Health Policy Analysis

An Introduction

Health Policy Analysis

An Introduction

Hans Maarse

Health Policy Analysis | An Introduction

Author
Hans Maarse | Maastricht University
(h.maarse@maastrichtuniversity.nl)
ORCID: 0000-0002-6275-3943

Published by: Maastricht University Press | Maastricht University, The Netherlands

Version: 2023-01
ISBN: 9789403702285
DOI: 10.26481/mup.2303

This work is licensed under a Creative Commons Attribution 4.0 International (CC BY 4.0) license © 2023, published by Maastricht University Press on behalf of the author.

Download, read or buy the book here: umlib.nl/mup.2303

Cover image & design: Maastricht University Press
Print and distribution: mybestseller.com

PREFACE

This book is intended for students interested in health policymaking. A key theme in the book is that health policymaking includes more than translating empirical knowledge about the determinants of health and disease into effective policy measures. A linear path from knowledge to health policy does not exist. Though undoubtedly of great importance, empirical knowledge on the determinants of life expectancy, quality of life, infant mortality, maternity death, health disparities, and other public health parameters is only one dimension of health policymaking. An instrumental view on health policymaking falls short because it neglects what may be called its political face. Health policymaking is not only a matter of applying empirical knowledge into practice but also the outcome of political contests, ideological beliefs, commercial interests, power, and institutionalized practices. The purpose of this book is to train students in analyzing the impact of these factors on health policymaking.

I wish to express my sincere appreciation to Maastricht University Press for generously supporting the publication of this book as an open access resource, making it freely available to all those interested in health policymaking. This accessibility will undoubtedly contribute to a wider and more informed discourse on this crucial subject.

The book results from many years of teaching health policy analysis or the analysis of and for health policymaking. It could not have been written without the enthusiastic input of all students I have met in my courses at Maastricht University. It is to them I dedicate this book. I also thank Arianne Elissen, Daan Westra, and Harm Lieverdink for their comments on an earlier version of the book.

Maastricht, August 2023

CONTENTS

FIGURES

BOXES

TABLES

PART ONE

INTRODUCTION

CHAPTER 1

THE PUBLICIZATION OF PUBLIC HEALTH

KEY POINTS:

- As of the nineteenth century, public actors at the national, regional, and local level have become increasingly involved in the pursuit of public health. This development is conceptualized in this book as the publicization of public health.
- Public health is defined as the size and distribution of health and disease at (sub)-population level.
- Public health is influenced by health determinants which can be classified into six main categories: biological factors, biosphere- and atmosphere-related factors, social and economic factors, environmental factors, behavioral factors, and healthcare-related factors.
- Health policy has a broader scope than healthcare policy. Healthcare policy forms a part of health policy.
- The essence of the 'new public health' is that pursuing public health requires a comprehensive and intersectoral approach.
- The growth of life expectancy worldwide since the middle of the nineteenth century demonstrates the success of the health policy. However, there are still significant health problems and there is much evidence of persistent health disparities worldwide.
- Health policymaking has the structure of collective action.
- Health policymaking is a context-bound activity. It is influenced by cultural, technological, economic, demographic, political, and global factors.
- Health policymaking is likely to expand in the future but may evoke increasing public resistance.
- The commercial sector is ever more penetrating the field of public health.

Box 1.1 The fight against cholera outbreaks

In the nineteenth century, outbreaks of cholera were still common in Europe. The Netherlands, for instance, was hit by five outbreaks: 1832-1833, 1848-1849, 1853-1855, 1859 and 1866-1867. Local authorities tried to control the spread of the disease through public hygiene measures, including cleaning the streets of garbage, sewage, animal carcasses, and repressive measures such as keeping infected people isolated and imposing travel and import restrictions (the disease was assumed to have its origin in Asia). Though these measures mitigated the death toll, they failed to remove the cause of the outbreaks. Because the victims of the outbreaks were concentrated among the poor, it frequently happened that people living in the prosperous city areas blamed the victim by calling cholera the consequence of vice and dirty habits, giving it a social and political dimension.

According to the miasma theory that still prevailed in the early nineteenth century, cholera was caused by noxious air. Consequently, local authorities focused on public hygiene to control the disease. The miasma theory came under attack when some doctors with interest in public health argued that the disease was caused by polluted drinking water. In his investigation of the outbreak in London in 1854, John Snow, a founding member of the London Epidemiological Society, discovered that many people living close to or making use of the Broad Street pump for their water intake had died from cholera, whereas brewery workers and poorhouse residents using uncontaminated wells had escaped from it. Based on this natural experiment, he concluded that the water in the pump had been contaminated by bacteria in human feces. For this reason, he persuaded the London authorities to remove the pump handle, and within a few days, the already subsiding epidemic vanished.

Snow's finding fitted into the advent of a new theory that postulated that separated drinking water and sewerage systems could prevent cholera outbreaks. With this theory in mind, public health advocates in the United Kingdom and other countries – known as the Sanitary Movement – urged sanitary measures from public authorities. Although they received the support of the local bourgeoisie who had learned that cholera did not stop at their front door, it took years before public authorities effectively took up the construction of a clean drinking water system and a separate sewer system. In the Netherlands, the delay was not only due to controversies over the validity

of the new theory but also the result of widespread reluctance among local authorities to take action, and the unwillingness of the national government to obligate municipalities to guarantee their citizens access to clean drinking water. Moreover, the national government refused to support local authorities financially. This lack of support mirrored the prevailing ideology of the 'night watch state' at that time.

Sources: Houwaart, 1991; Tulchinsky & Varavikova, 2000; De Swaan, 1988.

