7

The Netherlands

Hans Maarse, Maria Jansen,
Mariëlle Jambroes, Dirk Ruwaard

Introduction

The Netherlands has a complex and diverse system of public health services. For a long period of time its focus was mainly on health *protection*. The purpose of public intervention was to protect the population against infectious diseases and other exogenous health hazards, such as poor working and living conditions. Health *promotion* by public campaigns and other programmes to promote healthy lifestyles has become part of public health policy-making only since the 1980s.

Nowadays, public health services include a wide range of activities and state programmes (regulatory as well as non-regulatory) with the primary objective to protect and promote the health of the population and to prevent diseases through vaccination and screening programmes. Public health is no "isolated" domain but is closely connected to other public policy domains, in particular the social sector and public security. It is considered a shared responsibility of the national government, local government (municipalities) and the private sector. The Public Health Act, in force since 2008 and the successor of the Collective Public Health Prevention Act (1989), provides the institutional framework for this shared responsibility. Each municipality is obligated to establish and maintain a local public health service (*gemeentelijke geneeskundig dienst*, GGD). They cooperate with other municipalities to organize such services. At present, there are 25 regional public health services, covering all municipalities. In line with the shared responsibility of the public and private sector, various public-private partnerships have also been set up.

Historical background and context

In the early 19th century state involvement in public health hardly existed. A state regulation, in place since 1818, charged provincial and local authorities with some supervisory tasks in public health, but this regulation largely failed because of lack of knowledge and political will of the responsible authorities. There were also a few preventive regulations in force, such as the requirement that children of poor families had to be vaccinated against smallpox. Municipalities were also permitted to take repressive measures, including establishing quarantines (Querido, 1965; Houwaart, 1991).

Throughout the 19th century public health policy-making was characterized by a controversy between the so-called public health hygienists and the public authorities, both at the national and the local levels. Whereas the hygienists called for an active and preventive approach, for instance by creating better sanitary conditions, local authorities held on to mainly reactive and repressive measures. It would take several decades before public health was considered a collective problem requiring public intervention to be addressed effectively (De Swaan, 1988).

During the second half of the 19th century public health attention gradually extended to social issues. It was increasingly recognized that public health required protective measures against the harmful effects of poverty and poor housing and working conditions. In the 20th century state involvement in public health further expanded in line with processes of industrialization, technological advance, urbanization and traffic growth.

Around 1980 policy-makers began to realize that public health not only required health protection but also health promotion to address lifestyle factors such as smoking, alcohol consumption, lack of physical exercise and drug abuse (Jansen, 2007). The new emphasis on health promotion resulted in new policy initiatives, including regulatory measures, tax increases, public campaigns and screening programmes (Peeters, 2013). An example of a regulatory programme is the 1988 Tobacco Act (*Tabakswet*), which has been tightened a number of times since.

The 1989 Collective Public Health Prevention Act (*Wet Collectieve Preventie Volksgezondheid*) made municipalities responsible for epidemiological research, the care for children aged 0–18 years, infectious disease control, and environmental public health. In 2008, this act was integrated with the Infectious Diseases Act and the Quarantine Act into the Public Health Act (*Wet Publieke Gezondheidszorg*). One of the intentions of the new act was to better define the role of municipalities in public health by requiring them to publish local public health plans every four years. The new act also aimed to make national legislation consistent with the International Health Regulations of the World Health Organization (WHO).

A number of other laws are relevant for public health, including the Population Screening Act (*Wet op het Bevolkingsonderzoek*), the Tobacco Act (*Tabakswet*), the Drinking and Hospitality Act (*Drank en Horecawet*), the Security Regions Act (*Wet Veiligheidsregio's*), the Workplace Act (*Wet Arbeidsvoorziening*), the Health Insurance Act (*Zorgverzekeringswet*), the Goods and Products Act (*Warenwet*), the Public Support Act (*Wet Maatschappelijke Ondersteuning*) and, last but not least, environmental legislation. In addition, there are several programmes without a legal framework, such as breast cancer screening, child vaccination and influenza immunization.

Organization and structure

Institutional principles

The organization and structure of public health services in the Netherlands rests upon two institutional principles. The first is to regard public health as a shared responsibility between the state (i.e. the national government) and local government (i.e. the country's 393 municipalities). The national government has the overall "system" responsibility for public health, including regulation, funding, supervision and international collaboration. It also provides the overarching directions and priorities for public health policy-making, takes the lead in responding to public health emergencies (such as large-scale outbreaks of infectious diseases), and is in charge of screening and vaccination programmes.

The corollary of these responsibilities of national government is "decentralization unless". This decentralization of public health policy-making to the municipal level rests on three assumptions. The first is that effective public health policy-making requires an intersectoral (integrated) approach. Because of the presence of so many health determinants, only an intersectoral approach is expected to be successful. The second assumption holds that local government is best capable to develop and implement an intersectoral approach, given its tasks in various adjacent policy areas, such as housing, transport, schools, welfare, physical

infrastructure, neighbourhoods, youth care, home care, public security, social support and health care facilities. Third, decentralization is also assumed to strengthen local democracy, because public health plans must be developed and approved at the local level, enabling the involvement of local organizations and populations. The decentralization of public health is not an isolated process, but forms part of a broader process that also affects other policy areas such as long-term care and youth care. The general trend in recent institutional reforms of the Dutch welfare state has been to strengthen the involvement of the local administrative level by decentralizing ever more policy tasks and responsibilities.

The second institutional principle is to consider public health as a shared responsibility of the public and private sectors. There is an assumption that public health policy-making cannot be effective without the active collaboration of private industry, schools, employers, sport organizations, the veterinary sector, health care providers and residents. This principle has important consequences for governance in public health. Policy-making increasingly takes place in national or local networks involving public and private actors. Policy decisions in these networks are not hierarchical but the result of collective decision-making.

Both institutional principles are seen to follow on from the general governance principle that "public health is a co-production". This principle is manifest in the National Prevention Programme 2014–2016, entitled "All is Health" (*Alles is Gezondheid*) (Ministry of Health, Welfare and Sports, 2015). As part of this programme, a large number of private and public organizations signed a "pledge" to undertake concrete health-directed activities in one of the following areas: care, home, work, school, neighbourhood and protection. A pledge implies a moral, but not a legal, commitment to public health.

