

GOVERNANCE FOR HEALTH IN





REGIONAL OFFICE FOR **Europe**

Governance for health in the 21st century

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Abstract

A range of collaborative governance mechanisms has developed in many policy arenas in the past decade. The study on governance for health in the 21st century tracks governance innovations that have been introduced to address priority determinants of health and summarizes them as five strategic approaches to smart governance for health. The study relates the emergence of joint action of the health sector and non-health sectors, of public and private actors and of citizens to achieve seminal changes in 21st-century societies. They include a new understanding of health and well-being as key features of what constitutes a successful society and vibrant economy and the higher value placed on equity and participation. The study further describes the type of structures and mechanisms that enable collaboration and outlines the new role that health ministers and ministries and public health agencies need to adopt in such a challenging policy environment.

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Keywords

HEALTH POLICY (http://www.euro.who. PUBLIC HEALTH HEALTH SYSTEMS PLANS – ORGANIZATION AND ADMINISTRATION DELIVERY OF HEALTH CARE LEGISLATION, HEALTH

ISBN 978 92 890 0274 5

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Text editing: David Breuer Book design and cover design: Christophe Lanoux, Paris, France

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Acknowledgements

This study was led by Ilona Kickbusch, Director, Global Health Programme, Graduate Institute of International and Development Studies, Geneva, Switzerland, and was written by Ilona Kickbusch and David Gleicher, Project Officer, Global Health Europe, Graduate Institute of International and Development Studies.

Seven expert background papers informed the study; Springer is publishing these as a book, and the chapters are listed in the references.

The authors would like to thank all those who gave valuable feedback to the study, in particular: Harry Burns, Public Health Directorate, Scottish Government Health Directorates, Glasgow, United Kingdom; Mihály Kökény, former Minister of Health, Social and Family Affairs, Hungary; Gaudenz Silberschmidt, Division of International Affairs, Federal Office of Public Health, Federal Department of Home Affairs, Berne, Switzerland; and Thomas Zeltner, Science et Cité, Berne, Switzerland.

The study would not have been possible without the support of the project team, and special thanks are due to Kristina Petrova, Monika Rimmele and Michaela Told, Global Health Programme, Graduate Institute of International and Development Studies, Geneva, Switzerland. The definition of governance for health owes much to the work of Stephen Bell and Andrew Hindmoor, University of Queensland, Brisbane, Australia.

The Federal Office of Public Health within the Federal Department of Home Affairs of the Government of Switzerland funded the study.



Foreword

Adaptation of governance is driven by the changing nature of societies and the challenges they face. My goal as WHO Regional Director for Europe is to ensure that health is repositioned as an overarching goal shared by everyone. That is why the WHO Regional Office for Europe commissioned a study on governance for health in the 21st century.

Mind-sets for viewing and addressing health and its determinants have shifted. Two challenges go hand in hand: (1) the governance of the health system and the strengthening of health systems, which is called health governance; and (2) the joint action of health and non-health sectors, of the public and private sectors and of citizens for a common interest in what is called governance for health. The latter is the subject of this study.

Living in a knowledge society means that power and authority are no longer concentrated in government. Informed citizens, conscientious businesses, independent agencies and expert bodies increasingly have a role to play. Nevertheless, governments and health ministries continue to be important in managing governance for health, setting norms, providing evidence and making the healthier choice the easier choice.

We at WHO define governance for health and well-being as the attempts of governments and other actors to steer communities, whole countries or even groups of countries in the pursuit of health as integral to well-being through both whole-of-government and whole-of-society approaches. The entire society must be understood as being responsible for its health.

I see this as essential. Pathways to good and poor health can be nonlinear and hard to predict, and health is increasingly understood as a product of complex, dynamic relationships among distinct types of determinants. The health system alone does not have the tools to solve all our health challenges.

The highest levels of government and society must recognize that health is a common objective and that achieving it requires coherence. This study on governance for health informed the new European policy framework for health and well-being, Health 2020, in terms of how governments are moving in this direction. It is based on a set of background papers prepared by eminent experts, which provide further detail on the issues raised. This study is being expanded in a second phase to provide further guidance, tools and case studies.

Zsuzsanna Jakab WHO Regional Director for Europe



In this study, governance for health is defined as the attempts of governments or other actors to steer communities, countries or groups of countries in the pursuit of health as integral to well-being through both whole-of-government and whole-of-society approaches. It positions health and well-being as key features of what constitutes a successful society and a vibrant economy in the 21st century and grounds policies and approaches in such values as human rights and equity. Governance for health promotes joint action of health and non-health sectors, of public and private actors and of citizens for a common interest. It requires a synergistic set of policies, many of which reside in sectors other than health as well as sectors outside government, which must be supported by structures and mechanisms that enable collaboration. It gives strong legitimacy to health ministers and ministries and to public health agencies, to help them reach out and perform new roles in shaping policies to promote health and well-being.

Governance

In the 21st century, health is mainly about people and how they live and create health in the context of their everyday lives. This requires a new perspective on the governance of health and well-being. To date, much of the discussion on health in all policies and intersectoral action for health starts from the health perspective and builds on the evidence that the most important determinants of health are found in sectors other than health. In this study, we chose first to review the main changes that have occurred in governance, in order to position the challenges for health in a broader societal frame. Many of these challenges reflect the seminal shift from industrial to knowledge-based societies. The conclusion of the review is that all policy fields – not only health confront the necessity of reforming their way of working and of experimenting with new approaches to policy-making and implementation at the global, regional, national and local levels. This overall shift in modern policy-making must be understood if whole-of-government and whole-of-society approaches for health are to be implemented. Health is not the only policy field that requires action in other sectors, thus opening the opportunity for synergistic policies in all directions.

The changing nature of the challenges faced by 21st-century societies drives new approaches to governance; health is only one challenge and is not always given priority. Most of these challenges, however, have significant health effects, which have not been considered sufficiently so far. The challenges include systemic shocks, such as natural disasters and disease outbreaks, as well as longer-term processes, such as urbanization, epidemiological and demographic transitions, food insecurity, climate change and widening economic disparities. Unique to our times are the synergistic global interconnections among these large-scale challenges (and opportunities) and the interdependence of most of the solutions. The complexity of these wicked problems calls for systems approaches and networked responses at all levels and will force policy-makers to move out of their policy silos.

The result has been the diffusion of governance, from a state-centred model to a collaborative one, in which governance is co-produced by a wide range of actors at the level of the state (such as ministries, parliaments, agencies, authorities and commissions), society (as businesses, citizens, community groups, global media (including networked social media) and foundations) and supranationally (such as the European Union and the United Nations). This shift in governance is reflected in the varied approaches to health, with environment and health frequently at the forefront of multistakeholder developments. Governance is also increasingly conducted across levels, from local to global; regional and local actors therefore have increasing relevance, making effective multilevel governance as important as cross-sectoral and participatory governance. Research indicates that the diffusion of governance is not a zero-sum game between the state and society but can make the state more effective. As power becomes more widely distributed in society, the role of the state changes but remains critical and even expands into new areas.

Key messages: governance and its context

- The governance challenges faced by the health sector are not unique: all sectors are experiencing major shifts.
- The contextual drivers of change are interdependence, complexity, co-production and Europe's transition from industrial to knowledge-driven societies.
- Wicked problems require systems approaches that involve a wide range of society and multiple levels of governance, from local to global, with increasing relevance of the regional and local levels.
- The new context leads to the new governance dynamics of diffusion, democratization and shared value.
- Health is a major macroeconomic factor and, increasingly, a critical component of business models and strategies. Businesses must reorient themselves towards strategies built on shared value, which can enhance their competitiveness while advancing social agendas.
- The role of government in governance remains critical and is expanding in many areas of modern life.

Governance for health and well-being

Views are shifting, not only on how the state and society co-produce governance but also on how they view and address health and its determinants. Two challenges go hand in hand: (1) governance of the health system and strengthening health systems, which we refer to as health governance; and (2) the joint actions of health and non-health sectors, of public and private sectors and of citizens for a common interest, which is what we call governance for health. Health has become a critical macroeconomic and political factor throughout society; the result is that governments, businesses, communities and citizens increasingly engage in governance for health. It touches on their interests in many different ways. Health is considered a human right, an essential component of well-being, a global public good and an issue of social justice and equity. Health is also increasingly recognized as a property of other systems, such as the economy, the environment, education, transport and the food system. The recognition of health as a key factor for the economic prosperity of knowledge societies is gaining ground.

Health and well-being are critical components of good governance and, as such, constitute a social value in themselves. This is reflected prominently in the value of universal access to health care. Social values such as human rights, social justice, well-being and global public goods also guide governance for health and provide a value framework within which to act. These are reflected in many proposed policies at the national, European and global levels. It is increasingly recognized that the major factors of ill health and the major assets for health are best addressed by engaging non-health sectors and actors through policies and initiatives at all levels of governance, with or without the involvement of the health sector. Some national governments have gained much experience in doing so. Supranational bodies are also engaging with actors beyond nation-states. At the local level, cities are using a wide range of innovative policy instruments to improve health and well-being. In the corporate sector, investment in employee health and community programmes and in healthy products and services is being recognized as a new business model. Initial experiences suggest that businesses can build shared value by enacting policies to increase their competitive advantage while assuming social responsibility and supporting social growth. This will be a key challenge in the next decade, especially given the worldwide epidemic of noncommunicable diseases.

Governance for health requires a synergistic set of policies, many of which reside in sectors other than health and outside government and must be supported by structures and mechanisms that facilitate collaboration. The engagement of people is a defining factor. The concept of governance for health can best be illustrated as the culmination of three waves in the expansion of health policy – from intersectoral action, to healthy public policy to the health in all policies approach – all of which are now integrated in whole-ofgovernment and whole-of-society approaches to health and well-being. These approaches not only emphasize improving the coordination and integration of government activities for health but, by reaching beyond government, they contribute with others to overarching societal goals such as prosperity, well-being, equity and sustainability. They include accountability for health and equity through a diverse range of monitoring mechanisms.

Key messages: governance for health and well-being

- Governance for health and well-being is a central building block of good governance; it is guided by a value framework that includes health as a human right, a global public good, a component of well-being and a matter of social justice.
- The expanded understanding of health includes considering health as an emerging property of many societal systems; it therefore requires action in many systems, sometimes with and sometimes without the involvement of the health sector.
- Whole-of-government and whole-of-society approaches reflect this reality and are grounded in strategies that enhance joined-up government, improved coordination and integration and diffusion of responsibility for health throughout government and society.
- Governance for health builds on experiences gained in the health arena with intersectoral action, healthy public policy and health in all policies.

Research indicates that health and well-being require a combination of governance approaches – hierarchical, dispersed and participatory. This combination might be up to twice as effective as the single most effective intervention, as reflected in many policy papers. Although some countries have strengthened and expanded their public health activities to address 21st-century health challenges more effectively, others must still move in this direction. This study, which is based on a review of case studies of new approaches to governance for health, contains five proposals for smart governance for health, which should be combined in whole-of-government and whole-of-society approaches.

Governing by collaborating

Collaboration is the new imperative. The study shows that lessons can be learned from the rich literature on collaborative governance, including considering the process and design of collaboration; the virtuous circle of communication, trust, commitment and understanding; the choice of tools and mechanisms; and transparency and accountability.

Governing by engaging citizens

Public policy can no longer just be delivered. The study shows that successful governance for health requires co-production as well as the involvement and cooperation of citizens, consumers and patients. As governance becomes more widely diffused throughout society, working directly with the public can strengthen transparency and accountability. Partnering with and empowering the public are also crucial for ensuring that values are upheld. Technology, such as smart phones and networked social media, empower citizens and change how governments and health systems act, for example through digital and mobile health. Participation, transparency and accountability become engines for innovation within the new, complex relations between state and society.

Governing by mixing regulation and persuasion

Governing is becoming more fluid, multilevel, multistakeholder and adaptive. The study shows that traditional hierarchical means of governance are increasingly being complemented by other mechanisms, such as soft power and soft law, with expanding influence in an interdependent world. The mechanisms include self-regulation, governance by persuasion, alliances, networks and open methods of coordination as well as the new role of citizens in monitory democracy. Health promotion approaches such as making the healthier choice the easier choice are being reviewed because of the growing interest in nudge policies. At the same time, hierarchical multilevel regulations that extend from the global to the local level, such as the WHO Framework Convention on Tobacco Control and many European Union regulations, are becoming more common, as are regulations that affect many dimensions of people's lifestyles and behaviour.

Governing through new independent agencies and expert bodies

Evidence is critical in a knowledge society. The study shows that, similar to other fields of governance, independent expert bodies, such as federal agencies, commissions, regulators and auditors, are playing increasingly vital roles in providing evidence, watching ethical boundaries, extending accountability and strengthening democratic governance in health, as related to privacy, risk assessment, quality control and health technology and health impact assessment. Their importance increases as one moves to a knowledge society with more rapid innovation. The literature also indicates, however, that metrics must be improved, for example, by including both objective and subjective measures, to capture what is happening to most people and to the most disadvantaged people.

Governing through adaptive policies, resilient structures and foresight

Wicked problems have no simple causes or solutions. The study shows that whole-ofgovernment and whole-of-society approaches to health must be adaptive and must reflect the characteristics of complexity; decentralized decision-making and self-organizing social networking should enable stakeholders to respond quickly to unanticipated events in innovative ways. Interventions should be iterative and integrate continual learning, multistakeholder knowledge-gathering and -sharing and mechanisms for automatically adjusting policies or for triggering deliberations, especially since policy interventions in one area can have unintended consequences in another. Given the long-term nature of many health problems, anticipatory governance also requires new forecasting methods. Studies indicate the value of promoting a wide variety of smaller-scale interventions at the local and community levels for the same problem, as practised in many networks. Anticipatory governance with participatory foresight mechanisms can also increase social resilience by shifting policy focus from risks to addressing more fundamental systemic challenges and deliberating the social aspects (such as values) of public policy and science (such as evidence) jointly.

Key messages: smart governance for health and well-being

- Smart governance for health and well-being is already being practised in Europe and in many other parts of the world. Governments are already approaching such governance in new and innovative ways.
- Smart governance for health and well-being reflects how governments address health challenges strategically, the choices they make about the mixture of hard and soft instruments to use, the angle from which they approach a challenge and the partners and at which levels of government and society they choose to engage and when.
- Based on a review of case studies of new approaches to governance for health, five types of smart governance for health are proposed for consideration, which should be combined in whole-of-government and whole-of-society approaches:
- governing by collaborating
- governing by engaging citizens
- governing by mixing regulation and persuasion
- governing through independent agencies and expert bodies
- governing by adaptive policies, resilient structures and foresight.

Conclusions and recommendations for the Health 2020 process

Positioning health

First and foremost, the whole of government and whole of society must adopt people's health and well-being as a goal. The new European policy framework for health and well-being – Health 2020 must therefore involve partners from beyond the health sector to reach out to heads of government, parliamentarians, business leaders, mayors and European citizens. Creating a new innovation platform for Health 2020 could strengthen such an outreach strategy.

Basing policy on new metrics

The whole-of-government and whole-of-society approaches require familiarity with the complex dynamics of health and its determinants to govern better. Health 2020 can contribute actively to supporting countries in defining new measures for health and well-being based on both objective and subjective data and ensuring equity and sustainability as a basis for policy. These measures include new forecasting tools for anticipatory governance and new types of public health reports with new measures; a systematic effort, such as a clearing-house, might be initiated, for continually collecting robust evidence on how numerous policies affect health and how health affects other policies.

Institutionalized processes for whole-of-government approaches

To harness health and well-being, institutionalized whole-of-government structures and processes are required within government to facilitate cross-sector problem-solving and to address power imbalances. Health 2020 could propose innovative approaches, such as those reviewed in this study, to crossing sectoral and agency boundaries and to budgeting, financing and monitoring progress in countries. It could support health ministries and public health agencies in advocating for governments to tackle wicked problems through a mixture of hard and soft governance mechanisms, ranging from law to persuasion and incentives as well as motivating other sectors to engage for health. These initiatives include building capacity by providing intersectoral training in smart governance for health, in cooperation with schools of public health, business schools and schools for public policy, to create a new skills mix based on systems thinking and complexity science.

Innovative partnerships for whole-of-society approaches

Many of the current health challenges could be better resolved through whole-of-society approaches, which include civil society and the private sector as well as the media. Health 2020 can support health ministries and public health agencies in reaching out to people within and outside government to find joint solutions. It can propose new programmes, networks and initiatives to engage many different stakeholders and, above all, citizens throughout Europe and explore new incentive mechanisms. Stakeholders could jointly identify and implement new means for assessing accountability and health impact, such as the contribution to a European health footprint. The WHO European Healthy Cities Network would be an excellent laboratory for such an innovation.

A commitment to "the informed citizen" and to citizen participation

The health sector must commit itself to the highly participatory nature of smart governance for health. Health 2020 can initiate a process of dialogue with European citizens on health and well-being using new information and communication technologies. It could engage health ministries to develop a civil society strategy, open-data initiatives and tracking systems that ensure better public accountability for health in all sectors. This includes digital governance (e-governance) approaches as well as a comprehensive strategy to strengthen health literacy.

A global perspective

The new governance for health should integrate all levels of governance, from the local to the global. Health 2020 could initiate a process of convening policy-makers at various levels to find responses to interdependent challenges, making use of cooperation among the various levels of WHO. This will require support for new processes of health diplomacy to promote coherence among sectors such as foreign policy, trade, agriculture, development and health.

An outreach-oriented, innovative, supportive Regional Office

The health sector can support other arms of government by assisting them in setting policies and attaining goals. Health 2020 could initiate the pooling of both the best and failed experiences in innovative practices for shared goals in the European Region and beyond. Regular meetings with health ministers, heads of public health agencies and representatives of other sectors could drive such innovation forwards. The WHO Regional Office for Europe could build on models for long-term cooperation with other sectors, such as those developed in the European environment and health process, its work on food and health and network approaches, such as the South-eastern Europe Health Network and healthpromoting schools.

A joint commitment to innovation in governance

Finally, it is proposed that in the context of Health 2020, Member States and the Regional Office:

- initiate a process for assessing and monitoring progress in governance for health in the European Region; and
- consider establishing a multidisciplinary European institute of governance for health.

As part of an assessment and monitoring process, a measure of innovation in governance for health based on whole-of-society and whole-of-government approaches should be identified as a follow-up to this study. A biannual report on innovation in governance for health would be submitted to the Regional Committee. The measure would be based on the second phase of this study, which will review experiences in innovative governance for health according to the approaches to smart governance outlined here.

A multidisciplinary European institute of governance for health, like the Instituto Suramericano de Gobierno en Salud (South American Institute for Governance in Health) recently established by the Union of South American Nations, would be a resource for Member States of the WHO European Region to reorient towards smart governance for health by leadership development, political debate, training and research, in cooperation with national institutes in many disciplines.



1.

21st-century governance for health and well-being

Background

The results of this study will be used directly for preparing the new European policy for health , Health 2020, and will form the basis for the governance aspects of the European review of social determinants and the health divide. The focus of this study is on how governance for health and well-being is evolving to meet new challenges and circumstances in the 21st century, what is driving the change in how states and societies govern for health and how governments can take steps to enact smarter governance for health through collaboration. It is based on a review conducted between January and June 2011. In addition, seven studies commissioned from eminent experts (Andersson, in press; Fidler & Szabó, in press; Kamel Boulos, in press; Mc-Queen, in press; Özdemir & Knoppers, in press; Raynaud & Jané-Llopis, in press; Tomson et al., in press) are incorporated into this study. Health equity and how to achieve it through better governance will be discussed in an accompanying European study on social determinants of health and the health divide, which is being led by Michael Marmot of University College London, United Kingdom.

Focus of the study

How will European countries wish to define success as the century progresses? What role will health play? Narrow economic indicators such as the growth of gross domestic product are increasingly considered insufficient. For example, the recommendations of the Commission on the Measurement of Economic Performance and Social Progress (Stiglitz et al., 2009) state that people have incorrectly measured their lives and that the success of societies must also be measured in terms of the improved health and well-being of citizens and their quality of life and in terms of sustainable use of resources, particularly regarding the environment and the economy. In such a perspective, health not only becomes relevant to many areas of society and policy but also becomes a factor defining good governance. People must assign value to the right things. People, their potential and their capabilities are the key resources of a knowledge society, and investment in their health and their education is critical – countries are shaped by the health of their populations.

Governance concerns how governments and other social organizations interact, how they relate to citizens and how decisions are taken in a complex world (Graham et al., 2003). The argument addressed in this study is that the main changes taking place in governance in the 21st century are also manifesting in relation to health and its governance and are critical for achieving health gains in the decades to come. The changes include three contextual drivers –

interdependence, complexity and co-production – and three new governance dynamics, which we have summarized as diffusion, democratization and shared value. Already in 2001, the Organisation for Economic Co-operation and Development (OECD), in a report on governance in the 21st century (OECD, 2001), stated the following.

- Old forms of governance in both the public and the private sector are becoming increasingly ineffective.
- New forms of governance will involve a much broader range of active players; in particular, they depend to an increasing degree on the involvement of the governed.
- New forms of leadership are emerging, which continually shift the allocation of power and weaken centralized top-down decision-making structures.

The larger role of health in society is not new: it tends to manifest at critical points of societal change, such as the rise of the industrial society in the 19th century and the development of the European welfare state after the Second World War. In Europe during the past 150 years, health has not only shaped the modern nation-state and its social institutions, it has also powered social movements, defined the rights of citizens and contributed to constructing the modern self and its aspirations. Health is central to the era of individualization (Kickbusch, 2007). Access to health and to health care has for many people become synonymous with social progress and social justice. Health is now integral to how Europe defines itself and compares itself to other parts of the world. As Europe responds to globalization and the transition from industrial societies to knowledge societies (European Commission, 2010), to develop further and adapt its social model to fit this new context in the face of the economic downturn and to address the major challenges of the 21st century, health will again have an important, exemplary role to play.

Health governance

European health systems face complex challenges regardless of whether they are funded by taxes or insurance.

These challenges include:

- securing funding for both public health and health care services;
- ensuring equitable access to health care services, including financial protection;
- emphasizing the importance of empowering citizens and patients;
- using resources efficiently by such means as health technology assessment, competitive purchasing agreements, innovative service delivery methods and cost–effectiveness studies;
- monitoring and evaluation;
- knowledge-brokering: aligning research objectives and policy needs;
- interconnecting primary and specialized care; and
- training human resources, including strengthening the role of universities.

More recent analysis shows that there is no best health system. In the decade to come, the financial stability of some health systems will be threatened to the point of insolvency, while others will struggle to address changing population needs, to acquire adequate numbers of health professionals and to provide access to the best, newest, life-saving treatments and technologies. Many European countries must significantly reduce their national debt. The OECD has projected that, if new approaches are not implemented, public health care spending could increase by 3.5–6 percentage points of gross domestic product by 2050 in all OECD countries. Health systems becoming better managed and more efficient and effective is therefore of concern to the whole of government, other sectors and citizens. A 10% increase in health-care spending would increase life expectancy at birth by only 3–4 months (OECD, 2010). How would a 10% increase in education investment affect health? Progress in health is not usually measured in that way.

Health sector reform continues to be a key responsibility of health ministries, within the boundaries of their portfolios. Many Member States of the WHO European Region, especially low-income countries, still lack an effective health system. Many others still struggle with basic health governance mechanisms, such as guaranteeing financial protection for service users, and they need operational tools to help them develop and expand their health care systems to provide core services such as screening, vaccination and maternal and child health. More affluent countries must remain vigilant in protecting the health systems that took decades to develop and are repeatedly under threat. This is of the utmost importance, and a key dimension of the work of WHO has been to support Member States in addressing these challenges. This study does not cover this function of health ministries, which we term health governance, and its relevance for government budgets and the development of gross domestic product. Rather, the study was stimulated by a recent review that shows that all OECD countries could get better value from their health care spending and add an average of 2 years of life expectancy if they were all to become as efficient as the best performers. Improvements and savings are largely, however, related to preventing chronic disease, which can be dealt with only very partially within and by the health sector. It is therefore necessary to "broaden the definition of health reform to include a consideration of the intentional or unintentional impact of all policies – health, social, economic and others – on individual or population health" (Georgia Health Policy Center, 2008). No country does this yet systematically.

Governance for health and well-being

The aim of this study is therefore to identify new, innovative forms of governance that are emerging (Willke, 2007) to address the key health challenges of the 21st century, by collaboration between health and non-health sectors. The focus is on a whole-of-government and whole-ofsociety approach and on considering not only how other sectors affect health but also how health affects other sectors and, most importantly, how health influences overall social advancement, which we refer to as governance for health and well-being. Most health challenges originate beyond health care in the social determinants of health and in the factors that influence unhealthy behaviour, but they also depend on the global processes that drive disease outbreaks, food insecurity and antimicrobial resistance. Health ministers are now well aware of this challenge and have expressed this awareness on many occasions, most recently at the Meeting of the OECD Health Committee at Ministerial Level in October 2010 (OECD, 2010). Chronic diseases are the biggest health challenge we face and in addressing them we must take into account environmental and social determinants and take a balanced approach that covers individual and social responsibilities in an intersectoral policy framework....

However, we need new thinking on how we can rise to the challenges of increased chronic disease in general, and obesity in particular. We must work across government departments and together with industry, schools, planners and our citizens to make the environment more conducive to healthy lifestyles for all and to change unhealthy behaviours of people at risk. Particular care has to be taken to enable and promote healthy lifestyles among children.

Definition

In this study, governance for health is defined as the attempts of governments or other actors to steer communities, countries or groups of countries in the pursuit of health as integral to wellbeing through both whole-of-government and whole-of-society approaches. It positions health and well-being as key features of what constitutes a successful society and a vibrant economy in the 21st century and grounds policies and approaches in values such as human rights and equity. Governance for health promotes joint action of health and non-health sectors, of public and private actors and of citizens for a common interest. It requires a synergistic set of policies, many of which reside in sectors other than health as well as sectors outside government, which must be supported by structures and mechanisms that enable collaboration. It gives strong legitimacy to health ministers and ministries and to public health agencies, to help them reach out and perform new roles in shaping policies to promote health and well-being.

Outcomes

From the viewpoint of public health, the first question to be asked of new governance arrangements is whether they have the capacity to deliver. Will they produce better and more equitable health outcomes? Experience to date shows that tackling complex problems requires the engagement of many actors. Population health cannot be achieved without collaborative approaches; it requires an active state but, above all, it requires citizens and a wide range of social organizations to be involved, motivated and committed. Although whole-of-government action is critical for policy-making on social determinants of health, many health challenges also require approaches that include the whole of society, because health is foremost about how people can be healthy in their everyday lives. This is related to questions about how society should be organized to ensure health and therefore includes very basic issues of social justice and fairness. "Thinking about justice seems inescapably to engage us in thinking about the best way to live." (Sandel, 2010). We therefore conclude that, as governments seek to address wicked problems and govern better for results, they must include a commitment to the values, principles and processes inherent to good governance.

Wicked problems does not mean evil but rather problems that are very difficult to resolve. Successfully solving or at least managing wicked policy problems requires reassessing some traditional ways of working and solving problems, challenging governance structures, skill bases and or-

ganizational capacity. As a first step, wicked problems should be recognized as such. Successfully tackling wicked problems requires that governments and their ministers broadly recognize and understand that there are no quick fixes or simple solutions.

Contextual drivers

Three key contextual drivers of change that are highly relevant to developing governance for health are: interdependence, complexity and co-production. They are linked to several larger, long-term trends that affect overall social development (Nye & Kamarck, 2002) and health: globalization, marketization and the increasing power and impact of the business sector and the role of information technology. The most important trend, however, which is often overlooked, may be the rise of the role of citizens as active participants in governance at all levels: "across vast geographic distances and despite barriers of time, they deliberately organize themselves and conduct their cross-border social activities, business and politics outside the boundaries of governmental structures" (Keane, 2003).

These trends and drivers are ingredients of the transition from an industrial society to a knowledge society. The knowledge society, within which health plays an expanding role, is characterized by three interrelated processes (Willke, 2007):

- the changing contexts and conditions of knowledge work, based on specialized knowledge acquired through years of organized professional training and experience;
- the rise of the intelligent organization, in which the structures, processes and rule systems have been built in such a way that they can be called intelligent: structures designed intelligently, processes with built-in learning capacity and rule systems that allow existing rules to be changed if necessary; and
- the knowledge economy that comes into being when knowledge work and intelligent organizations are the rule and not the exception.

Health gains new political and economic relevance in a knowledge society based on innovation. Governments are rediscovering the extent to which health and well-being drive economic growth, prosperity and well-being, a view that was well appreciated in the 19th century. In the 21st century, health is not only a pivotal variable for public finance but constitutes an essential sector of the global economy and of national economies in its own right, just as it contributes to labour productivity and economic performance in all other sectors. In many OECD countries, the more narrowly defined health sector represents an average 10% of gross national product and 10% of the labour force. Health spending helped to stabilize OECD economies during the recent recession (OECD, 2010).

For example, in Germany, health is the second largest industry, larger than the automobile industry. Its macroeconomic importance in terms of innovation and productivity led the Government of Germany to establish a division responsible for the health care industry within the Federal Ministry of Economics and Technology. Its task is to better understand the economic dimension of health activities within the overall economy by, for example, drawing up satellite health accounts that are conceptually and methodologically consistent with the country's macroeconomic statistics (Aizcorbe et al., 2008; Schneider et al., 2010), to reach beyond market activities, as proposed by the Commission on the Measurement of Economic Performance and Social Progress (Stiglitz et al., 2009).

In satellite health accounts, health is considered a type of human capital that, like other capital goods, depreciates over time and requires investment. Measures are therefore needed of the capital stock of health and of the rate of depreciation, financial investment into health and the flow of returns to that investment. A value is then placed on improvements in health, which is derived by combining indicators such as quality-adjusted life-years with estimates of the value of a human life. This concept expands the scope of existing accounts beyond market activity to include the value of the time that members of households invest in their health and in the health of others (Aizcorbe et al., 2008).

The optimism – and sometimes hype – generated by these developments has been tempered during the past decade as the global community endured a series of challenges and shocks with far-reaching consequences. These require fundamental changes in perspective, governance structures, organizational capacity and skills, as indicated in the following section on the three contextual drivers: interdependence, complexity and co-production.

