Funding for public health in Europe in decline?

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Highlights

- Sources of information on funding for public health in Europe are contradictory
- There are nevertheless clear signs of cutbacks in many countries
- Declines are deeper and more widespread than previously documented
- Public health seems to have been an easy target for budget cuts
- However, a few countries have chosen to maintain or increase their funding

Abstract

Concerns have been raised in recent years in several European countries over cutbacks to funding for public health. This article explores how widespread the problem is, bringing together available information on funding for public health in Europe and the effects of the economic crisis. It is based on a review of academic and grey literature and of available databases, detailed case studies of nine European countries (England, France, Germany, Italy, the Netherlands, Slovenia, Sweden, Poland, and the Republic of Moldova) and in-depth interviews. The findings highlight difficulties in establishing accurate estimates of spending on public health, but also point to cutbacks in many countries and an overall declining share of health expenditure going to public health. Public health seems to have been particularly vulnerable to funding cuts. However, the decline is not inevitable and there are examples of countries that have chosen to retain or increase their investment in public health.

Introduction

Concerns have been raised in several European countries in recent years over cuts to public health budgets in the wake of austerity policies, including in Bulgaria [1], England [2, 3], Estonia [4], Greece [5, 6] and Latvia [1]. As cutbacks to public health may bring short-term cost savings, but massive costs to society in the long (but also short) run, this area is of major relevance to health systems and policies in Europe. Services identified at particular risk of cost-cutting measures include cancer screening [7] and communicable disease control [8-10]. In Greece, one of the countries most affected by the economic crisis, budget cuts let inter alia to a scale-down of HIV/AIDS prevention activities, with a subsequent increase in new infections [5]. In England an all-party health select committee concluded in 2016 that the cuts to public health added to the future costs of health and social care, increased the pressure on national health service (NHS) and risked widening health inequalities [11]. In a survey covering 47 of the 53 countries of the WHO European region in 2013, five countries reported making cuts to public health budgets (the Czech Republic, Denmark, Estonia, the Netherlands, and Macedonia), and five others reported closing or merging public health bodies (Bulgaria, Iceland, Latvia, Lithuania, Ukraine) [12]. An OECD review of health expenditure in the years after the onset of the economic crisis found that public health and pharmaceuticals were the two areas of health spending that saw the brunt of cuts after 2007 [13]. This mirrors developments in the United States, where spending on public health declined from 3.2% of current health expenditure in 2002 to 2.7% in 2014 [14]. More than half of local health departments in the United States experienced job losses and cuts to programmes as a result of the 2008 recession [15].

Despite these findings, very little comparative research on funding for public health in Europe has so far been undertaken and available data sources are sometimes contradictory. Exceptions include a review of levels and mechanisms of financing for public health published in 2013 [16] and an analysis of health promotion funding for older people in Europe [17]. This article aims to bring together available information on financing for public health in Europe to ascertain levels of financing and the impact of the economic crisis.

Materials and methods

This study is part of a wider investigation into the organization and financing of public health services in Europe, undertaken in 2014-2018 by the European Observatory on Health Systems and Policies and the World Health Organization Regional Office for Europe. It draws on a wider review of academic and grey literature on financing for public health in Europe, detailed country reports on the organization and financing of public health services in nine European countries [18], and semi-structured in-depth interviews covering these nine countries.

The literature review was conducted in September 2017, using the databases Medline and Google Scholar and the search terms “public health”, “financing” and “funding”, linked with the Boolean operators “AND” and “OR”. The search in Medline was confined to titles and excluded articles that were not concerned with Europe or published before 2008. We also reviewed sources available on the European Observatory’s Health and Financial Crisis Monitor, which has a

repository and searchable database of articles dealing with the effects of the economic crisis. All relevant articles and documents were included in the review and are given in the reference list of this article.