1.1 Introduction

The history of the fight against cholera outbreaks demonstrates a new direction in protecting and promoting public health. All across the world, but most profoundly in industrialized countries, public intervention at the national, regional, and local level to protect and promote the health of the population has radically expanded as of the nineteenth century by issuing health laws, carrying out public (childhood) vaccination programs, imposing food safety and road safety standards, launching health campaigns, regulating the financing and organization of health care, setting up local and national agencies for public health, managing epidemics and pandemics, and many other activities. Each of these interventions has contributed to the transformation of health systems into what they are today: complex, extensive, and expensive systems for public health. This development is referred to in this book as the publicization of public health.

Until the nineteenth century, public interventions to protect and promote public health were still in their infancy. Caring for patients by medical doctors largely consisted of what nowadays is called lifestyle prescriptions, for instance rules for diet, exercise and rest, sleep behavior, sexual activity, body hygiene, and control of emotion. Public interventions to contain the outbreak of infectious diseases concentrated on the isolation of infected persons and the imposition of travel and trade restrictions. Various cities had also introduced a local medical police to foster public hygiene. All this would change as of the nineteenth century when medical doctors interested in public health called for a new approach. Members of the so-called Sanitary Movement, such as Edwin Chadwick (1800-1890) in the United Kingdom, Rudolf Virchow in Germany (1821-1902), and Levy Ali Cohen in the Netherlands (1817-1889),

argued that the treatment of individual patients had to be complemented by population-based interventions. Many health risks, including poverty, poor housing, or contaminated water, could only be tackled by collective action.

Initially, collective action took place mainly at the local level by civil society organizations (organizations with a social purpose) and municipalities. Civil society organizations claimed a role for themselves in providing health and social services to their clientele and perceived state intervention as an intrusion in their work field. Nevertheless, state actors have become ever more involved in protecting and promoting public health. After the state had issued its first state laws for public health and health care in the nineteenth century (the first Public Health Act in England dates from 1848), public attention to health problems rapidly expanded in the twentieth century. Nowadays, it is impossible to imagine public health without public intervention. Caring for public health has become part of the public domain.

The attention to public health draws upon the insight that many health problems can and should be prevented by interventions at the (sub)population level. The occurrence of disease is no longer interpreted as a matter of misfortune or God's punishment of sinful behavior but as the effect of a complex set of factors many of which are beyond the control of the individual. Pursuing public health requires collective action because poor working and living conditions, contaminated nutrition and drinking water, environmental pollution, and global warming, to mention a few examples, cannot be resolved at the individual level. Spectacular advancements in bio-medical knowledge and vaccination technology have also contributed to the rise and expansion of the public health agenda. Nowadays, national (childhood) vaccination programs are known as one of the most effective interventions to protect public health (Van Wijhe, 2018).

Many countries have incorporated the state's responsibility for the health of its population in their national legislation. In the Netherlands, this responsibility has been laid down in the constitution. Article 22.1 of the Dutch Constitution states that 'the government takes measures to promote public health.' Though formulated as an open

norm because the measures the government should take to promote public health remain unspecified, it is nevertheless a norm not free of obligation.

The emergence and expansion of health policy are closely associated with the creation of nation-states on the European continent in the nineteenth century. This historical development meant the introduction of national governments in charge of governing their country and taking care of the welfare of their citizens. Initially, however, national governments were hesitant to take action. Following the 'night-watch state' ideology, public health was seen as a primary concern of actors operating at the local level. This situation has undergone radical change ever since. Nowadays, national governments have taken the lead in many areas of public health, though in some countries more than in others. However, the centralization in health policymaking did not mean that local and regional governments and civil society organizations have lost their place in public health. In many countries, they are closely involved in protecting and promoting public health within a general policy framework set out by the national government. A new development is the involvement of international actors in public health such as the World Health Organization and the European Union.

1.2 What is public health?

Public health must be distinguished from medicine (health care). While medicine involves the provision of health services to individuals who have fallen ill, public health is concerned with health and disease at the population or subpopulation level. Public health is 'public' in two ways: public in the meaning of going beyond individual health and public in the meaning of requiring public or collective action (Tulatz, 2019). Collective action can be taken by various actors including, among others, the neighborhood, the municipality, charitable organizations, the state, and organizations operating at the international level. This book focuses on the role of public or state actors in the pursuit of the health of its citizens. However, this focus does not mean that other actors' activities will be left out of consideration. On the contrary, health policymaking has always been heavily influenced by medical organizations, health experts, commercial stakeholders, the media, the judiciary, knowledge institutes, and

many other actors. Member states of the European Union must nowadays increasingly reckon with European regulation and initiatives.

Definition of public health

Public health has many definitions. A well-known approach is to define the concept in terms of interventions. An example is the definition of Verweij and Dawson (2007) who describe public health as 'collective interventions that aim to promote and protect the health of the public' (p. 2). Pomerleau and McKee (2005) conceive public health as 'the science and art of promoting health and preventing disease through the organized effort of society' (p.11). These definitions have in common that policy interventions are part of public health.

Tulchinsky and Varavikova (2000) follow a similar approach. Their comprehensive definition of what they call the 'new public health' runs as follows: public health comprises 'a very wide scope of organized activities, concerned not only with the provision of all types of health services, preventive and therapeutic, but also with the many other components relevant to the operation of the national health system. These involve questions on health and the environment as well as the production of resources (personnel and facilities), the organization of programs, the development of economic support, and the many strategies required to ensure equity and quality in the distribution of health services' (p. xix). By speaking about new public health, the authors distance themselves from the medical model and individualistic orientation in public health that dominated public health for a while in the 20th century, and led Fairchild even speak about 'the exodus of public health' (Fairchild et al., 2010).