Global interdependence: the context for governing health has changed

Interdependence refers to situations characterized by reciprocal effects among countries or among actors in different countries. Interdependence exists where transactions have reciprocal – and not necessarily symmetrical – costly effects. When interactions do not have significant, costly effects, there is simply interconnectedness. Interdependence does not mean mutual benefit; interdependent relationships always involve costs, as interdependence restricts autonomy. It is, however, impossible to specify a priori whether the benefits of a relationship will exceed the costs. This depends on the values of the actors and on the nature of the relationship (Keohane & Nye, 1989).

In the second decade of the 21st century, governments operate in entirely new contexts, which are, above all, dynamic, complex and interdependent, as are the problems they have to address. The current system of global governance has no mechanisms for addressing systemic shocks or for managing globalization fairly. Global challenges affect all people in all socioeconomic strata and geographical locations. Each challenge appears to be unique, but they are increasingly understood to have underlying patterns and interconnections, requiring global and whole-of-society and whole-of-government responses. The crisis in the international financial and monetary system, outbreaks such as severe acute respiratory syndrome (SARS), other health challenges such as HIV infection and AIDS, hurricanes, tsunamis and earthquakes have hit some countries harder than others, but the after-effects, often unforeseen and unpredictable, have transcended political borders, government sectors, businesses and civil society. Most recently, the risks associated with damage to the Fukushima nuclear reactor in Japan have changed policy perspectives throughout the world, the threat to human health being the main factor in the debate about controlling atomic energy production.

No single government can resolve these problems any more, but difficulty remains in obtaining a joint commitment to resolve complex, multilayered issues such as control of the global financial system, fair trade, access to medicines or equitable management of energy resources, even though a range of global governance mechanisms have been established. For example, health inequities have increased within and between countries despite a significant increase in foreign aid for health; this is one of many unintended consequences of policies. Critical interdependence has increased concerns about security, preparedness, resilience and response in many policy and social sectors and has led to the realization that the whole of society must be prepared, beyond the health sector (WHO, 2009).

Many sectors have realized how critical health is for them – for example, Fig. 1 shows the readiness framework (WHO, 2009) developed to prepare the whole of society for a disease outbreak. It emphasizes the interdependence of all sectors of society. The framework suggests five key principles: a whole-of-society approach, preparedness at all levels, attention to critical interdependence, a scenario-based response and respect for ethical norms. The diagram in Fig. 1 illustrates this approach, represented by the three circles in the middle: government, civil society and business. The pyramids inside each circle represent the levels within each sector (subnational, local government and community), and the nine circles around the disaster management continuum of readiness, response and recovery represent the nine key essential services, which are defence, law and order, finance, transport, telecommunication, energy, food, water and health. The readiness framework approach thus illustrates the interdependence of all sectors of society.

Many analysts consider that the global system is dysfunctional, both in defining the problems and in committing to collective responses, and they consider that the significant imbalances of power and resources should be addressed on a global scale (Labonte et al., 2004). At the same time, the dynamics of the new constellations of power must be better understood, such as the uncertainty about the role of emerging economies: as they gain power, their responses to many of the global challenges will define whether fair globalization and a more equitable global system become a reality.

Many of the health problems that governments confront today transcend national borders and are part of a complex web of interdependence. The separation between domestic and foreign policy agendas has become blurred, and the new geopolitical constellations significantly affect the role and position of many countries in the European Region – indeed of Europe as a whole – in the global arena. Parts of Europe are becoming considerably poorer and have to make hard choices about health and health systems. To resolve these problems, health ministries find themselves working at several levels, with overlapping networks of actors with competing agendas, both at home and abroad, as in the present economic downturn. In this critical situation, it has become obvious that health ministries do not have much bargaining power in many countries. This problem has been analysed in detail for the system changes after the breakdown of the USSR (Fidler & Szabó, in press).

The United Nations, with its universal membership, has been moving towards new models for facilitating and coordinating international engagement as traditional forms of cooperation between states are challenged, supplemented and sometimes replaced by new, more flexible types of organizations, alliances and networks (Orr, 2011). Three examples are the Committee on World Food Governance for health in the 21st century



Fig. 1. Readiness framework to prepare the whole of society for a disease outbreak

Source: WHO (2009).

Security, the high-level Energy and Climate Change Advisory Group and the Global Fund to Fight AIDS, Tuberculosis and Malaria.

The Committee on World Food Security, an intergovernmental body established by the Food and Agriculture Organization of the United Nations in 1974, was reorganized in 2009 to include a wider group of stakeholders and to increase its ability to promote polices that reduce food insecurity. The aim was to make the Committee the most inclusive intergovernmental platform for collaboration to ensure food security.

The United Nations Secretary-General established the high-level Energy and Climate Change Advisory Group. Its Chair, Kandeh K. Yumkella, Director-General of the United Nations Industrial Development Organization, said (United Nations, 2010), "Governments alone will not be able to deal with the challenges. We need a commitment from all sectors of society, including the private sector, academia and civil society, as well as from international organizations and nongovernmental organizations."

Nevertheless, many international organizations and many countries are ill prepared for the complex processes of multistakeholder diplomacy that are required. Health ministries find themselves involved increasingly with ministries responsible for foreign affairs and for economic cooperation and development and with international financial bodies that now consider health part of their toolbox because of its new relevance (Kickbusch, 2011). For many European countries, the European Union (EU) has added an additional level of power and complexity, as all countries are bound by a growing number of international agreements that are related to health but are not primarily health agreements. Most countries lack coherence among these many portfolios, and the health sector frequently lacks power to obtain commitment for a health agenda. This is where heads of government play a central role.

In an interdependent world, the economic effects of health and health security on other sectors and the whole of society are becoming increasingly evident and are changing the societal approach to health. As health issues affect other stakeholders negatively, they will increasingly call for governance and institutions that can respond and deliver a more efficient health system or better health security. First, there is concern about how the growth of the health sector affects other sectors of government and overall growth and productivity, especially in the countries in which expenditure for the health sector is growing more rapidly than the overall economy. The impact and capacity of the health sector are also becoming relevant in relation to outbreaks such as SARS, avian influenza, pandemic influenza (H1N1) 2009 and, most recently, the outbreak in Europe of infection with a deadly strain of *Escherichia coli* in 2011. The economic cost of the SARS outbreak was estimated to be ϵ_7 billion to ϵ_{21} billion, and the locally contained outbreak of plague in Surat, India, in 1994 was estimated to have cost $\epsilon_{1.4}$ billion, and the 1997 avian influenza epidemic in China, Hong Kong Special Administrative Region was estimated to have cost hundreds of millions of euros in lost poultry production, commerce and tourism (Robertson, 2003).

The 2011 outbreak of *E. coli* infection severely affected European farming and food retailing, as some countries banned the import of certain vegetables and consumers refrained from buying certain fresh products, leading to a dramatic decline in sales. The amount proposed by the EU in aid to European farmers for their losses was ϵ 210 million. The severity of the economic impact has led to political strain between countries, action by the EU and consideration of legal consequences in relation to cross-border compensation for farmers and other businesses affected. Governments, business and citizens are not yet well prepared to respond to such outbreaks at a whole-of-government and a whole-of-society level, and new forms of organization and coordination that allow for more rapid, efficient action are being discussed at the national, European and global levels. Uncertainty remains a defining factor in relation to such outbreaks; other sectors expect the health sector to minimize the impact on their areas of responsibility. At the same time, society expects a high level of security in population health. This is one of the reasons the European Centre

for Disease Prevention and Control was established in 2005 as an EU agency for strengthening Europe's defences against infectious diseases, in partnership with national health protection bodies.

Society's resilience is tested not only by systemic shocks and outbreaks but also by problems that have been gathering momentum for over a century but have been tackled with traditional approaches to policy and governance. Rapid urbanization, epidemiological shifts, demographic transitions, climate change, competition for scarce natural resources, widening economic disparities and the introduction of new technologies – from social media to synthetic biology – are profoundly affecting the health and well-being of societies. These are also interdependent wicked problems, in ways that are not yet fully understood, and there is no way to fully measure their impact on the economy and society. Countries struggle to address these problems, as well as the vulnerability brought on by change, but are hampered by two major factors. First, cross-sector and cross-border collaborative efforts are constrained by path dependence, policy silos, competing interests, unbalanced resource distribution and different systems of values and beliefs. Second, change is often difficult to achieve given strong private-sector interests, which are well organized and coordinated at the global level. In Europe, efforts to coordinate have an additional level of complexity owing to the power of the EU and the power and resource imbalances among countries.

Complexity: the understanding of health has changed and expanded

According to Fuerth (2009):

Complexity theory offers a much more realistic description of the flow and interplay of events. It brings to the study of human affairs, the sense that everything is indeed related to everything else, however inconvenient that may be for established disciplines, or for organizations based on bureaucratic insularity. It warns us to disregard the claims of ideologists and propagandists that there are unique, permanent solutions to major issues. It trains us instead to view issues, policies and the consequences of policies as parts of an unceasing interaction. It alerts us to the constant potential for abrupt, discontinuous forms of change. It helps us to understand why only the law of unintended consequences stands intact over the ruins of policies based on single concepts and rigid plans.

Another approach to governance implies a change in the perspective on the issue to be dealt with. WHO's definition of health as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (WHO, 1946) goes beyond disease categories. Today, this definition is reinforced by a perception of health both as an outcome of a wide range of political, social and economic developments and as an asset linked to the capabilities and resources of individuals, communities and society as a whole. The knowledge society, democratic development, the nature of health problems and technological innovation all point towards accepting complexity as a key characteristic of a 21st-century perspective of health and health risks. In health, this view is recognized in several ways: for example, by referring to the widespread use of tobacco or obesity as social epidemics, communicated diseases or commodity-driven pandemics because of the many factors that contribute to their spread. In terms of complexity, strategies to control such epidemics must work at many levels, and their impact reaches far beyond the health outcomes:

they also have economic, social and political effects as well as unintended consequences, which many health-centred analyses neglect (Slama, 2005).

Complex adaptive systems are (Glouberman et al., 2003):

... made up of many individual, self-organizing elements capable of responding to others and to their environment. The entire system can be seen as a network of relationships and interactions, in which the whole is very much more than the sum of the parts. A change in any part of the system, even in a single element, produces reactions and changes in associated elements and the environment. Therefore, the effects of any one intervention in the system cannot be predicted with complete accuracy, because the system is always responding and adapting to changes and to the actions of individuals.

Several authors have suggested that health be understood as a complex adaptive system that results from the multiple interactions and dynamic processes that are embedded in other complex systems. Many modern health problems and the complex nature of chronic diseases therefore require a systems perspective, which includes understanding the overall interdependence of all stakeholders and the social nature of risk, its equity dimensions and individual motivations. Changes are required at both the policy and organizational levels and at the level of the community and individual, as expressed in many health policy documents. Nevertheless, despite this knowledge and evidence, many governments have not responded with a whole-of-government or whole-of-society approach.

From a systems perspective, three approaches are relevant: (1) Health is produced and maintained through a complex adaptive system of interactions between individuals and their environment as well as between physiological, mental and behavioural factors, sociodemographic factors and socioeconomic status (Glouberman et al., 2003). (2) Health development in turn creates further processes, which affect other complex systems. The most obvious case is increased health and life expectancy and the demographic and epidemiological transitions that are redefining every area of personal and social life and policy. (3) Health can also be understood as an emerging property of other complex adaptive systems, such as the global food system.

Systemic risks require whole-of-government and whole-of-society approaches, because they affect the systems on which society depends, including health, transport, environment, agriculture and telecommunication. Investigating systemic risks therefore transcends an analysis of agents and consequences to focus on interdependence and spillover between risk clusters (Klinke & Renn, 2006). Two examples are particularly pertinent.

The report of the Commission on Social Determinants of Health (2008) shows that health is itself a property of other complex systems, from employment and work to transport and housing, that it relates to the social stages of industrialization, urbanization and globalization and, most importantly, that it relates to differential exposure to risks and differential coping capabilities, which are determined by the distribution of power, money and resources in society. These causes of the causes require a new approach to measurement and a new perspective on policy on equity. Unlike more traditional approaches to epidemiology, which address the identification of individual risk factors, an approach based on complexity highlights the wider environment within which systemic risks to health arise, the social gradient being one of the most obvious. This also means that other sectors achieve positive health effects, with no involvement of the health sector; this is particularly true of certain fiscal measures and redistributive policies. For example, countries with less social inequality also tend to have less health inequality and enjoy higher overall health status.

The links between food, food security, sustainable development and the systemic health risks obesity and diabetes clearly exemplify the need for a broader perspective (Kickbusch, 2010; WHO Regional Office for Europe, 2007). For example, the most important risk factors for type 2 diabetes are obesity, physical inactivity, a diet with low fibre and a high calorie count and smoking, which interact with other factors such as age, genetic factors and early-life nutrition (Fig. 2).



Fig. 2. Simplified map of foresight (scenario planning as a tool for strategic decision-making) for obesity

Source: Finegood et al. (2010).

These risks themselves are determined by structural factors, such as the extent of social stratification, industrialization, urbanization and globalization, which affect an individual's access to health care and exposure to environments that promote smoking or to obesogenic environments, which in turn depend on social norms, local food culture and urban infrastructure. Therefore, very few of the necessary interventions for addressing systemic risks and social determinants of health can be implemented by the health sector alone, or even at all.

Although production is frequently asserted to follow the patterns of food demand on the market, there are good reasons to think that food production has become dissociated from market demand and that many other factors distort the market. Forms of food production determine not only the safety of food products but also their nutritional and dietary value. Food production methods and the factors that influence them are thus an integral part of the patterns of foodrelated ill health. Environmental issues, especially the need for farming methods that are sustainable in the long term, influence food production. Broad concurrence can be foreseen between the production of food for human health and the production of food for environmental protection. Nutrition and environmental policies can thus be set in parallel, as outlined in the WHO European Action Plan for Food and Nutrition Policy 2007–2012 (WHO Regional Office for Europe, 2007). Food production affects human health not only through food consumption but also through nature and the sustainable development of the rural economy, which have implications for rural employment, social cohesion and leisure facilities. These in turn foster better mental and physical health.

Most interventions are broad, structural and related to policy rather than specific clinical interventions (Whiting et al., 2010), particularly in relation to the distribution of income, consumption and wealth. An analysis by the OECD (Slama, 2005) suggested that multipronged approaches are up to twice as effective as the single most effective intervention for comparable cost–effective-ness; this is most clearly demonstrated in tobacco control. Of particular importance are leverage interventions, which create positive system dynamics for effecting social change. Such systemic approaches also tend to be more sustainable, as the 30 years of experience in tobacco control show. They are frequently implemented in the face of organizational inertia and strong opposition from sectors with competing values and interests and with extensive financial resources. Whole-of-government and whole-of-society approaches therefore require a window of opportunity (Kingdon, 1995): a unique constellation that brings together cultural shifts, political will and political feasibility.

Co-production: the new role of citizens and civil society

Co-production of health

During the 20th century, citizens changed how they approached both health and governance, as individuals and as civil society communities and organizations. Many current health challenges require a unique mixture of structural and behavioural change and of agency and political action. Individual choices contribute to both health successes and health failures, but they are embedded in socioeconomic and cultural environments. Using the term obesogenic for environments that encourage unhealthy eating or discourage physical activity expresses this clearly and indicates the changes people must make in their lives, particularly at the local level. This understanding of obesity governance is itself a result of experience gained in 30 years of tobacco control.

Health activism has been pivotal in bringing about changes in how societies govern health and disease: from local action to address environmental health risks to global action on HIV infection and AIDS, access to medicines and tobacco control. The governance of health cannot be understood without the action of civil society at all levels: "a vast, interconnected and multilayered

nongovernmental space" (Keane, 2003). This form of democratization of health is linked to new participatory features of modern democracy, which includes both "strong traces of pluralism and strong conflict potential" (Keane, 2003).

The rise of civil society took place in the last decades of the 20th century; in the 21st century, there is again something inherently new about how individuals most recently empowered by new technologies and forms of communication are taking charge of their health and demanding more from governments, health professionals and industry. Citizens today are activists in two dimensions. They are engaged in co-producing health by engaging in two simultaneous and often interacting approaches: shared governance for health, which incorporates awareness that success requires committing to a whole-of-government and whole-of-society approach; and shared health and care, which relate to the collaborative, communicative relationships between individuals within the more narrowly defined health sector in their capacity as citizens, patients, caregivers, consumers or health care professionals. This co-production of health is enabled by the proliferation of new technologies and access to information, which are shifting the nature of European societies from industrial to knowledge-based and are redefining the structures and working modes of health organizations and agencies. Health is increasingly part of a larger knowledge economy based on knowledge work that requires intelligent users and learning organizations to produce successful outcomes. Health literacy is therefore a critical factor in both health governance and governance for health.

Co-production of knowledge

Co-production of health implies co-production of knowledge. If governance for health is to be effective, it must be participatory and include but transcend expert opinion. People's experience and people's perceptions are beginning to count in new ways. A knowledge society requires anticipatory governance. This (Kloprogge & van der Sluijs, 2006):

... underscores shared governance, the co-production of knowledge by science and society and the inseparable nature of facts and values where both of these elements need to be made explicit and deliberated to achieve innovation in governance. Beyond the traditional expert knowledge, anticipatory governance responds to uncertainty by mobilizing through an extended peer community of epistemic cultures, local and tacit knowledge and ways of knowing to enable a more robust and enriched framing of science and technology.

As many viewpoints as possible, from experts and laypeople, should be included to minimize the risk that unknown biases allow problems to be incorrectly defined or framed. "This broader approach to knowledge (including but beyond expert opinions) allows an examination of the value and power systems that shape visions of the socio-technical future(s)." (Kloprogge & van der Sluijs, 2006; Özdemir & Knoppers, in press).

Change based on co-production of health and knowledge is occurring in all sectors and areas of life (Fig. 3), in the demand for healthier food, greener technologies and cleaner streets, more rapid development of new medicines and treatments, more participatory forms of health care and the recent popular uprisings against unaccountable government regimes. People can be empowered to act. Shared governance for health, the focus of this study, is both a driver of change





and a response to the changing political contexts of the 21st century: it "envisions individuals, providers and institutions to work together to create a social system and environment enabling all to be healthy" (Ruger, 2010). The challenge for governments is to build the capacity for efficient co-production of public value in complex, interdependent networks of organizations and systems across the public, private and not-for-profit sectors (World Economic Forum, 2011) and to measure the value produced in new ways that enable evaluation of whether societies are moving towards greater well-being. According to Ruger (2010), "Shared health governance encompasses consensus-building around substantive principles and distribution procedures, accurate measures of effectiveness, changes in attitudes and norms and open deliberations to resolve problems. ... The process embodies roles and responsibilities for all parties – individuals, providers and institutions."

Governance

Three key governance dynamics

According to the Commission on Global Governance (1995), governance is:

... the sum of the many ways individuals and institutions, public and private, manage their common affairs. It is a continuing process through which conflicting or diverse interests may be accommodated and cooperative action may be taken. It includes formal institutions and regimes empowered to enforce compliance, as well as informal arrangements that people and institutions either have agreed to or perceive to be in their interest.

As outlined above, governments must act differently in today's world. They are the means by which state power is used, and, as power diffuses throughout the layers of modern societies, the role of the state and the functions of government must adapt. In most countries in the WHO European Region, the incumbent government and the state are clearly distinct, and power is constitutionally distributed between a parliament, a national government and various levels of subnational government. Adherence to the principles of good governance and the willingness and ability to introduce new governance approaches depends largely on the strength of the democratic institutions. Different political parties interpret the role of the state differently as they hold office; this political factor is very relevant to the governance of health, for example in relation to public policy and state interventions, in particular in relation to equity and health. With respect to health, some governments opt for individual lifestyle interventions, often based on arguments of individual freedom of choice; others address structural social or environmental factors, which often include measures to restrict markets or address redistribution. Sandel (2010) summarized these differences as revolving around three key ideas: maximizing welfare, respecting freedom and promoting virtue. These ideas are the core of the political debate on health at all levels of governance.

The role of the state is viewed differently in different parts of Europe, reflecting each country's historical development and political culture. Nevertheless, throughout Europe, there are long-term trends in the role and functions of the state and a shift in the separation of powers (Riklin, 2006), including in health. In general, most European democracies but not all are moving from authoritative to collaborative, participatory strategies of problem-solving and policy-making. Although the effects of the economic downturn cannot yet be fully gauged in some countries, all indications are that a return to monopolistic strategies will not resolve the issues.

A recent report by the World Economic Forum (2011) notes that efficiency and effectiveness in today's complex, interlinked, rapidly changing environment requires redesigning the structures and processes of governments to encompass a new set of actors and tools. Governments must remain relevant by being responsive to rapidly changing conditions and citizens' expectations and

must build capacity to operate effectively in complex, interdependent networks of organizations and systems in the public, private and not-for-profit sectors to co-produce public value.

Because of this shift, the word governance is increasingly used to describe new processes. The term is the subject of a wide range of academic literature, and many attempts have been made to categorize this body of work, distinguish schools of thought and develop explicative theoretical frameworks (Bell & Hindmoor, 2009; Frederickson, 2005; Hill & Lynn, 2005; Klijn, 2005, 2009; Osborne, 2010; Peters, 2001; Rhodes, 2000; Willke, 2007). In its broadest sense, governance determines how societies are steered and how power and resources are distributed. It also requires new forms of leadership. Governance undergoes major historical shifts and changes, some revolutionary and others more drawn out and incremental but not necessarily less transformational. de la Chapelle (2008) drew attention to the fact that, just as scientific paradigms change in scientific revolutions (Kuhn, 1969), political paradigms of the basis of governance systems and structures also change once they can no longer maintain their legitimacy or lose their problem-solving capacity.

In the current period of change, governance illustrates moments in the continual process that has been driven and shaped by trends in the distribution of power and authority. Diffusion of governance, monitory democracy and shared value are the three dynamics that shape understanding of the mechanisms and institutions of governance as it shifts from authoritarian to collaborative. They constitute a distinct group of political determinants of approaches to governance for health. According to Scharpf (1994):

... the advantages of hierarchical coordination are lost in a world that is characterised by increasingly dense, extended, and rapidly changing patterns of reciprocal interdependence, and by increasingly frequent, but ephemeral, interactions across all types of pre-established boundaries, intra- and inter-organisational, intra- and inter-sectoral, intra- and international.

Diffusion of governance

Innovation in governance extends beyond government to various actors in society. Nye & Kamarck (2002) proposed that the functions of the state would diffuse simultaneously in several directions in response to incongruence between state capacity and increasingly complex challenges (Fig. 4). Diffusion is seen in how governance is approached today at the level of both government and organizations. It is the basis of whole-of government and whole-of-society approaches. Moore & Hartley (2010) argued that the new class of governance innovation crosses the boundaries of organizations, creating network-based public service production systems, which tap into new pools of resources, exploit government's capacity to convene, exhort and redefine private rights and responsibilities and redistribute the right to define and judge the value of what is being produced.

Fig. 4. Diffusion of governance in the 21st century



Source: adapted from Nye & Kamarck (2002).

Examples include contracting child protection services to community groups, creating partnerships for renovating parks in the United States, creating a congestion charge for vehicle use in London and the law in Singapore that holds children to their customary duty to care for their ageing parents. In each of these examples, the challenges are so great that no single organization could bring about change; public coffers and rosters cannot be the only sources of financing and labour, defining the public purpose and deciding to use public assets; and the government is not solely responsible for mobilizing and deploying resources. The public services that result are evaluated not only for efficiency and effectiveness but also for justice, fairness and communitybuilding (Moore & Hartley, 2010).

The literature on governance addresses the patterns of power-sharing and analyses the relationships between organizations and their contexts, between sectors and policy fields, between states, between states and non-state entities and, most importantly, between and within the networks that function within these groupings. New terms have emerged to describe governance, including network governance, meta-governance, governance without government and the hollowed-out state. All refer to the consequences of diffusing governance and power. An example of the collaborations involved in governance is the partnership to control malaria (Fig. 5).


Source: Roll Back Malaria Partnership (2010).

The main issues discussed in the literature on governance are the role and authority of the state in the 21st century and the interfaces of local, national, regional and global policy. The debate on health includes three schools of thought on governance.

First, some authors argue that states have been significantly weakened, both nationally and internationally, especially by the increasing power of private corporations (Cashore, 2002; Strange, 1996; Vogel, 2008). They therefore juxtapose government and governance in a situation in which governments always appear to lose out.

Second, others draw attention to the fact that the scope, scale and nature of government action in the context of new policy problems and following the systemic shocks of the past decade are actually expanding (Bell & Hindmoor, 2009; Crawford, 2006; Jessop, 2002; Moss et al., 2006; Sorenson, 2006). This expansion is seen in both traditional and new types of hierarchical regulatory action, new relations between states and new, more complex multistakeholder relations.

Within health, governments are expanding their reach into many sectors of society. For example, moves to reduce tobacco consumption during the past decade resulted in new regulatory measures that reached into areas of life in which the state had not previously intervened. Negotiating major international treaties such as the WHO Framework Convention on Tobacco Control (WHO, 2003a) and continuing negotiations on its implementation require a vast, multistakeholder approach. Tobacco regulation affects not only the tobacco industry and tobacco farmers, producers and merchants but also, for example, the catering and advertising industries, customs authorities and agencies that control the trafficking of illicit goods. Similar processes are underway in relation to obesity control.

A third school of thought (Keane, 2009; Michalski et al., 2001) highlights the dynamism that has emerged in governance because people are becoming directly involved in matters affecting their quality of life, such as urban development, environmental issues and food systems and health. Citizen-controlled local food councils and neighbourhood councils are examples.

Diffusing governance leads to horizontal, multilevel, multistakeholder approaches. Three types of horizontal or shared governance are relevant in diffusion: whole-of-government, multistakeholder and multilevel governance. All three approaches are frequently used together, to merge into a fourth: the whole-of-society approach. More traditional, hierarchical forms of governance do not become irrelevant (as some of the literature on governance implies) and are not totally replaced by new mechanisms, but rather the approaches to governance indicated above complement each other and are combined and adapted in many different ways during periods of change to increase problem-solving capacity. This is certainly true in health, for which multistakeholder approaches are accompanied by increased interest in public health law at all levels of governance (Institute of Medicine, 2011).

Expansion of monitory democracy

Democracy today is fundamentally different from what it was 100 or even 50 years ago. Political scientists such as John Keane (2003, 2009) and Frank Vibert (2007) debated the extent to which political paradigms have changed and how the last part of the 20th century transformed understanding and concepts of democracy. They drew attention to new power-scrutinizing institutions that have arisen in a wide range of policy fields and interests, where they "raise the level and quality of public monitoring of power, often for the first time in many areas of life, including power relationships beneath and beyond the institutions of territorial states" (Keane, 2009). Given the strong relevance of co-production (as outlined above), this group of political determinants of health significantly affects the problem-solving capacity of societies in relation to health.

Keane (2009) argued that a new mode of democracy is emerging, which he calls monitory democracy. Legitimacy and accountability are also shifting from authoritarian to collaborative processes as citizens demand not only to be better informed but also to become involved in new ways.

Legitimacy has been defined as "a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs and definitions" (Suchman, 1995). Legitimacy depends on the level of acceptance by various direct and external audiences. Issues of representation, inclusiveness and transparency are critical in building the necessary trust for legitimacy. In addition, legitimacy depends on the ability of the process to engage stakeholders in a meaningful dialogue, in which they feel ownership and the possibility of deriving benefits. This requires full transparency, openness and respect. Nascent multistakeholder processes can be seriously jeopardized if the partners do not regularly verify the transparency of the perceptions and expectations of participation (Burger & Mayer, 2003; Vallejo & Hauselmann, 2004).

Monitory democracy is post-representative democracy, in which the devices of power-monitoring and power-controlling extend sideways and downwards through the whole political order. It represents the age of surveys, focus groups, deliberative polling, online petitions and audience and customer voting, as well as audit commissions, citizens' assemblies, Internet-based think-tanks, local assemblies, regional parliaments, summits and global watchdog organizations. It represents the transition from a political geography of one person, one vote and one representative to one person, many interests, many voices, multiple votes and multiple representatives. As outlined in the report of the Commission on the Measurement of Economic Performance and Social Progress (Stiglitz et al., 2009), what is measured is of increasing importance if people do not find that the data provided by government and other social institutions reflects their everyday experience. This clearly undermines trust. One reason most people perceive themselves to be worse off even though average income is increasing is because they are worse off. In the health arena, in which evidence plays a significant role, this is especially important, as discussed below.

According to Mulgan (2000):

... [Accountability] describes the process of being called "to account" to some authority for one's actions It is external, in that the account is given to some other person or body outside the person or body being held accountable; it involves social interaction and exchange, in that one side, that calling for the account, seeks answers and rectification while the other side, that being held accountable, responds and accepts sanctions; it implies rights of authority, in that those calling for an account are asserting rights of superior authority over those who are accountable, including the rights to demand answers and to impose sanctions....

But more recently, "accountability" has been extended beyond the concerns of representative democracy and into areas where the various features of core "accountability" described above no longer apply. For instance, "accountability" now commonly refers to the sense of individual responsibility and concern for the public interest expected from public servants ("professional" and "personal" accountability), an "internal" sense which goes beyond the core external focus of the term. Secondly, "accountability" is also said to be a feature of the various institutional checks and balances by which democracies seek to control the actions of the governments (accountability as "control") even when there is no interaction or exchange between governments and the institutions that control them. Thirdly, "accountability" is linked with the extent to which governments pursue the wishes or needs of their citizens (accountability as "responsiveness") regardless of whether they are induced to do so through processes of authoritative exchange and control. Fourthly, "accountability" is applied to the public discussion between citizens on which democracies depend (accountability as "dialogue"), even when there is no suggestion of any authority or subordination between the parties involved in the accountability relationship.