The in-depth country reports using national and grey literature were carried out by national experts with proven expertise in the areas of public health, health systems and policies. Countries included for the country reports were selected on the basis of geographical location and population size, general approach to public health services organisation and financing, key features of the health system as they relate to the organization and financing of health care, and the feasibility of undertaking in-depth reviews. Based on these considerations we selected the following nine countries: England, France, Germany, Italy, the Netherlands, Slovenia, Sweden, Poland, and the Republic of Moldova. National data collection was guided by a detailed template, which was informed by existing evidence on public health services in Europe [1, 19], as well as the assessment instruments developed by the Centers for Disease Control and Prevention in the United States for National Public Health Performance Standards [20].

The documentary analysis was complemented by semi-structured in-depth interviews with key informants, undertaken by the Observatory and WHO research team. The interviews were based on a topic guide, conducted via telephone or Skype and (where possible and upon consent) recorded and transcribed for further analysis. The topic guide covered several areas relevant to the organization and financing of public health services, including levels of financing for public health. Prior to conducting the interviews, a project information sheet and an informed consent form was shared with the interviewees. Ethical approval for the study was obtained by the Ethics Committee of the London School of Hygiene & Tropical Medicine, where the lead researchers of the Observatory are based. In total, 26 in-depth interviews were conducted in October 2016-January 2017.

Results

Three key themes emerging from the documentary analysis and the interviews were the available sources of information, the amount of resources spent on public health, and the impact of the economic crisis on financing for public health. The following sections present these themes in the form of a narrative synthesis.

What sources of information are available on funding for public health in Europe?

Information on the financing of public health services in Europe is available from international and national sources. Two international databases (OECD Health Data and Eurostat) provide information on the share of financing for public health as a percentage of current health expenditure. The OECD health database also provides a breakdown of the sources of financing for public health, as well as its providers. The WHO Global Health Expenditure database used to provide information on the share of financing for public health as a percentage of total health expenditure, but this information is no longer available. Additional information on the financing of

public health is available from national sources, including the data collected in the country reports undertaken for this study (England, France, Germany, the Netherlands, Italy, the Republic of Moldova, Poland, Slovenia and Sweden) [18].

Just as with health financing generally, models in Europe for financing public health differ greatly and there tends to be a mix of financing sources [16]. Yet, there is also remarkable uncertainty as to what constitutes expenditure on public health, just as there are different understandings of what constitutes "public health" or "public health services". Definitions differ from one country to the next [21, 22], with some including personal health services delivered by public health agencies, while others only include population-based services [21].

Only in 2011 have OECD, Eurostat and WHO agreed on a global standard of health accounts, with common definitions of expenditure categories for financing data reported by these three organizations, including for public health [23]. According to the 2011 edition of the System of Health Accounts, "prevention and public health services" are defined as "services designed to enhance the health status of the population as distinct from curative services, which repair health dysfunction. Typical services are vaccination campaigns and programs" [23]. Prevention and public health have been grouped under the functional category prevention, to better differentiate them from curative health services. In the previous version of the System of Health Accounts, SHA 1.0, categories were based on a mix of criteria: "public" referred at the same time to government-financed services, place of delivery (publicly owned services) and the beneficiaries involved (population groups).

While the new version of the System of Health Accounts clarifies the boundaries considerably, and explicitly includes areas such as environmental surveillance for public health purposes, there are many areas that fall under a more "upstream" and "whole-of-society" understanding of public health, such as strategies to improve health through active transport programmes, that are not captured by the system of health accounts as expenditure on prevention and public health [24]. Activities such as advocacy are also not counted as public health activity. Moreover, countries seem to vary considerably in how they capture spending on public health inside and outside the health system, such as for example vaccinations provided by GPs that may be hidden in primary care budgets.

Furthermore, confusingly, until 2017 the categories reported in the three health financing databases from OECD, Eurostat and WHO were not identical. The WHO Global Health Expenditure database used the category of "prevention and public health services", while Eurostat referred to "preventive care" and OECD to "public health and prevention". Since then, both Eurostat and OECD have used the term "preventive care", which is in line with the term used in the SHA 2011.