Consequently, public health services in the Netherlands are lacking clear institutional boundaries. They include a wide range of activities by many public and private actors in various policy domains, although there are also 25 clearly defined regional public health services.

Finally, public health policy-making involves actors at local (municipal), national and international levels. In a recent document, the government emphasized the increasing need to involve the international level in public health policy-making in view of the global scale of public health problems such as antimicrobial resistance, the Middle East Respiratory Syndrome (MERS) and food safety (Ministry of Health, Welfare and Sports, 2014).

National and local responsibilities in public health

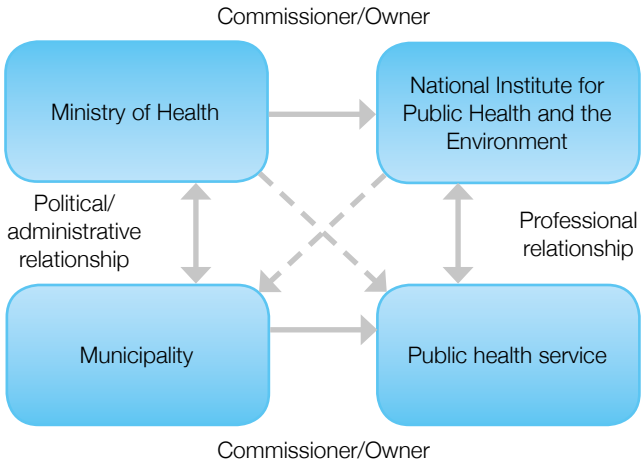
The 2008 Public Health Act provides an institutional framework for the relationship between national and local government in public health (Figure 7-1). Article 2 defines the municipality's responsibility as "the creation and continuity of public health and the coordination of public health with health care and medical assistance in case of accidents and disasters". Each municipality is charged with the following tasks: youth health care, environmental health, socio-medical advice, periodic sanitary inspections, health facilities for asylum-seekers, screening, epidemiological research, health education and community mental health. Another task, as mentioned above, is to present every four years a local public health plan, setting out the objectives and activities for the next four years. These local plans are anticipated to follow an intersectoral approach and to indicate how the national "spearheads" in public health (see below) are translated into concrete activities at the local level (article 13). Furthermore, the Public Health Act requires local governments to establish a local public health service (*Gemeentelijke Gezondheidsdienst*) for its tasks in public health (article 14).

The degree of policy discretion of local government in public health varies. The more medically oriented tasks, including infectious disease control, environmental public health, screening programmes and youth health care (for 0–19 year olds) leave local government limited policy discretion. For these activities, detailed national protocols are available and have to be followed. Here, local government more or less fulfils the role of an implementing agency, although it is permitted to outsource the implementation of these programmes to private agencies. For other tasks, municipalities have much discretionary space. Although they must take into account some policy constraints set by the national government, they are free to determine how to convert the national plan for public health into a local plan for public health and how to set up their local public health service. As a consequence, municipalities have jointly established 25 regional public health services. However, these do not have a uniform structure, particularly with regard to health promotion, as this is not a legal task for municipalities.

The Public Health Act defines the responsibility of the national government as "the promotion of the quality and efficiency of public health and the creation and improvement of the local support structure". Furthermore, the national government is in charge of "the promotion

of interdepartmental and international collaboration in public health" (article 3).

Figure 7-1 *Public organizations in public health and their responsibilities*



Source: Ministry of Health, Welfare and Sports, 2014

The Public Health Act contains a detailed separate chapter on how to deal with infectious diseases. Local government is charged with several tasks in this respect (article 6). However, in case of a large-scale outbreak of an infectious disease (i.e. an epidemic), the lead is in the hands of the Minister of Health, who is permitted to impose binding instructions on local government (article 7). The Public Health Act also contains special sections on the notification of infectious diseases by physicians and the measures directed at infected individuals (including isolation and quarantine), buildings, goods, vehicles, seaports and airports to stop the spread of the disease.

Public health services are also associated with public security. Large-scale incidents, crises and other disasters require intense collaboration between the fire brigade, the police, the municipality and the local public health officials. In order to coordinate these activities in case of large-scale incidents, regional network organizations, named Medical Support Organizations in the Region (*Geneeskundige Hulpverleningsorganisatie in de Regio*, GHOR), have been set up. There are 25 GHORs in the Netherlands, corresponding to 25 regional public health services.

Regional public health services

As mentioned above, the 2008 Public Health Act requires municipalities to establish a local public health service (*Gemeentelijke Gezondheidsdienst*) for its tasks in public health. Because many municipalities are too small for an agency of their own, inter-local (regional) services have been set up. As of January 2015 there were 25 such regional public health services, serving 393 municipalities. Most regional public health services cover 600 000 to 1 million inhabitants. They advise municipalities on a variety of issues. In addition to their regular tasks, the regional public health services focus on specific vulnerable groups, such as children, older people, homeless persons, immigrants, addicted pregnant women and victims of domestic violence.

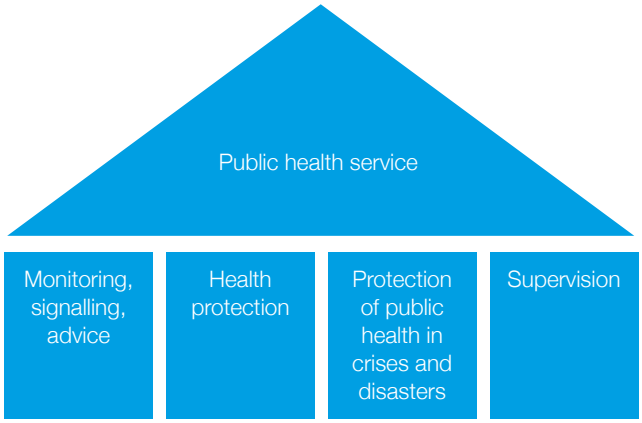
One of the tasks of the public health service is youth health care (*jeugdgezondheidszorg*), which includes preventive care for all children aged 0–19 years. Children aged 0–4 years visit child health centres for check-ups to monitor the child's growth and development and to detect early any health risks or problems. The child health centres also provide immunizations and medical and parental advice. In their first four years of life children visit the health centre about 15 times. After their fifth birthday, preventive check-ups are provided by school doctors. They check all children at the age of 5, 10, 13 and 15 years. The check-up of children aged 15 years was introduced in 2015 because of a high prevalence of psychosocial problems and risk behaviour among adolescents. As mentioned above, municipalities are free to contract out these activities to private organizations (Kroneman et al., 2016). Coverage is very high.