As power diffuses throughout government and society, a range of new actors, from donor agencies to central banks and economic rating agencies, such as Standard and Poor's, are playing roles with implications that stretch beyond national borders. At the national level, such agencies range from public service providers like the British Broadcasting Company's independent news services and the French Agency for Food, Environmental and Occupational Health and Safety to risk assessment and monitoring agencies such as Sweden's Children's Ombudsman. This new type of unelected authority accompanies the transition to a knowledge society. Although many of these entities are self-organized, others were established by elected governments but are often run by unelected officials who work at a distance fairly removed from the reach and rhythm of periodic elections. Vibert (2007) called this phenomenon "the rise of the unelected" and considered these actors to be a new, fourth branch of democratic government, in addition to the executive, legislative and judicial separations of power. A mechanism that is increasingly used (also in health) is the commission, although new types of health agencies are also being created, such as the Australian National Preventive Health Agency and the Commission for a Socially Sustainable Malmö.

The Australian National Preventive Health Agency will support the Council of Australian Governments and the Australian Health Ministers' Conference in addressing the increasingly complex challenges associated with preventing chronic disease. The Agency will promote disease prevention by providing evidence-informed advice to health ministers, supporting the acquisition of evidence and data on the state of preventive health in Australia and the effectiveness of preventive health interventions and setting national guidelines and standards for preventive health activities. The advisory council will consist of one representative of the Commonwealth, not more than two members representing the governments of the states and territories and at least five but not more than eight other members with expertise in preventive health.

The Commission for a Socially Sustainable Malmö (Sweden) was appointed to draft a plan, objectives and strategies for reducing health inequality in the City of Malmö. The plan will guide the City's efforts to reduce differences in health between population groups. The starting-point is a comprehensive national public health objective of "creating social conditions for good health on equal terms", with a focus on influencing the structural requirements for health. The Commission's aim is to provide the City of Malmö with a foundation and some tools for controlling, setting priorities and realizing activities that affect the requirements of all Malmö citizens for health and that reduce health inequality. It is an independent commission, the work of which should be

transparent. It is intended to invite organizations and Malmö citizens to share their experiences and take part in analysis and in shaping strategies. It is important that the Commission's work be made available and be communicated both internally and externally, such as at meetings, hearings and lectures for and with entities such as citizens, tradespeople, businesses, interest groups and educational institutes.

Digital governance

Over the last decade, digital governance (or e-governance) has become a widely discussed subject as well as a new reality for how the state and society communicate and interact. More and more local governments are using the Internet to communicate with their citizens. Although there is a digital divide between OECD and non-OECD countries, cities show an interesting mixture of the use of digital governance, with such cities as Bratislava, Ljubljana and Zagreb on a par with larger cities such as London, Paris and Tokyo. A growing number of municipalities publish the results of performance measurements on their web sites. The number of web sites providing data from such measurement systems had doubled globally by 2007, indicating a move towards more open coproduction of governance by the state and society, which depends on the diffusion of empowering technology throughout society on a scale unknown since the printing press was invented and proliferated. Digital governance will also help countries that are currently reviewing their government structures because of large political shifts. For example, the 2011 Moldova ICT Summit built on the summit on information and communication technology held in 2010 and brought together stakeholders from the Government, the Moldovan business community, multinational companies and academe to discuss international and national trends and challenges facing the industry. In particular, the Summit elaborated a plan for digital transformation (including health) in the Republic of Moldova, by effectively integrating technology into public and private life, and it formulated a proactive agenda for strengthening the competitiveness of the national information and communication technology sector.

Prague has been a rising star in the rankings for municipal digital governance, going from number 15 to number 2 between 2007 and 2009 and outranking even the world's most-connected city, Seoul, Republic of Korea, in terms of web site usability and citizen participation. Prague's rapid climb shows what can be accomplished with political will and dedicated information technology officials and public managers (Holzer et al., 2010).

According to the World Economic Forum (2011):

Governments of the future must be fully tech-enabled with a tech-savvy workforce. Policy, legal and regulatory frameworks and processes must be redesigned to align with the dynamics of the networked world. Information infrastructures must support new modes of collaboration, information and intensive governance. Even in the poorest regions, brilliant examples of service innovation have been driven through the use of cheap mobile and wireless technologies. FASTer (Flatter, Agile, Streamlined and Tech-enabled) governments are more likely to attract and retain a new breed of civil servant who thrives on problem-solving, results and innovation.

Shared value

The most widely disputed issue around the new governance is the role of business. This role has been challenged in many ways in relation to the governance of health, the most prominent examples being "the tobacco wars" (Brandt, 2007) and, more recently, debates about the undue influence of the food industry (Nestle, 2007). The social responsibility of industries and business sectors is discussed regularly, as societies and policy-makers deal with the wicked problem of epidemics driven by commodities and communication, such as childhood obesity. The safety of products, consumer health and the occupational safety and health of employees continue to be in focus from a health perspective. Advances in these fields have often been regulated at the national level and, more recently, European level. International legislation on access to medicines, restricting harmful products and promoting consumer health is often difficult to enact, given the power of the private sector. Nevertheless, there have been successes, such as the WHO Framework Convention on Tobacco Control (WHO, 2003a) and the Doha Declaration on the TRIPS Agreement and Public Health (World Trade Organization, 2001).

In 2001, members of the World Trade Organization adopted a ministerial declaration to clarify ambiguities between application of the principles of public health by governments and the terms of the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement). Although acknowledging the role of intellectual property protection "for the development of new medicines", the Declaration also recognizes concern about its effects on prices. The Doha Declaration affirms that "the TRIPS Agreement does not and should not prevent members from taking measures to protect public health". In this regard, the Doha Declaration enshrines the principles that WHO has publicly advocated and advanced over the years: reaffirmation of the right of members of the World Trade Organization to make full use of the safeguard provisions of the TRIPS Agreement to protect public health and enhance access to medicines by poor countries.

As the noncommunicable disease pandemic spreads, business has been seen as contributing significantly to its causes, particularly in countries with weak legislative structures. Governments and international organizations experience pressure from a highly globalized industry that can often harm health. For example, in 2003, the United States Sugar Association, Inc., comprising more than 300 companies, threatened to exert pressure on the United States Congress to stop funding WHO if the Organization did not rescind its recommendations on sugar consumption in its report on diet and nutrition (WHO, 2003b).

During recent decades, therefore, the gap between the interests of business and society has grown. Consumers and nongovernmental organizations have focused critical health campaigns on the pharmaceutical industry and tobacco, alcohol and food and beverage companies. Many of these industries could contribute significantly to health and its determinants if they were to reorient their premises. One business leader said, "Companies have a responsibility towards all stakeholders, including shareholders and the societies that make their very existence possible." (Murthy, 2011). During the past few decades, several companies have begun to reconsider their responsibility in relation to noncommunicable diseases and are providing support to the global NCD Alliance and other initiatives, such as the Clinton Foundation/Beverage Industry Agreement on Eliminating Soft Drinks Sales in Schools.

The leading beverage companies in the United States have made a three-year commitment with the Alliance for a Healthier Generation, a joint initiative of the American Heart Association and the William J. Clinton Foundation, to remove full-calorie soft drinks from schools across the country and replace them with lower-calorie, smaller-portion products. As a result of the agreement, the calories in beverages shipped to schools have been reduced by 88% since 2004 (American Beverage Association, 2010).

The challenge of giving back was addressed by a movement for increased corporate social responsibility, a form of corporate self-regulation in which businesses monitor and ensure active compliance with the spirit of the law, ethical standards and international norms. The movement was begun in relation to sustainable development – for people, the planet and profit; today, health features more prominently. The United Nations Global Compact, launched in 2000 to involve the business sector in achieving the Millennium Development Goals, is part of the drive for more private-sector involvement, especially by charitable contributions. Activities for corporate social responsibility are now ubiquitous, with proactive outreach to communities and others, including governments and civil society organizations. In global health, business has come to play a significant role in many partnerships, in the governance of organizations such as the Global Fund to Fight AIDS, Tuberculosis and Malaria and in promoting social business solutions in relation to nutrition and information technology. Today, the business community's involvement in health has extended beyond the usual partners, such as pharmaceutical companies, to include mining, information technology providers, food and beverage companies and a growing number of privatesector foundations. Murthy (2011) stated, "We are moving beyond traditional philanthropy, where companies only provide funds and direction, to deeper carefully managed relationships that share personnel, expertise and ideas."

In 1999, WHO launched the Roll Back Malaria Project in Azerbaijan, entirely financed by Eni, an international oil and gas company, as part of its programme for community relations. It helped the Ministry of Health to strengthen its malaria prevention and control activities. Eni works with many international organizations, governments and nongovernmental organizations in about 80 countries.

The Global Alliance for Clean Cookstoves was launched in 2010 as a public–private partnership to save lives, improve livelihoods, empower women and combat climate change by creating a thriving global market for clean, efficient household cooking solutions. The Alliance's 100 by '20 goal calls for enabling 100 million homes to adopt clean, efficient stoves and fuels by 2020. The Alliance works with public, private and not-for-profit partners to help overcome the market barriers to producing, deploying and using clean cookstoves in low- and medium-income countries.

The benefits and disadvantages of corporate social responsibility continue to be widely debated and are viewed critically not only by civil society but also by economists, who see the approach as a mindset "in which societal issues are at the periphery not at the core" (Porter & Kramer, 2011). As health becomes a major economic driver, linked to business innovation and growth, such as the role of the information technology industry in mobile health, new approaches can be conceived to how social and business interests interact. This is illustrated "when a firm invests in a wellness programme. Society benefits because employees and their families become healthier, and the firm minimizes employee absences and lost productivity." (Porter & Kramer, 2011). Fig. 6 shows areas in which the connections are strongest.

Fig. 6. The connection between competitive advantage and social issues



Source: Porter & Kramer (2011).

Porter & Kramer (2011) define shared value as policies and operating practices that enhance the competitiveness of a company while simultaneously advancing economic and social conditions in the communities in which it operates. Creating shared value involves identifying and expanding the connections between social and economic progress.

These authors suggest that corporate social responsibility, social business and social entrepreneurship are initial steps towards changing the role of business in a whole-of-society approach to health, in which business moves beyond philanthropy and charity. Porter & Kramer (2011) note that "societal needs not just conventional economic needs … define markets" and argue for a shared-value approach by business, government and society, in which social concerns result in both productivity and well-being. One method for measuring and providing incentives for a shared-value approach would be using the concept of a health footprint, which has proven to be useful for motivating businesses and consumers to adopt better practices in relation to hydrocarbon consumption (Raynaud & Jané-Llopis, in press). Similar to the movement for greener businesses and consumer preferences, health is moving from corporate social responsibility to become embedded directly in strategies and business models.

The changing nature of policy-making

A key problem in policy-making in the 21st century is dealing with uncertainty. Because of the developments described above, the nature of policy-making has changed. It has become more complex as it attempts to address wicked problems and systemic risks, confront multiple possible futures, include many players and stakeholders and reach agreement on courses of action based on the understanding that the amount of evidence is always increasing and is rarely final. An example is the interface of the global food system with the increasing prevalence of obesity and its long-term impact on health and life expectancy and also on agriculture and animal health. This complexity creates difficulty in predicting a clear trajectory for development, in having full confidence in calculations of risk or in defining any combination of behaviour and technology as sustainable. New forecasting methods indicate that "future death rates and health care expenditures could be far worse than currently anticipated" (Reither et al., 2011). Once these new calculations are accepted, they will clearly affect the amount of investment in a given problem, in this case obesity.

These uncertainties constitute a major problem for traditional bureaucracies. First, they are averse to risk and unlikely to act when they cannot be sure of the result; second, they have no incentive to take initiatives beyond their own sector. It is, however, no longer sufficient to address the major social challenges through a sectoral division of labour and with a short-term perspective when the challenges themselves interact, are interconnected and have long-term effects. It is also no longer adequate to apply a linear approach to policy-making, because (Government of Australia, 2007): "part of the wickedness of an issue lies in the interactions between causal factors, conflicting policy objectives and disagreement over the appropriate solution. Linear thinking is inadequate to encompass such interactivity and uncertainty." The question also arises of who should be involved in formulating policy and making decisions and, in the context of numerous regional and global agreements, at what level of governance the final authority lies. Doing only one thing is no longer safe and efficient; in the new environment, governments must use a wide range of approaches.

The move to policy-making through highly networked, multilevel, multistakeholder governance is not recent; it is a transition that has gathered momentum since the advent of modern public administration and is culminating now. All agencies and branches of government, in health and in other fields, are undergoing this change, as are businesses, associations, communities and individuals. The transition requires a new way of making policy. Nine features are required of policy-making in the 21st century. It must be (Government of Northern Ireland, 1999):

- 1. forward looking: taking a long-term view based on statistical trends and informed predictions of the probable impact of the policy;
- 2. outward looking: taking account of the national, European and international situation and communicating policy effectively;
- 3. innovative and creative: questioning established methods and encouraging new ideas and open to the comments and suggestions of others;
- 4. using evidence: using the best available evidence from a range of sources and involving stakeholders at an early stage;
- 5. inclusive: taking account of how the policy affects the needs of everyone directly or indirectly affected;
- 6. joined-up: looking beyond institutional boundaries to the government's strategic objectives and establishing the ethical and legal basis for policy;
- 7. evaluative: including systematic evaluation of early outcomes into policy-making;
- 8. reviewing: keeping established policy under review to ensure that it continues to address the problems for which it was designed, taking into account associated effects; and
- 9. learning lessons: learning from experience of what works and what does not.

To fully understand the extent of the shift, it is helpful to recapitulate the change from public administration to new public management and then to new governance that includes whole-of-society and whole-of-government approaches. Much of the transformation has occurred in the health sector, which has undergone continual management reforms in some countries.

The late 19th century saw the development and growth of public administration as the dominant form of governance. In public administration, authority is distributed hierarchically within specialized subunits, or bureaux, the functions and jurisdiction of which are dictated by stable, exhaustive rules and in which functionaries of the state are technical professionals whose appointments to public service were based increasingly on merit and not on birthright or favour with leadership (Osborne, 2009; Weber, 1922/1978).

Between the late 1970s and the early 21st century, the old national and international bureaucracies came under criticism. They were portrayed as bloated, inefficient and too slow to react to new, complex, interconnected challenges such as stagflation, the oil monopolies of the Organization of the Petroleum Exporting Countries, chronic poverty and instability in low- and mediumincome countries and global financial crises, such as the stock market crash of 1987. This portrayal also applied at the international level, where the increasing numbers of public-private partnerships and product-development partnerships saw closer cooperation between international organizations and the private sector in what some observers have called market multilateralism (Bull & McNeill, 2007). The increasing influence of neoliberal economic theory, coupled with new types of social challenges, tested the capabilities of public administration as the dominant mode of governance and brought about a move, especially in the Anglo-Saxon countries, towards a competing regime referred to as new public management.

New public management reforms were modelled on the private sector and made the management styles in public organizations less hierarchical, more focused and more entrepreneurial, emphasizing control of input and output, evaluation, performance management and audit, the use of market principles such as competition and contracts for resource allocation and outsourcing government functions to more efficient actors in civil society and the private sector (Hood, 1991). New public management reforms tended to ignore the problems of horizontal coordination and the ensuing fragmentation of effort, thereby actually hampering efficiency and effectiveness to some extent (Christensen & Laegreid, 2007).

New governance, whole of government and whole of society

Whereas new public management focuses on reforms in public-sector organizations and on improving their efficiency and effectiveness by applying market mechanisms, new governance is based on the changing context of the practice of public administration and the resulting changes in interjurisdictional, cross-sectoral and third-party relationships (Frederickson, 2005; Klijn, 2005). The two approaches described below, the whole-of-government and the whole-of-society approaches, both include multistakeholder, multilevel governance. They require that governments take on diverse role: as commander-in-chief, imposing mandatory regulations that define boundaries and rules for consumers and all stakeholders; as a provider of public goods and services; as the steward of public resources; and as a partner in collaborative undertakings with other jurisdictions, businesses and civil society organizations (Dubé et al., 2009a).

Whole-of-government approach

Several countries have shifted to a whole-of-government approach, sometimes called joined-up government, which represents the diffusion of governance vertically across levels of government and areas of governance as well as horizontally throughout sectors.

The Federal Sustainable Development Strategy for Canada makes environmental decisionmaking more transparent and accountable to Parliament. It does so by establishing a framework for sustainable development planning and reporting with the following elements: an integrated, whole-of-government picture of actions and results to achieve environmental sustainability; a link between sustainable development planning and reporting and the core expenditure planning and reporting system of the Government of Canada; and effective measurement, monitoring and reporting to track and report on progress to Canadians. The Strategy was conceived and implemented collaboratively at all levels of the Government, to improve transparency and accountability. The Minister of the Environment has overall responsibility for the Strategy.

The whole-of-government approach is often considered to be the appropriate way of addressing wicked problems within government. The activities are multilevel, spanning local and global activities and actors and increasingly involving groups outside government. This approach has become highly relevant in setting public policy for health. It requires that all actors consider improved health and well-being as a social goal that requires joint action.

In South Australia, the Department of the Premier and Cabinet is the principal government agency

that gives specialist advice on policy to the Premier and ministers, supports the Cabinet and provides direction and leadership to the public service. The Department oversees implementation of South Australia's strategic plan, has overall responsibility for relations between the federal and state governments and leads government initiatives in a range of services that benefit other government agencies and the community. The integration of a health-in-all-policies approach, known as health lens analysis, directly into the South Australia strategic plan was crucial for a whole-ofgovernment approach to health and well-being.

ActNow BC is a cross-government health promotion initiative that seeks to improve the health of British Columbians by taking steps to address common risk factors and reduce chronic disease. The British Columbia Ministry of Health, which initiated the programme, knew that it could not achieve its targets alone, since too many factors that influence people's ability to make healthy choices, such as access to affordable, healthy food, are beyond its scope. To overcome this hurdle, the Premier appointed a minister of state for ActNow BC, to lead a government-wide approach and coordinate the participation of all provincial ministries. The Ministry of Transportation provides community funding to install or widen cycling lanes, and the Community Food Systems for Healthy Living programme, supported by the Ministry of Agriculture and Lands, is introducing community gardens and kitchens in 12 First Nations communities. All ministries are required to use a health promotion lens.

The whole-of-government approach is often used to address a perceived lack of command and control from the centre in order to achieve a priority or for overall goals, with a new organizational design and reorganization. This approach requires building trust, a common ethic, a cohesive culture and new skills. Whole-of-government approaches consume time and resources but can be particularly suited for addressing complex policy issues. They require the full support of the overall system and top-level decision-makers. Conklin (2006) defined the approach as creating a shared understanding of a problem and a shared commitment to its possible solution. Typical of whole-of-government approaches are central strategic units, for example in the prime minister's office, sometimes devoted to specific priorities. They also include cabinet committees, interministerial or interagency units, intergovernmental councils, task forces, lead agency assignments, cross-sectoral programmes and projects and (as in the United States) so-called tsars, who are responsible for overseeing policies and convincing agencies to work together. They can be found in nearly all fields of public policy; in health, a global AIDS tsar or a drug tsar plays an important role. One aspect is finding ways to work together more pragmatically and intelligently rather then creating new, formalized structures. This approach is also referred to as network governance (Christensen & Laegreid, 2007).

A whole-of-government approach includes the complexity of multilevel governance – working at the national, regional and local levels of government. Many countries have devolved responsibility for public health, health care and a range of the determinants of health to the regional and local levels. Multilevel governance meets the idea that governance emerges from interactions among a range of state and non-state actors operating at different jurisdictional, geographical and organizational levels with different forms and degrees of authority (Hooghe & Marks, 2003). Multilevel governance, which is often related to global and regional governance, involves both

horizontal and vertical interaction among local, national, regional and global policy arenas. It highlights the important role of local governments in leading new approaches to governance for health.

The EU has created a number of specialized agencies in the European Region, such as the European Centre for Disease Prevention and Control, the European Agency for Safety and Health at Work and the European Food Safety Authority, which bridge the interests of the EU, EU countries and, ultimately, citizens.

New forms of collaboration in global governance have attracted attention. The number of organizations associated with global health has increased significantly. The movement for legitimate (involving people living with HIV) and effective global governance to stop the spread of HIV infection and AIDS has been a major catalyst for the diffusion of governance. UNAIDS was created to coordinate responses to the global challenge, also involving civil society. New multistakeholder governance arrangements have been instituted by agencies such as the Global Fund to Fight AIDS, Tuberculosis and Malaria and the GAVI Alliance.

In 2001, local strategic partnerships were set up in local authority areas across England. These statutory bodies bring together all public-sector service providers, businesses and civil society groups to provide unified public services in each area and to overcome the previous fragmented approach to delivering public services.

The whole-of-government approach emphasizes not only improving the coordination and integration of government activities but also focuses coordination and integration on the social goals that the government represents. Health in all policies is one whole-of-government approach to giving priority to governance for health and well-being, which involves sectors other than the health sector in both directions: how other sectors affect health and how health affects other sectors. The analysis Crossing sectors by the Public Health Agency of Canada et al. (2007) confirmed that the balance appears to be shifting from intersectoral action for health to intersectoral action for shared societal goals.

Based on successful government modernization policies in Canada, New Zealand and Singapore, the Federal Government of the United Arab Emirates designed a holistic approach to achieving more flexible, forward-looking joined-up government. This approach is successful because an agency at the centre of government champions the modernization process and derives its power from the leadership of the country. Such an agency has four roles: championing overall policy-making through national strategies; ensuring accountability and proper implementation by managing the performance of and coordinating cross-cutting programmes; enabling flexibility and continually reinventing government through institutional efficiency and service excellence; and supporting cabinet decision-making and related stakeholder communications. Fig. 7 shows these roles and related activities (World Economic Forum, 2011).

Whole-of-society approach

The whole-of-society approach adds yet another layer of complexity to the diffusion of governance. Usually, wicked problems require more than a whole-of-government approach: solutions require involving many social stakeholders, particularly citizens. Increasingly more platforms and alliances are therefore being created for action on shared social goals. The aim of a whole-ofsociety approach is to expand the whole of government by emphasizing the roles of the private





Source: adapted from World Economic Forum (2011).

sector and civil society as well as a wide range of political decision-makers, such as parliamentarians. The policy networks that have emerged within government increasingly extend beyond government to include other social actors, particularly for considering wicked problems such as obesity (Dubé et al., 2009b) and pandemic preparedness (WHO, 2009).

Based on WHO recommendations on how to establish a whole-of-society approach to pandemic preparedness, the following actions are recommended for governments.

- Establish a cross-government committee or task force to coordinate activities. •
- Establish a forum involving civil society and the private sector.
- Assign one agency, department or ministry to coordinate the multisectoral agencies or or-• ganizations involved.
- Integrate issue-specific plans with national management processes, plans and committees.
- Set up explicit legal and ethical frameworks for policy implementation.

- Formulate clear, issue-specific plans, including the chain of command, the human, material and financial resources required and where they will be obtained.
- Establish locations, structures and standard operating procedures.
- Align issue-specific plans with those of neighbouring countries.
- Promote the participation of the private sector.
- Share plans to facilitate public understanding and cross-border consistency.
- Consult neighbouring countries (in meetings or workshops) about aspects of their plans that have regional or cross-border implications.
- Identify the social groups that are likely to be most vulnerable and most severely affected and establish measures to protect them.
- Determine which agencies and organizations will deliver services most appropriate to each vulnerable population at all targeted locations.
- Stipulate the level of government (national, regional, local or community) responsible for each action.
- Provide advice to local authorities on planning, and conduct training for effective dissemination at all levels.
- Involve national and international organizations, and designate a coordination body.
- Conduct drills, simulations or exercises at least annually to test the robustness of the established plan; identify gaps, and revise the plan accordingly.
- Involve the private sector, civil society and international organizations in simulation exercises.
- Evaluate the lessons learned.

The whole-of-society approach implies new, greater capacity for communication and collaboration in complex, networked settings and highlights the role of the mass media and new forms of communication. Each party must invest resources and competence into the strategy. By engaging the private sector, civil society, communities and individuals, the whole-of-society approach increases the resilience of communities to withstand threats to their health, security and wellbeing. Paquet (2001) stated, "Collaboration is the new categorical imperative." The whole-ofsociety approach goes beyond institutions: it influences and mobilizes local and global culture and mass media, rural and urban communities and all relevant policy sectors, such as education, transport, the environment and even urban design, as demonstrated with respect to obesity and the global food system.

For example, in 1987, a group of intensive-care specialists in New Zealand decided to become involved in preventing road traffic injury. The core of this activity was changing people's discourse on road traffic injuries by rejecting the concept of accidents. A communication campaign became a successful lobbying action based on clever use of the mass media, which included raising awareness by ruthlessly and immediately exploiting every crash and every death, personalizing the victims and communicating in well-informed, innovative ways. The term crash was publicized in all the mass media, adopted by the Coroner in reporting road deaths and was received favourably by the Minister for Health. The installation of median barriers became an issue for the electronic and print media, politicians and the public. A petition from Auckland with 16 000 signatures was presented to Parliament in July 1988. Because of the increasing pressure on the Ministry of Transport, the Prime Minister announced a new policy in which "all new motorways will have median barriers as part of design and all old motorways will be retrofitted". These installations were completed in Auckland by 1992 (WHO Regional Office for Europe, 2004).

Whole-of-society approaches are a form of collaborative governance that emphasizes coordination through normative values and building trust among various actors in society. The approaches usually imply steering instruments that are less prescriptive, less committed to a uniform approach and less centralized and hierarchical. Joint goals and targets, such as in Healthy People 2020 in the United States of America (Davis, 1998; Federal Interagency Workgroup, 2010; United States Department of Health and Human Services, 2010), are a good basis. Many EU policies have a similar basis, given the wide consultation that precedes them, usually involving all relevant stakeholders, public as well as private, although not with the same level of influence.

Healthy People 2020 in the United States reflects input from a diverse group of people and organizations. The vision, mission and overall goals provide structure and guidance for achieving the objectives. Although they are general, they indicate specific, important areas in which action must be taken if the United States is to achieve better health by the year 2020. Developed under the leadership of the Federal Interagency Workgroup, the framework of the project is based on exhaustive collaboration between the United States Department of Health and Human Services and other federal agencies, public stakeholders and an advisory committee.

In the EU, policy is increasingly such that (Greer & Vanhercke, 2010):

... deliberative consensus is often regarded as provisional; multilevel – connecting different levels of government, crucially this means that it is not strongly hierarchical or hierarchical at all; a departure from representative democracy in which accountability is defined in terms of transparency and scrutiny by peers; a combination of framework goals set from above combined with considerable autonomy for lower-level units and agents to redefine the objectives in light of learning; and built on reporting on performance and participation in peer review in which results are compared with those pursuing other means to the same general ends.

The term multistakeholder governance, also known as devolved governance, is frequently used in the context of whole-of-society approaches. The stakeholders usually include the state, the private sector, nongovernmental organizations and other members of civil society, such as civil foundations (Burger & Mayer, 2003). This concept has entered the public health debate, particularly the argument of increased problem-solving efficiency, also described as results-based governance, and legitimacy. Although the involvement of civil society is now an accepted feature of many governance processes, the involvement of the private sector is still contested, particularly on grounds of legitimacy.

For example, to extend its reach, ActNow BC has more than 70 partners, including nongovernmental organizations, communities, schools and the private sector, which are delivering Act-Now BC programmes and services throughout British Columbia. One programme, in partnership with the British Columbia Dairy Foundation, purchased 900 refrigerators for schools to store fresh food, such as milk, fruit and vegetables (Health Council of Canada, 2007). 3.

Governance for health and well-being

For decades, the health sector has argued that health depends on policies and processes that originate beyond its jurisdiction, and the history of most major health advances reflects this view. The required approach to health has been described in many ways: intersectoral action for health, healthy public policy and, more recently, health in all policies, shared governance for health and governance for health determinants. Based on the arguments outlined in the first two chapters of this study, on the dynamics of new governance and the changing nature of policy-making, we have worked from a process- and relation-based understanding of governance.

The report of the Commission on Social Determinants of Health (2008) describes once more the many social determinants that constitute the causes of the causes of good or bad health and the many fields of social and political action that are required to effect a change to fairer distribution. It linked the intersectoral debate with a commitment to equity more strongly than before. Nevertheless, the failure in many countries to achieve real, sustained involvement of other actors in health and equity suggests that clearer understanding of health and governance is needed to move forward. This will require joint recognition of systemic risks and wicked problems and working together through both whole-of-government and whole-of-society approaches, accepting the need to build convergence to reach better outcomes.

The most important change the whole of government and the whole of society need to make is to consider that improved health and well-being represent an overarching social goal that requires common action. Considering health in the policies of other sectors becomes part of their social commitment both to improve well-being and to govern better.

History of horizontal governance for health in three waves¹

First wave: intersectoral action and primary health care

Intersectoral action for health is defined as efforts by the health sector to work collaboratively with other sectors of society to improve health outcomes.

In the Declaration of Alma-Ata (WHO, 1978), the participants in the International Conference on Primary Health Care stated that the role of governments in health, in all countries, both developing and developed, in the late 20th century should be redefined and strengthened and that intersectoral action is a key to better health. The Declaration called for a comprehensive health strategy that not only provided health services but also addressed the underlying social economic and political causes of poor health.

This call to engage in coordination for health can be considered the first of the systematic attempts to highlight the relevance of other sectors in modern health policy for improving population health. The governance innovation was based on a model of rational policy-making initiated by and under the leadership of the health sector. The health sector follows a rationale of the ends justifying the means and shows other sectors (such as education) how to contribute to health and how this in turn will contribute to economic and social development. Today, the term intersectoral action for health is used very broadly to denote a wide variety of forms of action and decision-making across sectors. Peake et al. (2008) deleted the collaboration imperative and defined intersectoral action for health as "actions undertaken by sectors outside the health sector, possibly, but not necessarily, in collaboration with the health sector, on health or health equity outcomes or on the determinants of health or health equity".

Second wave: health promotion and healthy public policy

The Adelaide Recommendations on Healthy Public Policy (WHO, 1988) state that "Healthy public policy is characterized by an explicit concern for health and equity in all areas of policy and by an accountability for health impact."

The health promotion movement reinforced call to engage other sectors for health in the 1980s. The Ottawa Charter for Health Promotion (WHO Regional Office for Europe, 1986) introduced "build healthy public policy" as one of the five action areas for health promotion, the others being "create supportive environments", "strengthen community action", "develop personal skills" and "reorient health services". Healthy public policy was to be implemented in concert with the other four strategies of the Charter to be fully effective.