How much is spent on public health?

The information presented in the OECD Health Statistics and Eurostat databases is derived from national reports. Where adjustments or estimates of nationally reported data are required, these are validated by national Ministries of Health prior to publication [25].

The data indicate wide variations between European countries in terms of the share of health expenditure they devote to public health. Table 2 shows the European countries with the lowest and highest share of expenditure on public health in 2014 and 2015. The countries covered by the two databases differ. Cyprus and Romania, for example, are not OECD member states and not covered by OECD Health Data, but, as European Union (EU) member states, they are covered by Eurostat.

Table 2 Lowest and highest expenditure on public health in the European countries covered in the WHO, Eurostat and OECD databases

	WHO (2016)	Eurostat (2018)	OECD (2018)
Latest year covered	2014	2016	2017
Lowest	Cyprus: 0.6%	Greece: 1.3%	Greece (2016): 1.3%
Highest	Romania: 7.4%	United Kingdom: 5.4%	United Kingdom (2016): 5.4%

Note: Information on expenditure on public health not available from the WHO Global Health Expenditure database at the time of writing

The variability in expenditure on public health is on such a scale that it raises major question marks over the reliability of data. Expenditure seems improbably low for some countries (such as Cyprus or Greece). Noteworthy is also that Romania spent only 0.78% of its current health expenditure on public health in 2014, according to Eurostat, which contrasts with a much higher 1.78% in 2013, and a reported expenditure on “prevention and public health services” of 7.4% of total health expenditure in 2014, according to WHO’s 2016 Global Health Expenditure database (based on SHA 1.0).

While a detailed analysis of the data reported by these countries would be needed to come to any firm conclusions, the experience of Italy might help to explain some of the difficulties of gaining accurate estimates of spending on public health. Just like Cyprus or Greece now, Italy had in the past some of the lowest expenditures on public health as a percentage of total (or current) health expenditure, according to international databases. According to the 2013 edition of the WHO Global Health Expenditure database, expenditure on public health in Italy was as low as 0.6% of total health expenditure in 2007. Similarly, according to the OECD 2012 Health at a Glance publication, expenditure in Italy was reported to be only 0.5% of current health expenditure in 2010. This has now been corrected to 3.7% of current health expenditure in 2014, according to the 2015 OECD Health Data. While this may be closer to the truth, national data still indicate a higher percentage, suggesting a share of 4.2% in 2009 (Ministry of Health 2011b, 2011c), with roughly the same percentage in the following years.

Several explanations have been put forward to explain the previously large discrepancies between international and national data on financing for public health in Italy. First, because many public health costs are intertwined with general health care costs and dispersed over national and regional sources of funding, it is difficult to estimate the resources specifically dedicated to public health. For instance, physicians' honoraria for medical care are documented as health care expenditure, but these activities also encompass preventive care. Similarly, mammography screening, dental care and laboratory tests undertaken in public hospitals are counted as health care expenditure. In addition, the absence of a clear and generally agreed definition of what to include under "public health" can cause confusion in data collection and reporting. Finally, the widespread dispersion of funds makes it difficult to identify and enumerate financial resources for public health. According to the OECD, "where preventive services are carried out at primary care level, the prevention function might not be captured separately and may be included under spending on curative care" (Signorelli, 2013). The case of Italy illustrates that different understandings of "public health" among European countries have an impact on capturing data on financing for public health. In Italy "sanità pubblica" is commonly understood to comprise the entire public (but not private) health care sector and the services provided by the Italian national health system.