The public health service has a clearly defined role and expertise in the area of its medically oriented tasks, such as the control of infectious diseases. Other areas of intense collaboration between the public health service and municipal agencies are the management of large-scale incidents in the regional GHORs and the early detection of health-related problems of children. However, in policy areas where effective public health action requires an intersectoral approach (e.g. in the care for older people, addressing overweight and obesity, promoting physical activity or addressing mental health problems), collaboration with the municipal agencies seems to be more problematic (Jansen, 2007). In these areas, public health officials must "compete" with the views and interests of other agencies in the municipal bureaucracy. Effective collaboration is also complicated by differences in the organizational culture of bureaucratic and professional organizations (Hendriks et al., 2015). A recent report on the public health service concluded that its position remains unclear. The price for the great variety in organizational structures is that the public health service misses a clear face of its own. Municipal authorities often indicate that they have difficulties in steering their public health service (AEF,

2013). What makes the position of the public health service even more complex is the organization on a regional level creating an administrative distance to the municipal level. This distance complicates not only the political and administrative steering of the public health service, but also the democratic control of its activities. The feelings of "administrative ownership" and local embeddedness are less developed than for local agencies (AEF, 2013).

The ambiguous position of the public health service led the government to present suggestions on how to strengthen the position of the service at the municipal or regional level. This document (Ministry of Health, Welfare and Sports, 2014) visualized their position as shown in Figure 7-2.

Figure 7-2 *The tasks of the public health service*



Source: Ministry of Health, Welfare and Sports, 2014

The government document stipulated "the need for uniform assurance of these tasks' by developing quality standards for each of the four pillars that are commonly accepted by professionals and administrators. Quality standards are currently being developed in a network consisting of representatives of the Ministry of Health, the National Institute for Public Health and the Environment, the Dutch Association of Municipalities and local (regional) public health agencies.

Note that it does not safeguard health promotion as a legal public health task. It would be great if the authors could reflect upon this.

National agencies for public health

At the national level several organizations, linked to the national government as either an agency or advisory body, are of importance to public health activities. The National Institute for Public Health and the Environment (*Rijksinstituut voor Volksgezondheid en Milieu*, RIVM) is an independent research and advisory agency with a staff of approximately 1500 persons (www.rivm.nl). It falls under the jurisdiction of the Minister of Health and supports the national government, the municipalities and other agencies involved in public health. RIVM's activities cover the prevention and control of infectious diseases, the promotion of public health and consumer safety, and environmental protection. Another main activity is data collection. Each year RIVM publishes reports on a variety of issues, including public health, nutrition and diet, disaster management, and the environment. As mentioned above, every four years RIVM publishes its National Public Health Status and Foresight Report (*Volksgezondheid Toekomstverkenning*, VTV) which provides an overview of recent developments in health and disease, the determinants of health, health care and health care policy. The first report was published in 1993 and the sixth report in 2014.

The Dutch Agency for Food and Product Safety (*Nederlandse Voedsel- and Warenautoriteit*, NVWA) is under the responsibility of the Minister of Economic Affairs. It performs various supervisory tasks and may impose administrative sanctions and fines on organizations violating legal prescriptions (www.nvwa.nl). Until 2015, the NVWA was in charge of supervising the Drinking and Hospitality Act, a task that has now been shifted to the municipalities.

The Healthcare Inspectorate (*Inspectie voor de Gezondheidszorg*, IGZ) is charged with supervising implementation of the Public Health Act and ensuring the quality of health services, prevention measures and medical products. It is directly subordinated to the Minister of Health and may take administrative measures in case of violations of the Public Health Act (www.igz.nl).

The Health Council (*Gezondheidsraad*) is a scientific board advising the government on a wide range of health issues, including public health, such as with regard to vaccination and screening programmes, but also healthy nutrition, environmental health and healthy working conditions (www.gezondheidsraad.nl).

Finally, the Council for Health and Society (*Raad voor de Volksgezondheid en Samenleving*) (www.raadrvs.nl) fulfils a broad advisory role in the field of health, health care and societal problems, while the Netherlands Organization for Health Research and Development (*ZonMw*) (www.zonmw.nl) sponsors health research, including in the area of public health.

In addition to these public organizations, a large number of private organizations, often (partially)

publicly funded, are active in research, information and communication. Examples include the Trimbos Institute (mental public health), the Food Centre, the Netherlands Institute for Sport and Physical Activity, the Netherlands Youth Institute, the Netherlands Institute for Sexually Transmitted Diseases-AIDS and Movisie (the Netherlands Centre for Social Development). Several of these organizations receive some state funding, but experienced budget cuts as part of the government's austerity measures that aimed to reduce the public deficit. As a consequence of these budget cuts, Stivoro, which had been active in anti-smoking programmes since 1974, terminated its activities in 2013.

Healthy Life Centre

Another noteworthy initiative is the Healthy Life Centre (*RIVM Centrum Gezond Leven*), which is part of the National Institute of Public Health and the Environment. This centre (www.loketgezondleven.nl) collates international evidence on the effectiveness of public health interventions. It was created in 2008 by the Ministry of Health, Welfare and Sports in collaboration with the National Institute for Public Health and the Environment, in reaction to critical comments of the Health Care Inspectorate on the fragmented structure of public health action, the lack of knowledge on the effectiveness of public health interventions and the lack of knowledge-sharing. The centre advises public authorities and public health professionals on the effectiveness of interventions.

Netherlands Public Health Federation

The Netherlands Public Health Federation (www.nphf.nl) is a public private networking organization for all public health-related institutions in the Netherlands that was established in 2000. It represents about 65 professional organizations, funds, research institutes and private companies engaged in prevention, health promotion and health protection. The federation aims to promote and strengthen public health by connecting like-minded organizations.