The Ottawa Charter stated unequivocally that health is created in the context of everyday life, where people live, love, work and play. It expanded the concept of determinants of health to include environmental challenges and people's empowerment. Although its concept of governance was still centred on state and public-sector policy, it opened strategic thinking towards new types of partnerships and approaches. The focus on new lifestyle and environmental challenges to health called for regulation in sectors other than health (both nationally and internationally), while the focus on supportive environments introduced achievement of a common health purpose through settings approaches, such as the WHO European Healthy Cities project, health-promoting schools and healthy workplaces. The health promotion approach addressed the interfaces between levels of governance, stakeholders and organizations in other sectors. Health promotion professionals were considered to be brokers for health rather than implementers.

The Second International Conference on Health Promotion in Adelaide, Australia, in 1988 addressed selected policy issues that required concerted action across government sectors, such as women's health, food and nutrition, tobacco, alcohol and creating supportive environments for health. The recommendations (WHO, 1988) urged governments to act on the underlying elements of a healthy society: now referred to as the causes of the causes. They stressed the relevance of equity as a determinant of health and introduced the concept of accountability for health effects (WHO, 1997a). This thinking led to the use of health impact assessment in policy.

Health promotion and healthy public policy gave rise to many innovations for governance. In the settings approach, health promotion reintroduced place as a key category in public policy for health. Initiatives such as the WHO European Healthy Cities project re-established the importance

of local action and the links between urban planning, zoning, green spaces, housing, transport, neighbourhood cohesion and health. In the setting and networking approaches, health promotion and healthy public policy are more of an incrementalist than a rational policy model; in this innovative social model, the health sector plays the role of an advocate and broker. To a greater extent than in the first wave of intersectoral action, the second wave recognized that complex policy-making must take into account the interests, values and established positions of institutions and personal ambitions. After two decades of focusing on individual behavioural change, health promotion showed (as did other areas of policy, such as the environment) that the problems have to be addressed at the causal level and that joined-up policy approaches are necessary (Fig. 8). This highlighted the accountability of other sectors for health and promoted health impact assessment.

Fig. 8. Determinants of population health



Source: Dahlgren & Whitehead (2006).

Today, the terms intersectoral action and healthy public policy are often used indiscriminately; however, intersectoral action does not necessarily include a policy component, and healthy public policy does not necessarily require intersectoral action. A single sector, such as finance or education, can implement policies that considerably affect heath, even if that was not the intent and without the health sector being involved. Increasing taxes on alcohol, tobacco or soft drinks can affect health even if the measure is introduced for fiscal reasons.

Third wave: health in all policies

According to Ståhl et al. (2006):

The health in all policies approach considers the impacts of other policies on health through health determinants when policies of all sectors are being planned, decisions between various policy options are being made, and when implementation strategies are being designed. It also examines the impacts of existing policies. The ultimate aim is to enhance evidence-informed policy-making by clarifying for decision-makers the links between policies and interventions, health determinants and the consequent health outcomes.

Intersectoral action for health usually took the shape of projects (Public Health Agency of Canada et al., 2007), which provided an opportunity to test elements of horizontal health governance. In Europe, wide-scale health promotion projects, such as Heartbeat Wales (Capewell et al., 1999) and the North Karelia Project (Puska et al., 1995), gave further impetus and more experience. There are, however, fewer examples of initiatives with a systems approach at the level of government followed by a move towards a whole-of-society approach. Finland comes closest, as it has been implementing a political paradigm shift for several decades. The Finnish approach to horizontal health governance has focused more on redefining health within government overall, eventually leading to the third wave of health in all policies (Puska & Ståhl, 2010).

In 1972, the Economic Council of the Government of Finland included health in its deliberations, and Finland's public policy gave priority to optimal population health and its fair distribution. Finland had continued to use various approaches to horizontal health policy since the 1970s, particularly in its response to high levels of cardiovascular disease. It adopted a national health programme based on intersectoral action in 1986, which was used as a model for healthy public policy in the Ottawa Charter for Health Promotion (WHO Regional Office for Europe, 1986). The national policy was acted upon, particularly in areas such as agriculture and commerce; a key factor was to reduce agricultural subsidies for products with a high fat content, such as milk, and subsidies were used instead to promote domestic berry and vegetable products. Based on its experience, Finland introduced a resolution on health protection in all policies during the Finnish Presidency of the EU in 1999. This led to several actions in the EU, one of the most important being the launch of sector-specific health impact assessment in all EU policies in 2000.

Finland built on its experience in horizontal governance for health and made health in all policies a major theme of the Finnish Presidency of the EU in 2006. At the end of its Presidency, the Council of the European Union (2006a) adopted a conclusion that invited the EU:

- to apply parliamentary mechanisms to ensure effective cross-sectoral cooperation for a high level of health protection in all policy sectors;
- to take into account and carry out health impact assessments of legislative and non-legislative proposals; and
- to consider the health impact, with particular emphasis on equity in health, of decision-making across all policy sectors.

Health in all policies is clearly built on the first two waves – the collaborative approaches of primary health care and health promotion – drawing on their strengths and learning from their short-comings. Health in all policies is an innovation in governance in response to the critical role that health plays in the economies and social life of 21st-century societies, to take governance beyond intersectoral action and healthy public policy, even though the terms continue to be used inter-changeably. Health in all policies is a network approach to policy-making throughout government – a whole-of-government approach with a focus on health – based on acceptance of different interests in the policy arena and the importance of building relationships among policy-makers to ensure policy outcomes.

The Australian Management Advisory Committee (2004) said:

Whole of government denotes public services agencies working across portfolio boundaries to achieve a shared goal and an integrated government response to particular issues. Approaches can be formal or informal. They can focus on policy development, program management, and service delivery.

The Adelaide Statement on Health in All Policies (WHO and Government of South Australia, 2010) included this approach, maintaining that a new social contract between sectors is required to advance human development, sustainability and equity and to improve health outcomes. This requires a new form of governance, with joined-up leadership within governments, across sectors and among levels of government. Governance for health and well-being requires both whole-of-government and whole-of-society approaches to address the causes of the causes and wicked problems in health, such as obesity and mental health. Health should be negotiated with others, with health not always in the lead. The health sector should be considered "one of a number of intersectoral players in a web that makes use of new kinds of leadership, skills, information and intelligence" (WHO, 1997a).

Involving the private sector and civil society in meaningful ways in designing and implementing policy is increasingly important during the transition to a knowledge society, in which power and intelligence are diffused throughout society. Nevertheless, the role of government must remain strong and clear, especially in relation to unfair distribution. With a better coordinated, integrated, capable, whole-of-government approach, the state is better equipped to steer and collaborate with society and promote good governance for health, well-being and equity.

Health ministries: a modern concept that is still taking shape

The health sector has experienced a transformation similar to that of governance, and health and well-being merit their place among the policy fields enumerated in the OECD description (OECD, 2001). Functionally separate health ministries are a relatively new phenomenon. In the mid-19th century, many cities had public health departments with broad authority. The New York Board of Health, for example, had the statutory power in 1849 "to do or cause to be done any thing which in their opinion may be proper to preserve the health of the city" (Rosenberg, 1962).

National health ministries came later. In Germany, for example, the Federal Ministry of Health was created as a separate ministry in 1961; it then underwent a variety of changes to include responsibilities such as youth, family and women, only to become a separate ministry again in 1991.

In 2002, it was given the responsibility for social affairs, before its portfolio was again reduced to health in 2005. In France, ministerial departments are even more fluid and depend on allocations from the Prime Minister. After its establishment in 1921, France's Ministry of Health was expanded to include other portfolios, such as labour, pensions, the family, older people and people with disabilities. Currently, France's Ministry of Health is also responsible for sports and women. In Sweden, the portfolio of the current Ministry of Health and Social Affairs includes social services and security, health and medical care, public health and the rights of children, older people and people with disabilities. The Ministry has four ministers: one for health and social affairs, one for public administration and housing, one for social security and one for children and the elderly.

In western European countries, portfolios are often changed during reorganization because of increasing attention to health and health issues, such as moving the responsibility for health insurance from the health to the social portfolio, as in France. Such decisions are driven by political considerations: in countries governed by coalition governments, ministry portfolios are adapted according to the availability of possible ministers and their importance and personalities.

The portfolios of health ministries in eastern European countries undergo less change. For example, in Croatia, the Ministry of Health and the Ministry of Labour and Social Welfare were merged in 2003 into the current Ministry of Health and Social Welfare. An exception is Hungary, where, after elections in April 2010, portfolios underwent far-reaching changes, with the creation of a super-ministry, the Ministry of National Resources, which combines the portfolios of social affairs, health, education, youth, sport and culture. Health ministries in central Asian countries have remained more static. For instance, the portfolios of Kazakhstan's and Turkmenistan's health ministries have not changed substantially since they were created after the countries became independent in 1991.

In the 20th century, the main role of health ministries was to organize health care, which became an increasing financial and organizational challenge. Public health has frequently not received the necessary priority, and only a few health ministries have systematically used healthin-all-policies approaches. Despite the epidemiological transition to noncommunicable diseases, the focus remained on care and cure rather than on health promotion and disease prevention. Further, most countries paid little attention to the policies of other sectors, even though intersectoral communication was highlighted in many health policy documents and in the Health for All targets adopted by the WHO Regional Office for Europe in 1984.

In the 21st century, the role of health ministries must change yet again into the whole of government and the whole of society. The health sector is part of an intersectoral web, with new kinds of leadership, skills, information and intelligence used to achieve societal goals through a range of collaborative mechanisms.



4.

Good governance for health and well-being

What is good governance?

Several international organizations have drawn up principles of good governance for governments, including the EU, the OECD and the World Bank. To some extent, these principles have emerged in parallel to guidelines for good corporate governance as standards for the behaviour of companies. More recently, such standards are also being applied in nongovernmental organizations. Understanding of good governance in relation to governments is well captured in the World Bank's definition of governance (World Bank, 2011):

We define governance as the traditions and institutions by which authority in a country is exercised for the common good. This includes (I) the process by which those in authority are selected, monitored and replaced, (II) the capacity of the government to effectively manage its resources and implement sound policies, and (III) the respect of citizens and the state for the institutions that govern economic and social interactions among them.

Major donors and international financial institutions have increasingly made reforms to ensure good governance a condition for receiving aid and loans, and similar standards apply to accession to the EU. According to the United Nations Development Programme (UNDP), good governance is accountable, transparent, responsive, equitable and inclusive, effective and efficient, participatory, consensus-oriented and follows the rule of law (Fig. 9). Fidler & Szabó (in press) provide more information on measures of good health governance and an analysis of governance for health and health governance in central and eastern Europe.

The OECD (2012) takes a similar but broader approach and defines good, effective public governance as follows: "[It] helps to strengthen democracy and human rights, promote economic prosperity and social cohesion, reduce poverty, enhance environmental protection and the sustainable use of natural resources, and deepen confidence in government and public administration." Good governance is therefore an amalgam of guiding principles that transcend specific policies, sectors and actors. In this regard, good governance is better understood as a process than as a destination, as a dynamic rather than a static state of affairs. Good governance is an ideal; the application of good governance principles without proper understanding of the context in development is often considered unreasonable. We consider the concept of good governance to be a necessary, intellectually helpful concept although good governance is frequently reduced to fighting corruption in the larger United Nations context. It can assist each health system in analysing progress towards good governance through the eight dimensions of the UNDP definition. Various tools and mechanisms for doing so are cited throughout this publication; for example, using digital governance (e-governance) to increase both transparency and





Source: UNDP (1997).

participation. The term good governance is sometimes used interchangeably with the concept of ethical governance; however, good governance for health and well-being has two larger features: the relationship between values and evidence and the role of guiding value systems for ethical governance. We propose four value orientations.

Role of guiding value systems

Values have become central to the health debate, reflecting a quest for orientation in a pluralist, global, multistakeholder world: democratic societies must continually debate what makes a good society. WHO Member States commit themselves to the values stated in the WHO Constitution (WHO, 1946) and in many other documents at both the global and regional levels. The call for Health for All highlighted the value of equity; the WHO HIV/AIDS strategy under the leadership of Jonathan Mann reinvigorated human rights. Such initiatives are not always easy to translate

into national policies in the face of many outside pressures. In 1984, the Member States in the WHO European Region agreed on a set of values in the context of European targets for health for all (WHO Regional Office for Europe, 1985). In June 2006, the health ministers of EU countries agreed that health services must be underpinned by the "overarching values of universality, access to good quality care, equity and solidarity" (Council of the European Union, 2006b). The Council based its statement on the following common values and principles.

- Universality means ensuring access to health care for every person.
- Equity means equal access to health care according to need, regardless of ethnicity, gender, age, social status or ability to pay.
- Solidarity is closely linked to the financial schemes of health systems. It requires countries to
 ensure universal access to the necessary health-care services by fair allocation of the costs
 of health and health services among all citizens. This is achieved mainly through social health
 insurance based on solidarity, in which the rich subsidize the poor and the healthy subsidize
 the sick.
- Access to good-quality care refers to the pledge of governments to provide the highest possible quality of care, which is patient-centred and responsive to individual needs.

These values must remain central to the health systems of Member States in the WHO European Region. As noted above, understanding of health today transcends the health system. Health and well-being are considered essential to good governance in general and the responsibility of the whole of government and the whole of society. Health must therefore be based on values and principles that transcend the increasingly fluid boundaries of health systems and care. This was well stated by Bjarne Hanssen in 2009, when he was Minister of Health and Care Services in Norway (Strand et al., 2009):

Reducing health inequity is a whole-of-government challenge. It requires intersectoral action, which is demanding. Nevertheless, it is the only way forward if we are to achieve our aim of reducing health inequity that is socially produced and unfair. The Norwegian Government is committed to action for a society in which there is equal opportunity for a healthy life for every individual.

Based on analysis of the literature, we propose that four interlinking concepts constitute the value framework of good governance for health: health as a human right, health as a component of well-being, health as a global public good and health as social justice.

Health as a human right

The new European policy for health, Health 2020, is based on broad agreement that health policies, programmes and practices can directly influence the enjoyment of human rights, and lack of respect for human rights can have serious health consequences. Protecting human rights is recognized as key to protecting public health. A human rights-based approach to health is therefore a governance approach for realizing and giving operational expression to the right to health and related rights. Health is a human right that is indispensable for fulfilling the fundamental principle of the inviolability of human dignity. This right has been recognized in many international treaties and conventions, as has the impact on other human rights on health, for example, in the WHO Constitution (WHO, 1946), in the Universal Declaration of Human Rights (United Nations General Assembly, 1948) and in the International Covenant on Economic, Social and Cultural Rights (United Nations General Assembly, 1966), a legally binding instrument of international law.

Every state has ratified at least one international human rights treaty that recognizes the right to health. The right to health or health care is also referred to in 115 state constitutions. It is frequently associated only with individual access to health care and medical facilities, whereas the right to health also includes other factors that can lead to a healthy life, including the protection of health:

- safe drinking-water and adequate sanitation;
- safe food;
- adequate nutrition and housing;
- healthy working and environmental conditions;
- health-related education and information; and
- gender equity.

As defined by the Office of the United Nations High Commissioner for Human Rights and WHO (2008), the right to health embodies a set of unalienable freedoms and entitlements, such as:

- the right to a system of health protection that provides equality of opportunity for everyone to enjoy the highest attainable level of health;
- the right to prevention, treatment and control of diseases;
- access to essential medicines; and
- maternal, child and reproductive health.

Health as a human right is therefore both a legal obligation and a set of values applied in a human rights approach to global health.

Although public policy is always formulated within preset political ideas of what is ethical or acceptable in the 21st century, no sector or actor is exempt from respecting human rights, which are a central value of governance for health, as they touch on a myriad of issues, as set out above. By defining rights and duties, national citizenship defines the entitlements of a specific group of people, which must be guaranteed by the state, in contrast to needs, which an individual satisfies by looking to the market or kinship (Jenson, 2009). Human rights, however, transcend 19th- and early 20th-century notions of citizenship: they are universal and unalienable, based on human dignity and not on the regimes of civil and political rights that have defined the boundaries of the responsibilities and roles of the state, markets, communities and the individual.

Health as a component of well-being

The value of generating social wealth and social growth rather than economic growth that can be measured only in terms of gross domestic product has been discussed internationally for some time. Since 1990, the United Nations has regularly measured the well-being of countries with the Human Development Index, with the intention of shifting "the focus of development economics from national income accounting to people-centred policies" (UNDP, 2011). Since 2010, the Index has combined three dimensions: a long and healthy life: life expectancy at birth; access to knowledge: mean years of schooling and expected years of schooling; and a decent standard of living: gross national income per capita. In the 2011 Human Development Index (UNDP, 2011), the rank of the Member States of the WHO European Region ranges from 1 (very high) to 127 (medium) of 187 countries. Policies for well-being are considered one possible reorientation of 21st-century public policy goals that provide a range of possibilities for partnerships and joint action for health and well-being.

Many European organizations and countries have begun to redefine their goals. For example, the European Commission (2009) issued a policy paper, GDP and beyond: measuring progress in a changing world, based on extensive work by partners including the European Commission, the European Parliament, the Club of Rome, OECD and WWF. During the past decade, several countries, including Australia, Canada and the Netherlands, elaborated measures of well-being at the national level. In the United Kingdom, the Office of National Statistics has begun a national consultation on new measures of well-being, seeking the views of citizens and organizations. In Germany, a parliamentary study commission on growth, well-being and quality of life began work in January 2011 to determine how to complement measures of gross national product with ecological, social and cultural criteria. In France in 2009, the Commission on the Measurement of Economic Performance and Social Progress made suggestions about measuring societal wellbeing (Stiglitz et al., 2009). The Council of Europe introduced well-being for all, emphasizing that well-being cannot be attained unless it is shared. The Club de Madrid, made up of former heads of state, has been holding high-level forums within its Shared Societies Project, which gives current leaders a better understanding of the benefits of policies that strengthen social cohesion, the contribution of social cohesion to well-being and economic performance and the incentives and means to advance social cohesion (Birkavs & McCartney, 2011).

Within this shift in values, in which societies' success is measured in terms of well-being rather than economic growth, health is understood as an essential component of well-being and becomes a core element of the measure of success. The change shifts the emphasis in the economy from the production of goods to a broader measure of overall well-being, which includes the benefits of health, education and security, the effects of income inequality and new ways to measure the economic impact of sustainability on future generations. As Robert Kennedy said during a speech at the University of Kansas (United States of America) in 1968, "The gross national product does not allow for the health of our children, the quality of their education or the joy of their play." (John F. Kennedy Presidential Library and Museum, 1968). The pursuit of well-being therefore promotes health from a sectoral goal to an overall social goal, requiring commitment not only at the highest level of government but also the whole of society. By including subjective measures of well-being, it validates people's experiences and perspectives.

Health as a global public good

Such global challenges as climate change and infectious disease outbreaks (for example, SARS in 2003 and *Escherichia coli* in 2011) recall the values inherent in the concept of public goods, such as peace and security, law and order, street signs and road traffic rules: things in the public domain. If they are adequately provided, everyone can benefit from these goods; if they are underprovided and, for example, law and order suffer and crime and violence prevail, everyone may suffer. As challenges and their determinants cross boundaries and the nation-state becomes less effective in addressing these problems on its own, public goods become globalized. Thus, services and conditions once guaranteed by national and local authorities now require international cooperation between states at the regional and even global levels. Many global health challenges and their solutions have the properties of global public goods.

Nationally, the provision and governance of public goods pose special challenges known as collective action problems. Each good may be provided differently, involving different people with different incentives. The provision of global public goods is a highly complex governance process, involving many actors, levels and sectors. In the case of pandemic influenza (H1N1) 2009, many states had to act, many agencies in each country had to become involved, many parts of WHO played important roles, the pharmaceutical industry had to initiate vaccine production, and, last but not least, many people worldwide took precautionary measures or sought treatment in response to information campaigns by the mass media and other actors (such as schools and employers). The successful provision of most global public goods follows a summation process, in which several or all countries take national-level measures to correct underprovision of a global public good, such as enhancing tuberculosis control. Health as a global public good, with the slightly nuanced concept of global public goods for health, provides a value system that highlights the need for effective governance of interdependence. United Nations activities in relation to HIV infection and AIDS, climate change and women's and children's health reflect such a commitment to global public goods (Orr, 2011).

Health as social justice

Effective action against the health divide in Europe requires including health equity in the values that define good governance. A review of the social determinants of health and the health divide in the WHO European Region (Mackenbach et al., 2008) revealed wide health inequality across the Region and within countries. Unless urgent action is taken, these gaps will increase. Evidence shows that the lower a person's social position, the worse his or her health; in most cases, however, the evidence has not been strong enough to mobilize public outcry or to persuade governments that closing the gap in health equity is a top priority for the whole of government. Many

of the factors that shape the patterns and extent of health inequities in a country, including the nature and type of employment, housing, environmental conditions, income level, security, education and community resources, lie outside the direct control of health ministries. At the same time, many determinants of health equity and inequity are also priorities in other sectors, including educational performance, social inclusion, social cohesion, poverty reduction and community resilience and well-being. These determinants represent a meeting-point for common action among sectors that, if due attention is given to their distribution, will result in benefits for health and health equity.

Many countries with long experience in tackling health inequity are moving to an approach based on sharing goals on the determinants of equity with other sectors and stakeholders. In these approaches, health equity is increasingly one of several indicators of progress. Health equity can be considered a guiding value system to promote benefits that accrue to multiple sectors and all of society in terms of social cohesion and quality of life. A key area for action in whole-of-government and whole-of-society approaches to health equity is new or strengthened instruments and mechanisms to promote equity of voice and perspectives in decision-making.

Relationship between values and evidence

Good governance in the knowledge society has three components: knowledge, legally prescribed procedures and social values (Klinke & Renn, 2006). The co-production of knowledge by the state and society and the pursuit of better evidence drive contemporary policy, as manifest in new modes of democracy and governance through independent agencies and expert bodies. The more complex a governance process and the more stakeholders involved, the more important it is to have common values. It would be misguided to assume that any policy can be based solely on evidence; the production of knowledge and what is called evidence is always embedded within existing values and beliefs.

According to Özdemir & Knoppers (in press):

Social factors such as human values and ways of knowing – what we choose to know and how we know it – expressly impact what gets to be produced as scientific knowledge. The choice and framing of scientific hypotheses, experimental methodology and interpretation of data can all be influenced by experts' and their institutions' value systems that often remain implicit in scientific decision-making.

Evidence and expert advice are only one element of the co-production equation. Evidence for policy-making is constantly evolving; in some cases, the conclusions and recommendations of different sources are incomplete or contradictory. Governance in the knowledge society therefore requires decision-makers who are fully aware of the values that coexist with and are often inseparable from the evidence and allow their debate through participatory processes.

Values can be defined as broad preferences for appropriate courses of action or outcomes. They therefore reflect a person's sense of right and wrong and what ought to be. Values influence attitudes and behaviour and thereby shape policy-making and entire societies by setting the rules and standards (the principles) that determine acceptable (that is, ethical) actions in the area of family and community or in terms of governance of society and interactions between communities and societies with different values and principles. Values can be global and regional. The notions of equal rights for all and that people should be treated with respect and dignity are important values that are endorsed virtually universally in principles such as civil and human rights. The epistemology of values such as equity, social justice and human rights is based on moral philosophy. The epistemology of evidence, however, is based on the philosophy of logic and science. According to McQueen (in press), "These may be seen as very distinct traditions and ones that have often been at odds in European history." However, in the knowledge society, values and evidence are two sides of the same coin, which influence each other. Whether intentionally or not, evidence and values are applied together; the dichotomy between scientific fact and social beliefs is not nearly as substantial as it is commonly held to be, nor are the two easy to separate.

In responding to uncertainty in policy-making, the tendency has been to rely solely on evidence, overlooking the ways in which social values shape evidence. For example, the precautionary principle represents a value system that overrides evidence (or the lack thereof) as the deciding factor in managing risk. It states that, in the face of uncertainty, an innovation or action should be halted if there is a perceived risk for irreversible damage, whether or not there is scientific evidence for such risk. A belief in science is strongly held in European thought. Science seeks clear explanations of what works and why. Insofar as medicine is seen as a science and public health as a science-driven field of work, these disciplines are held accountable to the rigour of scientific proof. The rise of accountability, framed in terms such as evidence-based medicine and evidence-based policy, runs almost parallel to the rise of such value concerns as equity and social justice in the world of health. McQueen (in press) further explores the role of values in governance for health.

The precautionary principle was a response to environmental concerns and the convergence of public fear of the perceived risks of developments in the 1990s, such as genetically modified organisms, nuclear energy, ozone depletion and climate change, which collectively led to the concept of a risk society (Beck, 1992). This concept catalysed the emergence of governance mechanisms perceived to ensure certainty by preventing or stalling the irreversible environmental changes and social risks associated with emerging technologies. The precautionary principle changes the previously neutral position of science to one of a value system, such that, in the face of scientific uncertainty, "it is more responsible to accept the priority of fear over the predictions of hope in order to prevent potential irreversible damages" (Jonas, 1985; Özdemir & Knoppers, in press; Tallacchini, 2005).

The Institute of Medicine (2011) suggests that health in all policies can be "seen as a manifestation of the precautionary principle: first do no harm to health through policies or laws enacted in other sectors of government". It cites California's Clean Air Act as embodying this principle.

For example, the precautionary principle implies that the values used to govern should be scrutinized with a rigour equal to that with which evidence is sought and evaluated. Although the strong relation between social determinants and good public health have been known for decades, the report of the WHO Commission on Social Determinants of Health (2008) brought together this knowledge in a new way, supported by strong evidence. Nevertheless, knowledge is not enough for effective action against the value-related causes of poor health. "The science of how effectively to change these causes is highly problematic and, in reality, significant changes in the attributable causes may imply political philosophies that are themselves tied to values that may not be in concert with those of the underlying values that relate to good health." (McQueen, in press). For example, behaviour changes are critical in actions to fight risk factors for noncommunicable diseases. Basic values such as freedom of choice are, however, inimical to some actions for addressing determinants of health and influence the type of evidence and arguments that policy-makers of various political orientations are willing to accept.

A new discussion of values in governance for health is therefore essential. Ultimately, the ageold, false separation between science (such as evidence) and society (such as values) must be closed so that these two inseparable strands of knowledge can be interpreted and deliberated jointly. Good governance for health must be based on an expanded understanding of health, in which health is recognized as a core component of human rights, well-being, the global commons and social justice. With this understanding of good governance for health and recognition that the whole of government and society should take responsibility for good governance for health, a multistakeholder deliberation should be held to define universal values and guiding principles for health that transcend the existing ones. Sandel (2010) argued that debating differing positions on how equity and justice should be understood and addressed will strengthen societies. His call for politics of moral engagement fits well with the requirement for addressing the complex, diverse factors that shape decisions about the distribution of health and determinants of health.



5.

Smart governance for health and well-being

In a knowledge society, policy decisions based purely on normative considerations lose ground to decisions based on evidence. At the same time, decision-making requires new methods for coping with and accounting for the uncertainties that abound when knowledge – always questionable, always revisable – supersedes majority values as the basis for authority. Smart governance is one way of describing the major institutional adaptations being undertaken in public and international organizations in the face of increasing interdependence. Smart governance, a term coined by Willke (2007), is "an abbreviation for the ensemble of principles, factors and capacities that constitute a form of governance able to cope with the conditions and exigencies of the knowledge society" (Fig. 10).

Fig. 10. Smart governance for health and well-being



Introduction

This section suggests how 21st-century governance arrangements, multidimensional and complex health challenges and their status as wicked problem can be addressed. This requires an integrated, dynamic response across portfolios, making health a shared goal for all parts of government and linking it more explicitly to well-being. In the previous sections, we highlighted two features.

- Power and responsibility have diffused up, down and throughout the levels of government and into society. With shifts in approaches to democracy and shared value, these trends are coming together in new whole-of-government and whole-of-society approaches, which provide a new framework for designing and implementing public policy for health.
- The concept of good governance has been extended to include aspirations such as health and well-being. Values such as human rights, well-being, global public goods, social justice and equity are the principles that can guide ethical policy-making for health (Fig. 11).





Sectors other than health are also facing these challenges: in general, sector-based approaches to governance do not fit the interdependent world of the 21st century, as outlined above. Just as health seeks the support of other sectors, the health sector must begin to consider how health contributes to or counters the agendas of other sectors and how it contributes to overall social well-being. Exerting leadership for health is not sufficient, as so frequently stated in documents on health. If all sectors are responsible for the whole, so is the health sector.

As governments come under increasing pressure to maintain legitimacy and improve performance, they gradually add new forms of governance, mainly by forging new strategic relationships, both within government and with non-state actors. We have chosen to use the term smart governance for an innovative set of approaches to address the most challenging health problems. Smart governance for health is already underway in Europe and many other parts of the world, where governments are approaching governance for health in new ways based on wider understanding of health and changes in how the state and society work together, discussed in previous sections of this study. The boundaries of the health sector are being redefined, with the involvement and cooperation of health professionals and their organizations as well as academe and the health technology industry. So far, these stakeholders have not sufficiently addressed the new governance challenge, even though they are major actors in public health and in the delivery and provision of health care services. Their opinions and perspectives are vital for forging workable, realistic policies. For example, because of the lack of engagement with health professionals during the pandemic influenza (H1N1) 2009 outbreak, many nurses and doctors refused to be vaccinated because they were uncertain that the vaccine was safe. If health professionals do not support a shift in perspective and policy, good governance cannot be fully realized.

In Europe, health impact assessment helps policy-makers to make more informed, forwardthinking decisions to avoid unintentional consequences for health, regardless of the sector in which the policy was set. Similarly, in South Australia, the health sector is lending its expertise to other sectors, providing a health lens for various challenges, from water security to sustainable transport systems. Institutionalizing this approach to health in all policies in a whole-of-government strategic plan will help other sectors to achieve their goals while promoting health, rather than saddling them with an additional burden.

Health impact assessment is a decision-support measure for policy-making that is applicable at the local, federal or provincial, national and supranational levels. It is also applicable across sectors and sensitive to the determinants of health inequities. Wismar et al. (2007) discussed the effectiveness of health impact assessments and its institutionalization in Europe based on research and case studies, from air quality in Northern Ireland and Ticino, Switzerland, to food production and nutrition in Slovenia after adaptation of the EU's agricultural policy. All 17 case studies demonstrate the effectiveness of health impact assessment.

