assessing interventions, developed jointly with national centres of expertise outside the health sector, advances intersectoral policy and practice.
Strengthening public health services to tackle NCDs

Well-resourced public health services can spearhead the health system response to NCDs by providing policy-relevant information on the disease burden, putting the spotlight on equity dimensions; catalysing intersectoral action for effective health promotion and disease prevention and the reduction of health inequalities; and working closely with communities and primary care services to identify locally relevant solutions for early detection of NCDs, engaging with high-risk and other vulnerable populations.

1. Strengthen public health intelligence capacity in order to develop evidence-informed policies and act on NCDs.
   - Use the WHO Global Monitoring Framework for NCDs as a basis for mandatory and ongoing NCD and associated lifestyle risk factor surveillance and monitoring programmes at country level.
   - Integrate equity dimensions such as age, gender, belief, sexual orientation and socioeconomic status into surveillance and intelligence systems on NCDs and risk factors.
   - Centralize stewardship and accountability for NCD surveillance and monitoring within a national public health institution.

2. Prioritize investment in disease prevention and health promotion, with emphasis on development of the new human resources required to tackle NCDs.
   - Invest significantly more resources in health promotion and disease prevention services.
   - Provide continuous professional development programmes which enhance the specific competencies that public health staff require to deliver prevention and promotion services at the population level, in particular the competencies needed to work across sectors to mobilize action on health inequities.
   - Revise the curriculum of graduate and postgraduate programmes for physicians, nurses and other relevant clinicians to strengthen the development of competencies in prevention and promotion.
   - Align the curriculum of graduate and postgraduate public health programmes with international standards, such as those promulgated by the Association of Schools of Public Health in the European Region (ASPHER) and the Agency for Public Health Education Accreditation (APHEA).
   - Align workforce planning of public health professionals with specific public health policies on NCDs and the burden of disease.
   - Include and integrate workforce planning for public health professionals within overall planning efforts for human resources for health, noting that public health is a significant contributor to overall health policies and the effectiveness of national health systems.
Focus on health equity across all public health functions.

- **Mandate public health services** to steward comprehensive, intersectoral action on health equity in relation to NCDs, and allocate the resources required for them to do so.

- **Conduct health equity impact assessment** and other systematic approaches in policy creation, evaluation and service planning.

- **Use proportionate universalism** to guide the design of programmes and services to address NCDs (Fig. 6).

- **Instil the competencies required to address health inequity** in training programmes for health promotion and disease prevention.

- **Formalize multistakeholder agreements** on shared outcomes to strengthen intersectoral governance for health equity.

Coordinate across public health, primary care and community services.

- **Establish a service** dedicated to strengthening population-oriented planning and action with primary care.

- **Create shared outcome agreements** for public health services and primary care, to embed health promotion and disease prevention in primary care.

- **Strengthen governance** between national, regional and local public health services, to deliver agreed population outcomes.

- **Engage communities** in health promotion and disease prevention at the municipal level.

“In order to secure new human resources required to address the challenge of NCDs, governments will need to invest substantially more in health promotion and disease prevention services.”

Regional Report, page 123.

“The implications of proportionate universalism for NCDs are significant. ... The approach requires enhanced skills and refined programmes of intervention that take account of groups within the population, focusing on each group to identify and explicitly address the barriers and levers for lifestyle change such as culture, gender, poverty, literacy and education. This approach requires clinical and public health professionals to be equipped with more sophisticated knowledge, skills, and competencies.”

Regional Report, page 126.
Examples of applications of proportionate universalism to public health action for NCDs:

- Routinely track tobacco, alcohol and nutrition behaviour by key socioeconomic groups;
- Apply population risk stratification tools incorporating socioeconomic variables to tailor health interventions and resource allocation according to needs;
- Introduce comprehensive tobacco control policies and prioritize smoking cessation workplace interventions in low-income and less secure areas of employment including heavily subsidized or free nicotine replacement therapy and counselling;
- In countries with large gender gaps in premature NCD mortality, invest in targeted outreach efforts to apply cardiometabolic risk assessment and in proactive condition management.

Proportionate universalism

“To reduce the steepness of the social gradient in health, actions must be universal, but with a scale and intensity that is proportionate to the level of disadvantage”

Institute of Health Equity (2010)
Ireland

ENGAGE: improving men’s health by addressing the deficit in gender-sensitive service provision

Description and impact

- Ireland’s National Men’s Health Policy aims to integrate gender-specific approaches into health policies, programmes and services and to translate them into practice.

- Central to the implementation of this policy, the Men’s Health Training Programme (“ENGAGE”) was developed to build capacity among front-line health workers and key stakeholders to engage men with health programmes and services.

- ENGAGE is a one-day training course disseminated through a training-of-trainers cascade model, supported by mechanisms for feedback, peer support and mentoring during and after training.

- ENGAGE has improved service providers’ knowledge and skills to engage with men and boosted community outreach programmes to priority groups of men.

Lessons learned

- Men’s poorer lifestyle behaviours and underutilization of health services can be addressed through more comprehensive policies, gender-sensitive service provision and community outreach.

- Promoting positive gender roles and supportive environments works better than reinforcing negative gender stereotypes.

- Investing in individual learning for front-line health workers, based on evidence-informed and networking tools, can have a transformative impact on the norms of organizational practice related to men’s health.

Kyrgyzstan

Community action for hypertension detection: an integrated approach to health promotion and primary health care provision in rural areas

Description and impact

- Community Action for Health is a programme built on direct citizen participation: village health committees made up of volunteers work with primary health care services to identify health priorities and implement health actions.

