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# Improving estimates of spending on prevention and public health in the European Union

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# Abstract

Investing in health promotion and disease prevention is essential for improving population health and strengthening the resilience of health systems to emerging threats. Yet, available data indicate that prevention accounts for only around 3% of total health expenditure across the European Union. This low share has attracted considerable policy attention but also partly reflects limitations in available data. Countries often struggle to identify and allocate preventive expenditure, particularly when activities span institutions or are embedded within broader health programmes. This can lead to underreporting and limit international comparability. This Working Paper assesses the quality and completeness of countries' reporting on health promotion and disease prevention and develops methods to quantify identified gaps. Initial results suggest that reported expenditure may underestimate preventive spending by around one-quarter, with the largest gaps in healthy condition monitoring programmes, immunisation and epidemiological surveillance. The paper also explores the scope for additional granularity for policy purposes by identifying expenditure targeted at particular risk factors, population groups and diseases. The most feasible options seem to be disaggregating immunisation spending by type of vaccine and identifying the costs of individual cancer screening programmes. On the other hand, granular reporting of collective activities such as health promotion and epidemiological surveillance is more challenging for countries because aggregate programme information is frequently lacking in detail making attribution to specific public health activities more difficult.

# Acknowledgements

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# In Brief

Programmes to prevent diseases and other public health interventions are key components of an effective health system, helping both to improve population health and to make health spending growth more sustainable in the long run. Hence, the systematic tracking and monitoring of how much a country spends on prevention is a key element for informed (public) health policy decision-making. This data is included in an annual data collection on health expenditure and financing (hereafter, the "JHAQ") based on a widely applied accounting framework – the System of Health Accounts 2011 (SHA 2011). Yet, the quality of this data and its international comparability came under increased scrutiny during the pandemic.

This Health Working Paper evaluates the reporting quality of preventive spending in the annual JHAQ data submissions by national experts across the EU and other EEA countries for reference year 2023, qualifies and quantifies data gaps across the preventive subcategories and explores the feasibility to obtain a breakdown at a more granular level (e.g. by risk factor, disease or population group).

***The trajectory of reported preventive spending was very dynamic in recent years***:

- Across the EU, the reported share of prevention in total health expenditure stood around 2.6% in 2019. ***This share more than doubled during the global COVID-19 health emergency - peaking at 5.5% in 2021 - before declining to 3.1% in 2023*** and remaining stable in 2024. The wide variation in the reported resources dedicated to prevention across countries reflects differences in the priority given to public health, the comprehensiveness of preventive programmes but it also points to data gaps and differences in reporting practices.
- When looking at the composition of reported preventive spending by subcategory in 2023 across the EU, expenditures were concentrated on healthy condition monitoring (30%), information, education and counselling (19%), immunisation programmes (19%), with early disease detection (16%), epidemiological surveillance (15%) and disaster preparedness and emergency response (1%) playing smaller roles. These shares shifted considerable in recent years, with the share of immunisation temporarily increasing in 2021 (to reach 30%) as COVID-19 vaccination campaigns were rolled out.

Yet, ***the reported preventive spending is generally underestimated.*** The review of preventive spending data and qualitative information in EU and other EEA countries concluded that:

- ***Nearly two-thirds of the countries assessed their reported preventive spending to be underestimated*** to varying degrees. Based on a comprehensive assessment ***almost all countries display some data gaps or misallocations in preventive spending***.
- ***Across all preventive subcategories, around half of the countries or more either report spending partially or not at all***. Disaster preparedness and emergency response is the subcategory most frequently going unreported (more than half of countries). Healthy condition monitoring is the subcategory where reporting is most often only partial (nearly 50% of countries), as some individual components, such as adult health or dental check-ups or maternal care are often missing.
- The ***underreporting of specific preventive spending subcategories appears to arise from a combination of factors***, including incomplete data sources, challenges to disentangle preventive activities from other healthcare functions (for example, general or dental health

check-ups may be recorded under curative care rather than under healthy condition monitoring), and differing interpretations of SHA guidance across countries. In some instances, preventive spending is misallocated to the wrong preventive subcategory if data sources do not allow for a clear separation of high-level preventive spending items. Hence, underreporting in a particular preventive spending subcategory does not necessarily mean that the expenditure is missing from overall health spending; it may be recorded under another preventive subcategory or a different healthcare function.

- Prevention delivered through private financing or by non-conventional providers is likely under-reported or missing in many countries, but this this is likely to have limited impact on overall comparability.

***A mixed-methods approach was used to quantify and fill the identified data gaps.*** *Based on such an approach:*

- ***Average preventive spending would increase from around 3.1% to 3.8% of total health expenditure across the EU in 2023*** after adjusting for identified reporting gaps, implying that reported prevention spending in the JHAQ is underestimated by around one quarter. After adjusting, the variation across countries narrows. Adjusted spending is estimated to be between slightly more than 2% in Malta, Poland and Romania and more than 5% in the Netherlands, Estonia, Croatia, Finland, Greece, Austria and Italy.
- ***In one-third of countries, underreporting of preventive spending accounts for more than 1 percentage point of overall health expenditure***, with the highest level of underreporting seen in Greece and Cyprus. On the other hand, the smallest adjustments were made for Bulgaria, Germany, the Netherlands and Ireland.
- In terms of total spending, the ***most important upwards adjustments of preventive spending occurred for health condition monitoring***, driven by underreporting of dental check-ups, occupational healthcare and adult check-ups. This was followed by corrections in epidemiological surveillance and immunisation spending.
- As a result***, healthy condition monitoring becomes the most important subcategory, accounting for nearly 40% of all preventive spending*** across the EU, followed by immunisation at 17%. Health promotion, epidemiological surveillance and early disease detection each account for around 13–15%, while disaster preparedness represents only 2%.