The call of Tulchinsky and Varavikova for a comprehensive approach to public health resonates with the concept of 'Health in All Policies' which holds that public policy-makers should adopt a collaborative and intersectoral approach to public health by taking into account the health consequences of their policy decisions in each sector of public policymaking. The European Union has embraced this approach, witness article 168.1 of the Lisbon Treaty, which states that 'a high level of human health protection shall be ensured in the definition and implementation of all Union policies and activities'.

This book takes a different approach by defining public health as 'the size and distribution of health and disease in the population' (Stronks & Bugdorf, 2021: p.4). Common indicators to measure public health are life expectancy, mortality, disease incidence and prevalence, quality of life, and health disparities. Our definition keeps public health separate from public health policymaking: public health is viewed as the object of health policymaking. In other words, health policymaking is directed at the protection and promotion of public health. Public health is conceptualized as the dependent variable in the policy–public health relationship. Of course, the relationship between public health and health policymaking can also be reversed because many public health problems ask for state action. Here, health policymaking is the dependent variable in the health policymaking–public relationship (see Figure 1.1). The emphasis in this book, however, is upon public health as dependent variable.

The five P's of public health policymaking

Following Brown (2010), health policymaking comprises five main activities:

- Protection of the population against exposure to illnesses that are contagious person-to-person or health risks from environmental sources.
- Prevention of disease by identifying and arresting health threats before they strike.
- Promotion of public health by fostering 'healthy living' and creating a 'healthy living environment'.
- Prognosis by anticipating public health risks through surveillance and monitoring.
- Provision of health services to care for patients.

The provision of health services is sometimes viewed as an activity largely falling beyond the scope of health policymaking. Health policymaking takes a population perspective instead of an individualistic perspective focusing on the treatment of patients (Parmet, 2009). Nevertheless, there are good reasons to consider the provision of health services an important dimension of health policymaking because of its essential contributions to public health. For instance, the increase in life expectancy and quality of life of patients with cardiac problems is closely related to the advance of cardiology. Many types of cancer are expected to become a chronic

disease (Mackenbach, 2020). Failing access to medical care (including prescription medicines) in middle-income and low-income countries is an important cause of public health problems.

This book adopts Brown's broad interpretation of public health policymaking. For linguistic convenience, the five activities will be summarized hereafter as the pursuit and promotion of public health.

Public health as a multidimensional policy issue

No question that public health is foremost a matter of health and disease at the population or subpopulation level. However, it has many other dimensions as well. A brief overview with some examples:

- Legal dimension (health legislation; health as a human right).
- Financial dimension (healthcare expenditures; cost control).
- Social dimension (SES-related health disparities; social impact of health and disease).
- Technological dimension (the advance of the digitalization and datafication of health).
- Economic dimension (health as business model; economic consequences lockdowns).
- Political dimension (conflicts in health policymaking; power balance in the health system).
- Global dimension (health issues in international trade; health disparities between industrialized countries and the rest of the world).
- Public security dimension (health-related migration, bioterrorism).

This brief overview demonstrates that public health is no exclusive domain of health professionals. The study of public health requires a multidimensional perspective to understand its complexity and implications.

1.3 Analytical model of public health

Figure 1.1 is a simple analytical model of public health based on the health field concept of Lalonde (a former federal Minister of Health in Canada). The model defines health as the result of six major factors: genetic and biological factors; environmental factors (for example air quality, water quality, soil quality, and physical environment); social-economic factors (for example living and working conditions, inequity, and prosperity); behavioural factors (lifestyle); the organization of health systems. Figure 1.1 adds the biosphere and atmosphere as sixth factor to Lalonde's field model because these spheres are increasingly recognized as important health determinants in the future (WHO, 2018; Woodward et al., 2014; KNAW, 2023). The model sees the state as part of the health system. Following the definition of the World Health Organization (2000), this system consists 'of all organizations, people and institutions producing actions whose primary intent is to promote, restore or maintain health'.

Figure 1.1 Model of public health and health determinants

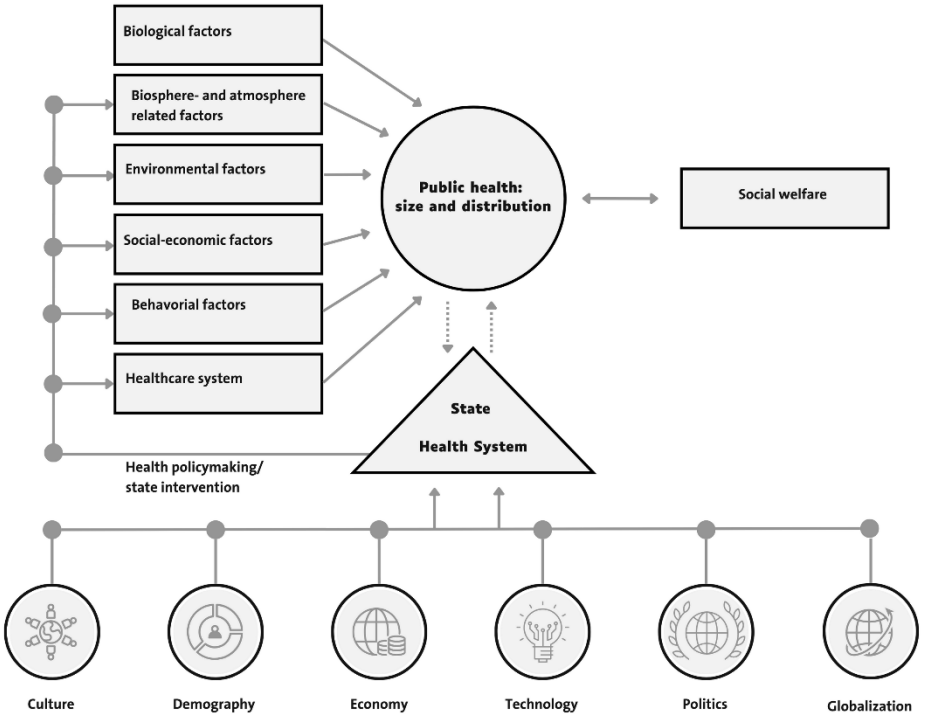


Figure 1.1 visualizes that public health is influenced by multiple factors and that health policymaking should take a comprehensive and intersectoral approach. A biomedical approach involving, for example, national screening and vaccination programs and establishing an up-to-date healthcare system, falls short because it leaves crucial determinants of public health unaffected.