- An annual hypertension screening week is organized, with a combination of house visits and fixed locations for blood pressure measurement, and those with elevated blood pressure are advised to seek care in primary care centres.

- Between 2011 and 2015, 1.75 million people (about half the adult population of the country) were screened for elevated blood pressure and detection rates doubled in rural areas, eliminating the previously observed urban–rural gap.

Lessons learned

- Community outreach and mobilization are essential to persuade people to go to health facilities for diagnosis and follow-up.

- Community action for health should not be a stand-alone effort but an integral part of the health system, thereby contributing to improved linkages between primary care and health promotion.

- An attitude of true partnership is key for the success of a community health programme.

- Countrywide expansion of community action for health is a result of step-by-step scaling up of a well designed and evaluated pilot project.
Transforming individual health services: towards integrated multidisciplinary primary health care

There are underexploited opportunities to move towards larger multiprofile primary health care (PHC) teams in order to support early detection and management of conditions in the context of multimorbidity. One size does not fit all, however, and a refined understanding of the health of the enrolled population and its determinants, including social determinants, enables multidisciplinary teams to proactively manage community health and well-being. Breaking down walls between levels of care and achieving greater coordination across the full spectrum of services throughout the life course will lead to an approach that is oriented to people’s needs.

1 Move towards larger multidisciplinary primary care teams that can share responsibilities and provide timely and effective people-centred prevention and management for the full range of NCDs.
   - Contract multidisciplinary teams for core NCD services with explicit agreements about quality and equity (Fig. 7).
   - Make legal changes (shift provider competencies) and changes in education.

2 Ensure community orientation and use tools to understand and manage population health and its determinants in order to respond proactively to people’s needs.
   - Establish regulatory frameworks for population health management.
   - Model medical conditions and identify high-risk patients using predictive analytics.
   - Enhance mechanisms to voice patients’ needs. Patients’ associations can provide feedback on health workforce performance, support the development of professional curricula for health, and set benchmarks and indicators of services.
   - Use primary care outcome indicators.
3 Promote coordination and integration in service delivery responding to individual and population needs.

- Introduce new professionals for care coordination.
- Apply integrated care certification programmes targeting a life-course approach to care.
- Pool health care and social care budgets.
- Use information solutions that promote integrated care between levels and settings of care, such as shared electronic medical records.

4 Apply effective regulatory instruments to expand primary care further, strengthening its resolutive capacity with regard to NCDs and reducing reliance on specialist and hospital services.

- Develop a governmental vision on primary and multidisciplinary care with strong stakeholder involvement and a focus on equity.
- Promote particular medical specialties, e.g. family medicine.
- Reduce the oversupply of acute hospital beds.
- Apply regulatory frameworks for professional accreditation: clinical licensing, certification and periodic recertification examinations for health professionals.

“Multidisciplinary primary care teams (...) aim to proactively and adequately address the needs of patients and communities present on a health-wellness continuum. They offer a comprehensive service including prevention and health promotion, curative services, patient education and self-management support, patient and family caregiver empowerment, psychological counselling, social services, referral and care coordination.”

Fig. 7. Example of a multidisciplinary primary health care team

**Case manager**
Care coordination, patient navigation

**Nutritionist**
Engaging people in nutrition behaviour change and prescribing dietary plans

**Pharmacist**
Medication reconciliation, renewal of prescriptions within a defined protocol

**Rehabilitation specialists**
Prescribing physiotherapy treatments

**Physician**
Diagnostics, prescription, referral, management of complex cases

**Psychologist**
Counselling on behavioural and life style changes

**Nurse**
Diagnostics, counselling, management of stable chronic patients and healthy children, prescription of medicines and examinations
Health promotion centres: integrating population and individual services to reduce health inequalities at community level

Description and impact
- Health promotion centres were created within primary health care facilities to provide lifestyle interventions that reduce NCD risk factors and health inequalities by combining population and individual approaches.
- The centres integrated previously dispersed activities and built partnerships with key stakeholders, including social services and nongovernmental organizations, to improve health at community level, focusing on vulnerable groups.
- Multidisciplinary teams in health promotion centres have a broad spectrum of competencies and skills and include nurses, physiotherapists, psychologists, dieticians and kinesiologists.
- Within 15 years, more than half of the adult population was screened for lifestyle risk factors. Trends in premature mortality, particularly from cardiovascular disease, declined by 19% between 2007 and 2015.

Lessons learned
- Primary health care services, together with public health services reaching out to communities, have proved to be a powerful vehicle to reach vulnerable groups and reduce health inequalities.
- A contextualized, integrated and multidisciplinary community-based approach enables a prompt response to be made to the needs of vulnerable populations but requires the transformation of service delivery so that governance, funding and competencies are aligned.
- Cross-sectoral cooperation relying on community-based approaches is of crucial importance for health equity.

Risk stratification: a fundamental instrument for population health management

Description and impact
- The Spanish risk stratification tool was rolled out as national–regional collaboration: developed by the Catalan Health Service, it was later expanded to the majority of Spanish regions under the leadership of the Ministry of Health, Social Services and Equality.
- The tool collates data from a range of health information sources to allow stratification of individuals by clinical complexity (accounting for multimorbidity) and resource use.
- Linking population surveillance and community action within a primary care and prevention approach, risk stratification allows the health needs of individual patients and population groups to be identified and interventions to be tailored accordingly.
- At the primary care level, this tool is used for strategic purchasing and resource planning, health workforce planning and proactive case management of high-risk patients.