Five types of smart governance for health and well-being

Smart governance for health defines how governments approach governance for health challenges strategically in five dimensions, through:

- collaboration;
- engagement;
- a mixture of regulation and persuasion;
- independent agencies and expert bodies; and
- adaptive policies, resilient structures and foresight.

Smart governance can also be understood as the application of smart power, defined by Nye (2011) as "the combination of the hard power of coercion and payment with the soft power of persuasion and attraction". Whereas hard power (such as using or threatening military intervention, economic sanctions) and soft power (such as diplomacy, economic assistance and communication) are wholly descriptive terms, smart power also involves evaluation. Smart governance for health and well-being means that the state is engaged in more complex relations with other government and societal actors, using both hard and soft power. This does not inevitably reduce its role or power; indeed, with regard to health governance and governance for health, states have expanded their power to meet new challenges through new collaborative arrangements. For example, health ministries and the health sector are now responsible for one of the largest and most important sectors in society, with significant economic and social impact, and also usually one of the most highly regulated sectors. At the same time, the state in many countries has been expanding its regulatory power into everyday life and into markets to address health challenges such as obesity, smoking, alcohol use, illicit drug use, environmental protection and food safety. In Europe, the role of the state is more complex, as governance dynamics have changed in the context of the EU. A challenge for governance for health in the 21st century in an age of globalization and marketization is how the interests of health and of the market can be reconciled to improve the public good rather than to serve individual interests. In the EU, this requires continual balancing between market efficiency and social (and health) protection (Scharpf, 2002).

Governing through collaboration

Terms such as cross-sector collaboration, interagency collaboration, interjurisdictional cooperation, strategic partnerships and multistakeholder, multilevel, deliberative and networked governance are often poorly differentiated, but they all refer to the same issue: how the state and society co-govern in the 21st century.

Multistakeholder deliberations feed into nearly every aspect of smart governance for health and are critical for effective anticipatory governance. WHO considers that a health system consists of all organizations, people and actions with the primary intent to promote, restore or maintain health. This primary intent should be given higher priority and be better coordinated within the wider health system and the health sector. The boundaries of what is called the health care system have, however, become increasingly fluid: health is not only a sector, it is an emerging property of other complex adaptive systems and of dynamic networks and relations, with many spillover effects. This view goes beyond the concept of a primary intent for health to other sectors and systems that contribute or endanger health (for example, the food system) or that consider health to be a significant part of their own primary intent but with goals that differ from those of the health system (such as economic development or foreign policy).

Health is a widely used instrument of foreign policy. Supporting health programmes can serve national interests through bilateral initiatives. In the geopolitical marketplace of the 21st century, supporting health can support political positioning, improve relations between states and between states and other actors and help to build alliances. Examples are the United States President's Emergency Plan for AIDS Relief, which former President George W. Bush and a bipartisan Congress instigated in 2003. Today, health is also part of foreign policy in such countries with newly advanced economies as Brazil, China and India, which are challenging established approaches to development.

Health is increasingly shaped by forces such as the speed of modern society, globalization of markets, increasing individual mobility and insecurity, energy expenditure, climate change, food security, concern about risks and safety and the reach of the mass media. We call these the 21st-century determinants of health, which cut across many of the acknowledged social, environmental and economic determinants of health. The health sector will have to work with an equally diverse range of actors to jointly explore policy innovation, novel mechanisms and instruments and better regulatory frameworks. For example, the health sector must work with the environmental sector in relation to climate change and food security and with the urban sector to create more liveable cities. Co-production and co-governance mean achieving outcomes by working together; in principle, it is irrelevant who is in the lead, as the goals pursued cannot be realized by unilateral action.

Given the importance of urban policy in improving human health outcomes and the variety of policy domains with direct links to health, the Lord Mayor of London agreed to the principle of equality of opportunity for all people and agreed that reducing health inequality and promoting Londoners' health are cross-cutting issues. Health is included in integrated impact assessment, which comprises a sustainability appraisal (including strategic environmental assessment) and a habitats regulation assessment and addresses health, health inequalities and community safety.

Many observations and analyses have appeared in the past three decades on cooperation in society for health, through partnerships, cooperation or collaboration (Institute of Medicine, 2011; Kickbusch & Buckett, 2010; Public Health Agency of Canada et al. 2007; Ståhl et al., 2006). The literature shows that working together consists increasingly of working in complex networks rather than between two clear hierarchical systems, sectors or portfolios. It implies bridging diverse policy areas, professional fields, academic disciplines, levels of government (from street level to political appointees), levels of governance (localities, states, regions and global) and sectors of society (public, private and civil). In some cases, health institutions might be better served
by not taking the lead and instead giving ownership and playing a supporting role to other sectors and non-state actors. This was the case in new approaches to food policies or to reducing child poverty.

Recipe for success (Scottish Government, 2009) sets out the steps in Scotland's National Food and Drink Policy. The food and drink industry is a priority in Scotland. *Recipe for success* promotes sustainable economic growth while recognizing the challenges of public health, environmental sustainability and affordability. The success of the policy requires partnerships. Many individuals and organizations in the public, private and third sectors, including food outlets, retailers, the National Health Service, Scotland Food and Drink, the National Federation of Enterprise Agencies, local authorities and communities, will be responsible for activities, which will be both challenging and exciting, some being achieved more easily than others. The strategy will support the growth of the food and drink industry, build on Scotland's reputation as a land of food and drink, ensure healthy and sustainable choices, make Scotland's public sector an example for sustainable food procurement, ensure that food supplies are secure and resilient to change, make food both available and affordable to all and ensure that Scots understand more about the food they eat (Scottish Government, 2009).

In his first annual report on the physical and mental well-being of the Canadian population in 2008, David Butler-Jones (2008), the Chief Public Health Officer, wrote that reducing child poverty would benefit the health of all Canadians. "Every dollar spent in ensuring a healthy start in the early years will reduce the long-term costs associated with health care, addictions, crime, unemployment and welfare."

Many further examples illustrate how a focus on health can help citizens and sectors to approach long-term challenges from new angles and with new tools. Use of cross-sectoral goals is sometimes less controversial than addressing an issue directly, as in the following example of gun violence.

CeaseFire is a not-for-profit organization with a public health approach, methods and techniques to stop the spread of HIV infection and AIDS and to prevent gun violence in some neighbourhoods of Chicago, Illinois, where homicide has reached epidemic levels. The initiative came from academe, was funded by private foundations and relies heavily on collaboration with law enforcement agents, the criminal justice system, the Mayor's office and especially neighbourhood associations and citizens. CeaseFire attempts to interrupt the cycle of violence and to change behavioural norms. The initiative involves information campaigns, strategic peer education and interventions with populations at higher risk, which have proved to be effective in combating communicable diseases and changing behaviour. An independent evaluation of the project showed that it reduced the broadest measure of shootings (including attempts) by an additional 17–24%. In four overlapping sites, the number of people actually shot or killed decreased by 16–34% (Skogan et al., 2008). A decrease in neighbourhood violence is of interest to law enforcement agents and the criminal justice system and also has health repercussions, which extend from reducing the burden on emergency health care services to reducing stress and anxiety in the populations living in violent surroundings.

Working together: successful collaborative governance

Experience with initiatives such as health in all policies demonstrates the difficulty in making progress, especially when there are imbalances of power and resources. It is even more difficult if a commitment to health and well-being has not been established in the whole of government, leaving advocacy to health ministries. Meta-analyses have been conducted of case studies in various policy areas, from public health, education and social welfare to international relations and natural resource management, to distil common propositions or contingencies that accurately capture elements that can make or break collaborative governance.

In terms of process and design, smart governance through collaboration depends on:

- the starting conditions for collaboration, as perceptions of the relative power and resources
 of stakeholders, perceptions of interdependence between stakeholders and the history of
 previous cooperation or antagonism combine to determine whether cross-sectoral, multiactor collaboration is successful, raising the question of when it is better to target one sector in
 particular (Kamel Boulos, in press);
- the role of leadership, to align the initial conditions, processes and structures, set ground rules, build trust and facilitate dialogue;
- institutional design, which is the structure and governance of collaborative systems, determining who has access to and can participate in the collaboration, the ground rules for the process, transparency, consensus rules and establishing deadlines; and
- the process of the collaboration, which is the iterative process of forging agreements, building leadership, building legitimacy, building trust, managing conflict, planning, working towards immediate small-win outcomes, commitment to the process and shared understanding of challenges and values.²

According to Huxham (2003), smart governance for collaboration depends on "achieving a virtuous cycle between communication, trust, commitment, understanding, and outcomes" (Ansell & Gash, 2007; Imperial, 2005). Growing emphasis is being placed on the role of attitudes and culture, building trust, the existence of real goal interdependence, time and knowledge in successful cross-sectoral collaboration.

It is important to build a consensus that health and well-being are an overall social goal: shared concerns. "Governance networks essentially present a struggle between differing values, how problems are defined, and how solutions are derived." (Klijn, 2009). Health depends largely on societies' ability to work together towards common goals despite different vested interests.

Lessons learned from Sweden's experience in implementing cross-sector policies for health further illustrate the importance of continual dialogue. Speaking from personal experience, Pettersson (2010) recalled that identifying common concerns with other sectors is a long-term process that requires continual dialogue and a realistic time frame. Problems need to be defined and indicators for monitoring progress designed jointly, with consideration of the partner's language, concepts and ways of operating. Other sectors probably already promote health but with different names and organizational jargon. For example, measures to improve passenger safety, tidi-

² Ansell & Gash (2008) reported a meta-analysis of 137 case studies of collaborative governance, in which Bryson et al. (2006) reviewed the literature on the theory of partnerships, networks and cross-sectoral collaboration.

ness, time-keeping and instant information in Sweden's public transport system can also prevent injuries, improve hygiene and may reduce stress (Pettersson, 2010).

The health sector must learn to understand and promote the contributions of partner sectors to better health and well-being. This includes understanding the partner's regular policy cycles, policy remit and existing strategic programmes and documents, all of which require preparation and investment of time. As more partners appear, smart governance must clarify the responsibilities for action in a world in which responsibility for health is universal.

When and under which circumstances is a whole-of-government approach required? The ability of society to succeed in creating collective welfare and economic prosperity depends on the ability of various sectors to trust one another enough to take a risk in initiating a strategy as complex and prone to failure as cross-sectoral collaboration (Bryson et al., 2006; Vangen & Huxham, 2003). Trust, in turn, is built on the expectation that the individual actors in a network will refrain from opportunistic behaviour (Klijn, 2009). Trust is built continually by sharing information and knowledge and demonstrating competence, good intentions and follow-through (Bryson et al., 2006).

Smart governance for collaboration can be based on a variety of tools and instruments that have proven useful at various stages of collaborative governance (WHO and Government of South Australia, 2010). They include the following seven instruments.

Interministerial and interdepartmental committees are the first. Finland's Advisory Board of Public Health is a forum consisting of 17 participants from all sectors of government, nongovernmental organizations, research institutes and municipalities. The Board provides a forum in which problems and interdependence can be jointly defined and trust and leadership can be built over time. Intersectoral policy programmes directly linked to the Prime Minister's office complement the Board, providing additional high-level leadership for this approach to governance for health (Wismar & Ernst, 2010).

Second, in the United States, Public Health–Seattle & King County formed an action team for vulnerable populations to coordinate county-wide preparedness with a wide variety of community partners. The team consists of a diverse cross-section of staff with expertise in public health for vulnerable populations, preparedness and infectious diseases.

Third, with over a decade of experience in supporting community voices, the nongovernmental organization Health & Development Networks set up national partnership platforms for more unified, grounded responses to HIV infection, tuberculosis and related health and development issues. They are platforms for information, dialogue and advocacy, which help civil society partners to exchange information and experience with these diseases. Partnership platforms are operating in Cambodia, Ireland, Malaysia, Thailand, Uganda, Zambia and Zimbabwe, and one is being set up in Viet Nam.

Integrated budgets and accounting are the fourth tool. The goal of including the health effects of cycling and walking in cost-benefit analysis of transport investments is a 20% increase in walking and cycling and replacing 15% of short car or public transport journeys by cycling and walking. The expected health benefits are on cancer (five types), high blood pressure, type 2 diabetes and musculoskeletal disorders; the other benefits are reducing road crashes, travel time, insecu-

rity, school bus transport, air, noise, congestion, road wear and parking costs. The benefits were estimated at ϵ 420 billion or ϵ 880 per year per moderately active person (Institute of Transport Economics, 2002).

Fifth are cross-cutting information and evaluation systems. The purpose of a gender mainstreaming checklist for the health sector (African Development Bank Group, 2009; World Bank Institute/PRMGE, 2009) is to help World Bank staff and consultants in analysing and identifying gender issues in the health sector, designing appropriate gender-sensitive strategies and components, allocating resources and defining monitoring indicators for all stages of the project or programme cycle. For effective gender analysis and mainstreaming in projects, the checklists should be used with the Bank's operations manual and environmental and social procedures. In these procedures, gender-sensitive terms of reference for environmental and social assessments should be prepared to demonstrate good practice in mainstreaming gender in any Bank-funded sector intervention, including health sector projects.

Joined-up workforce development is sixth. The Care Council for Wales established the Children and Young People's Workforce Development Network on behalf of Welsh ministers in 2006. Its role includes contributing to improving the lives of children and young people by ensuring that the people working with them have the best possible training, qualifications, support and advice; building a workforce that is properly equipped to deliver the cross-cutting approach to children and young people's services in Wales envisaged in the Children Act 2004; and engaging the full range of employers' interests in all sectors working with children and young people in Wales.

Legislative frameworks are seventh. Switzerland's drug policy is based on a fourfold approach: prevention, law enforcement, treatment and harm reduction. The perception of the issues, the implementation of policy decisions and the impact of this drug policy have changed, as determined from quantitative data on each of four pillars. A new perception of people with drug dependence gave rise to a new approach, which is based on social assistance and public health rather than on enforcement and punishment. The enforcement approach was, however, strengthened to deal with people who profit from drug trafficking. The four-pillar policy is intended to be a balanced, pragmatic approach based on recognizing that drug problems cannot be eliminated and that steps must be taken to mitigate the effects of drug abuse and the illegal drug trade.

Smart governance for health should bring about better, deeper engagement with various social actors, facilitated by greater transparency, and should be held accountable by social values. The mass media have an important role to play in this regard. Information-sharing in general should be recognized as one of the most effective tools for ensuring coordination, legitimacy and accountability (Hernández-Aguado & Parker, 2009). The same is true for businesses, which are often perceived as contributing to creating wicked problems but minimally to their solutions. Although hard regulations might ultimately be needed, businesses are taking the initiative to realign their operational philosophy in accordance with social values and to self-report progress made. The move to a shared value approach gives businesses a smart governance option to contribute to the solution more actively, thereby obviating implementation of harder regulation while catering to consumer preferences for healthier, safer products.

The chief executive officers of eight large food and beverage manufacturers formed the International Food and Beverage Alliance in a letter to WHO Director-General Margaret Chan in May 2008, committing their companies to support the WHO Global Strategy on Diet, Physical Activity and Health (WHO, 2004). They acknowledged the private sector's role by pledging to extend the efforts already under way at individual companies to realize "five commitments in five years":

- 1. continue to reformulate products and develop new products that support the goals of improving diets;
- 2. provide easily understandable nutrition information to all consumers;
- 3. extend responsible advertising and marketing to children initiatives globally;
- 4. raise awareness about balanced diets and increased levels of physical activity; and
- 5. participate actively in public-private partnerships that support WHO's Global Strategy.

The International Food and Beverage Alliance (2009, 2011) has delivered two reports to the WHO Director-General, outlining progress made in meeting the five commitments.

Why collaborative governance can fail

The literature on interorganizational partnerships corroborates the findings of studies on collaborative governance. McQuaid (2009), reviewing case studies of urban regeneration and labour market–exclusion policies, found that partnerships fail for a limited number of reasons:

- conflict about goals and objectives;
- considerable but underestimated direct and opportunity costs in terms of the time it takes to build trust and consensus;
- weak accountability of partners for success or failure;
- territorial and organizational difficulties when partnerships are seen as detracting from existing mainstream initiatives or when features of the structures or institutions within the partnering agencies make it particularly difficult to break out of policy silos;
- asymmetrical technical skills and expertise for contributing to the partnership;
- differences in philosophy among partners, such as the role of markets, or different value or ethical systems, which fragment the partnership's cooperative culture; and
- differing power relations and levels of community participation.

Governing through citizen engagement

Expansions in governance for health and in understanding of health also imply that the views of a wider range of actors are important. The health sector must work with other policy sectors, as described above; it must work with the private sector and with nongovernmental organizations; and, increasingly, it must engage with individuals in their roles as patients, consumers and citizens and in their everyday lives. Successful prevention, diagnosis and treatment of diseases are possible only with the active participation of citizens, and European governments and citizens tend to agree on this issue (Andersson, in press). Policy can no longer just be delivered: success requires co-production and the involvement and cooperation of citizens.

Diversity of engagement

Patient engagement has become not only an integral aspect of health care in Europe but also a model for citizen engagement. There are, however, "important differences between activities which aspire to empower individual patients in their own care, and structures put in place to allow the public (either as interested individuals or as elected representatives) to hold health structures to account" (Andersson, in press) (Box 1).

<u>Patients</u>		
To ensure appropriate treatment and care		
To improve health outcomes		
To reduce risk factors and prevent ill health		
To improve safety		
To reduce complaints and litigation		
<u>Citizens</u>		
To improve service design		
To determine priorities for public expenditure		
To manage demand		

Source: Coulter (2005).

Individuals are engaged not only as outlined in Box 1 but also as consumers, which is a nuanced distinction from their roles as patients and citizens. Engagement can be a continuum, from information provision to empowerment and from consultation to co-production, delegated power and ultimate control of decisions. The Government of Canada drew up a set of guidelines for altering public behaviour with regard to wicked problems in environment and health called tools of change, consisting of proven methods for promoting health, safety and environmental citizenship (Cullbridge Marketing and Communications, 2011).

Several analytical models help understanding of the level of power that is delegated to participants in each instance (Andersson, in press). The one introduced here was formulated by the International Association for Public Participation (2004):

- inform: provide information;
- consult: obtain public feedback;
- involve: work directly with the public;
- collaborate: partner with the public;
- empower: place final decision-making power in hands of the public.

Policy processes tend to focus on the first two levels of participation: informing and consulting citizens, service users and stakeholders. Working directly with, partnering and empowering the public are more complex and less frequently practised methods; however, they are crucial to ensuring that democratic values are upheld as governance becomes more widely diffused throughout society.

For example, the Government of Finland adopted a Programme for Child and Youth Policy in December 2007 (Ministry of Education, Finland, 2008), which incorporates comprehensive intersectoral approaches, with citizen engagement and empowerment at the centre. The programme is divided into three areas: a child-oriented society, well-being of families and preventing social exclusion. Gender equality and multicultural aspects are cross-cutting themes, reflected in each area and action of the programme. The government is particularly committed to giving children and young people more voice and opportunities for participation: children and adolescents are encouraged to influence their environment by voicing their opinions daily, at school, at municipal level and in the planning stage of services. This could become a model for other countries in the WHO European Region: regional and state administrations should design ways of hearing the opinions of children and young people. A further example of child and youth empowerment is the children and youth parliaments that have been established in Belgium and Ireland.

The creation of the Parliament of Children and Young People in Ústí nad Labem, Czech Republic, dates back to 1999, so that its existence has been sufficiently long for it to affect various areas of public life. The Parliament is made up of children aged 12–18 years who are students in elementary and secondary schools and want to use their free time, are communicative and can materialize their ideas. Because of the age limitation, the Parliament's members change continually, and new members have an opportunity to distinguish themselves and make suggestions.

There are many examples of good public engagement for health in Europe. The following provide some of the reasons for engaging.

The "Testing Our Genes" Consensus Conference in Denmark in 2002 was an example of exploring public perceptions of emerging policy areas. Denmark has been a pioneer in devising and using deliberative methods to engage randomly selected members of the public to assess emerging policy areas. In this example, a small group of citizens were asked to consider how the government should address ethical issues of genetic testing.

A workshop on tobacco control in Armenia in 2007, facilitated the implementation of existing policies. This meeting brought together government and international agencies, nongovernmental organizations, practitioners and researchers under the auspices of the Coalition for Tobacco-free Armenia to discuss how civil society could support the formulation and implementation of a national tobacco control strategy.

Social Support Act boards in the Netherlands gather public feedback on service quality. The 2007 Social Support Act requires that municipalities involve citizens in the delivery of social care. Many municipalities have established a Social Support Act board to give municipalities solicited and unsolicited advice on policy in relation to the Social Support Act.

The People's Voice Project in Ukraine in 1999, empowered citizens to assess health services. The World Bank funded a project to empower citizens to hold health services to account by using citizen report cards, conferences, public hearings, surveys and training of nongovernmental organizations and civil servants. The civic audit method has since been used in numerous European countries to evaluate the quality of health services from the perspective of citizens, led by the Italian nongovernmental organization Cittadinanzattiva.

Participatory budgeting in Seville, Spain in 2004 allocated funding and set spending priorities. Participatory budgeting allows citizens to make or influence decisions on spending directly at the city or neighbourhood level. Initiated in Latin America, it has since been used in France, Germany, Italy, Spain and the United Kingdom and other European countries. In Seville, the process involves thousands of residents each year in making decisions about spending on health, transport, culture and other services.

How technology can increase engagement

Recent advances in consumer technology and innovations from the private sector (including foundations) facilitate citizen engagement in new ways. For example, organizations such as AmericaSpeaks have pilot-tested what they call the 21st Century Town Hall Meeting, which brings together thousands of randomly selected citizens in one or several location to contribute to public debates. Participants sit at tables of 8–10 people with a trained facilitator. They discuss a series of questions and build a set of collective priorities. Participatory technology is used to ensure that every voice is heard: this includes a computer at each table, which serves as an electronic flip-chart so that agreements can be transmitted instantly, and voting keypads that allow participants to vote on what they consider to be the most important priorities. Similar consensus conferences have been organized in Europe, locally and regionally. This model has been applied to health in a variety of ways.

In the United Kingdom, the global arm of AmericaSpeaks, Global Voices, joined with the National Health Service and the firm Opinion Leader Research to hold a national dialogue on health policy in 2005, called "Your health, your care, your say", which resulted in a plan and commitments from the Prime Minister, Tony Blair. The high-profile meeting was broadcast live on the web, received day-long coverage on several BBC channels and was reported in the national press.

A year later, a more focused conference, the European Citizens' Deliberation on Brain Science, was held in partnership with a communication firm based in Germany, IFOK, and the King Baudouin Foundation. Conducted in nine languages, it was the first example of a transnational consensus conference. It resulted in 37 consensus recommendations for the European Parliament, which identified priorities for research and regulation on brain science (Meeting of Minds European Citizens' Panel, 2006). The recommendations set the framework for national and international meetings on this issue and guided research and policy. A growing body of research has shown a positive effect of the deliberation on both citizens and government institutions (Barabas, 2004).

Technology is not only helping citizens to engage in collecting intelligence and knowledge-sharing or shared care but also to act as independent agents to co-produce governance for health. During the past decade, smart phones (mobile telephones with advanced computing and communication ability beyond standard voice and texting features to include uninterrupted Internet connectivity and geospatial positioning) have "penetrated significantly into society, capturing an entire age spectrum of subscribers in western industrialised nations, from schoolchildren to senior citizens". (Kamel Boulos, in press). These devices are gaining credibility because of their potential to facilitate shared care with mobile health monitoring and to promote healthier behaviour, with 7000 health-related applications on the market in 2010 (Kailas et al., 2010). Applications for shared governance are less well understood.

For example, LoveCleanStreets is an application in the United Kingdom in which citizens use the built-in Global Positioning System (GPS) feature and camera of smart phones to report environmental or neighbourhood problems directly to local authorities. Citizens only have to photograph the problem, for example, broken pavements or street lamps, dead animals, damage to park facilities, dog fouling, illegal waste disposal, graffiti and blocked drains and gullies. The application sends the photograph with a report giving the exact location, which is identified by the GPS. Users can then visit www.lovecleanstreets.org to review the progress of their reports. Kamel Boulos (in press) found that city councils were "responding very well and promptly to citizens' reports filed via the lovecleanstreets.org mobile app".

Consumer technology like this can empower people to take ownership and promote healthier, safer environments. Direct reporting by toll-free telephone has been in place for decades; however, the ease with which such reports can be made and, crucially, followed up makes the right choice the easy choice for citizens who otherwise might not take the time or effort to make a report. The web site www.police.uk used social web features to inform citizens about criminal activity in their area and to solicit information on crimes.

The social web is also facilitating unprecedented multiway communications and engagement between and among government agencies and the communities they serve, thus "empowering citizens by helping create an informed citizenry, increasing public trust, and encouraging citizens' participation in shaping their own services by seeking feedback and generating new ideas from the public (wisdom of the crowds and demands of the public)." High-speed transfer of information and data and the possibility of mining social forums for crowd-sourced public mood and opinions help to build more resilient public policies. Kamel Boulos (in press) provides more information on networked social media, virtual and mirror worlds and their implications for governance for health.

Smart phones allow unprecedented leveraging of the power of the crowds, with a growing number of crowd-sourcing mobile applications in use for real-time participatory health and health care. For example, the MedWatcher application (Children's Hospital Boston, 2012a) is being used in relation to use of drugs, while the HealthMap application Outbreaks Near Me (Children's Hospital Boston, 2012b), from the Children's Hospital Informatics Program group that developed MedWatcher, allows participatory epidemiology (in which users submit a local outbreak report). Another example is the real-time lifesaving iPhone application of the San Ramon Valley Fire Department (2012) in California, which alerts community members trained in cardiopulmonary resuscitation as soon as a cardiac arrest has been reported to the national emergency number. The iPhone's GPS gives responders the location of the emergency and the nearest defibrillators.

How transparency feeds innovation

Engagement goes hand-in-hand with transparency, which is a necessary element for building trust in collaborative governance systems. When trust is successfully fostered, it opens new opportunities for win–win innovations through knowledge co-production of society and science,

in addition to coordination mechanisms such as hierarchical authority and the market forces of price and competition.

For example, health industries use data on patients for research and development, and governments require these data to decide where to make public investment. The health sector, however, guards the privacy of patients and their data because of the background history of discrimination based on health conditions and to protect the sanctity of the doctor–patient relationship. Nevertheless, patients usually want medical progress to be as fast as possible, with more investment in the fields that matter most to them. Some patients have shown their willingness to relinquish their privacy to achieve more efficient research, development and public investment, as long as there is transparency in how the data are used.

PatientsLikeMe (2012) is an example of this principle in action. Within a familiar social networking format, patients can openly share their data online. This helps to empower patients, who can compare their experiences and make better-informed decisions about the management of their own health, also creating an alternative research platform. Some of the communities that have formed on PatientsLikeMe represent combined collections of data that are large enough for clinical trials, such as the multiple sclerosis community, which has nearly 23 000 members. This is especially useful for rare diseases, in which patients may be geographically widely separated. At the time of writing, Abbott Laboratories and Novartis Pharmaceuticals Corporation were conducting clinical trials through the PatientsLikeMe web site. The openness philosophy of PatientsLikeMe provides a value system based on transparency on all sides, which allows the creation of mutually beneficial initiatives that would not exist in a setting of asymmetrical information.

Governments are also learning the benefits of data transparency. The United Kingdom, for example, has opened an online portal for data sharing. Access to the government data on which much evidence for policy depends is a large step towards making policy-making more transparent. It also invites citizens to engage themselves in the process by presenting their conclusions and recommendations on issues that they care about through initiatives like the "show us a better way" competition in the United Kingdom.

The Government of the United Kingdom has a dedicated Director of Digital Engagement, who manages and integrates new social media digital technology into the infrastructure of daily government communication and practice. The aim is to support and encourage government departments in the use of digital engagement techniques, such as communicating through Facebook and Twitter, as well as using traditional engagement methods.

The portal of the Government of the United Kingdom (data.gov.uk), launched in September 2009, is an ambitious project for opening up (for free re-use by members of the general public) almost all non-personal data acquired for official purposes. This opening-up-government portal gives free access to thousands of government datasets and more than 100 applications for accessing public data.

The WHO Regional Office for Europe has played a critical role in establishing interdisciplinary networks for health. Examples of long-standing interdisciplinary, politically oriented networks for health include the South-eastern European Health Network and the WHO European Healthy Cities Network. The South-eastern European Health Network is the health component of the 1999 Stability Pact for South East Europe and is a political and institutional forum set up by the governments of Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Montenegro, the Republic of Moldova, Romania, Serbia and the former Yugoslav Republic of Macedonia to promote peace, reconciliation and health in the Region. The WHO European Healthy Cities Network engages local governments in health development through political commitment, institutional change, capacity-building, partnership-based planning and innovative projects.

Governing by a mix of regulation and persuasion

Smart governance for health does not mean choosing between governing through networks or through hierarchies but rather the smart use of both approaches. "For many wicked policy problems the effectiveness of traditional policy approaches to influencing behaviour (legislation, sanctions, regulations, taxes and subsidies) may be limited without some additional tools and understanding of how to engage citizens in cooperative behavioural change" (Government of Australia, 2007). Smart governance is evaluative, with regard not only to the tool being used but also to the choice and use of the tool in the context of a plurality of tools and modes of application. Thus, smart governance for health concerns how governments respond strategically to health challenges: the choices they make about which mixture of instruments to use, which partners, at which levels of government and society to engage and when.

Hierarchical governance still matters

The mirror image of health in all policies implies that risk is present at many points in people's everyday lives. This has significant consequences for how people frame health policies and where they assign responsibilities for health in society. If health is everywhere, every place or setting in society can support or endanger health. As demonstrated in the previous section on governing through engagement, stakeholders in the health debate are not only the producers of unhealthy products and substances but also those who populate the arenas of everyday life where those products and substances are consumed. This implies a shift from material entities and organizations that are clearly defined as health organizations to increasing dependence on a strategic mixture of the institutional mechanisms that structure society and lifestyles and those that regulate behaviour and access to or consumption of products.