Academic collaborative centres for public health

With the objective of making health promotion more evidence-based and forging collaborative networks between local policy-makers (policy), public health professionals (practice) and researchers (science), the government funded a programme in 2006 to set up academic collaborative centres. In 2016, there were nine such centres, each with its own focus, covering epidemiology, infectious diseases, public mental health, youth health care, environmental health and demographic changes.

The results of these centres have been mixed (Jansen et al., 2012; Jansen et al., 2015). On the one hand, much knowledge has been gained from research that is shared with local policy-makers and public health professionals. On the other hand, differences in perspectives and priorities often make collaboration difficult. There is commitment to the centres at the strategic level, but policy-makers also said that the academic collaborative centres are "intended to help the disadvantaged, not to produce PhD-theses" (Jansen et al., 2015). Managers were inclined to prioritize daily routines. At the operational level, public health practitioners learned to undertake research in real-life situations, whereas university researchers became more acquainted with problems of practice and policy. After the termination of the programme in 2014, regional public health services have continued the activities of the academic collaborative centres as much as possible.

Objectives of public health policy-making

Since the 1980s the objectives of public health policy-making have not fundamentally changed. They can be summarized as (a) health protection and promotion; (b) disease prevention; (c) reduction of health inequalities; and (d) creation of social safety nets for groups at high risk.

The protection of the health of the population is explicitly defined as a public responsibility. The state is held responsible for protecting the population against health risks beyond their control. It must provide an adequate system of public health to avoid health risks, signal health risks in good time, inform the public, and intervene if necessary. This public responsibility has gained weight in contemporary "risk society" (Beck, 1992), not only because of the proliferation of ever more risks and an increasing body of knowledge on what might constitute risks, but also because of a new trend to claim financial compensation for the failure of public health risk management. The failure of health protection in the case of Q-fever in 2007–2009 (Evaluatiecommissie Q-koorts, 2010) is an example of the increasing judicial dimension of health protection.

Health promotion is also seen as a public responsibility, but the tension between public intervention and

individual responsibility is felt more strongly than in health protection. The Dutch government recently called for a shift in thinking about public health from "disease, care and dependency" to "health, prevention and self-empowerment" (Ministry of Health, Welfare and Sports, 2014). The addition of self-empowerment suggests a greater emphasis on individual responsibility for one's health. This reticent policy attitude is clearly visible in current efforts to tackle the problem of overweight and obesity, which are characterized by the lack of regulatory measures.

Disease prevention is a third main objective of public health policy-making. Various population and vaccination programmes are in place for the early detection of diseases (breast cancer, cervical cancer and colon cancer) and the immunization of children (e.g. against diphtheria, whooping cough, tetanus, polio, mumps, measles and rubella). These programmes are carried out under the central responsibility of the national government.

The objective of reducing health inequalities must be seen in the context of significant health disparities. For example, in 2009–2012 male life expectancy in the lowest socioeconomic class was 6.5 years lower than in the highest economic class; for females the difference was 6.1 years. For perceived healthy life expectancy the difference was 18.5 years for males and 19 years for females (VTV, 2014).

Finally, the need for "social safety nets" overlaps with the objective of reducing health inequalities. It recognizes that public health policy-making should include not only programmes for the entire population, but also specific programmes targeted at groups at high risk. Examples are families facing domestic violence and child abuse, patients with chronic psychiatric problems, homeless people, undocumented migrants, and people with drug addictions (Bosma et al., 2015).

The prevention cycle and priority-setting

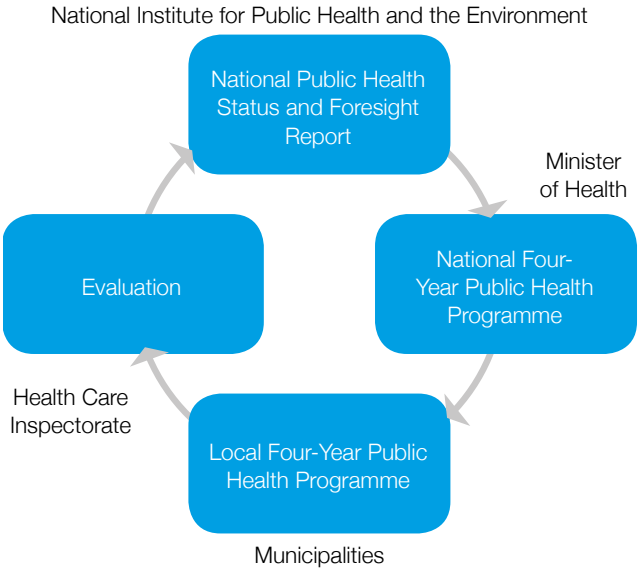
As mentioned above, the responsibility of the national government in public health goes beyond its "system responsibility" and its responsibility in the control of large-scale infectious disease outbreaks. The national government is also charged with giving overall directions to public health and setting priorities. For this purpose, the government has published many reports and national public health programmes.

A landmark publication was "Nota 2000", published in 1986. The central message of this policy document (heavily influenced by the WHO report "Health for All in the year 2000" and the 1978 Alma Ata Declaration) was the notion that health is influenced by many factors (or determinants), including genetic disposition, age, lifestyle and environment. Therefore, the document argued, more attention should be given to prevention, as curative health care is only the last link in the "health care chain". The document also emphasized the need for more information on population health, as the starting point for health policy-making. Future health foresight reports were considered indispensable.