Lessons learned
- The risk stratification tool can assist health systems to progress from disease-centred to people-centred care by responding more accurately to the actual needs of individuals and population groups.
- The tool is particularly relevant for managing patients with multimorbidity, employing both a system-wide and a clinical approach.
- It can be used to estimate current and future risks for mortality, morbidity and health service utilization, which can support health care management.
- Reliable, up-to-date, systematized and computerized primary health care records are essential to this effort.
Transforming individual health services: regionalization of specialized care for NCDs

Adequately regionalized specialist services can provide efficient and timely care for acute conditions. This is critical not only to improve response to acute events but also for health system efficiency. Regionalization requires service re-engineering in a manner that is nuanced, flexible, evidence-informed and people-centered. The process of regionalizing services needs to be rooted in new and closer relationships across the various parts of the health system and its actors, including clinicians, managers, policy-makers and other stakeholders.

1. Adopt a nuanced approach to the organization of hospital services, given the evidence and drivers for and against centralization.
   - Examine the case for change carefully.
   - Do not assume that the evidence for specific procedures or specialist care applies more generally – the case for centralization is stronger for some areas than others.

2. Align regionalization models with the type of service and patient needs taking into consideration the frequency with which patients need to use the service, competencies and skill mix of the team, and the level of technology.
   - Establish whether technology can reduce the requirement to centralize.
   - Consider different models of regionalization and weigh their strengths and weaknesses for particular services (Fig. 8).
   - Consider whether changes in treatment approach might change the dynamics to decentralize or centralize in future.
3 Manage the process skilfully when creating regional systems.

- Ensure that the patient perspective is central to the plan.
- Involve stakeholders early and have an open dialogue with the public.
- Plan the system, not individual providers.
- Base plans on evidence and quality criteria.
- Involve clinical professionals in standard-setting.
- Align regulatory systems with the new model.

4 Establish new ways of working and relationships across the system to make the models work.

- Develop common standardized patient pathways.
- Create systems to hold network models to account.
- Rethink the role of smaller hospitals to ensure they remain viable.
- Develop shared patient records—with patients, hospitals and primary care.
- Incentivize specialists and primary care to work together and ensure that payment models do not undermine the new models.
- Encourage hospitals to reach out to their communities and large hospitals to support smaller units.

“Evidence in this area is quite nuanced, and policy-makers and planners need to recognize the limitations and avoid simplistic “bigger is better” or “small is beautiful” arguments.”

Regional Report, page 166.
Fig. 8. Regionalization models for specialist services

Highly specialist centralization

TC

AC  AC  AC  AC

AC  AC  AC  AC  AC  AC

Tiered services

TC

GH  GH

AC  AC  AC  AC

AC  AC  AC  AC

Hub and spoke

TC

GH  GH

AC

GH

GH

Nonhierarchic networks

TC

GH

AC

AC

AC

TC

GH

AC

AC

AC

TC

GH

AC

AC

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AC

AC

AC
Regionalization of care for acute coronary syndrome

Description and impact
- A regional network was developed based on a two-tier system of regional cardiovascular centres and primary cardiovascular departments with clearly defined roles and requirements.
- The previously fragmented prehospital triage of acute coronary syndrome (ACS) patients was centralized, to improve coordination between ambulances and hospitals.
- New routes and target hospitals for ambulances were defined and a decision support system for ambulance personnel was designed.
- Monitoring of the quality of care was improved by introducing a computer scoring system in all city hospitals, insurance companies and the territorial medical insurance fund, as well as a city-wide electronic ACS registry.

Lessons learned
- Reducing cardiovascular mortality is a national priority in the Russian Federation, and this has greatly facilitated the service delivery transformation process at regional level.
- A comprehensive and sustained approach is needed to achieve better outcomes, with action being taken at policy, purchaser and provider levels.
- A systematic approach to quality improvement, based on periodic audit, quality monitoring, timely data and a feedback loop, is essential.
- The ability of a health system to respond to acute events is dynamic, affected by changing factors such as road quality, traffic patterns and the provider network, and needs constant review and adjustment.

Multisectoral mental health networks: a successful reform through skilful regionalization and service delivery redesign

Description and impact
- An integrated network involving all levels of care, from community to primary and hospital care, was set up in Belgium to provide comprehensive acute and chronic mental health care.
- The network teams are composed of hospital-based staff and financed from the hospital budget but operate in the community and actively liaise with primary care professionals and organizations.
- Multidisciplinary crisis and outreach teams provide, respectively, crisis resolution for people with (sub)acute psychological problems through short-term home treatment, and recovery-oriented care in the home environment for people with severe long-term mental health conditions.
- In 2017, 22 operational networks and about 59 mobile teams were following more than 13,000 patients, enabling a reduction of 1,230 long-term psychiatric beds.

Lessons learned
- Broad stakeholder agreement and participation is essential: all federal, regional and community ministers competent in mental health and psychiatry supported the reform.
- The participation of users and their relatives is central to build the care reform on the actual needs of users.
- Transforming service delivery can result in efficiency gains (reducing the number of psychiatric hospital beds) and improvements in patient satisfaction (shorter duration of treatment, closer to community).
A people-centred approach to strengthening health systems for NCDs

People-centred, instead of provider-centred, care is critical not only for the health system’s responsiveness but also for better NCD outcomes. Patients and their caregivers can be considered as the frontline workers for NCDs, as they make everyday judgments and decisions about health promotion, disease prevention and care in order to maintain and improve their quality of life.

1 Empower individuals through health literacy.

- Regulate for evidence-based health education and individual or group-based self-management training programmes.
- Include skills-oriented health education programmes in schools.
- Increase community and mass media health education campaigns.
- Engage citizens and patients in health-oriented groups, consumer organizations and local government.
- Provide personalized and comprehensive decision-making aids, including computer-based and web-based health education packages.