In the model, the state influences public health through interventions directed at the determinants of public health. The dashed arrow from public health to the health system represents the impact of public health on the health system. Problems in public health are the reason for state intervention. Public health contributes to social welfare. Conversely, social welfare and its distribution across society influence public health. For instance, there is much empirical evidence that more equal societies perform better in many areas of public life, ranging from life expectancy to depression levels and from violence to illiteracy (Mackenbach, 2019; Wilkinson & Pickett, 2009). Contextual factors influence the health system and health policymaking. These factors are discussed in section 1.7.

The dashed arrow from the state to public health represents the impact of state policies on public health that do not primarily aim at pursuing public health yet affect public health. An example is education policy the primary purpose of which is to provide students with knowledge and insight. However, education has a positive effect on public health. Similarly, public health benefitted from state interventions to manage the financial crisis in 2009-2012 because they eased off the deep financial concerns of many people. Nevertheless, it would be conceptually wrong to consider education or financial policy an element of health policy. Conversely, state measures can unintentionally cause health problems. An example is the increased prevalence of mental health problems, particularly among young people, as a side effect of lockdowns during COVID-19 (Moeti et al., 2021; RIVM, 2022).

The call for a comprehensive approach is not unique to health policy. A similar approach has been recommended for other parts of public policy. An example is the all-hazard approach in public security the purpose of which is develop an integrated approach to emergency preparedness planning. The focus is on capacities and

capabilities that are critical to preparedness for a full spectrum of emergencies and disasters. The emphasis is upon hazard mitigation and the improvement of system resilience (https://www. alertmedia.com/blog/all-hazards-approach).

Table 1.1 illustrates the variety of state interventions concerning COVID-19 by type of health determinant.

Table 1.1. Examples of state interventions to suppress COVID-19

Target system	Interventions
Society	Closing borders, airports, schools, bars, restaurants, theatres and non-necessary shops; ban on sports events; ban on visiting sports events; gathering ban; QR-code; economic relief measures.
Health behavior	Social distancing; wearing face masks; washing hands; restriction of social contacts; remote working; curfew; sanctioning offenders.
Health care	Upscaling testing capacity and IC capacity; purchase of protective means; vaccine development; mass vaccination programs; financial support for hospitals and other care providers.

The distinction between health policy and healthcare policy

The term state intervention in Figure 1.1 refers to public policies directed at the determinants of public health. In this respect, a distinction can be made between public health policy and healthcare policy. Public health policy, or briefly health policy, is in principle directed at all health determinants, while healthcare policy concentrates on health care. In other words, healthcare policy forms a part of health policy. Health policy goes beyond the boundaries of healthcare policy. The central message of the Health for All Declaration of 1978, known as the Alma-Ata Declaration, and the call of Tulchinsky and Varavikova for 'a new public health' was that the protection and promotion of public health involve more than a well-developed healthcare system. The Declaration advocated a revision of the health agenda by moving away from the then prevalent biomedical and individualistic perspective in public health towards a population perspective. The protection and promotion of public health requires a comprehensive approach directed at the determinants of health and illness.

Interventions directed at the healthcare system

Many public health interventions are directed at the healthcare system. Central themes in healthcare policymaking are the provision of health services (including vaccination and screening programs), the financing of these services, the distribution of the financial burden of health care over the population, and the payment of healthcare workers and provider organizations. There are plenty of studies providing an excellent analysis of these themes and the pros and cons of alternative options to organize the provision, financing, and payment of health services. International comparison of national healthcare systems have demonstrated fundamental differences in the provision, financing, and payment methods and healthcare governance. A fourth central theme is health system governance which can be provisionally defined as the organization of the policymaking process.

Interventions directed at other determinants of public health than healthcare

As said above, health policy has a broader scope than healthcare policy. A comprehensive and intersectoral approach comprises interventions directed, at least in theory, at all determinants of health. The goal of these interventions is the pursuit of public health at the (sub)population level. Examples are the regulation of food safety, the provision of clean water, anti-tobacco regulation, the creation of a healthy living environment, and the regulation of occupational health to protect workers.

Although the prevention and promotion have a central place in health policymaking, there are several reasons why these activities carry much less weight in the health policy arena than the provision of medical services (health care). Effective prevention and promotion are equivalent to the non-occurrence of disease. This makes their effectiveness much less visible than the effectiveness of successful medical interventions, even more so because the effects of prevention and promotion are, for the most part, long-term effects (Haslam, 2023). The assumed causal relationship between prevention and promotion on the one hand and public health on the other hand is also uncertain. A paradoxical aspect of prevention is that effective prevention may make people believe that a disease has been eradicated, as a consequence of which they take it less seriously. In other words, the risk of effective prevention is that it may lose

its effectiveness because of its success! Third, prevention and health promotion are frequently criticized because of their patronizing image. Similar problems hardly exist in medical care.