Regarding the feasibility to identify more granular prevention expenditure for specific preventive subcategories (such as a breakdown by risk factors, population groups or diseases) the analysis found:

- ***In most countries, the data sources that are used to compile preventive spending within health accounts do not include any additional breakdown*** to identify risk factors, population groups, disease or programmes. Where they exist, such as in France or Estonia, ***they tend to be limited to specific preventive subcategories*** (such as immunisation) ***and/or payers*** (such as social health insurance funds or central governments). Moreover, the type of breakdown that exist in countries (e.g. spending on addiction programmes as part health promotion) reflect national priorities impeding international comparability of such granular information. That said, complementary data sources that allow to generate additional breakdowns for subcategories exist in several countries, but they are generally not aligned with reported health accounts data for prevention (i.e. boundaries may not align with SHA 2011 concepts).
- The ***greatest opportunities to obtain more granular spending information exist for individual preventive services***, particularly ***immunisation, early disease detection and healthy condition monitoring programmes***. For collective preventive services, more granular breakdowns appear to be less frequently available. Information, education and counselling

programmes may sometimes be distinguished by risk factor, but they are often financed through broad health-promotion budgets covering several objectives. Epidemiological surveillance and disaster preparedness and emergency response are even less amenable to programme-level reporting because expenditure frequently supports shared staff, laboratories, information systems and institutional capacity.

- Regarding immunisation, a small group of countries can ***allocate total immunisation (or vaccine) costs to key vaccines*** against COVID-19, HPV, influenza or pneumococcal infections. For healthy condition monitoring, estimates can be derived in some cases to separately identify key components such as occupational healthcare, dental check-ups or adult check-ups – which can be assigned to settings or population groups. ***Early disease detection is the subcategory with the most potential for more granular analysis*** as spending on screening for breast, cervical and colorectal cancer and COVID-19 testing can be derived for several countries based on distribution keys calculated from information on average prices and participation rates.

Recording spending on prevention within the JHAQ comprehensively and systematically is an important contribution of health accounts to inform policy making but also serves as a key input for the monitoring of broader expenditure on prevention, preparedness and response against global health threats (PPR). ***Recommendations to improve the quality of reporting of preventive spending, its international comparability, and to potentially obtain more granular information include***:

- National data compilers should review ***their current accounting practice in the area of preventive spending*** to address identified reporting gaps. A starting point would be to systematically map all preventive activities, financing schemes and providers to ensure all relevant prevention activity is captured in health accounts. A strengthened collaboration between health accounts and public health experts could be beneficial for this.
- Filling existing data gaps across all preventive sub-categories by ***exploring the availability of administrative datasets, programme information and complementary data sources at the most granular level***. This can require including new data sources and the development of allocation methods to distinguish preventive activities from curative and other services, particularly where prevention is delivered alongside other healthcare interventions or bundled into broader budget items.
- ***Where improvements in the reporting of preventive spending should be prioritised is country-specific***, but gaps are generally most widespread for routine health check-ups, dental check-ups, occupational health, immunisation spending, epidemiological surveillance and emergency preparedness and response activities.
- While there is ***potential to improve existing SHA guidance*** on the accounting of preventive care, data compilers could benefit from reviewing whether their current accounting practice is in line with existing recommendations.

Obtaining ***more granular information on preventive*** **spending** ***requires using new data sources*** beyond those used for health accounting purposes. Where this granularity is to be integrated into the existing health accounts framework, the scope of these sources must be fully aligned. Alternatively, breakdowns of preventive spending data by risk factor, population groups or disease could be produced through dedicated exercises outside the health accounts framework. Deriving more granular data for the subcategories epidemiological surveillance and disease control as well as for disaster preparedness and emergency response would also be very beneficial for a better calibration of estimates of PPR.

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# 1 Introduction

Prevention and other public health interventions are vital components of an effective health system. A wide array of activities – either targeted at individuals or populations – exist that aim to enhance health status and maintain a state of low risk for diseases or conditions, that is, to prevent their occurrence through programmes of information, immunisation, screening, or monitoring. Over recent decades, there have been a number of public health success stories with increasing coverage of populations in terms of immunisation and screening as well as achievements in reducing accidents and lowering smoking and drinking rates through specific policy measures. Yet, public health challenges remain as rising obesity rates both among adults and children risk an increase of chronic conditions if left unchecked. At the same time, as evidenced by the recent COVID-19 pandemic, the threat from old or new infectious diseases requires health systems to be alert and responsive.

Indeed, COVID-19 revealed that OECD health systems were not resilient enough to cope with a health crisis of this magnitude. Generally, health systems were underprepared, understaffed, and had suffered from underinvestment in key areas. To address these shortcomings, an order-of-magnitude estimation carried out by the OECD Secretariat suggested that OECD countries should, on average, invest an additional 1.4% of their GDP relative to the 2019 baseline scenario (OECD, 2023[1]). These additional funds would be needed (i) to protect underlying population health through additional spending on preventive care, (ii) to fortify the foundations of health systems by investing in core equipment and better harnessing of health information, and (iii) to bolster health professionals working on the frontline. With respect to (i), the estimates suggest that around 0.3% of GDP are needed, on average, to enhance preventive care through improved public health systems, such as public health surveillance, infection prevention and control, combatting major risk factors.