2 Reshape health workforce competencies and practice around what patients value.

- Enhance leadership capacity in championing people-centred care.
- Integrate people-centred competencies in the professional education and health curricula of health professionals.
- Promote continuing professional development for health practitioners in a number of forms, including the internet, professional associations and journals.
- Apply tools that deliver reliable, current clinical knowledge to the point of care.
3 Design integrated networks of health services, to better address the whole range of needs of patients, families, communities and citizens.

- Encourage community leaders to advocate and support community involvement in health service delivery.
- Support team development and effective teamwork across the various entities of the network.
- Apply shared-care protocols across disciplines.
- Establish participation and collaboration mechanisms for local governments, communities, health-oriented groups and consumer organizations.
- Conduct targeted monitoring and evaluation of individual and team performance for continuous quality improvement and people-centred care.
- Include patients and families in the decision-making structures of integrated networks.

4 Create a supportive environment for patients’ and citizens’ engagement.

- Create sustainable mechanisms to engage citizens and patients in policy-making for health.
- Establish regulatory frameworks for the development of patient’s rights and responsibilities, for collaborative entities and teams, and for population health management.
- Invest in information technology, infrastructure and intelligence to support people-centred care (e.g. promoting the use of personal health records).

“People-centred care goes beyond the immediate health care context and takes full account of the broader influences that can impact people at the individual level. It is especially important for patients with chronic conditions who have repeated exposure to the health care system at multiple levels.”

Regional Report, page 172.
NCDs and human resources for health: a workforce fit for purpose

A health workforce “fit for purpose” in terms of skills, composition, roles and responsibilities, and numbers is fundamental for transforming health services to be more proactive and responsive to needs and for improving the overall health system response to NCDs.

1 Address numbers: train new workers in the correct competencies and utilize current workers more effectively.

- Scale up the production capacity of education institutions.
- Review and where necessary reorient curricula to match NCD demands, with a focus on a multidisciplinary approach (Fig. 9).
- Implement strategies to attract, recruit and retain qualified staff in neglected areas of NCD-related training and service delivery.
- Expand the scope of practice of certain cadres to free physicians from tasks that can be delegated at no risk to safety or quality of services.
- Create new cadres to exercise new roles and functions where “skilling up” is not feasible or insufficient.
- Retrain some existing staff willing to reorient their career, for instance to work in primary care, home care or geriatric care.
- Aim at health workforce self-sufficiency and recruit abroad only as a last resort and using WHO guidance.

2 Boost accessibility in underserved areas.

- Extend primary care services staffed with personnel competent in NCD diagnosis, patient counselling and referring to specialists as needed.
- Recruit and retain students from underrepresented and underserved areas, by reviewing recruitment criteria and procedures to make sure they are given equal consideration and designing strategies and incentives to encourage them to practice in their area of origin.
- Decentralize recruitment procedures for health workers in public services to make their deployment more equitable.
- Design incentive packages for health workers with financial, professional and family-friendly measures to attract and retain them in underserved geographical areas.
- Use communication technologies in a more intensive and innovative manner.
- Expand home care services, using visiting nurses who are especially trained for that purpose.
- Develop mobile services in exceptional cases when setting up fixed infrastructures is not justified.
- When envisioned, design the introduction of compulsory community service as an opportunity for learning and gaining experience.
3 Improve quality for optimized NCD services that meet new needs.

- Set up functional accreditation mechanisms.
- Create new roles, such as care coordinators and self-management counsellors, to facilitate the functioning, integration and continuity of health services and meet the needs created by the chronicity of many conditions.
- Adapt the organization and funding of services accordingly.
- Review the role and responsibilities of professional councils and make them accountable for the quality and safety of the actions of their members irrespective of their areas of work.

4 Rely on strategic planning, regulation and management to support availability, accessibility and quality.

- Create or strengthen the capacity for information collection and analysis in terms of workforce, competencies, skill mix, numbers, horizon scanning, research and scenario-building, and policy advice to support planning.
- Invest in a health workforce database.
- Mobilize stakeholders in developing responses to NCD-related challenges for the health workforce.
- Design a roadmap that specifies distribution of responsibilities, sequence of actions and time frames.
- Use national health workforce accounts to keep track of progress in implementing human resources plans.
- Professionalize the management of health services to ensure that there is capacity to support integrated multidisciplinary teams rather than individual health professionals, and coordinate services across the spectrum of prevention, promotion, care and rehabilitation.

“Simply focusing on more of the same – training more workers with the same skills and qualifications as those already in the workforce – is not an effective or efficient option.”

Regional Report, page 188.
Fig. 9. New health workforce competencies

- Advocacy
- Continuous learning
- Information & technology skills
- Clinical and organizational

**Individual services**
- Teamwork
- Communication & coordination
- People-centred care

**Population interventions**
- Integrating prevention & health promotion
- Intersectoral collaboration
- Addressing social determinants of health
- Population health needs assessment
Horizon scanning future health and care demand for workforce skills

Description and impact

A comprehensive approach was developed to project future demand for skills and competencies of the health and care workforce, based on a robust workforce planning framework.

The analysis of several scenarios of plausible futures pointed to a fast-growing demand for health workforce, largely driven by long-term conditions and NCDs. This calls for a different skill profile, and in particular for significantly higher numbers of lower-skilled health workers.

England has consequently expanded the mental health workforce, created new roles such as nursing and physician associates, increased training places for nurses, midwives and allied health professionals, and expanded medical education to train 1500 extra doctors.