Prevention and health promotion find themselves in a vulnerable position compared to medical care. Medical care appeals much more to one's imagination than prevention and health promotion. Medical advance also receives much more public attention and is frequently heralded as a sign of human progress. While the political pressure to cover the costs of new spectacular services is immense, political enthusiasm for prevention and health promotion often lags behind. Last but not least, the power of public health advocates in the health policy arena often tends to turn pale in comparison with the power of the medical profession (Haslam, 2023). However, there is one major exception: COVID-19. In response to the outbreak of the pandemic in 2019, governments worldwide spent large amounts of public money on the fight against the pandemic and its consequences. In the Netherlands, for instance, COVID-related expenditures amounted to EURO 87.6 billion in 2020-2023. The bulk of these expenditures went to test services and personal protective equipment as well as the financial compensation of firms for the loss of revenues due to lockdown measures. Health promotion also played a major role in the government's strategy to control the spread of the coronavirus: wash your hands regularly, keep distance in contact with other people, work at home, do not shake hands, wear a face mask, and so on.

The costs of prevention and health promotion

Health spending goes overwhelmingly to the provision of health services (health care). The fraction of all other activities in health spending (the OECD uses the term 'preventive care' to indicate these activities) fluctuates around a few percent of total health expenditures in OECD countries (OECD Health Statistics). However, this percentage underestimates total expenditures of prevention and health promotion because it only includes expenses that are counted as health expenditures. The problem with prevention and health promotion is that these activities miss clear boundaries. The costs of tobacco control measures, food safety control, clean air, water quality, and drug prevention, to mention only a few examples, should be factored in to get an accurate picture of the expenditures for prevention and health

promotion. However, where to draw the line? Which expenditures should be included and which excluded?

Van Gils and his colleagues (2020) have presented a more complete picture of the expenditures of what they call prevention. They found that the Netherlands spent in 2015 an estimated amount of €12.5 billion on prevention, of which €2.5 billion were spent on disease prevention (e.g. screening and vaccination programs), €0.6 billion on health promotion (programs to stimulate a healthy lifestyle), and 9.5 billion on health protection (e.g. protection against environmental risks, food safety, and clean water). Measured as a percentage of the Gross Domestic Product (GDP) total spending on prevention had decreased from 2.5% in 2003 to 2.5% in 2016.

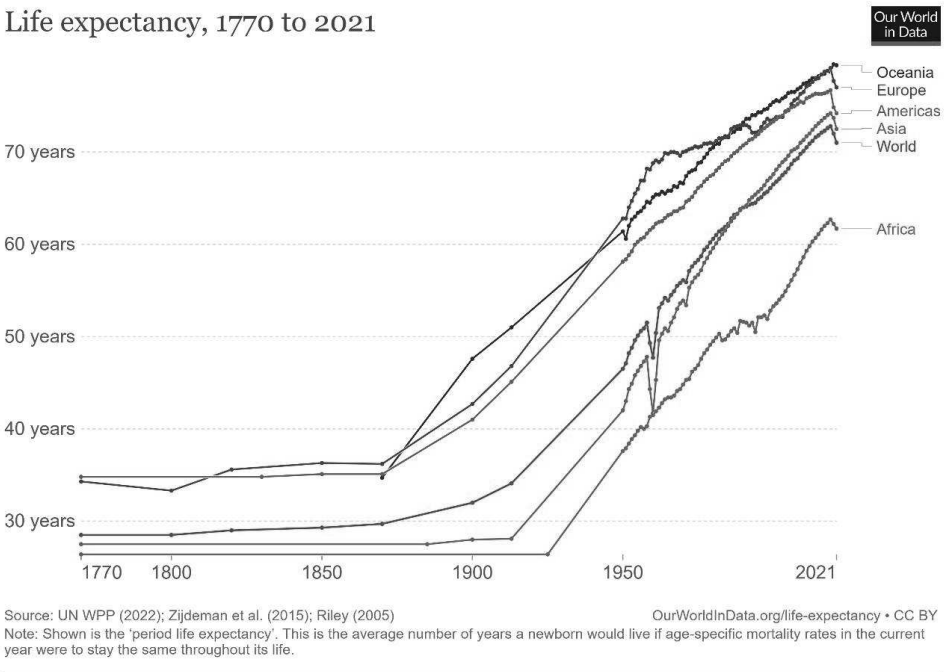
1.4 Success and failure of health policy

What is the evidence of the effectiveness of state intervention in public health? For an answer to this question, it is interesting to look at the development of life expectancy at the global level (Figure 1.2).

Figure 1.2 highlights a remarkable growth of life expectancy at birth worldwide since the second half of the nineteenth century. This growth has many fathers. Mackenbach (2020) mentions five factors that have contributed to significant changes in public health: (a) the improvement of living conditions without any human involvement (e.g. climate change); (b) social changes that have improved public health (e.g. the transition from an industrial to a service economy); (c) interventions that, as a side effect, have contributed to public health (e.g. education); (d) public health interventions (e.g. vaccination programs); (d) medical care (p. 12). Although it is difficult to disentangle the effect of each of these factors, Mackenbach makes a reasonable case for the contributions of public interventions and medical care to mortality decline.

Figure 1.2 demonstrates that life expectancy in Europe and the Americas has risen from some 35 years to over 70 years. Particularly interesting is that the rapid rise in life expectancy dates from the middle of the nineteenth century. This was exactly the period in which state intervention in public health started off in many countries.