The call for smart investments in prevention and public health is further amplified in a context of tighter budgetary constraints that currently exist in many OECD countries. Targeted investment in prevention can be one element in a wider strategy to make health systems more efficient. However, not all public health interventions are equally cost-effective. Thus, more information is needed to understand how the budgets for preventive activity are actually composed.

More robust information on preventive spending and its various components can also improve the estimates on spending on prevention, preparedness and response (PPR) to global health threats beyond pandemics (OECD, 2026[2]). OECD's ongoing work aims for better tracking of spending in this area to support informed decisions on sustainable investment. This is particularly important in a changing global health financing landscape, where the poorest and most vulnerable countries are both on the frontline for most global health risks and are bearing the brunt of aid cuts.

Building on exploratory work carried out in 2017 (Gmeinder, Morgan and Mueller, 2017[3]), the Health Committee has taken further steps to improve the availability and comparability of information on spending on prevention. With input from the delegates for the OECD Working Party on Health Statistics and the Expert Group on the Economics of Public Health, the OECD engaged in a project, supported by the European Commission and the Health Foundation, to review and improve existing estimates of preventive spending and to explore the feasibility of identifying population groups and risk factors that preventive spending targets across OECD countries. In the first phase of the project, a survey was circulated to health accounts experts to assess current practices in reporting preventive spending and to identify what

additional granularity could be obtained. Responses from 35 countries were received. These responses together with around 15 structured interviews with survey respondents were used to identify and quantify potential data gaps in current preventive spending estimates. Further, an attempt was made to disentangle spending on prevention and public health programmes by targeted risk factors, population group and disease where possible.

This document aims to improve understanding of current country practices in reporting expenditure on preventive care in countries of the European Union and the European Economic Area (which adds Iceland, Liechtenstein and Norway), as a basis for enhancing the measurement and international comparability of prevention data in the future. It draws on responses from 35 countries to the *OECD Questionnaire on Accounting for Preventive Care Expenditure,* with 2023 as the reference year. The questionnaire examined how preventive spending is reported within the System of Health Accounts (SHA) framework, including the scope of activities covered, their classification across SHA categories, and the level of detail available in national data sources, as well as a series of structured interviews with national data compilers to better understand survey responses, the overall strategy countries use to report preventive spending as well as challenges faced in data reporting and adding additional granularity.

This Health Working Paper is structured in three main parts. The first part (Chapter 2) reviews existing data on preventive spending both at national and international level and discusses recent trends based on the annual collection of the Joint Health Accounts Questionnaire (JHAQ) on health expenditure and financing. The second part (Chapter 3) discusses the reporting quality of preventive spending submitted via the JHAQ before attempting to quantify and fill identified data gaps. The third part (Chapter 4) analyses what additional data could be obtained as part of this work to provide a more granular breakdown of expenditure by risk factor, disease area and target population – based on experiences in a few EU countries. The document concludes (Chapter 5) by laying out possible avenues for future work in this area.

# 2 What does current reporting tell us about spending on prevention?

Measuring the financial resources dedicated to preventing diseases and other public health interventions[1] and tracking them over time is key for informed decision-making in (public) health. On an international level, one accounting framework collects this data regularly - the System of Health Accounts 2011 on which the joint OECD/WHO/Eurostat data collection on health expenditure and financing is based. Additionally, there are also some initiatives on a country level, either as part of a national version of a health accounts implementation or otherwise.

## 2.1 Prevention spending under the System of Health Accounts 2011

### *SHA 2011 provides a methodology to define and systematically track spending on prevention and public health*

The most common method to systematically track spending on prevention and public health is part of a wider context of measuring health expenditure within a National Health Accounts framework. Many countries in the OECD have a long history of estimating expenditure on health (including prevention) within this framework, which in some cases can be traced back many decades (OECD, 2025[4]).

Since 2015, the *System of Health Accounts 2011* (SHA 2011) (OECD/WHO/Eurostat, 2011[5]) has been adopted as the global standard for the data collection on health expenditure and financing (JHAQ), jointly carried out by OECD, WHO and Eurostat. A total of 53 countries participated in the 2025 JHAQ collection round, potentially providing detailed and internationally comparable health spending data, including on spending on prevention and public health.

SHA 2011 allocates all health expenditures based on a tri-axial approach covering the dimensions healthcare financing (HF), healthcare services (HC) and healthcare provision (HP) built around the conceptual identity that healthcare goods and services that are consumed need to be both provided and financed.[2] The framework further develops the subcategories of the three core dimensions HF, HC, and HP, as well as proposing applications for additional analysis beyond the core framework.

In SHA 2011, spending on health (including prevention) captures transactions for activities with the primary intent of improving, maintaining, or preventing the deterioration of the health status of individuals, groups of the population or the population as a whole as well as to mitigate the consequences of ill health.

[1] Generally, public health is understood as a science to protect and improve the health of communities through various policies and interventions. Activities to prevent diseases before they occur or stop them from getting worse are one instrument of public health actions. Others are, for example, health promotion, epidemiological surveillance and pandemic preparedness.
[2] See Annex A for the HC, HP and HF classification.