In France, it is similarly difficult to distinguish between the public health care sector and public health services. Data on the financing of public health only relate to what is termed "institutional prevention", i.e. public health activities that are organized and financed through dedicated programmes at national or local level. Spending on institutional prevention in 2014 was €5.9 (5.864) billion, which translates into 2.3% of total health expenditure [26]. This includes mainly primary and secondary individual prevention and the financing of national programmes. It does not include prevention activities during medical consultations, activities and salaries of health workers from other ministries (school health, student health, occupational health), or complementary expenses by local governments (on the health of vulnerable people or on health promotion). The spending on institutional prevention can therefore be considered a minimum estimate of what is spent on public health functions. For instance, a 2002 national survey published in 2006 tried to provide a better estimate of the percentage of current health spending dedicated to prevention activities. The result was 6.4% of current health spending [27]. However, this survey has not been repeated since. Nevertheless, another study tried to estimate individual prevention in ambulatory care for the year 2012. The estimated expenses were €8.5 billion, i.e. nearly 50% more than total institutional prevention.

In addition to some of the differences between data collected nationally and those reported internationally (which should be the same but often are not), there also used to be differences in the data reported by the three international databases for some countries. The most pronounced differences could be found between those data reported in the WHO Global Health Expenditure database on the one hand and Eurostat and OECD databases on the other, although without a consistent pattern in reporting: for some countries, figures were identical, for others the share was reported as higher in Eurostat and in yet others it was reported as higher in the WHO database. It can be assumed that these differences were mainly due to the fact that Eurostat and OECD have started earlier with using the 2011 System of Health Accounts, including the category of "preventive care", while WHO still used the System of Health Accounts 1.0 (the system prior to

2011), including the category of “prevention and public health services”. Furthermore, the share of expenditure related to “total health expenditure”, including capital investment, in case of the WHO database, but to “current health expenditure”, excluding capital investment, in case of the Eurostat and OECD databases.

Some countries also display slight differences between the data reported by Eurostat and OECD. These differences are likely to be due to the different updating schedules of the databases. While OECD health data are published annually to coincide with the OECD Health at a Glance publication and then frozen, the Eurostat database is updated continuously, on receipt of national reports.

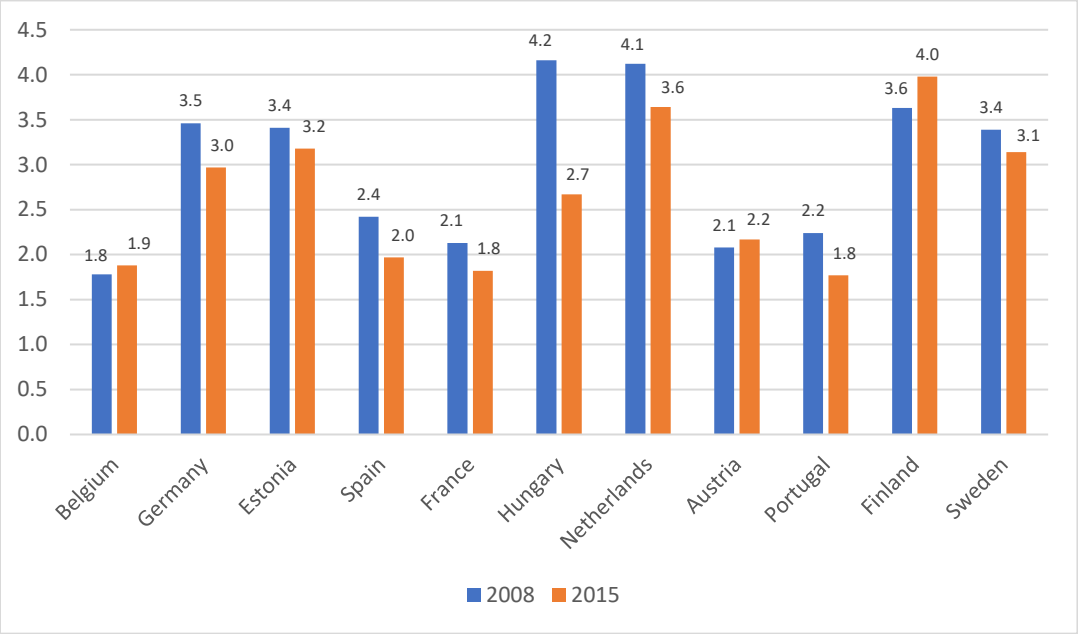
The data discussed so far relate to national averages. However, there can also be large variations within countries. In the Netherlands, for example, a great deal of the national public health budget flows to the municipalities that are largely free in how to spend these resources. Since the budget is not earmarked they may decide to spend more but also less on public health. Italy is one of the few countries for which more detailed information is available on expenditure across regions. In 2014, both absolute and relative expenditure on public health varied considerably across regions, ranging from 2.7% of regional health expenditure in Trentino-Alto Adige to 5.9% in Aosta Valley.