Typical examples are smoking regulations, which involve a governance shift from individual to social responsibility. In the mid-20th century "it was still possible to argue that to smoke or not to smoke was simply an issue of personal agency", but by the 1980s and 1990s "the growing evidence that smoke harmed non-smokers ... began to erode traditional arguments" (Brandt, 2007). This shift reshaped the policy of regulation and led to a cultural transformation. Today, governments not only regulate who can buy tobacco products, where and at what price, but they also regulate where people are permitted to smoke. In doing so, they change the cultural approach to smoking and set new norms. Over time, smoking restrictions extend to all settings: first, usually schools and hospitals, then major public places, then all forms of transport, then restaurants and bars, until finally – as in New York City – there is virtually no space outside the home where smoking is permitted. Smoking laws also regulate access to images and messages by restricting advertising for tobacco products. The first international health treaty, the WHO Framework Con-

vention on Tobacco Control, also regulates tobacco.

Health, it turns out, really is everybody's business in both a symbolic and a real sense: owners of bars and restaurants, retailers, the management of airports and railway lines must all be concerned about health. Everyday settings become healthy settings through a commitment to norms, standards and patterns of appropriate behaviour, with laws and regulations sometimes promoting, in other cases following, cultural shifts (Kickbusch, 2003).

In the most comprehensive review of the literature on governance to date, Hill & Lynn (2005) concluded that, although market- and network-related government activities have increased in importance, hierarchical government is by no means in decline, and the role of government is just as pivotal as it ever was. Bell & Hindmoor (2009) noted that governments have recently extended hierarchical controls at the national and regional levels, for example, in areas such as mobile phones, genetic cloning, the Internet, genetically modified organisms, performance-enhancing drugs for athletes, in vitro fertilization, traffic congestion, population imbalances, antisocial behaviour and the threat of terrorism. Dubé et al. (2009b) provide an interesting illustration of the different policy tool options (Fig. 12).



Fig. 12. Policy tool options

Source: Dubé et al. (2009b).

The traditional tools of hierarchical governance – command and control, rules and standards of behaviour backed by sanctions and rewards dealt out by the state – are also undergoing transformation (Salamon, 2002). New layers of regulatory authority are emerging at the regional and global levels, and states are revising their institutions to increase hierarchical authority and centralized control. In recent decades, political leaders increasingly centralized executive power and authority to ensure strong leadership in the face of real or perceived crises (Bell & Hindmoor, 2009; Hocking, 2005; Poguntke & Webb, 2005; Walter & Strangio, 2007). At the same time, the number of regulatory agencies expanded, as governments are now expected to police society and markets and to mitigate the risks presented by new technologies.

In Spain, the world's first ban on overly thin catwalk models at a top-level fashion show in Madrid caused outrage among modelling agencies and raised the prospect of restrictions at other venues. Madrid's fashion week turned away underweight models after protests that girls and young women were trying to copy their rail-thin looks and developing eating disorders (CNN World, 2006).

EU policy is a clear example of a new regulatory approach to governance that is increasingly (Greer & Vanhercke, 2010; Sabel & Zeitlin, 2008):

(a) deliberative (consensus is often regarded as provisional); (b) multilevel (connecting different levels of government – crucially, this means that it is not strongly hierarchical, or hierarchical at all); (c) a departure from norms of representative democracy (accountability is defined in terms of transparency and scrutiny by peers); (d) a combination of framework goals set from above combined with considerable autonomy for lower-level units and agents to redefine the objectives in light of learning; and (e) built on reporting (on their performance) and participation in peer review (in which results are compared with those pursuing other means to the same general ends).

Evolving instruments for multilevel governance and steering

An extension of top-down authority is also evident in government's reliance on multilevel governance to address an increasing number of challenges, the solutions for which require effective coordination of collective action beyond the nation-state, with implementation within the nationstate at the national and local levels. Whereas governing through networks captures the horizontal cross-sectoral and interjurisdictional aspects of smart governance for health, and governing through engagement illustrates the diffusion of governance for health roles to many new actors, the aim of multilevel governance is vertical relations among governance actors and arenas.

In Europe in particular, there has been a rise in multilevel regulatory agreements since the 1990s, due almost entirely to the new authority at the regional level of governance. In the 1970s, when the European Economic Community was formulating policies on trade and agriculture, fewer than 20 agreements were signed every 3 years, whereas 260 such agreements were signed between 2002 and 2005 (Bell & Hindmoor, 2009). In some cases, the EU has been able to enact health-promoting regulations as measures for consumer protection, such as the regulation on nutrition and health claims made on food packaging in 2006 (European Parliament, 2006), which calls for measures "to ensure that any claim made on foods' labelling, presentation or marketing in the EU is clear, accurate and based on evidence accepted by the whole scientific community". The increasing attention that industry lobbyists pay to the European Parliament is testament to

its growing influence and authority. This can have implications for governance for health, as exemplified in 2010, when the food industry successfully lobbied the European Parliament to vote down proposals to force food manufacturers to add traffic light labels on the front of packaging to help consumers to calculate their daily intake of salt, sugar and fat.

The EU's best-known approaches to smart governance for health have been through its steering instruments: declarations and conclusions, efforts to create closer cooperation and harmonization through recommendations, resolutions and codes of conduct, which are used as alternatives to legislation (Greer & Vanhercke, 2010; Senden, 2005). Examples include the EU Platform on Diet, Physical Activity and Health, the High Level Group on Health Services and Medical Care and the Open Method of Coordination (Greer & Vanhercke, 2010). The last in particular reflects the incorporation of traditional forms of hierarchical governance into new governance methods to ensure that the soft law practices of the EU do not degrade into sharing ideas without followthrough. Greer & Vanhercke (2010) considered that the possibility that the European Court of Justice could intervene with hard law through Article 49 jurisprudence (provision of services), state aid and competition cases (assimilating health into the internal market) is integral to the success of regulatory approaches that rely less and less on command and control. This potential use of hard law provides incentives for EU countries to make the most of softer, consensus-based mechanisms. Bell & Hindmoor (2009) refer to this approach as "self-regulation in the shadow of hierarchy".

The decreasingly territorial nature of problems and solutions and increasing differentiation within the international system is driving the move to more mixed, multilevel forms of governance (Zürn, 2010). Differentiation is reflected in the presence of new, legitimate actors and arenas beyond the nation-state, which also make decisions, take regulatory action, implement policy, allocate resources and accept and recognize actors and functions – the traditional business of governments. As Zürn (2010) states, "nation-states have increasing difficulties in designing unilateral policies or regulations that are of use in attaining governance goals such as security, legal certainty, legitimacy or social welfare", for which they must turn to multilateral collaboration and to international and regional institutions.

An example is European policies to address antimicrobial resistance. Antimicrobial resistance is a growing threat to public health worldwide. In 2009, a joint working group of the European Centre for Disease Prevention and Control and the European Medicines Agency estimated that resistant bacteria caused more than 25 000 excess deaths in Europe per year (ECDC/EMEA Joint Working Group, 2009). After reviewing policy during the past 15 years, Tomson et al. (in press) found that countries such as Chile, Denmark, France, Israel, the Netherlands and Sweden had all developed and implemented practical policies for managing resistance or components thereof at various levels of society. Similarly, many local antibiotic stewardship programmes have been set up in hospitals and health centres. Successful control of resistance to antibiotics, however, requires a multipronged approach in which all relevant sectors of society are engaged, from the World Health Assembly to pharmacies and consumers.

The EU has had a common policy on antimicrobial resistance at the regional level since the late 1990s, which is a concrete example of multilevel top-down governance. The EU issued recommendations to restrict systemic antibacterial agents to prescription-only use in 2002. Eighteen

countries adopted this and have implemented measures to comply, such that no antibiotics are sold without a prescription or such products represent less than 1% of sales. In eight countries, however, 1–10% of antibiotics are sold without a prescription, and in Greece the percentage exceeds 15% (Wernli et al., 2011). The chain of effective multilevel governance is often only as strong as its weakest link. States increasingly rely on multilateral organizations to help coordinate policy responses; however, without effective hierarchical controls to implement policy within states, multilevel governance breaks down. In the case of antimicrobial resistance in Europe, if policies or surveillance mechanisms are not implemented in one country or locality, the success of the policy in the entire region is jeopardized.

One of the best examples of expanding smart forms of multilevel hierarchical regulation is the WHO Framework Convention on Tobacco Control (WHO, 2003a), especially in conjunction with EU tobacco regulations. Tobacco control policy in the EU "highlights the vertical interactions and shared authority and responsibilities between regions, states and intergovernmental organization as well as the importance of non-state actors on all levels. It also emphasizes the importance of integrating different sectors, such as health care, agriculture and international trade for appropriate and effective policy-making." (Tomson et al., in press). Tobacco regulation is an example of governance through networks and engagement that wholly depends on a strong hierarchical top-down core of regulatory agreements and hard law. It highlights the necessity for and complementarity of the diffusion of power, with a strong steering role of the state.

Softer side of the state: how states govern through persuasion

A softer side of top-down authority has appeared in new forms of welfare contractualism, in which the state uses its centralized power and resources to provide incentives through reward rather than sanction. For example, Bell & Hindmoor (2009) say:

... states have used tax incentives, subsidised nursery places and job-sharing schemes to encourage mothers to return to work. In Mexico, Brazil and other South American countries, conditional cash transfers provide financial incentives for mothers to take nutritional supplements, keep their children in school, and ensure they attend regular health check-ups. Parents are paid only if they effectively police their own activities.

One step further along the continuum from rewards for good behaviour is governance through persuasion, which goes beyond changing people's behaviour through rewards and sanctions to changing people's ideas of how they ought to behave (Bell & Hindmoor, 2009). The health sector has extensive experience in governing through persuasion and in collaborating with non-state actors to do so. Peer education on HIV and HIV prevention programmes are an example.

Traditional hierarchical means of governing are becoming more fluid and adaptive. Regulation is no longer only top-down, as soft power and soft law extend their influence. This includes both self-regulation and growing interest in nudge policies, which build on health promotion approaches such as making the healthier choice the easier choice. The term nudge describes "any aspect of the choice architecture that alters people's behaviour in a predictable way without forbidding any options or significantly changing their economic incentives" (Thaler & Sunstein, 2008). Examples are making salad rather than chips the default side-dish or making stairs rather than lifts more architecturally prominent in public buildings. Another applied technique for nudge policy is social norm feedback, in which information about what others are doing is shared. Table 1 provides more examples and highlights the distinction between nudging and regulating.

Торіс	Nudging	Regulating
Smoking	Make nonsmoking more vis- ible through mass-media cam- paigns with the message that most people do not smoke and most smokers want to stop	Ban smoking in public places
Reduce cues for smoking by keeping cigarettes, lighters and ashtrays out of sight	Increase the price of cigarettes	Alcohol
Serve drinks in smaller glasses	Regulate pricing through duty or minimum pricing per unit	Make lower alcohol consump- tion more visible by mass- media campaigns with the message that most people do not drink to excess
Raise the minimum age for purchasing alcohol	Diet	Designate sections of super- market trolleys for fruit and vegetables
Restrict food advertising in mass media directed at children	Make salad rather than chips the default side-order	Ban industrially produced trans-fatty acids
Physical activity	Make stairs, not lifts, more prominent and attractive in public buildings	Increase duty on petrol year on year (fuel price escalator)
	Make cycling more visible as a means of transport, such as through city bicycle hire schemes	Enforce car drop-off exclusion zones around schools

Table 1. Examples of nudging and regulating actions

Source: adapted from Marteau et al. (2011).

All public health professionals may not be convinced of the value of nudging (Bonell et al., 2011), and admittedly more research is needed into its effectiveness; however, it represents an important shift in governance, in which individuals are not treated only as perfect specimens of *Homo economicus*, always rational and calculating. Rather than using incentives directed at people's pocketbooks, nudge policies interface with people "within the settings of their everyday life: where they learn, work, play and love" (WHO Regional Office for Europe, 1986), subtly influencing the norms by which they live and the psychosocial cues that can provoke healthier behaviour or discourage unhealthy habits.

Governing through independent agencies and expert bodies

As described earlier in the study, many new mechanisms have emerged since 1945 as approaches to democracy. A characteristic of Keane's (2009) monitory democracy that distinguishes it from previous forms of representative or assembly democracy is the "way all fields of social and political life come to be scrutinized, not just by the standard machinery of representative democracy, but by a whole host of non-party, extraparliamentary and often unelected bodies operating within and underneath and beyond the boundaries of territorial states". These many new power-scrutinizing institutions differ so widely that grouping them as a common phenomenon is difficult. According to Keane (2009):

Monitory mechanisms are not just information-providing mechanisms. They operate in different ways, on different fronts. Some scrutinise power primarily at the level of citizen input to government or civil society bodies; other monitory mechanisms are preoccupied with monitoring and contesting what are called policy throughputs; still others concentrate on scrutinising policy outputs produced by governmental or nongovernmental organizations. Quite a few of the inventions concentrate simultaneously on all three dimensions. Monitory mechanisms also come in different sizes and operate on various spatial scales, ranging from "just round the corner" bodies with merely local footprints to global networks aimed at keeping tabs on those who exercise power over great distances.

Box 2 provides examples of these monitory mechanisms.

When the governments of British Columbia and Ontario announced that they would convene citizens' assemblies to explore the issues of electoral reform and democratic renewal, they introduced a new mechanism for decision-making into the political process, a mechanism that could bring more women into Canada's decision-making and transform politics in the process. Tens of thousands of citizens in both provinces were told that they had been randomly selected from the electoral lists and could put their names forward for a draw to become members of the citizens' assemblies. At selection meetings in both provinces, 250 eligible members were randomly picked to serve on the assemblies. Those selected spent months (18 in British Columbia and 9 in Ontario) learning, deliberating and finally making collective recommendations about electoral reform, Box 2. Monitory mechanisms

Citizen juries

Participatory budgeting

Teach-ins

Archive and research facilities

Conflict-of-interest boards

Railway courts

Consumer testing agencies

Democracy clubs

Protestivals (a speciality of the Republic of Korea)

Deliberative polls

Public consultations

Social forums

Blogs

Electronic civil disobedience

Advisory boards

Talkaoke (local and global talk shows broadcast live on the Internet)

Public memorials

Opportunities for professional networking

Public meeting trigger clauses

Lok adalats (people's courts in India)

Consumer councils

Democracy cafes

Summits

Boards of accountancy

Public scorecards (yellow cards and white lists)

Tendency for nongovernmental organizations to adopt written constitutions, with an elected component

International criminal courts

Bioregional assemblies

Think-tanks

Local community consultation schemes

Citizens' assemblies

Global Association of Parliamentarians against Corruption

Box 2. (continued)

Public interest litigation

Online petitions

Public vigils

Global watchdog organizations

Expert councils (such as the German Council of Economic Experts)

Global social forums

Unofficial ballots (such as text-messaged straw polls)

Focus groups

Consensus conferences

Information, advisory and advocacy services

Brainstorming conferences

Constitutional safaris (famously used by the drafters of the new South African Constitution to identify best practices)

Satyagraha methods of civil resistance

Chat rooms

Peaceful sieges

Independent religious courts

Public planning exercises

Web sites dedicated to monitoring the abuse of power (such as Bully OnLine, a British initiative against workplace bullying and related issues)

Self-selected opinion polls

Source: adapted from Keane (2009).

which were proposed in referendums. Although the public rejected the recommendations of the citizens' assemblies to reform the political system, remarkable things took place in the meeting rooms of the assemblies. For a range of public issues, from health care to climate change, poverty and childcare, an opportunity was given to ensure that all Canadians had a hand in shaping those decisions (Nguyen, 2009).

Rise of the unelected

In this wide variety of new democratic mechanisms, one subcategory is of particular importance, referred to by Vibert (2007) as the unelected. The focus on evidence-based policy led to the creation of agencies such as the National Institute for Health and Clinical Excellence in the United Kingdom, an independent body for setting national guidelines, for example on treatment, use of

medicines and quality of care, and to a similar organization in Germany, the Institute for Quality and Efficiency in Health Care. Further, the EU has created a number of specialized agencies at the regional level, which bridge the interests of the EU, the EU countries and, ultimately, its citizens. Permanand & Vos (2010) noted that, in practical terms, the EU agencies have proliferated on numerous grounds but mainly "in response to an increased demand for information, expert advice and coordination at the Community level, as well as the need to lessen the Commission's workload and its search for more efficient and effective decision-making." The EU countries support these multilevel expert agencies because they facilitate collective action and improved governance without further strengthening the European Commission and because "European Union agencies are generally networks functioning to a 'hub and spoke' model, which directly involves national level counterparts." (Permanand & Vos, 2010). Some of these unelected expert bodies have elaborate approaches for listening to public and patients' opinions (such as the Citizens' Panel of the National Institute for Health and Clinical Excellence) (Dolan et al., 2003).

When these new, highly capable, unelected actors meet the increasing involvement and growing demands of informed citizens, the more traditional elected forms of government must react, "propelled to change both the way they discharge their problem-solving role and the way in which they provide an arena for the expression of values in society" (Vibert, 2007). In this regard, governments must facilitate and adapt to the new distribution of power. In Germany, public debates on the future of nuclear energy after the events at the Fukushima reactors in Japan led to the establishment of the Ethics Commission for a Safe Energy Supply chaired by the former head of the United Nations Environment Programme (Grefe & Schnabel, 2011), and the government based its decision to opt out of nuclear energy on the results of this Commission's deliberations. Similarly, in 2007, the High Court of England and Wales found that the government's consultation on the future energy mixture for the United Kingdom was misleading and required the government to revise its recommendations. Increasingly, established ways of taking controversial decisions are being called into question.

In the EU, regulatory agencies such as the European Medicines Agency and the European Food Safety Authority fill important gaps between regulation at the regional level and implementation of regulations by EU countries (Mossialos et al., 2010):

Many of the [EU] agencies represent the formalization into a single structure of what had previously been a series of loosely connected committees. This single committee structure can then work independently of both the [European] Commission and the Member States – though this is not to say that the main committees are not subject to pressures from both, nor that their decisions or recommendations have never reflected these pressures – a fact that, in turn, generates its own credibility.

The agency approach therefore represents a new mode of EU governance, which shifts from "the long-standing, essentially top-down, rule-based 'Community method'" and aims to foster the credibility of EU scientific decision-making and make processes such as risk assessment for health protection less political (Mossialos et al., 2010).

The unelected are also reaching into governance for health in lower-income areas of the European Region. For example, the Global Fund to Fight AIDS, Tuberculosis and Malaria, a multilateral, multistakeholder donor agency, has established multistakeholder forums in Bulgaria, Romania and Tajikistan, through their country coordinating mechanisms. These forums are responsible for governing Global Fund investments in the countries in a manner analogous to the Fund's own board of directors, which includes representatives from donor and recipient governments, non-governmental organizations, the private sector (including businesses and foundations) and affected communities.

The Global Fund to Fight AIDS, Tuberculosis and Malaria created the country coordinating mechanism with responsibility for establishing an oversight plan to ensure that activities are implemented and resources are used as specified in the grant agreement. Oversight is a critical element in ensuring accountability in grant implementation. This is, however, a major undertaking, and, while several such mechanisms have set up processes and systems that can be considered examples of best practice for oversight, many are still struggling to overcome challenges in exercising their oversight function.

Governing by adaptive policies, resilient structures and foresight

According to Fuerth (2009):

Most human misery arises from our own ignorance, rather than from the inherent organization of the natural world. Science and technology are ladders allowing us either to climb higher out of this condition, or to descend further. At the societal level, we express our choice through governance. But the default condition of governance is for the most part that it is myopic and fragmented.

How complexity science can lead to better governance for health and well-being

Addressing wicked problems requires a high level of systems thinking. If there is a single lesson to be drawn from the first decade of the 21st century, it is that surprise, instability and extraordinary change will continue to be regular features of our lives (Swanson et al., 2009). As a result, the findings and theories of complexity science are increasingly considered relevant to public policy in sectors beyond the environment, in which it has been used most frequently (OECD Global Science Forum, 2009). Interdisciplinary systems approaches are essential for analysis, for attempts to improve health and well-being and to prevent future crises.

Systems approaches require understanding of the system as a whole, the interactions between its elements and possibilities for intervention. In complex systems, understanding the system as a whole may include acknowledging the extent of one's ignorance and one's limited grasp of the implications of nonlinear relations within the system. For example, the systems approach is of particular value in road safety for children, "because it moves away from placing the onus on children to adapt their behaviour to cope with traffic to recognizing that children's need for safe mobility must instead be addressed in the design and management of the whole transport system" (WHO and UNICEF, 2008). More than 260 000 children die as a result of road traffic crashes each year, and up to 10 million more are estimated to be non-fatally injured (WHO and UNICEF, 2008). Preventing children from being injured requires understanding the system and the interactions between its elements. Effective interventions require a mixture of policies, from engineering and urban planning, such as reducing and enforcing speed limits and building separate infrastructure (the establishment of exclusive motorcycle lanes in Malaysia reduced crashes by 27%), to vehicle design and safety equipment, daylight headlamps on vehicles, access to bicycle helmets, legislative action and implementation of standards and better education and skill development for children, parents and the general population. Such systems responses can be strengthened by adding anticipatory governance with foresight, as discussed below, helping policy-makers to determine whether proposed policy interventions would be adequate in future scenarios, such as those associated with demographic change and further urbanization.

Tomson et al. (in press) showed how complexity science is used in analysing emerging, nonlinear (unpredictable), multilevel characteristics of health systems, and suggested that health also be viewed through the lens of complex adaptive systems. Fig. 13 captures this complexity.



Fig. 13. Complex ecology of national health systems

Source: Tomson (2010).

Complex adaptive systems are characterized by nonlinear, self-organizing relations among agents, which gives rise to uncertainty and unanticipated consequences or emergent properties or behaviour: thus, the whole is greater than the sum of its parts. For example, urban planners understand that "the characteristics of a neighbourhood are different from, and not just the sum of, the individual elements of houses, streets, parks and shops. What makes a neighbourhood work, or not, is not the result of its particular parts, but rather, of the complex interactions of the individual elements" (Glouberman et al., 2003). The same can be said of human health, which is not just a function of an individual's biological characteristics. Studies of interconnections (weak links) and interdependence (strong links) in the system and how small-scale interventions can affect the system as a whole are therefore essential.

Complexity science demonstrates that the wicked problems have no simple cause or simple solution, and interventions in one area could have unintended harmful effects in another. Strategies for public policies based on complexity have been developed (Glouberman et al., 2003; Swanson et al., 2009), which indicate that complex adaptive systems should be approached by policies that mirror the characteristics of complexity; decision-making should be decentralized, and selforganizing or social networking should be available to allow stakeholders to respond quickly to unanticipated events in innovative ways. Interventions should be iterative and should integrate continual learning, multistakeholder knowledge-gathering and -sharing and mechanisms for automatically adjusting policy or for automatically triggering deliberations. Interventions should promote wide variation in policies, as many smaller interventions for the same problem can increase the likelihood of finding an appropriate, effective solution (or solutions) compared with a single, top-down, rationally planned approach. This is particularly important to bear in mind as governance for health shifts to more collaborative, whole-of-society and whole-of-government approaches. These approaches should not be misinterpreted as a return to top-down large-scale initiatives. Preserving and promoting system resilience should also be a fundamental characteristic of smart governance for health. Resilience is often misunderstood as merely the ability to bounce back from systemic shocks to the old system as quickly as possible. In many instances, however, this is neither possible nor desirable. Resilience does not imply sustaining an existing system but refers to the adaptive capacity of a system to evolve with the challenges – to roll with the punches – in the least disruptive way.

Swanson et al. (2009) proposed a comprehensive framework for creating such adaptive policies, consisting of seven tools to help policy-makers create more resilient policies in an uncertain world (Fig. 14).

In summary, mirroring complexity means promoting policies that are holistic, allow self-organization and social networking in the communities that design, implement and receive the endservices of public policy, decentralize decision-making to the lowest effective, accountable unit of governance, whether existing or newly created, promote variety and diversity in responses to common problems, institutionalize continual learning and formal policy review and integrate automatic policy adjustment by defining signposts and triggers for changes in policy or for new discussions on renewing or adapting policy. Each of these methods has been shown to help communities and stakeholders to respond better to unanticipated events, to increase the capacity of

Fig. 14. Making an adaptive policy

Making an adaptive policy (policy design and implementation)



Source: adapted from Swanson et al. (2009).

policies to be successful in unforeseen situations and to manage risk more efficiently in the face of unanticipated conditions (Swanson et al., 2009). Using integrated, forward-looking analysis and multistakeholder deliberations is essential.

How to govern anticipatorily: integrated, forward-looking analysis

According to Swanson et al. (2009):

By identifying key factors that affect policy performance and identifying scenarios for how these factors might evolve in the future, policies can be made robust to a range of anticipated conditions and indicators developed to help trigger important policy adjustments when needed.

Swanson et al. (2009) described the importance of foresight and what is called anticipatory governance. Foresight is "the capacity to anticipate alternative futures, based on sensitivity to weak signals, and an ability to visualize their consequences, in the form of multiple possible outcomes", while anticipatory governance requires foresight in policy design and implementation processes (Fuerth, 2009). Integrated, forward-looking analysis should lead to policies and to policy-makers who are better able to "sense and execute changes ahead of the cusp of major events; the better to blunt threats and harvest opportunities" (Fuerth, 2009). Rather than a forecast with a highly deterministic outlook on one high-probability outcome or singular trajectory, anticipatory governance builds broad capacity among the stakeholders to imagine multiple possible future scenarios, including ignorance – unknown unknowns or black swans – and to address uncertainty head-on. Anticipatory governance signals a shift from risks to addressing more fundamental challenges, such as ignorance in the conception and response to the future(s) of innovations and how people live, work, love and relate to each other as a society.

Fuerth (2009) conceptualized anticipatory governance as a system of systems, comprising a foresight system, a networked system for integrating foresight into the policy process, a feed-back system to gauge performance and to manage institutional knowledge and an open-minded institutional culture. Integrated foresight analysis complements initiatives to institution-alize health impact assessment and health lens analysis (Özdemir & Knoppers, in press).

Scenarios are powerful tools for illustrating possible future complex, multistakeholder issues. They can be prepared by inviting not only experts but also major actors to identify major trends, factors or motivations for change and to find possible solutions in a collaborative approach. New governance for health could benefit from a scenario for global health. This could not only promote agreement about the description of the issue and the design of possible solutions but could also illustrate the choices and decisions available for putting international and national policy-making institutions on track in a best-case scenario. It could show that the status quo is an impossible option, place the choices and decisions before the relevant decision-makers and make them accountable, in a positive way, for the results that will be seen when they no longer are making the decisions (Raynaud & Jané-Llopis, in press).

Anticipatory governance for health can be based on new methods of health forecasting. As Reither et al. (2011) stated, modelling of health forecasts should move from two-dimensional to three-dimensional. Most long-term health projections are based on linear extrapolation from age-specific data; three-dimensional models include the accumulated health experience of people who are now alive, which more accurately reflect the health challenges to be addressed and thus provide a better basis for decision-making.



New governance for health

Previous sections examined how governance for health in the 21st century is evolving with the notions of health, democracy and the roles of the state and society. We argued for a new, expanded approach to good governance, guided by values for health and well-being. We further described the main characteristics of smart governance for health, which is co-produced collaboratively, in government and throughout society, incorporating new actors and methods for scrutinizing power and authority, to increase resilience and adaptability.

Governance for health reflects how people shape their societies in the 21st century. Governments must change their approaches. It is well understood that health requires action at the whole-of-government level and by health ministers and ministries. It is also recognized that partnerships and participation are important mechanisms for new governance as expressed in wholeof-society approaches. The Moscow Declaration, adopted at the First Global Ministerial Conference on Healthy Lifestyles and Noncommunicable Disease Control (WHO, 2011), reflects this type of thinking clearly in sections 11 and 12:

- 11. Effective noncommunicable disease prevention and control require leadership and concerted "wholeof-government" action at all levels (national, subnational and local) and across a number of sectors, such as health, education, energy, agriculture, sports, transport and urban planning, environment, labour, industry and trade, finance and economic development.
- 12. Effective noncommunicable disease prevention and control require the active and informed participation and leadership of individuals, families and communities, civil society organizations, private sector where appropriate, employers, health care providers and the international community.

We have discussed the many reasons why another approach to governance is required to promote and protect health and well-being in the 21st century. To propose new roles for health ministers and ministries, we have explored the roles of government and society in co-producing governance for health in the 21st century.

We have compared developments in health with an analysis of general trends in new governance, and we have aligned ourselves with the conclusion of the most comprehensive review of governance literature to date (Hill & Lynn, 2005) that, although market- and network-related government activities have increased in importance, the role of government is as pivotal as ever. The role of governments in health remains fundamental; the changing nature of health has seen a clear, if sometimes contested, expansion of regulatory controls into new areas of policy in different sectors.

We concur with the position that governments today are exploring new approaches in metagovernance, which covers the range of government functions (Bell & Hindmoor, 2009):

... in relation to the support of governance arrangements, which include overseeing, steering and coordinating governance arrangements; selecting and supporting the key participants in governance arrangements; mobilising resources; ensuring that wider systems of governance are operating fairly and efficiently; and taking prime carriage of democracy and accountability issues.

The number of new mechanisms and approaches to governance for health has grown exponentially at all levels, involving many different actors. In health, there is a clear trend towards a new form of collaboration and towards monitory democracy, with more levels of accountability for health impact.

We agree with others that health can no longer be considered a sectoral goal to be produced by a single ministry. Health emerges from complex adaptive systems that depend primarily on social and political determinants of health. This concept requires a shift throughout society and government, in three main directions:

- 1. heads of government recognize health as a priority for joined-up government;
- 2. all sectors and levels of government and society recognize health as both a means to reach their own goals but also as a responsibility towards the whole of society; and
- 3. the health sector recognizes health as requiring greater leadership and outreach.

Governance for health requires whole-of-government and whole-of-society approaches and new positioning and roles for health ministers and ministries. New forms of transitional leadership are beginning to emerge.