According to this methodology, spending on *preventive care*[3] only covers primary and secondary prevention; tertiary prevention[4] is generally allocated to the category of rehabilitative care. Preventive care is a high-level category within the functional classification (HC) but can be broken down further at a subcategory level (Figure 2.1):

- ***Information, education, and counseling programmes*** which combine approaches to enable individuals, families, and communities to play active roles in achieving, protecting, and sustaining their own health;
- ***Immunisation programmes*** including the costs of vaccines as well as the cost of administering the vaccines;
- ***Early disease detection programmes*** which concern the active search for a disease early in its course, before symptoms appear, within risk groups, as organised programme activities, and can involve screening, diagnostic tests, and medical examinations.
- ***Healthy condition monitoring programmes*** referring to the active monitoring of healthy conditions, not focused on specific diseases, such as general health check-ups.
- ***Epidemiological surveillance and risk and disease control programmes*** which involves technical operations to manage knowledge and resources with a preventive and control focus.
- ***Preparing for disaster and emergency response programmes*** which includes preparations for an appropriate response in case of humanitarian emergencies, whether of human or natural origin[5].

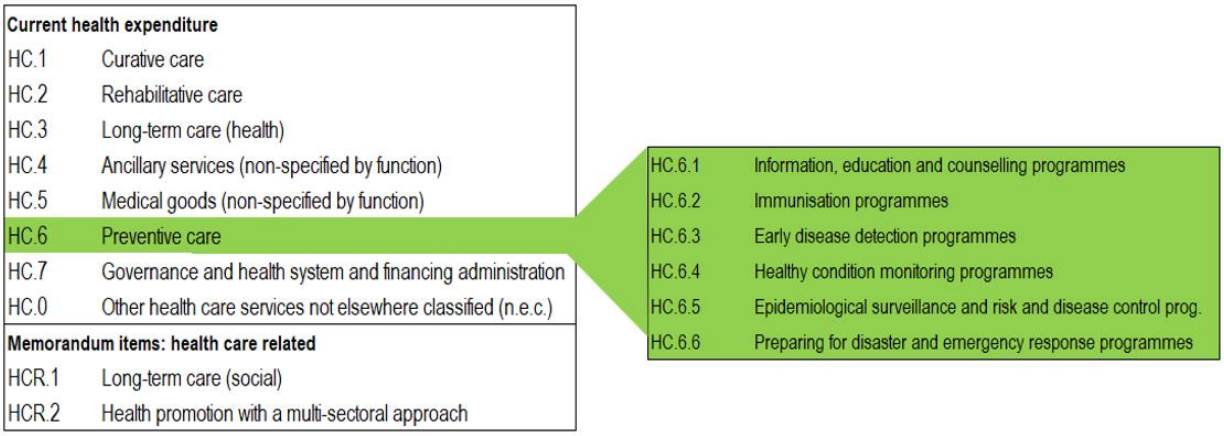
For some activities, it can be unclear whether they fall within the definition of health expenditure as set out in SHA 2011 or outside; and many of these boundary issues occur in the area of prevention and other public health activity. For this reason, the OECD produced further guidance, clarifying which transactions should be included in preventive spending for various health risk factors (OECD, 2017[6]). Some key guidelines include, for example, that activities outside of the health sector (e.g. traffic safety regulations) which may contribute to promote health (as a co-benefit), as well as costs related to enforcing regulation outside the health sector, or compliance costs (to comply with regulation that intent to have a positive health impact) are considered outside of preventive spending as defined in the SHA 2011. They also clarify that preventive activity that people initiate themselves, outside an organised programme (e.g. travel vaccination, health check-ups at own initiative) should be included under the preventive care category.

[3] While SHA 2011 defines the category as “preventive care”, it also includes other public health interventions such as health promotion, epidemiological surveillance and emergency preparedness as subcategories beyond primary and secondary prevention. Hence, whenever reference is made to spending on prevention based on SHA 2011, it also includes spending on other public health interventions.

[4] Tertiary prevention aims to reduce the negative consequences of an already-established disease by restoring function and reducing disease-related complications. Once a diagnosis has been made, a therapeutic or tertiary preventive path is established. The rationale for excluding tertiary prevention is that it overlaps with activities for rehabilitative purposes which are captured under a separate function under SHA 2011.

[5] A distinction should be made between this subcategory and total spending on “prevention, preparedness and response” (PPR) which is measuring investments to make health systems resilient against global health threats. The scope of PPR is much wider than category HC.6.6 to include spending across other functions within and outside of preventive care (HC.6). PPR is thus not a explicit functional category within the SHA 2011 framework but ongoing work to monitor PPR spending uses information collected from JHAQ data as a key input (OECD, 2026[2]).

### Figure 2.1. Prevention is a key category in the functional classification (HC) of SHA




Source: Adapted from (OECD/WHO/Eurostat, 2011[5])

### *EU countries report to have allocated around 3% of health spending to prevention in 2023*

In 2023 (the year for which the reporting quality will be analysed in Chapter 3), EU countries reported spending on average around 3.1% of their current health expenditure on prevention and public health (Figure 2.2).[6] The Netherlands allocated more than 5% of their health budget to prevention in that year, followed by Germany, Croatia, Italy, Finland, Austria and Estonia with shares over 4%. At the other end of the scale, several countries including Belgium, Poland, Cyprus, Romania, Malta and Liechtenstein reported less than 2%. While a degree of variation is expected, in some cases important underreporting of prevention spending can also be assumed. With this mind, the following provides a brief summary of trends and composition of prevention spending.