Figure 1.2 Increase of life expectancy across the world, 1770-2021



Source: Our World in Data

In several studies, the British physician and medical historian McKeown has argued that population growth in England and Wales since 1700 had been primarily due to the decline of mortality and the improvement in the overall standards of living. The decline in infectious diseases mainly caused a decrease in mortality. His most contentious conclusion was that the contribution of medicine to the decrease of mortality due to infectious diseases had been marginal. McKeown based his challenging conclusion on the following argument. Since effective medical interventions against infectious diseases were hardly available in the nineteenth century, most of the decline in mortality in that period cannot logically be attributed to advancements in medicine. As an alternative explanation, he postulated that the decline of infectious diseases had to be attributed to other factors, including limited family size, increased food supplies, improved nutrition, and sanitation. Based on this alternative explanation, he strongly emphasized the need for prevention and a more balanced allocation of the scarce resources for public health and medicine.

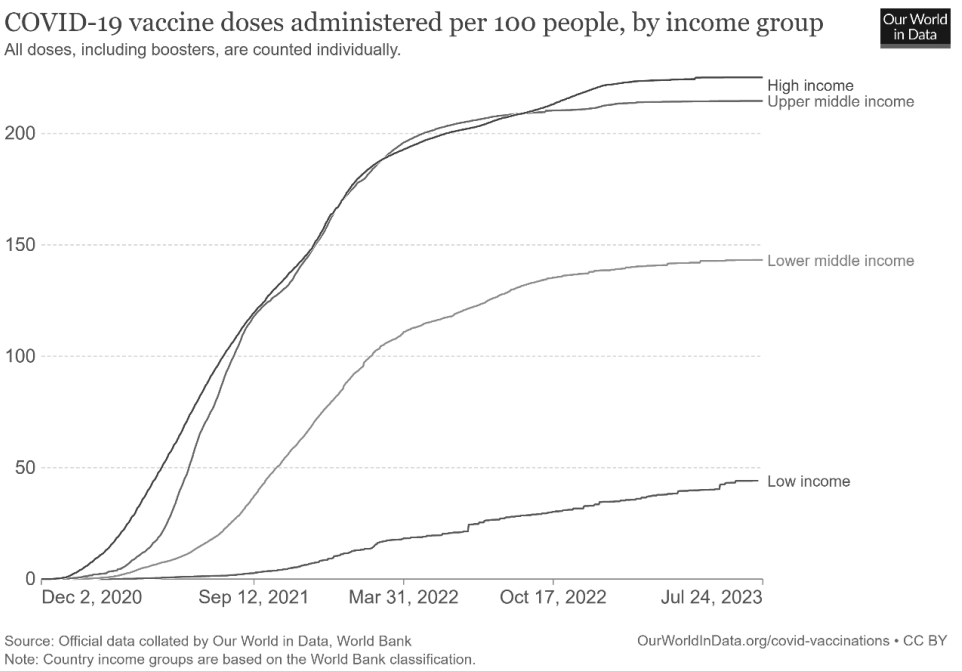
The McKeown thesis has met much criticism (e.g. Mackenbach, 1996). Critics put forward that his empirical analysis was inaccurate and that his explanation for the decline of mortality in terms of the improvement in the overall living standards missed a firm empirical basis. The nineteenth century was a period of rapid industrialization and urbanization. Many people in urban areas lived in deplorable conditions. McKeown's claim also incorrectly repudiated, his critics claim, the evidence for the contribution of medicine to public health in the 20th century (Mackenbach, 2020; Nolte et al., 2012). Nevertheless, the McKeown thesis has attracted broad attention. It resonates with the call for a 'new public health' and a paradigmatic shift in public health from a biomedical approach to an approach directed at health protection and promotion.

Figure 1.2 not only highlights the success of public health interventions but also some of their failures. It shows that the increase in life expectancy started around 1850 in Europe, the Americas, and Oceania. Asia and particularly Africa lagged almost a hundred years behind. Europe, the Americas, and Oceania are also leading regarding life expectancy in 2019, whereas Asia and Africa score significantly lower. In short, the comparison of global public health trends reveals significant life expectancy disparities, indicating that continents have not benefitted equally from the progress in public health. It is beyond the scope of this chapter to explore the causes of these differences. However, there are good reasons to mention the problems of failed states and the unequal distribution of wealth across the globe as two important causes of the unequal distribution of public health. Vaccine inequity between high-income and low-income countries during COVID-19 is only a recent manifestation of the unequal distribution of health worldwide (Figure 1.3).

Widespread and persistent health disparities across the population are another aspect of failing public intervention. While the health of the population has significantly improved over the last two decades, not all people have benefitted equally from this progress. Studies demonstrate huge health disparities across Europe (Mackenbach, 2019). In its forecast on public health in the Netherlands, the National Institute of Public Health and the Environment reported a difference of 7.5 years in life expectancy between people with low and high education in 2011-2014. The difference

in life expectancy in good perceived health between both categories was estimated at almost 19 years (RIVM, 2018). According to the latest data, the disparities have increased ever since (CBS, 2022). There is overwhelming evidence of a strong correspondence between structural factors, in particular income inequality and health inequality (Wilkinson & Pickett, 2009). It has been calculated that the average life expectancy of a person born in London drops by one year for every two stops traveling eastward on a London Underground train from Westminster on the Jubilee Line (BBC News, 20 July 2012). The correspondence between income inequality and health inequality underscores the need for a comprehensive approach. A biomedical approach only fails.

Figure 1.3 COVID-vaccine doses administered by 100 people, by income group



Source: Our World in Data

1.5 Health policymaking as collective action

A central theme in this book is that the state has become actively involved in public health. The state's central role does not mean, however, that it can protect and promote public health on its own. On the contrary, the pursuit of public health should be understood as a process of collective action.