New role for the health sector

The role of governments and government agencies in health is far from over, and the dichotomy between state-centred and society-centred relational governance is somewhat false; they remain distinct approaches, but they coexist in most cases. Capable, informed ministries are still crucial, whether activities are hierarchical or designed for more fluid systems of communication and collaboration. But they need to change. In view of the transformations that society has undergone over the past 35 years, many governments and health ministries appear to be slow to adapt. Too many national governments and agencies within governments continue to conduct business as usual and "assume the role of coal shufflers on electric trains" (Willke, 2007). Instead, according to such authors as Paquet (2001), the state must play new roles and become involved in problem-solving as a broker, catalyst, animator, educator and partner in much more participatory, flat processes. This is true also for health ministries and the agencies aligned with them. In particular, the interaction with citizens has become critical, lending new vigour to concepts of subsidiarity and health action at the local level and the importance of meso-institutions that allow participation in debates on issues.

Health ministers, permanent secretaries, secretaries of state and the like have important roles in good governance for health, by engaging in transformational leadership within government:

• creating the environment within their sphere of influence to send the message that they wish to see cross-cutting approaches and to move away from territorial identity;

- taking positions on health in the cabinet and initiating cross-departmental cooperation with support at the ministerial level;
- using their authority to reach out to other actors for joint initiatives, setting the framework for micro-decisions through nudge policies directed at society as well as government; and
- seeking exchanges with citizens and community-based action groups to understand people's concerns and contributions through a civil society strategy.

Senior civil servants in health ministries and heads of health agencies should develop the capacity of their organizations for smart governance for health and:

- adopt an extended understanding of health that: looks outwards from the health sector as well as inwards; abandons linear thinking and accepts the unpredictability and uncertainty of complexity; and calls on health policies and institutions to reflect better use of foresight, multistakeholder deliberation, promotion of variation, self-organizing networks, decentralized decision-making and continual learning and review to manage risks and create more enduring policies;
- assign the resources and, above all, the time to build intersectoral trust and understanding; identify interdependent goals jointly with partners in other ministries, the private sector and communities; and take on the role of network manager, with skill and respect for network partners; and
- support national, regional and global dialogue on societal values and goals, of which health and well-being should be essential components, by facilitating universal ownership of the health agenda, recognizing that, in some cases, the health ministry will not always lead.

Note the distinction between the powers of politics, which sit with ministers, and the powers of policy, which sit with the ministries, agencies and experts on whom they call. We have argued that health politics is paramount, and it is often politics that has the most influence over good governance for health and its four dimensions: human rights, well-being, global public goods and social justice. Ministers must recognize their responsibility for acting on the political determinants of health, beyond the scope of public policy. Parliamentarians must engage in new, proactive ways in governance for health. For example, the recommendations in the Moscow Declaration from the First Global Ministerial Conference on Healthy Lifestyles and Noncommunicable Disease Control (WHO, 2011) identify and distinguish the responsibilities at the whole-of-government level and at the level of a health ministry.

The Adelaide Statement on Health in All Policies (WHO and Government of South Australia, 2010) summarized the new responsibilities of health departments in support of a health-in-all-policies approach as follows:

- understanding the political agendas and administrative imperatives of other sectors;
- building the knowledge and evidence base of policy options and strategies;
- comparing the health consequences of options in policy development;
- creating regular platforms for dialogue and problem-solving with other sectors;

- · evaluating the effectiveness of intersectoral work and integrated policy-making; and
- building capacity through better mechanisms, resources, agency support and skilled and dedicated staff.

The power to initiate smart governance for health lies mainly with ministries. Health ministries and agencies must assume new roles as meta-governors of relations, responsible for building trust and managing networks by better communication for collaboration. To advance governance for health, the health sector must learn to work in partnership with other sectors, jointly exploring policy innovation, novel mechanisms and instruments and better regulatory frameworks. This requires a health sector that is outward-oriented, open to others and equipped with the necessary knowledge, skills and mandate to take a systems approach to health and the priorities of partner ministries. This also means improving coordination and supporting champions within the health sector.

Political engagement and leadership

Change must be led, within governments and organizations and at the level of civil society. Leadership can be shown at the top of an organization, and it can emerge from the bottom up, since agendas are set in civil society and through the media. In the health arena, the term political will is frequently used to describe the ability to effect change. This term is a composite of many dimensions; it requires a sufficient set of political actors with a common understanding of a particular problem on the public policy agenda, who genuinely intend to support a policy solution commonly perceived to be potentially effective (Post et al., 2010). Ensuring political will is complex and is usually achieved over time, influenced by contextual factors such as media and social acceptance of an issue. Kingdon (1995) identified three streams in agenda-setting that must come together to effect policy change: the problem, the politics and the policies.

Leaders can also be seen as policy entrepreneurs: they help understanding of an issue, frame it and act as facilitators. Leaders today are not always individuals; they may also be organizations or movements that exert pressure on politicians and policy-makers. In the health arena, there are many examples of such leadership, through social movements such as those related to women's health and to the HIV and AIDS response. New dimensions are developing through technology. As new forms of participation appear, leadership becomes increasingly consultative and democratized. Monitory democracy also depends on good ethical judgement and transparency about conflicts of interest from leaders.

Nye (2008) stressed that leadership is changing in a 21st-century context. He applied his concept of soft and hard power to leadership and saw effective leadership as a successful mixture of the two, which he called smart power. Leaders today are enablers: they help a group to create and achieve shared goals. This is an important attribute in multistakeholder governance, as one of the most highly regarded leadership skills is the ability to enlarge the sense of "we" to create a common purpose. This principle of leadership is fully reflected in the health promotion notion of empowerment: enabling people to improve their health and address its determinants. This kind of leadership is called transformational leadership, in which power for change is based on goals that serve a higher purpose – in this case, better health and well-being as a societal goal. This type of leadership can be contrasted with transactional leadership, which is based on self-interest, al-though the two are not totally separate. Porter & Kramer (2011) proposed a shared value concept of transformational leadership in health and the environment and also in the business world, without neglecting the self-interest necessary to run a business.

Such new leadership requires a range of skills. One of the most important is known as contextual intelligence (Mayo & Nohria, 2005), which is the ability to discern trends in the face of complexity and adaptability and to capitalize on these trends. It is a skill that allows a leader to align tactics with objectives and then create smart strategies in an evolving environment. Transformational leaders make good use of windows of opportunity, and they apply a mixture of hard and soft power strategies to achieve change. In the health arena, these skills must be strengthened; many technical experts in health and health care and public health managers are not prepared for the political nature of health and the highly politicized context in which health decisions are taken. Lack of knowledge about the political process and the political culture is one of the weaknesses of health ministries and of many health organizations, which is why politically astute ministers and permanent secretaries are so important for moving governance for health forward.

Conclusions and recommendations on the new European policy for health – Health 2020

Smart governance for health is under way across Europe, although WHO investigations suggest that it has been unevenly adopted across the European Region. Health 2020 can contribute significantly to creating the new mindset required to move governance for health forward, by adopting the following eight recommendations.

1. Positioning health

First and foremost, people's health and well-being must be a goal for the whole of government and the whole of society.

As noted in other discussions on social progress beyond the gross domestic product (Stiglitz et al., 2009), good health is an overall societal goal that is integral to human well-being, economic and social development and environmental protection. It is an essential component of sustainable development and good governance. Although several modern constitutions include a commitment to health, this commitment must be made actionable in new ways, so that governance for health is based on human rights: health is an unalienable responsibility of all. Governance for health is a responsibility at the highest level of government, and clear investment goals should be set in relation to sectors of policy and society. This is critical in addressing the determinants of health.

Health 2020 must therefore engage partners far outside the health sector to apply a health lens and reach out to heads of government, parliamentarians, business leaders, mayors and European citizens. Creating a Health 2020 innovation platform could strengthen such a strategy.

2. Basing policy on new metrics

The whole of government and the whole of society must become more familiar with the complex dynamics of health and its determinants to govern better.

All actors must appreciate the extent to which good health enhances the quality of life, improves workforce productivity, increases learning capacity, strengthens families and communities, supports sustainable habitats and environments and contributes to security, poverty reduction and social inclusion. They must also recognize the extent to which good health depends on multiple social determinants, inequalities and social gradients. Governance for health is closely related to managing the risks associated with globalization and modernization. It requires equipping the actors with skills and the capacity to recognize and address cross-cutting problems such as health. Sectors must work together to define indicators for monitoring change and progress. Through regular review, even when a policy is working, states improve their resilience to unexpected change by identifying emerging issues that affect the policy at an early stage. It is therefore essential that the data and information collected and shared be relevant for all parties and acceptable evidence be broadened to include citizens' perspectives, so that they can affect decision-making. Improving general health literacy in society should go hand in hand with improving health literacy in government sectors.

Health 2020 can help countries to identify new measures of health and well-being based on both objective and subjective data and equity and sustainability. New types of public health reports with new measures can be considered, including new forecasting tools for anticipatory governance. Health 2020 could also initiate a systematic effort, such as a clearing house, to collect robust evidence on how policies affect health and how health affects other policies.

3. Institutionalized processes for whole-of-government approaches

Institutionalized whole-of-government structures and processes are required to encourage crosssectoral problem-solving and address power imbalances and harness health and well-being.

These processes require a significant change in culture and an appropriate timetable. The functional organization of government departments limits their ability to address cross-cutting wicked problems. Government agencies need the leadership, mandate, incentives, audits, budgetary instruments, pooling of resources, sustainable mechanisms and realistic time frames to work collaboratively on integrated solutions. Governments can coordinate policy-making through strategic plans that set out common goals, integrated responses and increased vertical and horizontal accountability across departments. These will include new reporting formats, such as measuring externalities between sectors and between national and transnational health effects that are subject to external and broad public scrutiny. One such proposal is to establish a team of civil servants at the centre of government (a department of consequences) that deals systematically with such cross-cutting issues.

Health 2020 could propose innovative approaches (such as those reviewed in this study) to working across sector and agency boundaries and to budgeting, financing and monitoring prog-

ress in countries. It could support health ministries and public health agencies to be champions within governments for tackling wicked problems through a mixture of hard and soft governance mechanisms, ranging from law to persuasion and incentives, as well as motivating other sectors to engage for health. These tactics include building capacity through intersectoral training in smart governance for health in cooperation with schools of public health, business schools and schools for public policy, to create a new skills mix based on systems thinking and complexity science.

4. Innovative partnerships for whole-of-society approaches

Many current health challenges could be better resolved by whole-of-society approaches that include civil society and the private sector as well as the mass media.

By working with third parties in civil society and the private sector, governments have been portrayed as hollowed-out: in charge of regulating sectors in which they no longer have control or expertise. By working with third parties, however, governments have enhanced their legitimacy, generated additional social capital, made sure that their policies reflect local needs and gained access to valuable resources, such as the expertise, legitimacy and contacts of third parties³ (Bell & Hindmoor, 2009).

Health 2020 could support health ministries and public health agencies in reaching out to others within and outside government to arrive at joint solutions. It could also propose new programmes, networks and initiatives to engage many different stakeholders and, above all, citizens throughout Europe, and explore new incentive mechanisms. Stakeholders could jointly undertake and implement new assessments and accountability frameworks for health effects, such as their contributions to a European health footprint. The WHO European Healthy Cities Network would be an excellent laboratory for such innovation.

5. A commitment to the informed citizen and to citizen participation

The health sector must commit itself to the highly participatory nature of smart governance for health.

In monitory democracy, politicians and certain government bodies cede their representative authority to new actors, who have better, more transparent information on what people want and need. Through new consumer technologies, people inform themselves directly, search out information, exchange it with others and demand access to information. This is all the more important, since many challenging lifestyle-related health issues can no longer be categorized clearly as public or private behaviour. An increasingly well-educated citizenry expects greater engagement, and governments should give them a clear agenda for participation, outlining the roles of citizens and patients and the impact they will have. Participation should be seen as a core health service activity, to be encouraged systematically throughout policy-making and health service commissioning cycles. Citizens have a right to health information.

Health 2020 can initiate dialogue with European citizens on health and well-being through new information and communication technologies. It can commit health ministries to design a civil so-

³ Where the first party refers to elected policy-makers and legislators, and the second party refers to public sector organizations and administrators.

ciety strategy, open-data initiatives and tracking systems that allow better public accountability, including digital and mobile government approaches, and a comprehensive strategy to strengthen health literacy.

6. A global perspective

The new governance for health must integrate all levels of governance, from the local to the global.

Health challenges often require states to work together to provide public goods. The globalization of public goods through the integration of economies and the abolition of political borders has led to the notion of regional and global public goods based on national building blocks. For example, pandemic disease surveillance is based on effective monitoring and reporting by many different actors at local and national levels, who answer to regional bodies such as the European Centre for Disease Prevention and Control and to global actors such as WHO. Coherence is essential for effective collective action, and this requires seamless coordination and policy implementation, from local to global level, with continual feedback and review.

Health 2020 can initiate a process in which policy-makers at various levels are brought together to respond to interdependent challenges by making use of the cooperation among the various levels of WHO. This will require support for new types of health diplomacy that promote coherence between sectors, such as foreign policy, trade, agriculture, development and health.

7. An outreach-oriented, innovative, supportive Regional Office

The health sector can support other arms of government by assisting in developing policy and attaining goals.

Health 2020 could pool reports of best and failed innovative practices in working with others for shared goals within the European Region and beyond. Regular meetings with health ministers, heads of public health agencies and representatives of other sectors could drive these innovations forward. The WHO Regional Office for Europe could use models of long-term cooperation with other sectors, such as the European environment and health process in its work on food and health, as well as network approaches such as the South-eastern Europe Health Network and health-promoting schools.

8. A joint commitment to innovation in governance

In the context of Health 2020, Member States and the WHO Regional Office for Europe should:

- assess and monitor progress in governance for health in the European Region, by designing
 a measure of innovation in governance for health focused on whole-of-society and whole-ofgovernment approaches as a follow-up to this study and submitting a biannual report on innovation in governance for health to the WHO Regional Committee for Europe; and
- consider establishing a multidisciplinary European institute of governance for health, which, like the recent initiative taken by the Union of South American Nations in establishing the In-

stituto Suramericano de Gobierno en Salud (South American Institute for Health Governance), would operate as a resource for Member States of the WHO European Region to reorient their governments towards smart governance for health by leadership development, political debate, training and research, in cooperation with national institutes in many disciplines.



Glossary

Accountability: being called to account to some authority for one's actions. It is external, in that the account is given to another person or body outside the person or body being held accountable; it involves social interaction and exchange, in that one side, that calling for the account, seeks answers and rectification, and the other side, that being held accountable, responds and accepts sanctions; it implies rights of authority, in that the person or body calling for an account is asserting the right of superior authority over the person or body that is accountable, including the right to demand answers and to impose sanctions.

Complex adaptive system: made up of many individual, self-organizing elements capable of responding to others and to their environment. The entire system can be seen as a network of relations and interactions, in which the whole is much more than the sum of the parts. A change in any part of the system, even in a single element, results in reactions and changes in associated elements and the environment. Therefore, the effects of any one intervention in the system cannot be predicted with complete accuracy, because the system is always responding and adapting to changes and to the actions of individuals.

Foresight: the capacity to anticipate alternatives, on the basis of sensitivity to weak signals, and the ability to visualize multiple possible outcomes (Fuerth, 2009).

Governance: how governments and other social organizations interact, how they relate to citizens and how they take decisions (Graham et al., 2003).

Governance for health: attempts of governments and others to steer communities, whole countries or groups of countries in the pursuit of health and well-being as a collective goal (adapted from Bell & Hindmoor, 2009).

Health governance: actions and means a society adopts to organize itself for promoting and protecting the health of its population (Dodgson et al., 2002).

Health in all policies: a strategy to strengthen the link between health and other policies, addressing the effects on health of all policies, such as those for agriculture, education, the environment, finance, housing and transport. It seeks to improve health and at the same time contribute to the well-being and the wealth of countries through structures, mechanisms and actions planned and managed mainly by sectors other than health (Wismar et al., 2007).

Healthy public policy: an explicit concern for health and equity in all areas of policy and accountability for health impact. The main aim is to create a supportive environment to enable people to lead healthy lives, making healthy choices possible or easier for citizens (WHO, 1988).
Health promotion: Health promotion is the process of enabling people to increase control over, and to improve, their health (WHO Regional Office for Europe, 1986).

Health system: all activities with the primary purpose of promoting, restoring and maintaining health (WHO, 2000).

Health equity: the absence of systematic disparities in health (or in the major social determinants of health) between groups with different underlying social advantage or disadvantage, such as wealth, power or prestige. Inequities in health systematically put groups of people who are already socially disadvantaged (for example, by virtue of being poor, female or members of a disenfranchised racial, ethnic or religious group) at further disadvantage with respect to their health (Braveman & Gruskin, 2003).

Interdependence: situations characterized by reciprocal effects among countries or actors in countries. Interdependence exists when transactions have reciprocal – not necessarily symmetrical, costly effects; when interactions do not have significant costly effects, there is simply interconnectedness. Interdependence does not mean mutual benefit. Interdependent relations always involve costs, as interdependence restricts autonomy; specifying a priori whether the benefits of a relationship will exceed the costs is impossible. This depends on the values of the actors and the nature of the relationship (Keohane & Nye, 1989).

Intersectoral action: working with more than one sector of society to take action on an area of shared interest. Sectors may include government departments such as health, education, environment and justice; ordinary citizens; not-for-profit societies or organizations; and business (Health Canada, 2000).

Legitimacy: a generalized perception or assumption that the actions of an entity are desirable, proper or appropriate within some socially constructed system of norms, values, beliefs and definitions (Suchman, 1995). Legitimacy depends on the level of acceptance by various direct and external stakeholders. Representation, inclusiveness and transparency are critical to building the necessary trust for legitimacy. In addition, legitimacy depends on the ability to engage stakeholders in a meaningful dialogue in which they feel ownership and the possibility of deriving benefits, which requires full transparency, openness and respect. Nascent multistakeholder processes can be seriously jeopardized if the partners do not regularly monitor the transparency of perceptions and expectations with regard to participation (Burger & Mayer, 2003; Vallejo & Hauselmann, 2004).

Multistakeholder deliberation: a collective and collaborative public effort to examine an issue from different viewpoints before taking a decision; deliberative processes strengthen policy design by building recognition of common values, shared commitment and emerging issues and by providing a comprehensive understanding of causal relationships (Swanson et al., 2009).

Meta-governance: covers the range of functions that governments take on in relation to the support of governance arrangements, which include overseeing, steering and coordinating governance arrangements; selecting and supporting the key participants in governance arrangements; mobilizing resources; ensuring that wider systems of governance are operating fairly and efficiently; and taking prime carriage of democracy and accountability issues (Bell & Hindmoor, 2009).

Nudge policy: any aspect of the choice architecture that alters people's behaviour in a predictable way without forbidding any options or significantly changing their economic incentives (Thaler & Sunstein, 2008).

Public health: the science and art of preventing disease, prolonging life and promoting health through organized efforts of society (Acheson, 1988).

Shared value: policies and operating practices that enhance the competitiveness of a company while simultaneously advancing economic and social conditions in the communities in which it operates. Shared value is created by identifying and extending the connections between social and economic progress (Porter & Kramer, 2011).

Social determinants of health: the conditions in which people are born, grow, live, work and age, including the health system. These circumstances are shaped by the distribution of money, power and resources at global, national and local levels, which are themselves influenced by policy choices. The social determinants of health are responsible for most health inequity, the unfair but avoidable differences in health status seen within and between countries (Commission on Social Determinants of Health, 2008).

Smart governance: one way to describe the major institutional adaptations observed in public and international organizations in the face of increasing interdependence. In a knowledge society, policy decisions based on purely normative considerations lose ground to decisions informed by evidence. At the same time, decision-making requires new methods for coping with and accounting for the associated uncertainties that abound when knowledge – always questionable, always revisable – supersedes majority values as the basis for authority. Smart governance, coined by Willke (2007), is "an abbreviation for the ensemble of principles, factors and capacities that constitute a form of governance able to cope with the conditions and exigencies of the knowledge society".

Well-being: people's experience of positive and negative emotions, satisfaction, vitality, resilience, self-esteem and sense of purpose and meaning. Social well-being has two main components: supportive relationships and a feeling of trust and belonging; together they form a picture of what everyone really wants: a fulfilling and happy life (New Economics Foundation, 2011).

Whole-of-government approach: the diffusion of governance vertically across levels of government and arenas of governance and horizontally throughout sectors. Whole-of-government activities are multilevel, from local to global government activities and actors, and increasingly also involving groups outside government. A whole-of-government approach often seeks to address a perceived lack of command and control at the centre with respect to an issue or overall goals by using a new organizational design and reorganization. This approach requires building trust, common ethics, a cohesive culture and new skills. It stresses a need for better coordination and integration centred on the overall societal goals for which the government stands. Health in all policies is one whole-of-government approach to making governance for health and well-being a priority for more than the health sector and working in both directions: how other sectors affect health and how health affects other sectors.

Whole-of-society approach: an approach with the aim of extending the whole-of-government approach by additional emphasis on the roles of the private sector and civil society, as well as political decision-makers such as parliamentarians. Increasingly, the policy networks that have emerged within government extend beyond government to include other societal actors, particularly in considering wicked problems such as obesity (Dubé et al., 2009b) and pandemic preparedness (WHO, 2009). By engaging the private sector, civil society, communities and individuals, the whole-of-society approach can strengthen the resilience of communities to withstand threats to their health, security and well-being. A whole-of-society approach goes beyond institutions: it influences and mobilizes local and global culture and media, rural and urban communities and all relevant policy sectors, such as the education system, the transport sector, the environment and even urban design, as demonstrated in the case of obesity and the global food system. Whole-of-society approaches are a form of collaborative governance that emphasizes coordination through normative values and trust-building among a wide variety of actors.

Wicked problems: the term wicked in this context is used not in the sense of evil but rather as an issue that is highly resistant to resolution. Successfully solving or at least managing wicked policy problems requires reassessing some of the traditional ways of working and solving problems. These problems challenge governance structures, skills bases and organizational capacity. A first step is to recognize wicked problems as such. Addressing wicked problems successfully requires broad recognition and understanding, including from governments and ministers, that there are no quick fixes or simple solutions.



References

- Acheson D (1988). Report of the Committee of Inquiry into the future development of the public health functions. London, H.M. Stationery Office:289.
- African Development Bank Group (2009). Checklist for gender mainstreaming in governance programmes. Abidjan, African Development Bank Group (http://www.afdb.org/fileadmin/uploads/ afdb/Documents/Policy-Documents/Checklist%20for%20Gender%20Mainstreaming%20in%20 Governance%20Programmes%20EN.pdf, accessed 30 May 2012).
- Aizcorbe A, Retus B, Smith S (2008). Toward a health care satellite account. Survey of Current Business, 88:24–30.
- American Beverage Association (2010). Alliance school beverage guidelines: final progress report. Washington, DC, American Beverage Association.
- Andersson E (in press). Engagement in health: what role for the public and patients? In: Kickbusch I, Gleicher D, eds. Governance for health. Berlin, Springer.
- Ansell C, Gash A (2007). Collaborative governance in theory and practice. Journal of Public Administration Research and Theory, 18:543–571.
- (Australian) Management Advisory Committee (MAC) (2004). Connecting government: whole of government responses to Australia's priority challenges. Canberra, Commonwealth of Australia (http://www.apsc.gov.au/mac/connectinggovernment.pdf, accessed 30 May 2012).
- Barabas J (2004). How deliberation affects policy opinions. American Political Science Review, 98:687–701.
- Beck U (1992). Risk society: towards a new modernity. London, Sage.
- Bell S, Hindmoor A (2009). Rethinking governance: the centrality of the state in modern society. Cambridge, Cambridge University Press.
- Birkavs V, McCartney C (2011). Policies for shared societies: their contribution to well-being and economic performance. In: *Challenge Europe: growth, well-being and social policy in Europe: trade-off or synergy*? Brussels, European Policy Centre:20–26.
- Bonell C et al. (2011). One nudge forward, two steps back. British Medical Journal, 342:d401.
- Brandt AM (2007). The cigarette century: the rise, fall, and deadly persistence of the product that defined America. New York, Basic Books.
- Braveman P, Gruskin S (2003). Defining equity in health. Journal of Epidemiology and Community Health, 57:254–258.
- Bryson JM, Crosby BC, Stone MM (2006). The design and implementation of cross-sector collaborations: propositions from the literature. *Public Administration Review*, 66:44–55.
- Bull B, McNeill D, eds. (2007). Development issues in global governance. London, Routledge.
- Burger D, Mayer C (2003). Making sustainable development a reality: the role of social and ecological standards. Eschborn, Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ).
- Butler-Jones D (2008). The Chief Public Health Officer's report on the state of public health in Canada, 2008: addressing health inequalities. Ottawa, Minister of Health (http://www.phac-aspc. gc.ca/cphorsphc-respcacsp/2008/pdf/cpho-report-eng.pdf, accessed 30 May 2012).
- Capewell S et al. (1999). Effects of the Heartbeat Wales programme. British Medical Journal, 318:1072.

- Cashore B (2002). Legitimacy and the privatisation of environmental governance: how non-state market driven (NSMD) governance systems gain rule making authority. *Governance*, 15:503–529.
- Children's Hospital Boston (2012a). *MedWatcher: track medication safely from your iPhone.* Boston, Children's Hospital Boston (http://www.healthmap.org/medwatcher, accessed 30 May 2012).
- Children's Hospital Boston (2012b). Outbreaks near me. Boston, Children's Hospital Boston (http://www.healthmap.org/outbreaksnearme, accessed 30 May 2012).
- Christensen T, Laegreid P (2007). The whole of government approach to public sector reform. *Public Administration Review*, 67:1059–1066.
- CNN World (2006). Skinny models banned from catwalk. Atlanta, Cable News Network (http:// articles.cnn.com/2006-09-13/world/spain.models_1_association-of-fashion-designers-skinnymodels-pasarela-cibeles?_s=PM:WORLD, accessed 30 May 2012).
- Commission on Global Governance (1995). Our global neighbourhood. Oxford, Oxford University Press.
- Commission on Social Determinants of Health (2008). 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, World Health Organization (http://www.who.int/social_determinants/resources/gkn_lee_al.pdf, accessed 30 May 2012).
- Conklin J (2006). Wicked problems and social complexity. In: Dialogue mapping: building shared understanding of wicked problems. New York, Wiley.
- Coulter A (2005). What do patients and the public want from primary care? British Medical Journal, 331:1199.
- Council of the European Union (2006a). Council conclusions on health in all policies (HiAP). Proceedings of the 2767th Employment, Social Policy, Health and Consumer Affairs Council meeting, Brussels, 30 November and 1 December 2006. Brussels, Council of the European Union (http:// www.consilium.europa.eu/ueDocs/cms_Data/docs/pressData/en/lsa/91929.pdf, accessed 30 May 2012).
- Council of the European Union (2006b). Council conclusions on common values and principles in European Union health systems. Brussels, Council of the European Union.
- Crawford A (2006). Networked governance and the post-regulatory state? Theoretical Criminology, 10:449–479.
- Cullbridge Marketing and Communications (2011). Tools of change: proven methods for promoting health, safety and environmental citizenship [web site]. Ottawa, Cullbridge Marketing and Communications.
- Dahlgren G, Whitehead M (2006). European strategies for tackling social inequities in health: levelling up part 2. Copenhagen, WHO Regional Office for Europe.
- Davis RM (1998). Healthy People 2010: national health objectives for the United States. British Medical Journal, 317:1513–1517.
- de la Chapelle B (2008). Multi-stakeholder governance: emergence and transformational potential of a new political paradigm. In: Helbing D, ed. *Managing complexity: insights, concepts, applications.* Berlin, Springer.
- Dodgson R, Lee K, Drager N (2002). Global health governance: a conceptual review. Geneva, World

Health Organization (http://whqlibdoc.who.int/publications/2002/a85727_eng.pdf, accessed 30 May 2012).

- Dolan P, Tsuchiya A, Wailoo A (2003). NICE's citizen's council: what do we ask them, and how? *Lancet*, 362:918–919.
- Dubé L et al. (2009a). Building convergence: toward an integrated health and agri-food strategy for Canada. Ottawa, Canadian Agri-Food Policy Institute (http://www.capi-icpa.ca/pdfs/Building-Convergence_Summary.pdf, accessed 30 May 2012).
- Dubé L, Thomassin P, Beauvais J (2009b). Whole-of-society approach to policy development and implementation: building convergence and driving change on the ground. Ottawa, Canadian Agri-Food Policy Institute. (http://www.capi-icpa.ca/converge-full/eight.html, accessed 30 May 2012).
- ECDC/EMEA Joint Working Group (2009). The bacterial challenge: time to react. Stockholm, European Centre for Disease Prevention and Control and European Medicines Agency (http://www.ecdc.europa.eu/en/publications/Publications/0909_TER_The_Bacterial_Challenge_Time_to_React.pdf, accessed 30 May 2012).
- European Commission (2009). Communication from the Commission to the Council and the European Parliament. GDP and beyond: measuring progress in a changing world. Brussels, European Commission.
- European Commission (2010). Communication from the Commission: Europe 2020 a strategy for smart, sustainable and inclusive growth. Brussels, European Commission (http://ec.europa.eu/europe2020/index_en.htm, accessed 30 May 2012).
- European Parliament (2006). Regulation (EC) No. 1924/2006 of the European Parliament and the Council of 20 December 2006 on nutrition and health claims made on foods. Official Journal of the European Communities, L 404 (30 December):9.
- Federal Interagency Workgroup (2010). *Healthy People 2020 framework*. Washington, DC, United States Department of Health and Human Services (http://www.healthypeople.gov/2020/consortium/HP2020Framework.pdf, accessed 30 May 2012).
- Fidler A, Szabó T (in press). Bridging the gap: governance challenges for the health sector in the countries of central and eastern Europe and the former Soviet Union. In: Kickbusch I, Gleicher D, eds. Governance for health. Berlin, Springer.
- Finegood D, Merth T, Rutter H (2010). Implications of the foresight obesity system map for solutions to childhood obesity. *Obesity*, 18:S13–S16.
- Frederickson GH (2005). Whatever happened to public administration? Governance, governance everywhere. In: Ferlie E, Lynn LE, Pollitt C, eds. *The Oxford handbook of public management*. Oxford, Oxford University Press.
- Fuerth LS (2009). Foresight and anticipatory governance. *Foresight*, 11(4):14–32.
- Georgia Health Policy Center (2008). Finding the voice of public health in the national health reform dialogue: an integrative model for health system transformation. Atlanta, Georgia State University.
- Glouberman S et al. (2003). A toolbox for improving health in cities: a discussion paper. Ottawa, Caledon Institute of Social Policy.
- Government of Australia (2007). Tackling wicked problems: a public policy perspective. Canberra,

Australian Public Service Commission (http://www.apsc.gov.au/publicationso7/ wickedproblems.pdf, accessed 30 May 2012).