### *Spending on prevention rose sharply during the pandemic*

Looking at the trajectory of this indicator over the last decade, the share of preventive spending in current health expenditure remained broadly stable at around 2.5-2.6% in the years leading up to the pandemic (Figure 2.3). This increased to 3.2% in 2020 and more than doubled to 5.5% in 2021, before falling back to 4.3% in 2022 and 3.1% in 2023, with the share remaining stable in 2024. Widespread testing and the roll-out of vaccination campaigns were the main contributors to the surge in preventive and public health spending during this period. Overall, the subsequent fall appears to confirm that much of the increase in prevention spending during the pandemic was temporary, linked to emergency measures, and that countries have since returned closer to their pre-pandemic levels.

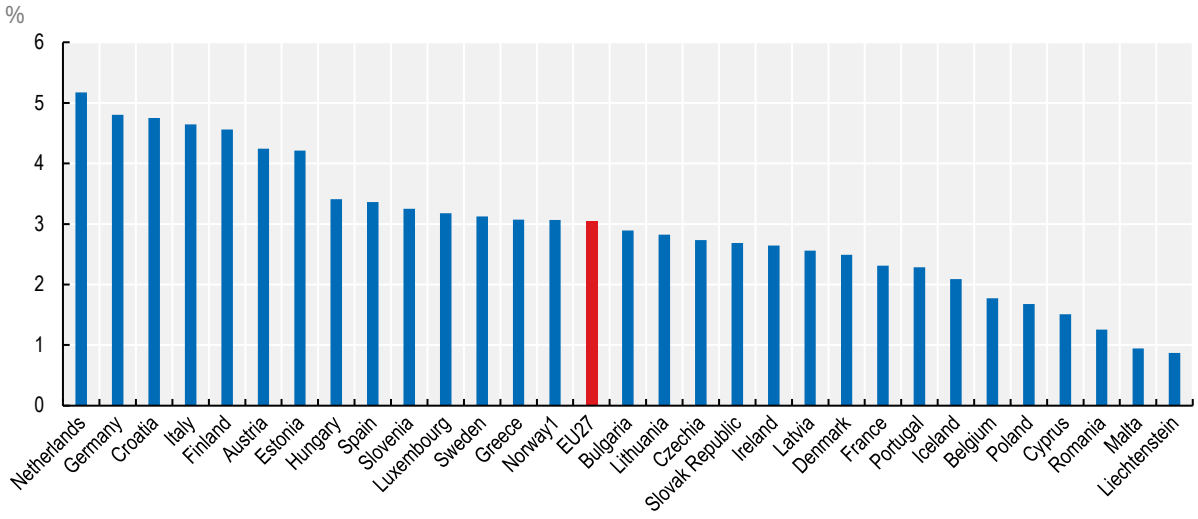
Many countries were following this trend (Figure 2.3). The share of France, for example, more than doubled from 2.4% in 2019 to 5.8% in 2021, but this increase was largely reversed by 2024, returning to 2.6%. Slovenia experienced a smaller increase during the acute phase of the pandemic, from 3.2% in 2019 to 5.4% in 2021, followed by a complete reversal to 3.1% in 2024. Austria stands out for its particularly sharp rise and subsequent decline, with prevention's share of health spending increasing from 3.2% in 2020 to 10.4% in 2021, before falling to 2.5% in 2024, close to its pre-pandemic level.

[6] Please see Annex B for a more detailed presentation of the data.

An increase of a similar magnitude could be observed in Estonia, where it rose from 3.6% in 2019 to 8.8% in 2021, before falling again to 3.9% in 2024.

## Figure 2.2. Spending on prevention stood around 3% of overall health expenditure in 2023 across the EU

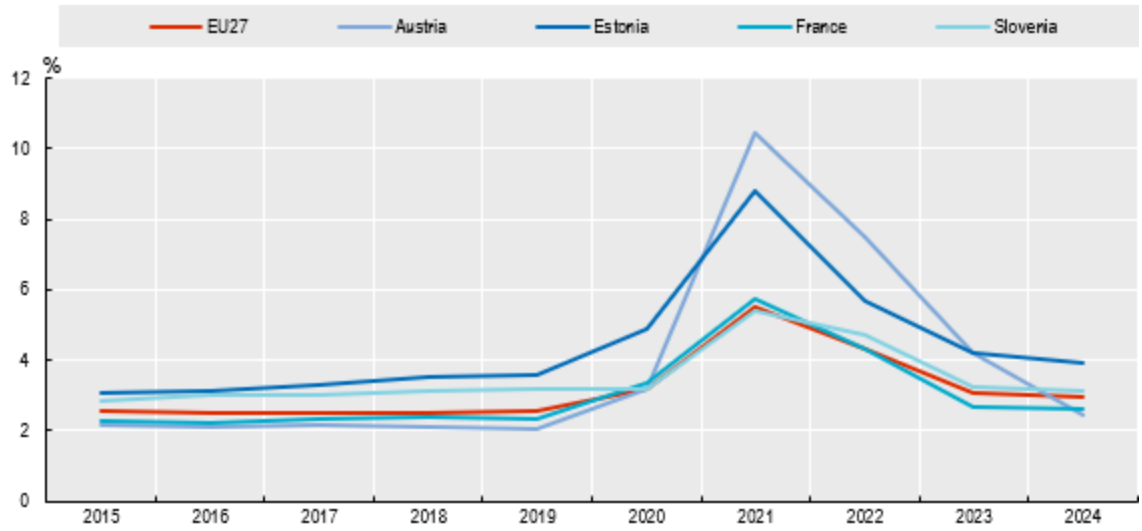
Spending on prevention as share of current health expenditure, 2023 (or nearest year)




Note: 1. Latest data from year 2022. EU average is unweighted.
Source: OECD Health Statistics 2025.