Since then, many policy documents on public health have been published. The 2008 Public Health Act requires the Minister of Health to publish a national public health plan including national priorities every four years (article 13). The publication of these plans is part of the so-called "prevention cycle". This cycle (Figure 7-3) takes four years to complete and consists of four consecutive steps:

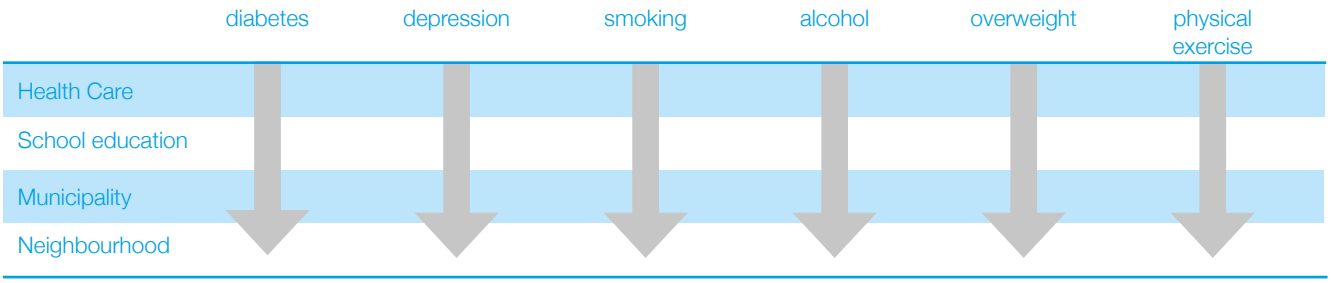
- The first is the publication of the National Public Health Status and Foresight Report by the National Institute for Public Health and the Environment.
- This is followed by the publication of the four-year national public health programme by the Minister of Health. This document also sets out a number of "spearheads" (priorities) in public health.
- Third, municipalities are required to prepare local public health plans. These plans need to include programmes for translating the national priorities into concrete activities.

Figure 7-3 *The prevention cycle*



Source: Authors' compilation

Figure 7-4 *Public health "spearheads" and policy domains*



Source: Ministry of Health, Welfare and Sports, 2013

- The final step is an evaluation of the results of the four-year programme by the Health Care Inspectorate.

After the cycle has been completed, a new cycle is initiated.

A recent example is the National Programme on Prevention (Ministry of Health, Welfare and Sports, 2013). This policy document underscored the need for an intersectoral approach and formulated five "spearheads" (Figure 7-4). Municipalities are expected to translate these priorities into their four-year public health plans. The national programme was further concretized in the government's document "Everything is Health 2014–2016 (*Alles is Gezondheid*)", published in 2015.

Figure 7-4 highlights the connections between public health and the social domain where municipalities perform various tasks. As mentioned above, these tasks have been expanded as part of recent reforms of long-term care and youth care, with the decentralization of non-residential care to the local level.

The financing of public health services

Public health services are mainly funded by the state through taxation. In 2016, according to data in line with the System of Health Accounts used by OECD, WHO and Eurostat, total expenditure on preventive care (public health and prevention) amounted to 3.6% of total health expenditure, a decline from 4.5% in 2005 (Statistics Netherlands, 2017).

Table 7-1 illustrates that most financial resources for public health are spent on disease prevention and health protection. Less than 10% was allocated in 2017 on health promotion.

Table 7-1 *State budget for public health in 2017*

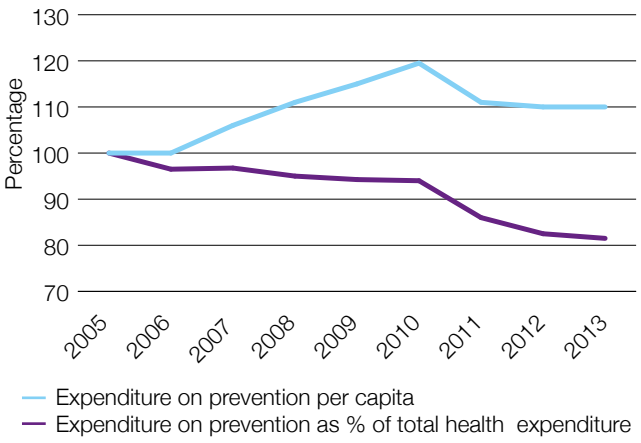
Activity	Budget in million €	Percentage
Health protection	104	15.9
Disease prevention	477	73.0
Health promotion	54	8.3
Miscellaneous	18	2.8
Total	**653**	**100**

Source: Ministry of Health, Welfare and Sports, 2017

A large part of the national public health budget is allocated to the municipalities, which are largely free to choose how to spend these resources. Since the budget is not earmarked for public health, they may decide to spend more, but also less, on public health. The revenues of the regional public health services come from the municipalities (64% in 2013), the national government or other public funders (e.g. through subsidies or research contracts) (11%) and market activities (e.g. travellers' vaccination) (AEF, 2013). The financial crisis and subsequent public expenditure cuts to reduce the public deficit and debt also had consequences for the financing of the regional public health services. They had to implement expenditure cuts and, in a number of cases, reduce their activities (AEF, 2013).

Figure 7-5 shows the development of public expenditure on prevention in 2005–2013, adjusted for inflation and covering the following services: (youth) vaccination programmes, flu vaccinations, mother and child health services, screening for breast and cervical cancer, occupational health care, and annual dental health checks. Expenditure per capita increased between 2005 and 2010 and decreased thereafter. Expenditure on prevention as a percentage of total health expenditure, however, declined continuously between 2005 and 2013.

Figure 7-5 *Development of public expenditure on prevention (2005–2013): 2005=100*



Source: Zorgbalans, 2014

The public health workforce

As mentioned above, the 2008 Public Health Act requires municipalities to set up a public health service. They are free to choose how to set up their service, but it needs to cover expertise in social medicine, social nursing, epidemiology, health promotion and behavioural sciences.

The total size and composition of the public health workforce in the Netherlands is unknown and a standardized system for the regular collection of data on the public health workforce is lacking. Pooling the available workforce data from seven reports in 2012 resulted in a "best estimate" of the total public health workforce of 12 000 full-time equivalents (FTEs) (Jambroes, 2012). However, this point estimate is by necessity inaccurate, as different definitions of the public health workforce were used in the underlying reports.

The example of the public health workforce for preventive youth health care

A recent study on the size and composition of the workforce in preventive youth health care provides some illustrative evidence on the wider public health workforce (Jambroes et al., 2015). The total size of the workforce in preventive youth health care in the Netherlands was estimated at 7000 professionals, corresponding to 4934 FTEs and 0.65% of the total workforce (in FTE) in the health system. There are some regional disparities in the ratio of children (aged 0–18 years) to youth health care workers, varying from 688 to 1007 and, for children aged 4 years or younger, from 163 to 223 (Jambroes et al., 2015).