Furthermore, it is important to keep in mind that not only the share of health expenditure devoted to public health matters, but also the total amount per capita. This is particularly the case in a context where there are major changes to overall health expenditure and health expenditure as a percentage of GDP, as happened in many European countries in the context of the global economic crisis.

What was the impact of the economic crisis?

Although available data on public health spending have thus to be treated with some caution, they still provide useful information on trends. The global economic crisis that unfolded in the years since 2007 in particular seems to have had a negative impact on funding for public health in a number of European countries. Comparing the share of health expenditure devoted to public health in 2008 and 2015, it becomes apparent that in eight of the 11 European countries for which data are available for both years from the Eurostat database, the share of health expenditure devoted to public health has declined, the exceptions being Austria, Belgium and Finland (Figure 1).

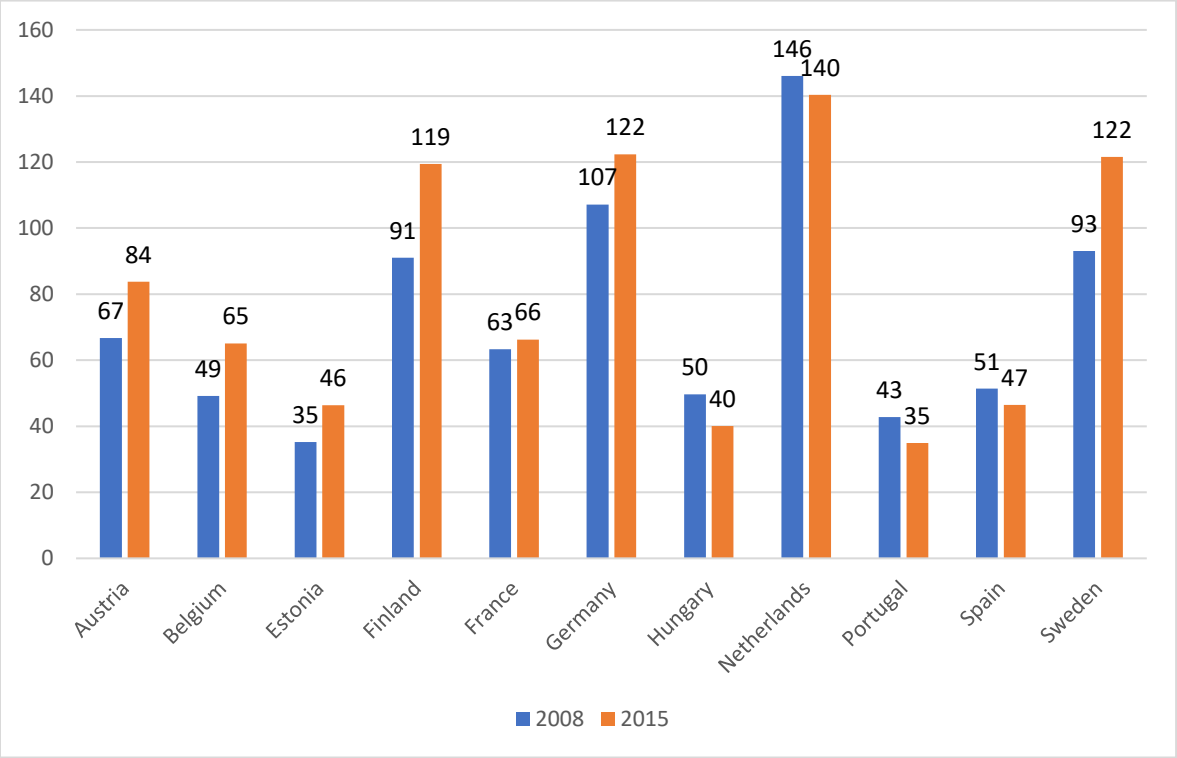
Figure 1 Share of financing to "preventive care" as % of current health expenditure, 2008 and 2015