## Figure 2.3. The share of prevention in health spending is returning to the pre-pandemic level

Spending on prevention as a share of current health expenditure, selected EU countries, 2015–2024

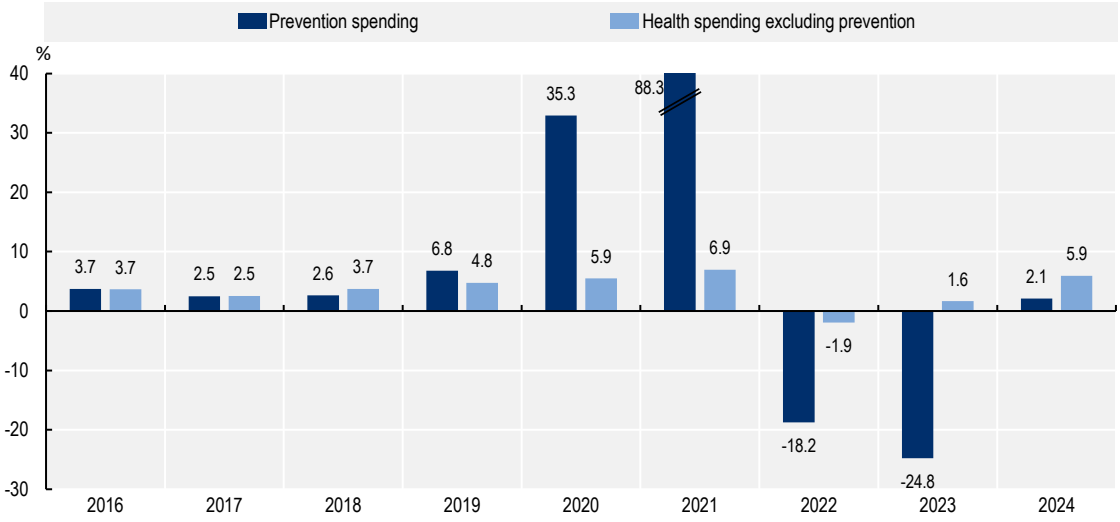



Source: OECD Health Statistics 2026

In the years leading up to the COVID-19 pandemic, year-on-year growth of prevention spending was broadly in line with other health spending across EU countries (Figure 2.4). This changed markedly in 2020 and 2021, when the financial resources allocated to prevention and public health jumped by 35% and nearly 90% in real terms, respectively, compared with around 6–7% for overall health spending excluding prevention. As COVID-19 related public health emergency measures were scaled back, spending on prevention fell by around 18% in 2022 and a further 25% in 2023, while other health spending declined only slightly in 2022 before returning to moderate growth in 2023. In 2024, spending on prevention returned to moderate growth of around 2%, below a 6% increase in other health spending.

## Figure 2.4. Growth in preventive spending outpaced other health spending during the pandemic but has since slowed down

Annual growth in health spending, in real terms, EU average, 2016–2024



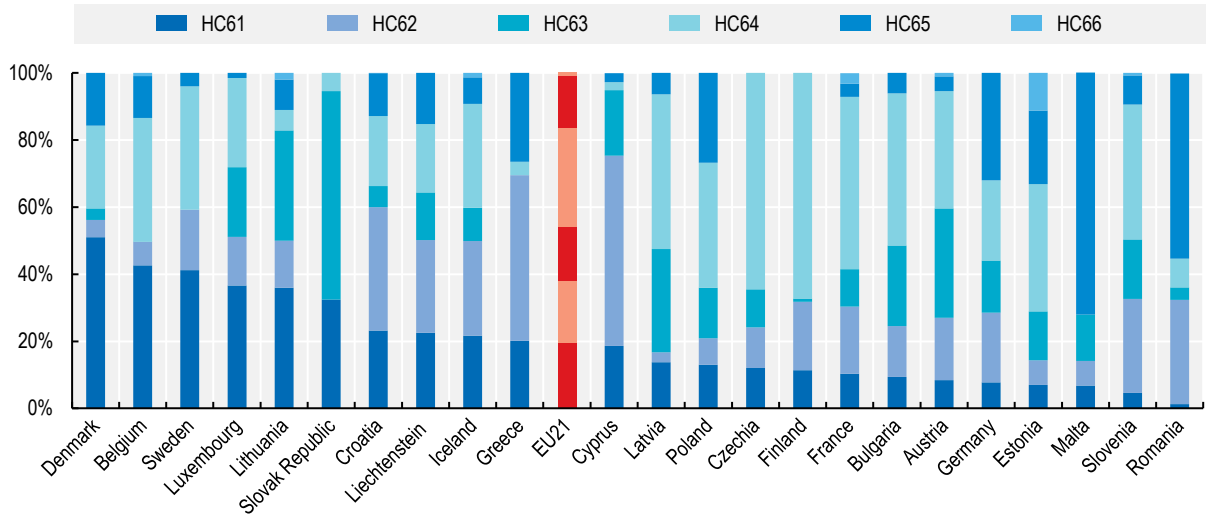

Source: OECD Health Statistics 2026.