Figure 7-6 shows the distribution of total FTEs for each of the Essential Public Health Operations (EPHO), as defined by WHO in its European Action Plan for Strengthening Public Health Capacities and Services (WHO, 2012) and adjusted for youth public health operations (Jambroes et al., 2015):

1 Surveillance of youth health and wellbeing

2 Monitoring and response to psychosocial incidents and emergencies

3 Youth health protection

4 Youth health promotion, addressing social determinants, health inequity and including advocacy communication and social mobilization for health

5 Disease prevention, including early detection of illness

6 Promote, develop and support youth health public policy

7 Ensuring a sufficient and competent youth health care workforce

8 Ensuring access to youth health care and quality of youth health care

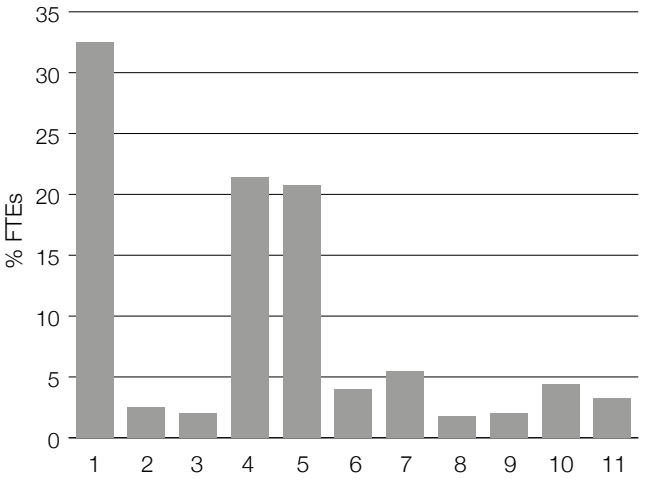
9 Advancing youth health care research to inform policy and practice

10 Ensuring a youth health care safety net

12 Management and team leadership

All 11 youth public health operations are provided by relevant organizations, including local public health services, but there are major variations in terms of staff resources (Figure 7-6). Most FTEs are related to surveillance, health promotion and disease prevention and the fewest to health protection and psychosocial health incidents. The EPHO pattern is similar across regions.

Figure 7-6 *Percentage of full-time equivalents per EPHO in preventive youth health care*



Source: Jambroes et al., 2015

Human resource policies, management and information systems

Public health workforce planning and development in the Netherlands is governed at three levels:

- the municipal level, consisting of organizations providing local or regional public health services;
- the level of public health physicians, organized within the professional association of public health physicians (*Koepel Artsen Maatschappij en Gezondheid*, KAMG); and
- the national level, taking the form of the Advisory Committee on Medical Manpower Planning (*Capaciteitsorgaan*).

For the local level, no central human resources policy for the provision of public health services exists. Standards or guidelines for the appropriate size and composition of the public health workforce are hardly available and municipalities are largely free to determine these factors themselves.

Public health physicians are involved in workforce governance through the development and maintenance of professional practice standards and the development of general teaching programmes for the training of new public health physicians. The KAMG also advises the Ministry of Health on the national distribution of training positions for public health physicians.

The Advisory Committee on Medical Manpower Planning is in charge of assessing the required training inflow of public health physicians at the national level for four-year periods (Capaciteitsorgaan, 2011). The estimation of the required inflow is based on a simulation model. The need for public health physicians is operationalized by several indicators including, among others, projected demographic and epidemiological changes in the population, task-shifting programmes and socioeconomic developments. However, the financial resources allocated for training programmes do not match the estimated need for manpower. In 2013, for example, the actual training inflow was 37% lower than recommended by the Advisory Committee (Batenburg & van der Lee, 2014).

The Netherlands School of Public and Occupational Health (NSPOH) is the main training institute for postgraduate education in public or occupational health. Apart from medical training programmes, the NSPOH also provides a postgraduate Master of public health programme and several refresher courses.

Recent advice to the Minister of Health on how to prepare health care professions to cope effectively with future challenges (Kaljouw & Van Vliet, 2015) proposed a new conceptualization of health, which did not focus on disease but instead on functioning and the ability to adapt and self-manage (Huber et al., 2016). This new conceptualization might have consequences for the future health workforce and its competences, as it emphasizes prevention and public health.

Quality assurance and performance measurement

There is no systematic monitoring and quality assurance system in place for the range of public health services provided at different administrative levels. Most of the available information relates to nationally organized immunization and screening programmes (Figure 7-7). The effectiveness and efficiency of more decentralized public health services, provided by regional public health services and municipalities, are generally not monitored.

Immunization programmes

The National Institute for Public Health and the Environment is tasked with monitoring the performance and quality of immunization programmes. The Health Council, drawing heavily on research and monitoring, is the most important advisory body on immunization programmes, as well as on national screening programmes.

The coverage rate of the national immunization programme for children is high. Nevertheless, the overall coverage rate of children under 2 years of age has declined from 96.1% (cohort 1995) to 91.2% (cohort 2014). The coverage rate for the first mumps, measles and rubella vaccination (MMR) was 93.8% in 2016 (cohort 2014). This percentage is now under the critical level of 95% set by the World Health Organization to eliminate measles (Van Lier et al., 2016). For children under 10 years of age the coverage rate was 90.9% in 2016 (cohort 2006). For other vaccinations of the national immunization programme too there is a slight decrease in coverage. By the end of 2016 there was a heated debate in the media between the advocates and opponents of the immunization programme of children.

The coverage of the National Influenza Programme, introduced in 1997, is lower. At present, all persons aged 60 years and older and specific groups at risk (those with cardiovascular disease, diabetes, lung diseases, serious kidney conditions and other persons with poor resistance to influenza) are invited annually by their general practitioner for a vaccination, free of charge. The coverage of this programme among people aged 60 years and older gradually declined from 71.5% in 2008 to 52.8% in 2014. It also declined among all groups at risk. While there is no clear explanation why this decline has occurred (Sloot et al., 2015), critical media coverage questioning the value of the programme may have played a role (IQ Healthcare, 2013).