Lessons learned

- Investigation of skills mix and future demand for the whole system has revealed new ways of thinking and planning.
- Small annual changes in demand can add up to larger changes over time, requiring major shifts in the skills and competencies of the health workforce.
- Understanding the context of the system to be investigated is important, to ensure that the appropriate scope, level of enquiry and methods are selected.
- Stakeholders should be involved at every stage of the workforce review, including modelling and validation of variables.

Improving cardiovascular risk through capacity-building and task-sharing at primary care level

Description and impact

Eight PHC facilities implemented a package of essential interventions to better identify and manage individuals with high cardiovascular risk.

Their approach combined community-level support for behaviour change in NCD risk factors with changes to primary health service delivery.

Expanding the role and responsibilities of nurses through pre-doctor check-ups and home visits was central to improving service coverage and quality.

Capacity-building of PHC facilities was supported by team-based training of specialists, provision of updated clinical protocols, and implementation of supervisory mechanisms and a system of monitoring and evaluation.

In partnership with local governments in rural areas, health promotion activities were supported by a range of stakeholders, including other government agencies, civil society organizations, youth leaders and journalists.

Lessons learned

- Expanding the role of nurses required a systematic approach, including changes to a regulatory framework.
- Supportive management and the ability to compare team performance outcomes strengthen the commitment of health workers to improve the quality of care.
- Active involvement of patients in joint decision-making process with health workers favours patients’ behaviour change.
- Intersectoral collaboration to improve health is a key factor in raising public awareness and promoting community-based health programmes.
Health financing strategies to support scale-up of core NCD interventions and services

Adequate and prioritized health financing arrangements (revenue collection, pooling, purchasing and benefit design) can be powerful enablers of transformations in public health and in primary and specialist care, scaling up NCD interventions and services by ensuring the availability of funding for the right services at the right time and providing behavioral incentives.

1 Allocate reasonable levels of public funding to health-improving activities by making a strong business case for health, including for NCDs, and institutionalizing this capacity.

- Ensure that public funding for health is at or above 12% of total government spending.
- Invest in mechanisms, people, data, and skills to make a better business case for health and NCD spending including credible plans to harness potential efficiency gains.
- Engage in continuous strengthening of fiscal dialogue and budgetary processes to increase funding for health, and in particular for underfunded activity and programme areas.
- Apply high taxes to tobacco, alcohol and unhealthy foods to make a significant public health impact while increasing fiscal space, but have realistic expectations of earmarking.

2 Use more explicit criteria to prioritize the health budget linked to development and health objectives.

- Engage and support the processes of strengthening public finance management.
- Invest in strengthening the public finance management capacity of health budget officials.
3  Adopt an outcome-oriented approach to fund intersectoral actions and address misalignment of incentives across sectors.

- Highlight outcomes and economic returns of specific interest to other sectors, not just the health sector, when seeking to involve those other sectors in funding or delivering actions for better NCD outcomes (Table 1).

- Consider effective options for financing intersectoral actions for better NCD outcomes, such as joint budgeting, specific health system funding conditional on intersectoral partnership, and financing of independent agencies.

- Apply a comprehensive approach to financing mechanisms, as they cannot work in isolation: issues such as governance, the regulatory and legal environments and measures to foster trust must also be taken into account.

4  Align and optimize incentives across the delivery interface to reinforce a people-centred service delivery model that promotes integrated, continuous and comprehensive services.

- Identify misalignment and inconsistencies between the envisioned service delivery model and the behaviour encouraged by the sum of incentives in the system (move away from optimizing incentives within levels of care only).

- Mitigate weaknesses in base payment mechanisms rapidly through an incremental approach.

- Experiment with and evaluate larger-scale change to the incentives continuum, in countries with a strong tradition of strategic purchasing.

- Deploy non-financial incentives and the full range of strategic purchasing to influence provider and patient behaviours.

“The costs of scaling up core interventions and services are low compared to the burden of NCDs, and the returns on scale-up are therefore enormous.”
Regional Report, page 208.

“While the approaches described above are common and likely to be an improvement on the typical interface of capitation, fee-for-service and case-based payment, they influence provider and patient behaviour without making any fundamental change to the basic incentives that do not support the envisioned service delivery model.”
Regional Report, page 218.
Table 1. Economic costs of NCDs and return on investments in three countries

<table>
<thead>
<tr>
<th>Costs</th>
<th>Belarus</th>
<th>Kyrgyzstan</th>
<th>Turkey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct health-care costs of NCDs**</td>
<td>0.27</td>
<td>0.82</td>
<td>1.27</td>
</tr>
<tr>
<td>Indirect costs of NCDs (loss from premature death, absenteeism and presenteeism)***</td>
<td>5.13</td>
<td>3.1</td>
<td>2.31</td>
</tr>
<tr>
<td>Overall cost of NCDs</td>
<td>5.4</td>
<td>3.9</td>
<td>3.6</td>
</tr>
</tbody>
</table>

**Return on investment at 15 years**

<table>
<thead>
<tr>
<th></th>
<th>Belarus</th>
<th>Kyrgyzstan</th>
<th>Turkey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salt reduction</td>
<td>94</td>
<td>12.3</td>
<td>88</td>
</tr>
<tr>
<td>Tobacco control</td>
<td>31.1</td>
<td>3.8</td>
<td>5</td>
</tr>
<tr>
<td>Alcohol control</td>
<td>12</td>
<td>-</td>
<td>0.6</td>
</tr>
<tr>
<td>Physical activity awareness</td>
<td>5.2</td>
<td>3.6</td>
<td>2.3</td>
</tr>
<tr>
<td>Cardiovascular diseases and diabetes clinical interventions ****</td>
<td>0.6</td>
<td>0.01</td>
<td>4.3</td>
</tr>
</tbody>
</table>

*GDP: gross domestic product
**NCDs include cardiovascular disease, chronic respiratory diseases, diabetes and cancer, unless otherwise specified.
***In calculating the indirect costs of absenteeism and presenteeism in all three countries, the indirect costs of chronic respiratory diseases and cancer were not included.
****Diabetes was not included under the clinical interventions package in Kyrgyzstan.