### *The composition of preventive spending has changed in recent years with the share of immunisation temporarily rising in 2021 as COVID-19 vaccination campaigns were rolled out*

Bearing in mind gaps and under-estimation, current reporting suggests a wide variation across countries in the composition of spending on preventive care (Figure 2.5). On average across EU countries, resources in 2023 were concentrated on *healthy condition monitoring* (HC.6.4, 30%), *information, education and counselling* (HC.6.1, 19%), *immunisation programmes* (HC.6.2, 19%), with *early disease detection* (HC.6.3, 16%), *epidemiological surveillance* (HC.6.5, 15%) and *disaster preparedness* (HC.6.6, 1%) playing smaller roles. However, this average masks strong cross-country differences. For instance, Denmark reported around half of all preventive spending under information campaigns, while Czechia allocated nearly two-thirds to healthy condition monitoring programmes. By contrast, the Slovak Republic accounted for more than 60% under early disease detection, and Greece directed almost half towards immunisation. In Romania, more than half of preventive resources were recorded as epidemiological surveillance. These divergences may reflect different policy priorities, price differences and utilisation patterns, but they also signal reporting gaps or differences in reporting practice.

## Figure 2.5. Spending on check-ups and immunisation programmes accounted for half of preventive spending across the EU in 2023

Composition of spending on prevention by subcategory, 2023

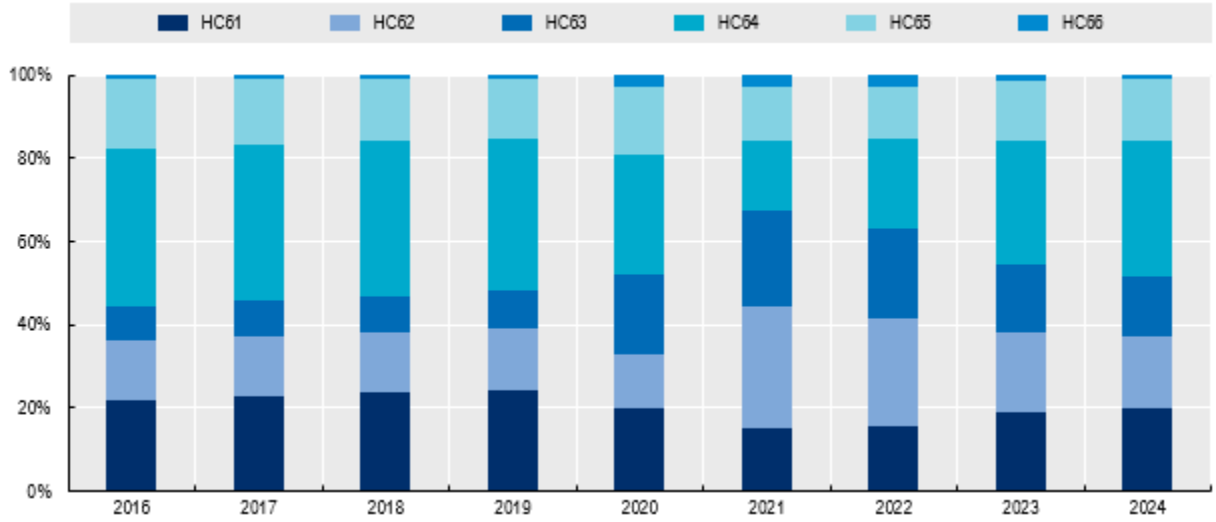



Note: HC.6.1 refers to "Information, education and counseling programmes", HC.6.2 to "Immunisation programmes", HC.6.3 to "Early disease detection programmes", HC.6.4 to "Healthy condition monitoring programmes", HC.6.5 to "Epidemiological surveillance and risk and disease control programmes", HC.6.6 to "Preparing for disaster and emergency response programmes".
The non-reporting of one category typically means that spending for this category is either missing or is reported elsewhere, in case it cannot be distinguished from another category. Among EU countries, Hungary, Ireland, Italy, the Netherlands, Portugal and Spain only report preventive spending on an aggregate level are hence not included in this chart.
Source: OECD Health Statistics 2025.

The average composition of preventive subcategories was relatively stable before the COVID-19 pandemic but has been more dynamic in recent years (Figure 2.6). Up to 2019, healthy condition monitoring accounted for close to 40% of preventive spending, and information campaigns made up a further quarter. By contrast, immunisation programmes and epidemiological surveillance each stood at only around 15%. During the pandemic, this pattern shifted. In 2020, the share of early disease detection, epidemiological surveillance, and disaster preparedness and response increased, while 2021 saw immunisation spending account for around 30% of all preventive care with the rollout of COVID-19 vaccination campaigns. Subsequently, this fell back to about 19% on average across OECD countries in 2023 and was reduced further in 2024. At the same time, healthy condition monitoring (30%) re-emerged as the dominant component of prevention (increasing further to 33% in 2024), while early disease detection remained at a higher share than before the pandemic (14% in 2024 vs. 9% in 2019). In 2024, the shares of surveillance and disaster preparedness were on a similar level compared to 2019.