Screening programmes

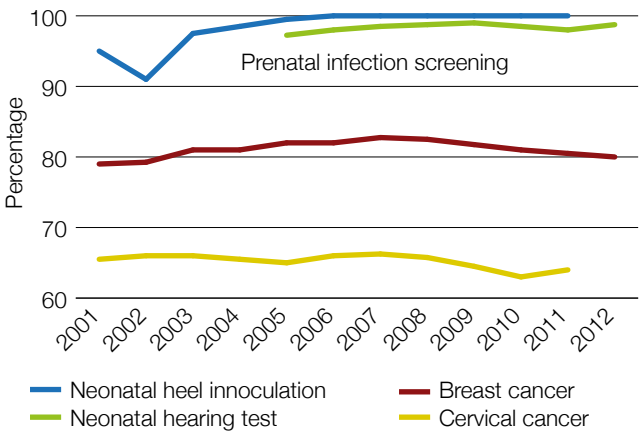
A breast cancer screening programme for women (aged 50–75 years) was introduced in 1988. It is currently organized by RIVM and implemented by five regional screening organizations. Women are invited to participate every two years. The coverage rate was 79.4% in 2013, with breast cancer detected in 6.9 per 1000 women screened. The total number of avoided breast cancer deaths is estimated at 775 women per year (Figure 7-7). The programme is monitored and evaluated yearly by a national evaluation team.

The national screening programme for cervical cancer has been in place since 1996. Every five years women (aged 30–60 years) are invited to participate. The coverage rate in 2012 was 64%. A new programme based on self-tests began in July 2016.

The cervical cancer screening programme covered 58% of the population in 2014. The relatively low percentage might be partly due to negative campaigns in the (social) media (De Melker et al., 2012).

Finally, in 2013 a national screening programme for colon cancer started. All persons aged 55–75 years are invited every two years to participate in this programme.

Figure 7-7 *Coverage rates of national screening programmes*



Source: Zorgbalans, 2014

Local public health services and plans

Municipalities are assigned an important role in the provision of public health services. In the government's view they are best capable of developing an integrated approach to public health, close to the citizens. However, various studies indicate that putting an intersectoral approach into practice is far from easy. In particular, there seems to be a gap between the rhetoric and the reality of an integrated approach to public health (Steenbakkers et al., 2012).

As mentioned above, the 2008 Public Health Act requires municipalities to present every four years a local public health plan with an outline of objectives and activities, taking into account the priorities of the national public health programme. However, it is unclear how well they perform this task. Municipalities in general do not measure the effectiveness and efficiency of their public health activities. At most, they monitor input, process and output indicators, but no outcome indicators.

An evaluation by the Healthcare Inspectorate of the content and quality of local health plans in 2009 found that there was much scope for improvement. The Inspectorate even concluded that, in several respects, performance in 2009 was worse than in 2004. The main observations of the Inspectorate were:

- 64% of the local plans did not meet legal requirements. Only 36% of the plans scored

"reasonable" or "good" in this regard. Municipalities were found to be better in signalling public health problems than in taking concrete action. This also applied to the problem of health inequalities between socioeconomic classes.

- 61% of municipalities indicated that they asked their public health service for advice on decisions with potentially far-reaching consequences for public health; 37% said they "sometimes" did so and 2% said they did not consult their public health service at all.
- 81% of the local plans referred to all five "spearheads" (see Figure 7-4) and 12% referred to only four.
- Little attention was paid to implementation. Only 4% of the local plans scored "good" and 21% "reasonable" with regard to implementation; 25% of plans paid little or no attention to implementation. Lack of financial resources and lack of administrative capacity were often given as an explanation for inadequate implementation.
- 50% of municipalities did not monitor and evaluate their activities in public health.

Conclusion and outlook

Although some research on specific prevention programmes has been undertaken, it is impossible to draw firm conclusions on the effectiveness and efficiency of public health services in the Netherlands. The overall picture is that population health in the Netherlands is reasonably good and that it has improved in several respects in the last decades (Zorgbalans, 2014). However, there is scope for further improvement, including in the areas of tobacco and alcohol consumption, overweight and obesity, and inequalities in health.

The strength of the Dutch system of public health services is its well-developed infrastructure. There is a nationwide structure for screening and vaccination programmes, as well as 25 regional public health services covering all municipalities. The existence of these regional organizations is a precondition for the development of an active approach to public health at local and regional levels. In addition, there are 25 network organizations (GHORs) to coordinate the activities of health care professionals ("white"), the police ("blue") and the fire brigade ("red") in case of large-scale incidents and disasters. The coordination between the regional public health services and the GHORs is facilitated by the full geographical overlap of the geographic areas they cover. If necessary, capacity can be scaled up quickly by involving other regions, the national government and the National Institute for Public Health and the Environment. The infrastructure for epidemiological research and the monitoring of population health is also well developed. The resulting data make it possible to monitor health developments not only at the national or regional level, but also at the neighbourhood level in each city.

Another strength is the formal embeddedness of public health in local government. The 2008 Public Health Act provides a formal institutional framework for the responsibilities of the national and local governments and the coordination of their activities in public health, in particular with regard to the large-scale outbreak of infectious diseases.

A weak element of the organization of public health services in the Netherlands is the incomplete translation of national prevention programmes and priorities into concrete local programmes by municipalities. The relationship between municipalities and the regional public health service may be tense in practice. The financial crisis led many municipalities to impose budgetary cuts on the regional public health services, as the state budget for public health activities at the municipal level is not earmarked.

One challenge is how to find a proper balance between the national and local administrative levels in public health. The current trend is to "decentralize unless". But what if the performance of municipalities or private actors is less than expected? Decentralization should not result in less effective or less efficient public health action. Despite several initiatives (such as the academic collaborative centres or the Healthy Life Centre) to make public health interventions more evidence-based, questions remain with regard to the effectiveness and efficiency of the regional public health services. The national government has now initiated a quality-measurement programme, but it is still at an early stage.

The involvement of a wide range of public and private organizations is crucial for advances in public health, something that has been recognized in the Netherlands as the "co-production" of public health. However, the success of co-production largely depends on moral commitments and, perhaps to some extent, on "naming and shaming" in monitoring reports. It is evident that the incomplete translation of moral commitments into concrete activities is the Achilles' heel of "co-production".

Policy-makers will have to deal with complex ethical problems in their efforts to strengthen public health. Promoting a healthy lifestyle as "the normal way of life" makes sense (after all, most people consider their personal health as the most important value in life), but how far may such intervention reach? How to balance health and freedom of choice, individual responsibility and privacy?