- Government of Northern Ireland (1999). Professional policy making for the twenty first century. Belfast, Government of Northern Ireland (http://ctpr.org/wp-content/uploads/2011/03/ Professional-Policy-Making-for-the-21st-Century-1999.pdf, accessed 30 May 2012).
- Graham J, Amos B, Plumptre T (2003). Principles of good governance in the 21st century. Ottawa, Institute on Governance.
- Greer SL, Vanhercke B (2010). The hard politics of soft law: the case of health. In: Mossialos E et al., eds. *Health systems governance in Europe: the role of European Union law and policy.* Cambridge, Cambridge University Press.
- Grefe C, Schnabel U (2011). "Wir müssen zukunftsoffen bleiben". Zeit Online, 21 (http://www.zeit. de/2011/21/Energie-Ethikkommission, accessed 30 May 2012).
- Health Canada (2000). Intersectoral action toolkit. Ottawa, Health Canada.
- Health Council of Canada (2007). ActNow BC supports healthy lifestyles. Ottawa, Health Council of Canada (http://healthcouncilcanada.ca/docs/shiningalight/ActNow%20BC%20supports%20 healthy%20lifestyles.pdf, accessed 30 May 2012).
- Hernández-Aguado I, Parker LA (2009). Intelligence for health governance: innovation in the monitoring of health and well-being. In: Kickbusch I, ed. *Policy innovation for health*. New York, Springer:23–66.
- Hill C, Lynn LE (2005). Is hierarchical governance in decline? Evidence from empirical research. *Journal of Public Administration Research and Theory*, 15:73–96.
- Hocking J (2005). Liberty, security and the state. In: Saunders P, Walter S, eds. Ideas and influence: social science and public policy in Australia. Sydney, UNSW Press.
- Holzer M et al. (2010). *Prague e-governance: a study of best practices*. Newark, NJ, E-Governance Institute, National Center for Public Performance.
- Hood C (1991). A public management for all seasons? Public Administration, 63:3–19 (http://www.globalhealtheurope.org/images/stories/researchpaper_02_v3_web.pdf, accessed 30 May 2012).
- Hooghe L, Marks G (2003). Unravelling the central state, but how? Types of multi-level governance. American Political Science Review, 97:233–243.
- Huxham C (2003). Theorizing collaboration practice. Public Management Review, 5:401–423.
- Imperial M (2005). Using collaboration as a governance strategy: lessons from six watershed management programs. Administration and Society, 37:281–320.
- Institute of Medicine (2011). For the public's health: revitalizing law and policy to meet new challenges. Washington, DC, National Academy of Sciences.
- Institute of Transport Economics (2002). CBA of cycle track network in Norwegian cities. Oslo, Institute of Transport Economics (TØI-report 567/2002) A 38(8):592–605.
- International Association for Public Participation (2004). IAP2 public participation spectrum. Wollongong, Australia, International Association for Public Participation Australasia.
- International Food and Beverage Alliance (2009). Progress report to Dr. Margaret Chan, Director-General of the World Health Organization on the International Food and Beverage Alliance's five

commitments to action under the 2004 Global Strategy on Diet, Physical Activity and Health. Geneva, International Food and Beverage Alliance.

- International Food and Beverage Alliance (2011). The International Food and Beverage Alliance's five commitments to action in support of the World Health Organization's 2004 Global Strategy on Diet, Physical Activity and Health. Geneva, International Food and Beverage Alliance.
- Jenson J (2009). Making sense of contagion: citizenship regimes and public health in Victorian England. In: Hall P, Lamont M, eds. Successful societies: how institutions and culture affect health. Cambridge, Cambridge University Press.
- Jessop B (2002). Governance and metagovernance: on reflexivity, requisite variety, and requisite irony. Lancaster, Department of Sociology, Lancaster University (http://www.lancs.ac.uk/fass/ sociology/papers/jessop-governance-and-metagovernance.pdf, accessed 30 May 2012).
- John F. Kennedy Presidential Library and Museum (1968). Remarks of Robert F. Kennedy at the University of Kansas, March 18, 1968. Boston, John F. Kennedy Presidential Library and Museum.
- Jonas H (1985). The imperative of responsibility: search of an ethics for the technological age. Chicago, University of Chicago Press.
- Kailas A, Chong CC, Watanabe F (2010). From mobile phones to personal wellness dashboards. *IEEE Pulse*, 7/8:57–63.
- Kamel Boulos MN (in press). Social media and Web 2.0: how will they impact governance for health? In: Kickbusch I, Gleicher D, eds. *Governance for health*. Berlin, Springer.
- Keane J (2003). Global civil society? Cambridge, Cambridge University Press.
- Keane J (2009). The life and death of democracy. New York, Simon and Schuster.
- Keohane RO, Nye J (1989). Power and interdependence. 2nd ed. Cambridge, MA, HarperCollins.
- Kickbusch I (2003). Perspectives in health promotion and population health. American Journal of Public Health, 93:383–388.
- Kickbusch I (2007). Health governance: the health society. In: McQueen D, Kickbusch I, eds. *Health and modernity: the role of theory in health promotion.* New York, Springer.
- Kickbusch I (2010). Health in all policies: the evolution of the concept of horizontal governance. In: Kickbusch I, Buckett K, eds. *Implementing health in all policies: Adelaide 2010*. Adelaide, Government of South Australia.
- Kickbusch I (2011). Global health diplomacy: how foreign policy can influence health. British Medical Journal, 342:d3154.
- Kickbusch I, Buckett K, eds. (2010). Implementing health in all policies: Adelaide 2010. Adelaide, Government of South Australia.
- Kingdon JW (1995). Agendas, alternatives and public policies. 2nd ed. New York, Addison Wesley Longman.
- Klijn EH (2005). Networks and inter-organizational management: challenging, steering, evaluation, and the role of public actors in public management. In: *The Oxford handbook of public management*. Oxford, Oxford University Press.
- Klijn EH (2009). Trust in governance networks: looking for conditions for innovative solutions and outcomes. In: Osborne SP, ed. The new public governance? Emerging perspectives on the theory and practice of public governance. London, Routledge.

- Klinke A, Renn O (2006). Systemic risks as challenge for policy making in risk governance. Forum *Qualitative Sozialforschung/Forum Qualitative Social Research*, 7(1):33.
- Kloprogge P, van der Sluijs (2006). The inclusion of stakeholder knowledge and perspectives in integrated assessment of climate change. *Climatic Change*, 75:359–389.
- Kuhn T (1962). Structure of scientific revolutions. Chicago, University of Chicago Press.
- Labonte R et al. (2004). Fatal indifference: the G8, Africa and global health. Ottawa, Juta Academic.
- Mackenbach J et al. (2008). Socioeconomic inequalities in health in 22 European countries. New England Journal of Medicine, 358:2468–2481.
- Marteau TM et al. (2011). Judging nudging: can nudging improve population health? British Medical Journal, 342:d228.
- Mayo AJ, Nohria N (2005). In their time: the greatest business leaders of the twentieth century. Boston, Harvard Business School Press.
- McQuaid RW (2009). Theory of organizational partnerships: partnership advantages, disadvantages and success factors. In: Osborne SP, ed. The new public governance? Emerging perspectives on the theory and practice of public governance. London, Routledge.
- McQueen D (in press). Value base, ethics and key challenges of health governance for health protection, health promotion and disease prevention. In: Kickbusch I, Gleicher D, eds. *Governance for health.* Berlin, Springer.
- Meeting of Minds European Citizens' Panel (2006). European citizens' assessment report: complete results. Brussels, Meeting of Minds Partner Consortium.
- Michalski W, Miller R, Stevens B (2001). Governance in the 21st century: power in the global knowledge economy and society. In: OECD, ed. *Governance in the 21st century*. Paris, Organisation for Economic Co-operation and Development:7–26.
- Ministry of Education, Finland (2008). The Finnish Government's Child and Youth Policy Programme 2007–2011. Helsinki, Ministry of Education.
- Moore M, Hartley J (2009). Innovations in governance. In: Osborne SP, ed. The new public governance? Emerging perspectives on the theory and practice of public governance. London, Routledge.
- Moss C, Schmitz A, Schmitz T (2006). First-generation genetically modified organisms in agriculture. *Journal of Public Affairs*, 6:46–57.
- Mossialos E et al., eds. (2010). Health systems governance in Europe: the role of European Union law and policy. Cambridge, Cambridge University Press.
- Mulgan R (2000). Accountability: an ever-expanding concept? Public Administration, 78:555–573.
- Murthy NRN (2011). Corporate connections: the value of private sector partnerships. Harvard International Review, Spring:69–73.
- Nestle M (2007). Food politics: how the food industry influences nutrition and health. Revised and expanded edition. Berkeley, University of California Press.
- New Economics Foundation (2011). *Measuring our progress: the power of well-being*. London, New Economics Foundation (http://www.wikiprogress.org/images//Measuring_our_progress_ webReady.pdf, accessed 30 May 2012).
- Nguyen C (2009). A woman's place is at the policy table ... and how citizens' assemblies are help-

ing make that happen. Ottawa, Canadian Women's Health Network (http://www.cwhn.ca/en/node/39372, accessed 30 May 2012).

- Nye J (2008). The power to lead. Oxford, Oxford University Press.
- Nye J (2011). The future of power. New York, PublicAffairs.
- Nye J, Kamarck EC (2002). Governance.com: democracy in the information age. Washington, DC, Brookings Institute Press.
- OECD (2001). Governance in the 21st century. Paris, Organisation for Economic Co-operation and Development.
- OECD (2010). Meeting of the Health Committee at Ministerial Level: final communiqué. Paris, Organisation for Economic Co-operation and Development (http://www.oecd.org/ dataoecd/4/55/46163626.pdf, accessed 30 May 2012).
- OECD (2012). Public governance [web site]. Paris, Organisation for Economic Co-operation and Development (http://www.oecd.org/countrieslist/0,3351,en_2649_37405_1_1_1_37405,00.html, accessed 30 May 2012).
- OECD Global Science Forum (2009). Applications of complexity science for public policy: new tools for finding unanticipated consequences and unrealized opportunities. Paris, Organisation for Economic Co-operation and Development.
- Office of the United Nations High Commissioner for Human Rights and WHO (2008). *The right to health.* Geneva, Office of the United Nations High Commissioner for Human Rights (Fact Sheet No. 31; http://www.ohchr.org/Documents/Publications/Factsheet31.pdf, accessed 30 May 2012).
- Orr R (2011). UN Innovation: a business model for solving global problems. *Harvard International Review*, Spring:64–68.
- Osborne SP (2009). The (new) public governance: a suitable case for treatment? In: Osborne SP, ed. The new public governance? Emerging perspectives on the theory and practice of public governance. London, Routledge.
- Özdemir V, Knoppers BM (in press). From government to anticipatory governance: responding to the challenges of innovation and emerging technologies. In: Kickbusch I, Gleicher D, eds. Governance for health. Berlin, Springer.
- Paquet G (2001). The new governance, subsidiarity and the strategic state. In: OECD, ed. Governance in the 21st century. Paris, Organisation for Economic Co-operation and Development.
- PatientsLikeMe (2012). PatientsLikeMe [web site]. Cambridge, MA, PatientsLikeMe (http://www. patientslikeme.com, accessed 30 May 2012).
- Peake S et al. (2008). Health equity through intersectoral action: an analysis of 18 country case studies. Ottawa, Public Health Agency of Canada and Geneva, World Health Organization.
- Permanand G, Vos E (2010). EU regulatory agencies and health protection. In: Mossialos E et al., eds. *Health systems governance in Europe: the role of European Union law and policy.* Cambridge, Cambridge University Press.
- Peters BG (2001). The future of governing. Lawrence, University Press of Kansas.
- Pettersson B (2010). Health in all policies across jurisdictions a snapshot from Sweden. Public Health Bulletin South Australia, 7(2):17–20.
- Poguntke T, Webb P (2005). The presidentialization of politics in democratic societies: a framework for analysis. In: Poguntke T, Webb P, eds. *The presidentialization of politics: a comparative*

study of modern democracies. Oxford, Oxford University Press:1-25.

Porter M, Kramer M (2011). Creating shared value. *Harvard Business Review*, 89(1/2):62–77.

Post LA, Raile ANW, Raile ED (2010). Defining political will. Politics and Policy, 38:653–676.

- Public Health Agency of Canada et al. (2007). Crossing sectors experiences in intersectoral action, public policy and health. Ottawa, Public Health Agency of Canada (http://www.phac-aspc.gc.ca/publicat/2007/cro-sec/pdf/cro-sec e.pdf, accessed 30 May 2012).
- Puska P et al., eds. (1995). The North Karelia project: 20 year results and experiences. Helsinki, National Public Health Institute.
- Puska P, Ståhl T (2010). Health in all policies the Finnish initiative: background, principles, and current issues. Annual Review of Public Health, 31:27.1–27.14.

Raynaud O, Jané-Llopis E (in press). Partnering for health governance transformation. In: Kickbusch I, Gleicher D, eds. Governance for health. Berlin, Springer.

Reither EN, Olshansky SJ, Yang Y (2011). New forecasting methodology indicates more disease and earlier mortality ahead for today's younger Americans. *Health Affairs (Millwood)*, 30:1562–1568.

- Rhodes RAW (2000). Governance and public administration. In: Pierre J, ed. Debating governance: authority, steering, and democracy. Oxford, Oxford University Press.
- Riklin A (2006). What Montesquieu could not have known yet: reflections on a revision of the separation of powers theory. *Ancilla Iuris,* 20.
- Robertson J (2003). The economic costs of infectious diseases. Canberra, Parliament of Australia (Research Note No. 36 2002–03; http://www.aph.gov.au/library/pubs/rn/2002-03/03rn36.htm, accessed 30 May 2012).
- Roll Back Malaria Partnership (2010). Roll Back Malaria (RBM) Partnership publications and multimedia resources [web site]. Geneva, World Health Organization (http://www.rollbackmalaria. org/multimedia/index.html, accessed 5 January 2012).
- Rosenberg CE (1962). The cholera years; the United States in 1832, 1849, and 1866. Chicago, University of Chicago Press.
- Ruger JP (2010). Health and social justice. Oxford, Oxford University Press.
- Sabel CF, Zeitlin J (2008). Learning from difference: the new architecture of experimentalist governance in the European Union. European Law Journal, 14:278–280.
- Salamon LM, ed. (2002). The tools of government. Oxford, Oxford University Press.

Sandel MJ (2010). Justice: what's the right thing to do? London, Penguin Books.

- San Ramon Valley Fire Department (2012). *Fire department iPhone App 2.o.* San Ramon, San Ramon Valley Fire Department (http://firedepartment.mobi, accessed 30 May 2012).
- Scharpf FW (1994). Games real actors could play: positive and negative co-ordination in embedded negotiations. *Journal of Theoretical Politics*, 6(1):27–53.

Scharpf FW (2002). The European social model. Journal of Common Market Studies, 40:645–670.

- Schneider M et al. (2010). Foundations, methodology, and selected results of a satellite account for the German health economy. Augsburg, Beratungsgesellschaft für angewandte Systemforschung mbH.
- Scottish Government (2009). Recipe for success Scotland's National Food and Drink Policy. Edinburgh, Scottish Government (http://www.scotland.gov.uk/Publications/2009/06/25133322/2,

accessed 30 May 2012).

- Senden L (2005). Soft law, self-regulation and co-regulation in European law: where do they meet? *Electronic Journal of Comparative Law*, 9.1.
- Skogan WG et al. (2008). Evaluation of CeaseFire-Chicago. Chicago, Northwestern University.
- Slama K (2005). From evidence to practice: tobacco control effectiveness. Promotion and Education, 12(Suppl. 1):28–32.
- Sorenson E (2006). Metagovernance: the changing role of politicians in processes of democratic governance. *American Review of Public Administration*, 36:98–114.
- Ståhl T et al., eds. (2006). *Health in all policies: prospects and potentials.* Helsinki, Ministry of Social Affairs and Health (http://ec.europa.eu/health/archive/ph_information/documents/health_in_ all_policies.pdf, accessed 30 May 2012).
- Stiglitz JE, Sen A, Fitoussi JP (2009). Report by the Commission on the Measurement of Economic Performance and Social Progress. Paris, Commission on the Measurement of Economic Performance and Social Progress (http://www.stiglitz-sen-fitoussi.fr/documents/rapport_anglais.pdf, accessed 30 May 2012).
- Strand M et al. (2009). Setting the political agenda to tackle health inequity in Norway. Copenhagen, WHO Regional Office for Europe (Studies on Social and Economic Determinants of Population Health, No. 4; http://www.euro.who.int/__data/assets/pdf_file/0014/110228/E93431.pdf, accessed 30 May 2012).
- Strange S (1996). The retreat of the state: the diffusion of power in the world economy. Cambridge, Cambridge University Press.
- Suchman M (1995). Managing legitimacy: strategic and institutional approaches. Academy of *Management Review*, 20:571.
- Swanson D et al. (2009). Seven guidelines for policy-making in an uncertain world. In: Swanson D, Bhadwal S, eds. *Creating adaptive policies: a guide for policy-making in an uncertain world.* London, Sage.
- Tallacchini M (2005). Before and beyond the precautionary principle: epistemology of uncertainty in science and law. Toxicology and Applied Pharmacology, 207(2 suppl):645–651.
- Thaler RH, Sunstein C (2008). Nudge: improving decisions about health, wealth, and happiness. New Haven, CT, Yale University Press.
- Tomson G (2010). The impact of global processes on health systems in Europe. Geneva, Global Health Europe (Global Health Europe Research Paper No. 2; http://www.globalhealtheurope. org/images/stories/researchpaper_02_v3_web.pdf, accessed 30 May 2012).
- Tomson G, Påfs J, Diseberg A (in press). The challenges of multi-level governance: the impact of global and regional processes on health and health systems in Europe. In: Kickbusch I, Gleicher D, eds. *Governance for health*. Berlin, Springer.
- UNDP (1997). Good governance and sustainable human development. A UNDP policy document. New York, United Nations Development Programme (http://mirror.undp.org/magnet/policy/ chapter1.htm, accessed 30 May 2012).
- UNDP (2011). Human development report 2011 Sustainability and equity: a better future for all. New York, Palgrave Macmillan.

- United Nations (2010). UN advisory group seeks to enhance public-private links to boost access to energy. New York, United Nations (http://www.un.org/apps/news/story.asp?NewsID=35333, accessed 30 May 2012).
- United Nations General Assembly (1948). Universal Declaration of Human Rights. New York, United Nations.
- United Nations General Assembly (1966). International Covenant on Economic, Social and Cultural Rights. New York, United Nations.
- United States Department of Health and Human Services (2010). HHS announces the nation's new health promotion and disease prevention agenda. Washington, DC, United States Department of Health and Human Services (http://www.hhs.gov/news/press/2010pres/12/20101202a.html, accessed 30 May 2012).
- Vallejo N, Hauselmann P (2004). Governance and multi-stakeholder processes. Winnipeg, International Institute for Sustainable Development.
- Vangen S, Huxham C (2003). Nurturing collaborative relations: building trust in interorganizational collaboration. *Journal of Applied Behavioral Science*, 39:5–31.
- Vibert F (2007). The rise of the unelected: democracy and the new separation of powers. Cambridge, Cambridge University Press.
- Vogel D (2008). Private global business regulation. Annual Review of Political Science, 11:261–282.
- Walter J, Strangio P (2007). No, Prime Minister: reclaiming politics from leaders. Sydney, UNSW Press.
- Weber M (1922/1978). Economy and society. Berkeley, University of California Press.
- Wernli D et al. (2011). A call for action: the application of the International Health Regulations to the global threat of antimicrobial resistance. *PLoS Medicine*, 8:e1001022.
- Whiting D, Unwin N, Roglic G (2010). Diabetes: equity and social determinants. In: Blas E, Kurup AS, eds. Equity, social determinants and public health programmes. Geneva, World Health Organization (http://www.who.int/social_determinants/en, accessed 30 May 2012).
- WHO (1946). Constitution of the World Health Organization. Geneva, World Health Organization (http://www.who.int/governance/eb/who_constitution_en.pdf, accessed 30 May 2012).
- WHO (1978). Declaration of Alma-Ata. International Conference on Primary Health Care, Alma-Ata, USSR, 6–12 September 1978. Geneva, World Health Organization (http://www.who.int/hpr/NPH/ docs/declaration_almaata.pdf, accessed 30 May 2012).
- WHO (1988). Adelaide Recommendations on Healthy Public Policy. Second International Conference on Health Promotion, Adelaide, South Australia, 5–9 April 1988. Geneva, World Health Organization (http://www.who.int/hpr/NPH/docs/Adelaide_recommendations.pdf, accessed 30 May 2012).
- WHO (1997a). Jakarta Declaration on Leading Health Promotion into the 21st Century. 4th International Conference on Health Promotion: "New Players for a New Era – Leading Health Promotion into the 21st Century", Jakarta, 21–25 July. Geneva, World Health Organization (http://www.who. int/hpr/NPH/docs/jakarta_declaration_en.pdf, accessed 30 May 2012).
- WHO (2000). The world health report 2000: health systems: improving performance. Geneva, World Health Organization (www.who.int/whr/2000/en/index.html, accessed 30 May 2012).

- WHO (2003a). WHO Framework Convention on Tobacco Control. Geneva, World Health Organization (http://www.who.int/fctc/en, accessed 30 May 2012)
- WHO (2003b). Diet, nutrition and the prevention of chronic diseases: report of the joint WHO/FAO expert consultation. Geneva, World Health Organization, 2003 (WHO Technical Report Series, No. 916; http://www.who.int/dietphysicalactivity/publications/trs916/download/en/index.html, accessed 30 May 2012).
- WHO (2004). Global Strategy on Diet, Physical Activity and Health. Geneva, World Health Organization (http://www.who.int/dietphysicalactivity/en, accessed 30 May 2012).
- WHO (2009). Whole-of-society pandemic readiness: WHO guidelines for pandemic preparedness and response in the non-health sector. Geneva, World Health Organization (http://www.who.int/csr/disease/influenza/pandemic/en, accessed 30 May 2012).
- WHO (2011). Moscow Declaration: First Global Ministerial Conference on Healthy Lifestyles and Noncommunicable Disease Control. Geneva, World Health Organization (http://www.who.int/nmh/ events/Moscow_ncds_2011/conference_documents/moscow_declaration_en.pdf, accessed 30 May 2012).
- WHO and Government of South Australia (2010). Adelaide Statement on Health in All Policies. Geneva, World Health Organization (http://www.who.int/social_determinants/en, accessed 30 May 2012).
- WHO Regional Office for Europe (1985). Targets for Health for All: targets in support of the European regional strategy for Health for All. Copenhagen, WHO Regional Office for Europe.
- WHO Regional Office for Europe (1986). Ottawa Charter for Health Promotion. Copenhagen, WHO Regional Office for Europe (http://www.euro.who.int/__data/assets/pdf_file/0004/129532/ Ottawa_Charter.pdf, accessed 30 May 2012).
- WHO Regional Office for Europe (2004). *Preventing road traffic injury: a public health perspective for Europe*. Copenhagen, WHO Regional Office for Europe (http://www.euro.who.int/__data/ assets/pdf_file/0003/87564/E82659.pdf, accessed 30 May 2012).
- WHO Regional Office for Europe (2007). WHO European Action Plan for Food and Nutrition Policy 2007–2012. Copenhagen, WHO Regional Office for Europe (http://www.euro.who.int/__data/ assets/pdf_file/0017/74402/E91153.pdf, accessed 30 May 2012).
- WHO and UNICEF (2008). World report on child injury prevention. Geneva, World Health Organization (http://www.phs.ki.se/csp/pdf/Publications/summary_world_report_children_ engl.pdf, accessed 30 May 2012).
- Willke H (2007). Smart governance: governing the global knowledge society. Frankfurt, Campus Verlag.
- Wismar M, Ernst K (2010). Health in all policies in Europe. In: Kickbusch I, Buckett K, eds. *Implementing health in all policies: Adelaide 2010.* Adelaide, Government of South Australia.
- Wismar M et al. (2007). The effectiveness of health impact assessment: scope and limitations of supporting decision-making in Europe. Copenhagen, WHO Regional Office for Europe on behalf of the European Observatory on Health Systems and Policies (http://www.euro.who.int/__data/ assets/pdf_file/0003/98283/E90794.pdf, accessed 30 May 2012).
- World Bank (2011). What is our approach to governance? [web site]. Washington, DC, World Bank

(http://go.worldbank.org/MKOGR258Vo, accessed 30 May 2012).

- World Bank Institute/PRMGE (2009). Gender and development. A trainer's manual. Module 3: Integrating gender into development projects. Washington, World Bank Institute (http://info. worldbank.org/etools/docs/library/192862/Module3/Module3-index.html, accessed 30 May 2012).
- World Economic Forum (2011). The future of government: lessons learned from around the world. Cologny, World Economic Forum (http://www3.weforum.org/docs/EU11/WEF_EU11_ FutureofGovernment_Report.pdf, accessed 30 May 2012).
- World Trade Organization (2001). DOHA Declaration on the TRIPS Agreement and Public Health. Geneva, World Trade Organization.
- Zürn M (2010). Global governance as multi-level governance. In: Enderlein H, Wälti S, Zürn M, eds. Handbook on multi-level governance. Cheltenham, Edward Elgar.



Key literature that has informed this study

Bambra C, Smith K, Kennedy L (2008). Politics and health. In: Naidoo J, Wills J, eds. *Health studies.* 2nd ed. London, Palgrave Macmillan.

Bauman Z (2007). Liquid times: living in an age of uncertainty. Cambridge, Polity Press.

Bevir M, ed. (2011). The Sage handbook of governance. London, Sage Publications.

Bogdanor V (2005). Joined-up government. Oxford, Oxford University Press.

- Brinkerhoff DW, Fort C, Stratton S (2009). Good governance for health: assessing progress in *Rwanda*. Chapel Hill, NC, IntraHealth International (http://www.intrahealth.org/~intrahea/files/ media/good-governance-and-healthassessing-progress-in-rwanda/goodgovandhealth.pdf, accessed 30 May 2012).
- Dietz T, Ostrom E, Stern PC (2003). The struggle to govern the commons. Science, 302:1907–1912.

Edelenbos J, Klijn EH (2007). Trust in complex decision-making networks: a theoretical and empirical exploration. Administration and Society, 39:25–50.

Enderlein H, Wälti S, Zürn M, eds. (2010). Handbook on multi-level governance. Cheltenham, Edward Elgar.

- Fidler DP (2010). The challenges of global health governance. New York, Council on Foreign Relations (http://www.pdf-finder.com/The-Challenges-of-Global-Health-Governance.html, accessed 30 May 2012).
- Government of Australia (2004). Connecting government: whole of government responses to Australia's priority challenges. Canberra, Australian Public Service Commission (http://www.apsc.gov.au/mac/connectinggovernment1.htm, accessed 30 May 2012).
- Hall P, Taylor RCR (2009). Health, social relations, and public policy. In: Hall P, Lamont M, eds. *Successful societies: how institutions and culture affect health.* Cambridge, Cambridge University Press.
- Henke K-D, Martin K (2009). Health as a driving economic force. In: Kickbusch I, ed. Policy innovation for health. New York, Springer:95–124.
- Jakubowski E, Lister G (2006). Ninth Futures Forum on health systems governance and public participation. Copenhagen, WHO Regional Office for Europe (http://www.euro.who.int/__data/ assets/pdf_file/0006/97836/E89766.pdf, accessed 30 May 2012).
- Kickbusch I (2009). Policy innovations for health. In: Kickbusch I, ed. Policy innovation for health. New York, Springer.
- Koenig-Archibugi M, Zürn M, eds. (2006). New modes of governance in the global system: exploring publicness, delegation and inclusiveness. Basingstoke, Palgrave Macmillan.
- Lehtonen M (2010). Deliberative decision-making on radioactive waste management in Finland, France and the UK: influence of mixed forms of deliberation in the macro discursive context. Journal of Integrative Environmental Sciences, 7:175–196.
- Mulgan G (2010). Health is not just the absence of illness: health in all policies and "all in health policies". In: Kickbusch I, Buckett K, eds. *Implementing health in all policies: Adelaide 2010.* Adelaide, Government of South Australia.

Newman J (2005). Introduction. In: Newman J, ed. *Remaking governance*. Bristol, Policy Press. Ostrom E (2010). Nested externalities and polycentric institutions: must we wait for global solu-

tions to climate change before taking actions at other scales? *Economic Theory,* doi:10.1007/ s00199-010-0558-6.

- Peters BG (2009). Meta-governance and public management. In: Osborne SP, ed. The new public governance? Emerging perspectives on the theory and practice of public governance. London, Routledge.
- Pollitt C (2003). Joined-up government: a survey. Political Studies Review, 2:34–49.
- Raustiala K, Victor DG (2004). The regime complex for plant genetic resources. International Organization, 58:277–309.
- Rouse WB (2008). Health care as a complex adaptive system: implications for design and management. *The Bridge*, 38(1):17–25 (http://www.nae.edu/File.aspx?id=7417, accessed 30 May 2012).
- Sihto M, Ollila E, Koivusalo M (2006). Principles and challenges of health in all policies. In: Ståhl T et al., eds. *Health in all policies: prospects and potentials*. Helsinki, Ministry of Social Affairs and Health: 3–20.

Slaughter AM (2004). A new world order. Princeton, NJ, Princeton University Press.

Slaughter AM, Hale TN (2010). Transgovernmental networks. In: Enderlein H, Wälti S, Zürn M, eds. Handbook on multi-level governance. Cheltenham, Edward Elgar.



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ISBN 978 92 890 0274 5

Governance for health in the 21st century



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