Sources:
Estonia

Moving to mixed payment in primary care: an instrument to scale up prevention and management of NCDs

Description and impact
- A pay-for-performance instrument was designed by the Estonian Health Insurance Fund in collaboration with the Society for Family Doctors and was implemented in a step-by-step approach, in order to facilitate wider acceptance by physicians.
- The incentive makes up a small share of the total government budget for primary health care, at about 2%, and provides additional payment on top of an existing mixed payment mechanism.
- Family physicians are awarded lump-sum cash bonuses for achieving coverage targets linked to clinical guidelines for specific services and receive personal electronic feedback on their performance.
- The pay-for-performance instrument has strengthened NCD prevention and management, including significant increases in service coverage.

Lessons learned
- Pay-for-performance was not a stand-alone solution but part of a comprehensive strategy to strengthen primary care, with purposefully chosen incentives.
- Pay-for-performance was a powerful means to inform policy-makers and service providers about priorities, and small resources led to a significant impact.
- The behaviour change among family physicians is likely to be leveraged more by performance feedback and benchmarking than by the financial incentive.
- Weaknesses in service delivery (solo practices and fragmentation) could not be rectified by further refining the payment mechanism and have led to a new wave of service delivery reforms.

Hungary

The public health tax: an effective instrument to collect additional revenues and promote a healthy diet

Description and impact
- A tax levied on food products containing unhealthy levels of sugar, salt and other ingredients was prepared and introduced collaboratively by the ministries of health and finance in Hungary in 2011.
- The tax is collected at the point of sale from consumers and from sellers when purchasing or selling a taxable food product.
- One year after its introduction, the tax had led to an average 29% increase in price and a 27% decrease in sales, while nearly 40% of unhealthy food manufacturers had improved their product formulas.
- In its first four years of operation, the tax generated about US$ 219 million for public health spending.

Lessons learned
- A fiscal instrument can play an effective role in improving the nutrition behaviour of the population.
- The public health product tax is not a “silver bullet” for addressing poor nutrition or a budget shortfall and should be part of a comprehensive set of measures targeting nutritional behaviour.
- Intersectoral action enabled accurate problem definition, development of an appropriate policy solution, and effective implementation.
- Continuous refinement of legislation after initial enactment was essential for ensuring effectiveness.
Medicines are not only an essential part of primary health care but also one of its main drivers of success. Long-term and equitable access to affordable, quality-assured, safe and effective medicines is essential to achieve better NCD outcomes and improve financial protection. Different evidence-informed, cost-effective technical packages, such as the WHO Package of essential NCD interventions (PEN) or the Global Hearts Initiative package, can serve as the basis for the selection of these medicines.

1 Align evidence-based priority NCD medicines with agreed clinical guidelines and prescribing protocols.
   - Set clear criteria for inclusion of medicines in national essential medicines lists and reimbursement lists.
   - Align treatment guidelines with these priority medicines to promote their use in clinical practice.

2 Promote equitable access to priority NCD medicines for all patients who need them, including those in rural and remote communities.
   - Conduct regular monitoring of medicines availability and prices; consider equity of access and disaggregation of data.
   - Agree a standardized methodology for assessing affordability.
   - Establish efficient procurement and distribution systems for pharmaceuticals.
   - Monitor progress against agreed international targets for access to NCD medicines, using an equity lens.

3 Include priority NCD medicines from evidence-based treatment protocols in public sector procurement or in coverage policies, with no or minimal out-of-pocket payments.
   - Assess the amounts of out-of-pocket charges faced by patients and whether these may compromise access to needed medicines.
   - Increase the extent and breadth of coverage of NCD medicines in reimbursement programmes, to improve affordability and decrease out-of-pocket payments.
   - Monitor the potential adverse impact on medicine prices of various taxes and charges applied in the medicines supply chain (margins and mark-ups, VAT, other duties).
   - Consider amendments to the legal framework for determining medicines prices, where prices for prescription medicines are unregulated.
4 Implement coordinated supply- and demand-side policies promoting acceptance and use or generic medicines.

- **Review regulatory and reimbursement procedures** to prevent unreasonable delays to market access and inclusion in reimbursement lists for generic medicines.

- **Focus messages to health-care professionals and patients on equivalence** between originator brand and generic products, where the quality of generic medicines is assured.

- **Focus activities on regulatory authority strengthening and capacity-building** to ensure the quality of products in circulation and to build confidence and trust in the effectiveness and safety of generic medicines, where quality cannot be assured.

- **Link reimbursement to the lowest-priced generic product** to help create financial incentives for consumers to choose generic medicines.

- **Remove inappropriate incentives for doctors and pharmacists** to prescribe and dispense more expensive originator brand products.

- **Consider a package of pharmaceutical, pricing and reimbursement policies** that fosters a healthy market.

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5 Boost adherence to long-term treatments for NCDs through improved communication between patients and health-care providers and simplified treatment regimens.

- **Undertake regular medication reviews** to assess the necessity of all medicines being taken and the potential impact of polypharmacy on reduced medicine adherence. Pharmacists can play an important role in medicines review.

- **Simplify treatment regimens** where possible, to improve adherence to medicines, which results in greater chances of successful treatment outcomes and less avoidable health care costs.