Policy-makers realize that health financing may become unsustainable in the future without a radical reorientation in health policy-making that places greater priority on prevention to avoid unnecessary health care costs. The national government has expressed its commitment to prevention in various policy documents, including the National Programme on Prevention, known as "Everything is Health". However, the challenge remains of how to translate these programmes into concrete measures at the local level and how to ensure the active and continuous involvement of municipalities, other public authorities and the private sector.

References:

AEF (Andersson Elffers Felix) (2013). *Borging van de publieke gezondheid en de positie van de GGD [Assurance of public health and the position of the GGD]*. Utrecht.

Batenburg R, van der Lee I (2014). Issues regarding training positions for youth health care physicians, physicians in infectious disease control, environmental public health physicians and tuberculosis control physicians (Dutch). Utrecht: NIVEL.

Beck U (1992). *Risk Society. Towards a New Modernity*. London: Sage Publications.

Bosma H et al. (2015). Lonely at the bottom: a cross-sectional study on being ill, poor and lonely. *Public Health*, 129:185–187.

Capaciteitsorgaan (2011). Capaciteitsplan 2010, Deelrapport 4: Sociaal Geneeskundigen [Capacity Plan 2010, Sub-report 4: Social Medicine]. Utrecht.

De Melker H et al. (2012). Developments in HPV vaccination. *Nederlands Tijdschrift voor Geneeskunde*, 156(47):A5410.

De Swaan A (1988). *In care of the state*. Oxford: Polity Press.

Evaluatiecommissie Q-koorts (2010). Van verwerping tot verheffing. Q-koortsbeleid in Nederland [From rejection to exaltation. Q fever policy in the Netherlands]. Den Haag.

Hendriks A et al. (2015). One more question to guide the development and implementation of Health in All Policies: Integrate? *Health Promotion International*, 2015:1–3.

Houwaart E (1991). *De hygiënisten: Artsen, staat & volksgezondheid in Nederland 1840–1890 [The hygienists: Doctors, state & public health in the Netherlands 1840-1890]*. Groningen: Historische Uitgeverij Groningen.

Huber M et al. (2016). Towards a 'patient-centred' operationalisation of the new dynamic concept of health: a mixed methods study. *BMJ Open*, 5:e010091.

IQ Healthcare (2013). Monitoring vaccinatiegraad nationaal programma griepppreventie [Monitoring vaccination levels of the national flu prevention programme]. Nijmegen.

Jambroes M (2012). Enumeration of the public health workforce in the Netherlands; insight into the size and composition is limited. Nederlands Tijdschrift voor Geneeskunde, 156.

Jambroes M et al. (2015). Enumerating the preventive youth health workforce: size, composition and regional variation in the Netherlands. Health Policy, 119(12):1557–1564.

Jansen M (2007). Mind the gap. Collaboration between practice, policy and research in local public health. Dissertatie, Universiteit Maastricht.

Jansen M et al. (2012). Working at the nexus between public health policy, practice and research. Dynamics of knowledge sharing in the Netherlands. *Health Research Policy and Systems* 10:33 (http://www.health-policy-systems.com/content/10/1013).

Jansen M et al. (2015). Conditions for sustainability of Academic Centres for Public Health in the Netherlands: a mixed methods design. *Health Research Policy and Systems*, 13:36, DOI 10.1186/s12961-015-0026-7.

Kaljouw M, Van Vliet K (2015). Naar nieuwe zorg en zorgberoepen [Towards new care and care professions. The outline]. De countouren. Diemen: Zorginstituut Nederland.

Kroneman M et al. (2016). The Netherlands: health system review. *Health Systems in Transition*, 18(2):1–239.

Ministry of Health, Welfare and Sports (2013). Nationaal Programma Preventie.

Ministry of Health, Welfare and Sports (2014). Betrouwbare Publieke Gezondheid: gezamelijke verantwoordelijkheid van gemeenten en rijk [Reliable

Public Health: joint responsibility of municipalities and the state].

Ministry of Health, Welfare and Sports (2015). Alles is Gezondheid 2014–2016 [All is health 2014-2016].

Ministry of Health, Welfare and Sports (2017). Begroting Volksgezondheid, Welzijn en Sport [Budget Public Health, Welfare and Sport] (http://www.rijksbegroting.nl/2017/, accessed 22 June 2017).

Querido A (1965). Een eeuw staatstoezicht op de volksgezondheid [A century of state supervision of public health]. Den Haag: Staatsuitgeverij.

Peeters R (2013). *The Preventive Gaze: How Prevention Transforms Our Understanding of the State*. The Hague: Eleven International Publishing.

Sloot R et al. (2015). Vaccinatiegraad Nationaal Programma Griepppreventie 2014 [Vaccination rate for the National Programme for Flu Prevention 2014]. Utrecht: NIVEL.

Statistics Netherlands (2017). StatLine [online database]. The Hague/Heerlen: Statistics Netherlands (http://statline.cbs.nl/, accessed 22 June 2017).

Steenbakkers M et al. (2012). Challenging Health in All Policies, an action study in Dutch municipalities. *Health Policy*, 105:288–295.

van Lier E.A. et al. (2016). Immunisation coverage and annual report. National Immunisation Programme in the Netherlands 2016. Bilthoven: RIVM.

VTV (Volksgezondheid Toekomst Verkenning) (2014). Een gezonder Nederland [A healthy Netherlands]. Bilthoven: RIVM.

WHO (2012). *European Action Plan for Strengthening Public Health Capacities and Services*. Copenhagen: World Health Organization Regional Office for Europe.

Zorgbalans (2014). *De prestaties van de Nederlandse gezondheidszorg [The performance of Dutch health care]*. Bilthoven: RIVM.

Web sites:

www.jellinek.nl/vraag-antwoord/wat-is-het-doel-van-het-alcoholbeleid/ (accessed 4 January 2016).

www.nationaalkompas.nl. Antimicrobiële resistentie: wat is het bereik en wat zijn de effecten van preventie?

www.utrecht.nl. Gezond gewicht Utrecht. Resultaten van een uniek samenwerkingsproject (accessed 4 January 2016).