First, it should be emphasized that the state itself is no unitary actor. It has a multi-actor structure. It consists of numerous actors that participate in health policymaking. Examples are the government (in many countries consisting of a coalition of political parties), government departments, civil service, inspectorates, regional authorities, municipalities, public health agencies, regulatory agencies, and many others. Each actor has its own policy beliefs, interests, and standard procedures. Reaching and maintaining agreement within the ranks of the government can be quite challenging.

Secondly, the state has a multi-level structure. In various countries, including England, Germany, the Netherlands, and Scandinavian countries, a great deal of health policymaking is devolved to the regional and local level. A new development is the involvement of international organizations in public health, such as the World Health Organization and the European Union.

Thirdly, the concept of state might be mistaken by the implicit suggestion of a command-and-control relationship in health policymaking. While it is a matter of fact that the state has acquired intervention power in public health, its power should not be overestimated. Nowadays, provider organizations, health funding organizations, patient organizations, commercial organizations, health worker organizations, non-governmental organizations, and many other stakeholders are also involved in health policymaking, some of them even closely. They demand action, criticise the government, make policy suggestions, warn of risks and other consequences, and so on. Health policymaking takes place in an environment of political pressure and counter-pressure as a consequence of which the margins of policy change are often limited. The absence of a command-and-control structure is even more unmistakable in global health policymaking. There exists no world government that is capable of issuing binding regulations supported by effective sanctions. Global policymaking

occurs in complex multi-level networks where nation-states negotiate agreements on common issues. Compliance with these agreements is often a matter of commitment; formal sanctions on non-compliance are absent.

Co-production and mutual dependency

State intervention in public health is characterized by a high degree of mutual dependency. The pursuit of public health requires collective action involving many more actors than the state. Health policy can only be successful with broad public support. Sanctions only to enforce compliance do not work. Furthermore, civil society organizations and the market sector should take up their role. An illustration of the importance of their role as co-producer (or co-creator) is the Dutch Prevention Covenant (2018) which aimed at a substantial reduction of smoking, overweight, and problematic alcohol use. The Covenant consisted of morally binding agreements with more than 70 civil society and market organizations to promote public health. Another dimension of co-production is the involvement of non-governmental organizations in public health. Many of these organizations provide health and relief services at the global level and call for global health problems.

State intervention has also become critically dependent upon the market sector. The success of mass vaccination programs would not have been possible without the development of effective vaccines by the pharmaceutical industry. The rapid development, production, and distribution of vaccines against the coronavirus have been invaluable in restricting the impact of COVID-19 on public health. At the same time, it is also a matter of fact that the health industry has become heavily dependent on the public purse. Many industries have the state or publicly funded care organizations as their principal client. The industry nowadays determines nearly the entire biopharmaceutical technology (Sullivan et al., 2022; Booth et al., 2022). The pharmaceutical industry benefits from public investments in medical research (Angell, 2004). The US government invested a large amount of public money to expedite the development and production of an effective vaccine to tackle the outbreak of the H1N1 pandemic in 2009 (Parmet, 2011) and the COVID-19 pandemic in 2020.

1.6 The contested nature of health policymaking

The pursuit of public health by governments has always been contested due to Ideological differences, conflicting interests, power relations, and daily politics. State intervention is not only a knowledge-driven activity but also the outcome of political conflict. Health policymaking involves complex dilemmas concerning the balance between individual, market, and public interests or the balance between individual and public responsibility. The history of health policymaking is ridden with conflicts between public authorities and the corporate sector. State regulation of tobacco, alcohol consumption, and food issues, to mention a few examples, has always met fierce opposition from the industry, which considered its financial interests at stake. Employers in the nineteenth century agitated against the introduction of the ban on child labor because of its consequences for their businesses. Already in the eighteenth century, attempts to implement global measures to prevent the spread of cholera, smallpox, and pestilence from the East to the West met with resistance from international trade companies because of their economic interests (Schama, 2023). The pasteurization of milk, a very effective public measure, was heavily contested at the point of introduction. Public protest against state vaccination programs has been common from the very beginning. 'When smallpox struck the Massachusetts colony in the early 18th century, Boston's selectmen forbade the inoculations endorsed by Cotton Miller who was rewarded with a grenade thrown through a window of his house bearing the inscription 'Cotton Matter, You Dog, Dam you; I'll inoculate you with this, with a Pox for You'' (Brown, 2010: 160). Fluoridation of drinking water in the Netherlands had to be terminated after public protests (Box 1.2). Radical state measures to fight COVID-19 which most people had never held for possible elicited furious protests from a vocal minority against what its members saw as unwarranted state restrictions on individual freedom. The political face of public health also has a global dimension (McInnis et al, 2020). Public security experts consider the unequal distribution of health across the globe a global security risk. According to Stoeva (2016), public health has changed from a 'low politics issue' into a 'high politics issue': it has become part of geopolitics.

Though state interventions to protect or promote public health can raise great emotions, it is also a matter of fact that they sometimes rapidly fade away after their

introduction. The pasteurization of milk or the obligation to wear seatbelts is nowadays a widely accepted instrument to prevent disease or injuries. Public support for tobacco control measures has significantly increased. Sometimes, protests come from a small but vocal minority. Loud protests against the mass vaccination programs during COVID-19 did not restrain most of the population from vaccination.

Box 1.2 Introduction and withdrawal of fluoridation of drinking water in the Netherlands

In many countries, the fluoridation of drinking water has proven a contested issue. Fluoridation has a long tradition in the United Kingdom, but legislation in Germany and France made its introduction impossible. Denmark even has a legal ban on fluoridation. Fluoridation has also proven contested in the Netherlands. Inspired by the scientific finding that fluoridation could preserve dental decay, the government started in 1952 a 15-year local experiment with fluoridation of drinking water, notably without informing the local population. Other municipalities did not wait for the experiment's results and also decided to fluoridate drinking water.