Source: Eurostat data

In all of these 11 countries, the share of current health expenditure as a percentage of gross domestic product (GDP) increased between 2008 and 2015, as did the total current health expenditure per person, when adjusted for purchasing power standard (PPS). However, when considering the expenditure on preventive care per person, adjusted for PPS, increases can be seen in only eight of the 11 countries, with levels still lower than in 2008 in three countries (Figure 2).

Figure 2 Health care expenditure on preventive care per inhabitant, purchasing power standard, 2008 and 2005



Source: Eurostat data

Although not shown in Figures 1 and 2, as data for the United Kingdom are incomplete in the Eurostat database and only available at the aggregate level, one of the countries facing major cutbacks to public health in recent years was England. While financing for public health was initially "ringfenced", when public health services were moved from the National Health Service (NHS) to local government in April 2013, in 2015 a £200million in-year cut to the public health budget was announced, followed by further cuts in absolute numbers. The situation was exacerbated by large cuts to the budgets of local authorities. This created a strong incentive to re-designate any other activity even vaguely linked to health as part of their "public health" spending, even including activities such as road maintenance, possibly to make it appear as if public health spending was being protected.

Funding cuts to public health also featured prominently in a number of the interviews we conducted, in particular in England, France, Moldova, the Netherlands and Slovenia. Illustrative examples are given in Box 1.

Box 1 Interview quotes illustrating funding cuts to public health services in Europe

England

"Between 2013 and now there have been major reductions in the [national] funding to local authorities. [...] In some places, budgets of local authorities were reduced by about 30%. There was a significant funding impact on public health" (ENG – Interview 2).

France

"In the Ministry of Health, the possibility to finance public health was reduced in the last years and at the regional level it [the funding reduction] is more evident, for example, when I asked the director of the Regional Health Agency of Paris Region, the maternal and child health protection system is in difficulty, because the entity that is financing this service is in big budgetary constraints" (FRA – Interview 2).

Moldova

"You know about our financial crisis. It was talked about 1 billion dollars [this related to a scandal when this sum went missing from government accounts]. It's a very big problem really, not only for salaries. Even the latest reform [merging 36 rayon centres of public health into 10 sub-national centres] is in connection with this crisis." (MDA – Interview 1)

Netherlands

"Expenditure to public health as a share of total health expenditure has declined in recent years. There are two main reasons for this. The first reason is that costs in curative care have increased tremendously in the last 10 years, driving up total health expenditure. The second reason is that the policy for prevention in the Netherlands is rather modest, the government is not so ambitious in this area." (NL – Interview 3)

"This lack of financing is partly related to the way that public health services are organized in the Netherlands. The municipalities are in charge of paying public health services and they are nearly autonomous They receive a lumpsum from central government for all tasks and are free to decide how to use it. Furthermore, there were cuts to the budgets of municipalities in recent years and they also have to help people who become jobless as a result of the financial crisis. Prevention only has a low priority. Priority-setting is a problem and health doesn't play a major role." (NL – Interview 3)

"After 2008 in the Netherlands, just as everywhere else, there were budget cuts all over the place, also in public health services. We do not yet have a clear view of that, because the study that we commissioned is still under way, so I have no idea whether these budget cuts were severe or how severe they were and what damage has been done. […] We have preliminary reports that in infectious disease control and youth health care everything is OK" (NL – Interview 2)

Slovenia

"In recent years, budgets have declined by about one third. This is linked, to a significant degree, to austerity measures since 2012 (SLO – Interview 1).