- **Encourage exchanges** when establishing or reviewing treatment regimens, with health-care professionals explaining the rationale for treatment, as well as possible side-effects, and patients describing difficulties in taking medicines, including the extent of influence of costs.

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“Affordability can be increased and out-of-pocket costs decreased by broadening the extent and breadth of coverage of NCD medicines in medicines reimbursement lists. Ideally, priority medicines should be available with no or only minimal co-payments.”

Regional Report, page 237.
Health system information solutions for NCDs

From clinical consultations to macro-level resource allocation, health system information solutions can contribute to long-term benefits, including improved quality, continuity, coordination and equity of care; better planning and resource allocation; efficiency gains; and enhanced evidence-informed health service delivery and policy-making.

1. Make use of population health intelligence to monitor population health outcomes and support the deployment of integrated care strategies for chronic patients.
   - Apply health risk stratification tools at the local and national levels to link allocation of resources and tailor health services to needs.
   - Employ global best practices with regard to algorithms, adjusted to specific country contexts, degree of eHealth development and availability of accurate data.
   - Promote evidence-based decision-making in the day-to-day work of all stakeholders, policy-makers, public health managers, health-care providers and patients (for self-care).

2. Optimize the use of electronic medical records shared between primary and specialist care levels to enhance collaboration around patients’ needs.
   - Systematize electronic medical records in health care organizations which will, as a first step, gather medical and clinical data during the provision of care to support health-care providers in diagnosis and treatment decisions.
   - Define standards, minimal data sets and functionalities at the national level, to allow the further development of electronic medical records into means of exchanging medical data between stakeholders and between levels of care.
   - Integrate other electronic services, such as ePrescription or eReferrals, into electronic medical record systems.
   - Ensure there is no need to keep old paper-based medical data, which would hinder the implementation of an electronic record system.
   - Legislate to support the development and use of electronic medical records.
3 Exchange and integrate clinically relevant data to achieve significant improvements in clinical practice with tangible benefits for patients, including individualized treatment plans, improved quality of care and optimal use of care resources.

- Establish an eHealth strategy and a global eHealth architecture with a clear governance structure and a roadmap for eHealth development (Fig. 10).
- Take a decision on a health information exchange platform at an early stage in national eHealth development.
- Consider the electronic health record system as a key pillar of the health information exchange.
- Integrate all national eServices, including ePrescription, eOrdering, eReferrals and eDischarge, into the health information exchange and connect them for comprehensive eGovernment services.
- Establish a legal framework to support the development of health information exchange and electronic medical record systems.
- Clearly identify stakeholders – patients, health-care providers and health-care professionals – and define and monitor their roles, responsibilities and access rights at national level.

4 Harness the advances in telehealth and telemonitoring to increase accessibility, quality and efficiency.

- Expand the use of telehealth and telemonitoring tools where appropriate, to increase access to needed health services in underserved areas.
- Clearly define telehealth services and cover them in payment schemes.
- Incentivize the use of telehealth and telemonitoring solutions for NCD management wherever possible, for better medical outcomes.
- Use mobile health solutions for self-care, patient tracking, increasing adherence to drugs and communication.
- Encourage and popularize technology-enabled innovations in health service delivery.

5 Give patients access to their own health data and expanded personalized services through personal health records.

- Include patient-oriented functionalities and shared decision-making tools in personal health records extracted from electronic medical and health record data sets to drive them towards more person-centered care.
- Enable patients to track the use of their data in the health system, in line with national or supranational legal frameworks.
- Complement personal health records with practical tools for self-care.
- Legislate to support the development and use of personal health records.

“Tackling NCDs requires enhanced continuity and coordination between health-care providers, which can be made affordable using advanced health information systems and technology-enabled care.”

Regional Report, page 244.
**Fig. 10. Sequencing the implementation of information solutions**

<table>
<thead>
<tr>
<th></th>
<th>First wave</th>
<th>Second wave</th>
<th>Third wave</th>
<th>Fourth wave</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Infrastructure</strong></td>
<td>Set up basic technological and network infrastructure</td>
<td>Improve to an advanced and reliable technological and network infrastructure</td>
<td>Set up an interoperability platform (health information exchange)</td>
<td>Develop interoperability services between providers</td>
</tr>
<tr>
<td><strong>EMR-EHR</strong></td>
<td>Digitize medical records: EMR</td>
<td>Interconnect EMR through shared EHR</td>
<td>Expand interconnection to all health and care providers</td>
<td>Integrate CDSS in integrated care pathways</td>
</tr>
<tr>
<td><strong>Telehealth and e-services</strong></td>
<td>Develop first e-services: e-booking, e-prescription</td>
<td>Expand interconnection to all health and care providers</td>
<td>Scale up telehealth and telemonitoring at national/subnational level</td>
<td>Allow third-party telehealth applications to interoperate</td>
</tr>
<tr>
<td><strong>Personal health data</strong></td>
<td>Set up health portals with health information</td>
<td>Grant access to patients’ data through PHR</td>
<td>Improve PHR offering with personalized information and services</td>
<td>Allow third-party m-health applications for patients</td>
</tr>
<tr>
<td><strong>Health analytics</strong></td>
<td>Develop health information dashboards for NCD monitoring</td>
<td>Apply population health risk stratification for proactive care</td>
<td>Improve risk stratification with mental health and social data</td>
<td>Health big data and analytics connecting with non-health sectors</td>
</tr>
</tbody>
</table>

Croatia

Primary care electronic panels: an information solution for more proactive primary health care services

Description and impact

- Primary care panels, developed by a family group practice and then introduced nationwide by the Croatian Health Insurance Fund, are software tools comprising preventive and chronic disease panels.
- Preventive panels are filled in routinely during primary care encounters and enable general practitioners to record and stratify NCD risk factors.
- Chronic disease panels enhance proactive management of patients with major NCDs, allowing disease-specific parameters to be recorded and relevant indicators calculated.
- Panels include reminders for follow-up of patients, “pop-ups” highlighting missing information, and decision support tools based on clinical guidelines.