Fluoridation has always been criticized, initially primarily by orthodox religious groups and the anthroposophical community. At the end of the 1960s, the critique on fluoridation swelled up. Legal experts argued that the state could not coerce citizens to drink fluoridated water, more so because they could not escape from this intervention. Other opponents stated that fluoridation reeked of state paternalism. Fluoridation developed into an issue in national and local politics.

In 1976, the government ended the controversy by issuing a ban on fluoridation. The public health community and the dental profession, which had always wholeheartedly supported fluoridation, were shocked that evidence-based measures had met so much political and resistance. They considered their professional authority undermined.

Source: Edeler, 2009.

1.7 The context of health policymaking

As Figure 1.1 indicates, health policymaking does not take place in nowhere land. It is a context-bound activity. This section explores this context by briefly discussing six factors: culture, demography, economy, technology, politics, and globalization. These factors are interconnected. Our exploration mainly concentrates on the Western industrialized world.

Culture

Cultural factors influence health policymaking in various ways. In many countries, broadly shared values and social norms, including freedom of choice, equity, and respect for human life, have been institutionalized as normative principles policy-makers cannot ignore. They must respect the 'legacy of the past' to be trustworthy. Another aspect of culture is the strong value attached to health. Research in the Netherlands demonstrates that many people consider good health the most important value in their life. They hold the state responsible for organizing unrestricted access to health care and protecting them against health risks. Paradoxically, this belief may not withhold people from simultaneously claiming maximum freedom of choice. Crafting a proper balance between the common good of public health and the individual good of freedom of choice is a fundamental dilemma in health policymaking.

Health policymaking also reflects cultural changes in society. An example is the empowerment of patients in Dutch health care in the 1990s. The formalization of the right to consent, complain, or participate in decision-making on health issues was closely associated with the process of emancipation that had started in the mid-1960s. Health knowledge is nowadays only one click away. Individualization, changing modes of cohabitation, increased participation of women in the labor force, and the rise of the internet society with its fluid and unstructured interactions between individuals have fundamentally altered the cultural context of health policymaking.

The cultural context has also been mentioned as one of the explanations for differences in the handling of COVID-19 between China, South Korea, and Taiwan on the one hand and countries on the European continent on the other hand. The

collectivist type of culture in Asian countries contrasts with the individualistic cultural characteristic of Western countries, where most people attach great value to freedom of choice and are skeptical about state-imposed restrictions on social life (Han et al., 2020). Wearing face masks in public spaces is much more accepted in Asia than in the West.

Demography

Demographic changes affect health policymaking in many ways. The aging of the population confronts health systems with new challenges. The rapid increase of patients with age-related degenerative diseases requires large investments in long-term care services. In many countries, long-term care capacity lags behind the extrapolated growth of the demand for long-term care. The demographic shift constitutes a new social risk (Morel, 2006).

Another aspect of the changing population composition concerns the balance between 'productive' and 'non-productive' sectors in society. This balance, known as the old-age ratio and calculated as the ratio of persons aged 65 and older and the size of the working population, indicates the level of support available to older persons by the working-age population. In Europe, the average ratio has dropped from 5 to 1 in 1997 to almost 3 to 1 in 2017. These numbers indicate that Europe had about five persons of working age for every person aged 65 or over in 1997 and twenty later only three persons to one person (https://ec.europa.eu/eurostat). They pose big challenges to health and social policy. What makes these challenges even more complicated is the aging of the health workforce. Recruiting young health practitioners with expertise in long-term care is a new major problem.

Economy

Economic changes have always influenced public health. An illustration is the impact of rapid industrialization in the eighteenth and nineteenth centuries in Europe on public health. The transformation of the economy as an effect of the introduction of mass production was associated with rising public health problems due to long working hours, child labor, an unhealthy working environment, poor housing, alcohol abuse, and other problems. In Germany, mass unemployment motivated Chancellor

Bismarck to introduce social security legislation in 1883 to protect his subjects against the social perils of industrialization by guaranteeing them an income during illness and covering the costs of medical treatment. However, his primary intention in enacting health insurance legislation was not to preserve public health solidarity but to raise a political barrier to what he saw as socialist agitators in his country.

A dramatic example of the economy-health relationship is the impact of the financial crisis in 2009-2010 on public health in various European countries, including Greece, Portugal, and Ireland. The austerity measures imposed by the Troika (European Commission, European Central Bank, and International Monetary Fund) compelled the Greek government to implement massive budget cuts in health care with dramatic consequences for access to health care and public health (Thomson et al., 2015).

The correlation between the amount of a country's financial resources and spending on health care signifies the importance of the economy for health care. Prosperous countries can spend more national resources on health care than low-income or middle-income countries. Many healthcare facilities and access to medicines in low-income countries are substandard and compare poorly with facilities and access to medicines in rich countries. Large investments are necessary to improve access to and quality of health services and raise the standard of living of large parts of the population in low-income and middle-income countries.

Finally, economic interests frequently conflict with the goals of health policymaking. Although the health risks of smoking or air pollution, to mention two examples, are well-documented, an intensive lobby of the corporate sector has repeatedly proven a formidable barrier to policy measures to tackle these problems.

Technology

Technology influences health policymaking. Beck (1992) has argued that the modernization process has brought more welfare but also created new risks. Nowadays, mankind is exposed to great risks marked by a high level of human agency. Some of these manufactured risks have even global impact (e.g. global warming). State intervention to protect the population against these risks has