"The impression from international data is right in that the proportion going to public health is getting less. It has decreased heavily in recent years. This has been offset through EU funds and the Norwegian financial mechanism (something like the European Cohesion Fund, but from Norway) (SLO – Interview 3).

In France, national data indicate that the percentage of current health expenditure devoted to "institutional prevention" declined from 2.5% in 2006 to 2.2% in 2014. In the Netherlands, too, public expenditure cuts designed to reduce the government deficit had consequences for the financing of public health organizations. They had to implement expenditure cuts and, in a number of cases, reduce their activities. Some agencies struggled with financial problems. Expenditure on prevention declined as a share of current health expenditure since 2005 and as amount per capita since 2010.

Italy is an example of a country that has increased resources devoted to public health in recent years, despite a challenging economic situation and financial constraints on the public sector. As part of the State-Region Agreement of July 2014, the Ministry of Health and the regions decided to earmark an increased absolute amount of national health funding to achieve the objectives of the 2014-2018 National Prevention Plan.

The economic crisis also had a major impact on international health funding. Several countries in Central and Eastern Europe, in particular some of the former Soviet countries, depend on international donors for some elements of their public health programmes, especially the Global Fund against AIDS, TB, and Malaria, resulting in a host of potential challenges, including the lack of sustainability [28, 29], as many donors, including the Global Fund, have withdrawn from middle-income countries. In Moldova, there were 21 national public health programmes in 2016, but only 2-3 of them were systematically financed by the national government. The remainder was either unfunded, underfunded, or dependent on external donors.

Discussion

Overall, our study suggests that the share of health expenditure devoted to public health in Europe is small and has declined further in the wake of the international economic crisis. A number of countries have reported cuts to public health budgets and these are also visible in the internationally reported health financing data. It seems that the decline to funding for public health as a share of health expenditure in Europe is much more profound and widespread than indicated by the 2013 survey of countries of the WHO European region [12]. This should be of major concern to public health practitioners across Europe and warrants more detailed investigation. A recent systematic review on the return on investment for public health interventions found that the median return is 14.3 to 1 [30]. This means that the opportunity costs of cutting expenditure on public health can be tremendous and any perceived gains are nothing less than a "false economy" [30].

A major limitation of our study is the apparently poor quality of data on financing for public health. There is still insufficient harmonization or standardization of how financing data are captured and accounted for. Until very recently, different data were reported in different international databases and these datasets might be at odds with nationally reported data. These differences undermine the credibility of international reporting of health data, which is also not helped by the fact that an improbably low share of total (or current) health expenditure devoted to public health is reported from some countries and an improbably high share in others. In addition, national health accounts may underestimate actual spending as some public health services, for instance those involving intersectoral working, or public health services provided by other sectors, may not be recorded.

Conclusions

Despite some uncertainty over data quality, there are strong indications that the share of health expenditure devoted to public health has declined in many European countries in the wake of the international economic crisis. It seems that public health was an easy target for budget cuts and curative services were more successful in holding on to (and increasing) financial resources. Why this is the case is open to speculation. Reasons might include the absence of strong professional or commercial lobby groups in favour of public health, the invisibility of the long-term (and short-term) benefits of public health interventions, a failure of the public health community to make a convincing case for continued investment, and powerful opposing commercial interests [30-32]. Further research is needed into the reasons why public health seems to have been such an easy target for budget cuts. It is also worth highlighting that there are countries that have bucked the trend, maintaining or increasing their funding for public health in absolute or relative terms. Exploring the reasons for this resilience could provide useful lessons for countries that have been struggling to maintain their levels of funding.

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