Lessons learned

- Local innovations can effectively improve early detection and care of NCDs, if scaled up nationally.
- Supporting a demand-driven, bottom-up approach to transform service delivery can garner acceptance by different stakeholders.
- Alignment of wider health system functions, such as incentives and accountability arrangements, ensures the successful roll-out of an innovation.
- Innovative information technology in primary care does not necessarily require large investments.

Kazakhstan

Telemedicine: bridging the urban–rural divide in access to services

Description and impact

- A telemedicine network was introduced as a key component of a national approach for strengthening health care delivery in rural settings and achieving the country’s goal of universal health coverage.
- It has been gradually expanded in line with advances in communication infrastructure and now includes 209 connected health care facilities operating at different levels.
- Teleconsultation services include those designed specifically to support the diagnosis and treatment of NCDs, such as in the areas of cardiology and pulmonology.
- Timely and correct diagnosis and treatment through telemedicine allows health care professionals to promptly administer emergency medical care to patients at lower costs.

Lessons learned

- Telemedicine can be a key component of scaling up coverage of core NCD services by overcoming geographical challenges and the shortage of health personnel.
- Information solutions make it possible to address previously intractable problems, such as access to care and specialist care for rural populations in large, sparsely populated countries.
- A well governed national telemedicine network can be an effective tool for timely prevention, diagnosis, management and treatment of NCDs.
- Scaling up telemedicine solutions requires a multifaceted approach that builds on identifying appropriate applications, introducing standards, providing training and integrating health information.
Leapfrogging health system responses to NCDs: making change happen

Policy-makers today live in a fortunate age of knowing with great certainty what works for NCDs. Slow progress primarily results not from a lack of knowledge but from not fully applying what is already known. The challenge now is how to speed up the adoption of what is known to work and avoid the mistakes that were made in the past in order to achieve a sharp improvement in NCD outcomes and narrow down regional, gender and socioeconomic inequalities. This is the challenge of leapfrogging.

There is a range of leapfrogging opportunities that countries can harness to maximize the health system’s contribution to improved NCD outcomes. Among the most promising ones are:

- developing sustainable intersectoral governance arrangements and operating models with clear mandates, including for joint action, monitoring and financing;
- investing in stronger health promotion and disease prevention, including skill sets and education, and promoting the principles of universal proportionalism in the design of public health action;
- moving towards multiprofile primary care teams operating in larger units with proactive population health management at community level, establishing linkages to public health and community services, and offering integrated services with specialists and hospitals;
- adapting the composition and skill set of the health workforce to meet future health challenges, in particular, rapidly expanding the role and task profile of nurses;
- rapidly implementing information solutions in a range of areas to address previously intractable policy concerns, especially in the area of population health management, bringing increasingly concentrated specialist care closer to people through telesolutions, and promoting patient-self-management.

Health system transformation: making change happen
To reap the benefits of leapfrogging opportunities, policy makers need to manage a complex transformation process, focusing not only on what to do but also on how to do it, taking into account the political economy and national context. There are political economy obstacles that stand in the way of ambitious large-scale health system transformation:

- **The time dilemma: present costs, future benefits.** Most NCD-related measures incur costs today but do not provide benefits until sometime in the future. When considering an NCD investment today (such as taxation on tobacco, alcohol or sugar-sweetened beverages) that will yield benefits in the future, many policy-makers correctly understand that their administrations will bear the costs, but the benefits will be reaped on someone else’s watch.

- **The commercial determinants of health.** The risk factors that lead the exponential rise of NCDs are tobacco use, alcohol use, physical inactivity and unhealthy diets. Transnational corporations in these areas are major drivers of NCD epidemics, as their economic interests are not in line with public health goals.

- **Over-reliance on high-technology and complex specialist care** on both the demand and supply sides. At the same time, effective public health action, community health and primary care services do not reach enough people. This has become one of the main causes of health system inefficiency. A web of complex causes, involving culture, expectations, traditions, vested interests and financial imperatives, underlies this pattern.

- **Resistance to changing the culture of medicine.** The medical culture in a doctor- and hospital-centric health system and the poor managerial/clinical interface result in suboptimal attention or resistance to people-centred approaches in policy and practice, and to the expansion of the task profiles of nurses, midwives and community workers necessary for a better health system response to NCDs.
Leapfrogging opportunities and challenges

A range of successful change initiatives have shown, however, that it is possible to build on a number of opportunities to catalyse and sustain change:

- **Creating strategic alignment**: without a vision, there can be no alignment and hence no change;
- **Acknowledging the interconnections** between the “whys”, “whats” and “hows” of change;
- **Working with professional cultures**, particularly (although not exclusively) the clinical culture, which remains a powerful determinant of change (or the lack of it) in health systems;
- **Creating enabling environments** that allow change to flourish, through adopting plan-do-study-act approaches;
- **Nurturing new leadership** approaches based on a system approach;
- **Increasing patient and public engagement** so they become co-producers of health;
- **Supporting evidence-informed policy** that is timely and relevant.

In order to significantly accelerate progress in NCD outcomes, Member States of WHO in the European Region have to seize the exciting leapfrogging opportunities. The experience of champions in the WHO European Region has proven that political economy obstacles can be overcome: engaging in major systemic changes that require political commitment, energy, vision, committed people, distributed leadership and, above all, courage.
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.

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