### Figure 2.6. The share of immunisation in all preventive spending increased during the pandemic

Composition of preventive spending by subcategory, 2016-2024, EU average




Note: HC.6.1 refers to "Information, education and counseling programmes", HC.6.2 to "Immunisation programmes", HC.6.3 to "Early disease detection programmes", HC.6.4 to "Healthy condition monitoring programmes", HC.6.5 to "Epidemiological surveillance and risk and disease control programmes", HC.6.6 to "Preparing for disaster and emergency response programmes". EU average refers to average of 20 EU countries with available data.
Source: OECD Health Statistics 2026

## 2.2 National initiatives to measure spending on prevention and public health

In addition to the regular reporting of data on spending on preventive care based on the SHA 2011 framework, some EU countries also report this data based on alternative boundaries within their national versions of health accounts:

- In ***Germany***, health accounts are implemented in a national configuration as well as based on SHA 2011. While both versions use the same overall boundary of current health expenditure, the categories for the three core dimensions differ (Gesundheitsberichterstattung des Bundes, 2026[7]). The German service dimension includes a category on "*prevention and health protection*" which is similar but not identical to the category "*preventive care*" in SHA 2011. On average, the amount spent on "prevention and health protection" is around 10% higher than on the corresponding SHA category. In addition to health promotion and disease detection, this category also includes spending on "assessment and co-ordination" and "health protection" which are not entirely captured under category HC.6 of SHA 2011. On the other hand, the German NHA classification has a separate category for maternity care, which is – unlike under SHA 2011 – not captured under "prevention and health protection" in the German National Health Accounts context. Since the German-specific financing breakdown is more granular than under SHA 2011 reporting obligations, the German national health accounts version offers interesting additional insights about the different social security schemes that finance preventive activity (see Chapter 4).
- The ***French*** health expenditure data ("*dépenses de santé*") is published annually by the Directorate of Research, Studies, Evaluation and Statistics (DREES) of the Ministry of Health using both a national classification as well as the SHA classification. Generally, spending on prevention is exclusively included within the boundaries used for international comparisons and thus identical

the boundaries set in SHA (DREES, 2025[8])[7]. However, DREES publishes preventive spending data on a much more granular level in the French publication than for international reporting purposes (see Chapter 4).

A number of EU countries have also made attempts to measure preventive spending outside of any national health accounts context:

- In ***Austria***, the national public health institute *Gesundheit Österrreich GmbH* (GÖG) has been estimating national spending on health promotion and prevention in irregular intervals. The most recent estimate was carried out for year 2016 based on a survey targeting all relevant agencies on a federal, state and municipality level as well as social security funds (BMASGK, 2019[9]). The scope of analysis went beyond the boundaries of prevention as defined in SHA 2011 and included spending on health promotion, as well as on primary, secondary and tertiary prevention and capacity building. The estimated values were substantially above the corresponding SHA results as tertiary prevention accounted for around 70% of all health promotion and prevention costs. Moreover, the GÖG figures also include preventive spending if provided by outpatient physicians (currently not included in the Austrian SHA figures). Table 2.1 displays a mapping and comparison table between the comprehensive preventive spending estimates carried out by GÖG and the Health Accounts results compiled by *Statistik Austria*. After adjusting for the two items mentioned above, the values are quite close. That said, the GÖG study includes a very detailed breakdown on various preventive areas and by payer (see Chapter 4).

### Table 2.1. Preventive spending figures based on GÖG approach and SHA for Austria (only public financing)

in million Euro

| | 1996 | 2001 | 2012 | 2016 |
|---|---|---|---|---|
| **Comprehensive preventive spending (GÖG)** | **805** | **1,027** | **2,019** | **2,441** |
| of which: without tertiary prevention | 363 | 465 | 749 | 899 |
| of which: without tertiary prevention and spending at outpatient physicians | 180 | 257 | 488 | 662 |
| **Spending on preventive care based on SHA (Statistik Austria)** | **211** | **286** | **469** | **576** |

Note: SHA data for Austria has meanwhile been revised.
Source: (BMASGK, 2019[9])

- In the ***Netherlands***, there has been interest in obtaining a more comprehensive overview on spending on public health and prevention also including spending outside the health sector as part of a multi-sectoral approach. Using a consistent methodology and categories, researchers from the *National Institute for Public Health and the Environment* (RIVM) have calculated spending on prevention ("*Kosten van preventive*") for the years 2003, 2007 and 2015 (de Bekker-Grob et al., 2006[10]; Post et al., 2010[11]; VZ Info, n.d.[12]). The preventive spending figures RIVM has calculated is substantially above the Dutch preventive spending data included in the health accounts (Table 2.2). Using a multisectoral approach, the difference is around five-fold, and most of it can be explained by the inclusion of spending items for health protection outside of the health sector, for example, measures to prevent poor air quality, traffic safety measures, or household waste inspections. Yet, the RIVM approach to estimate total preventive spending includes detailed line

[7] To inform national debates, the aggregate « *consommation de soins et de biens médicaux (CSBM*) » which excludes spending on long-term care, prevention and administration appears to be more widely used in France.

items in the health area that can be useful in discussing a more granular approach to measure preventive spending (see Chapter 4).

### Table 2.2. Preventive spending figures based on RIVM approach and SHA for the Netherlands

in million Euro

| | 2003 | 2007 | 2015 |
|---|---|---|---|
| **Total preventive spending (RIVM)** | **12,454** | **13,023** | **12,466** |
| Health promotion | 436 | 454 | 647 |
| Health protection | 9,956 | 10,044 | 9,472 |
| Disease prevention | 2,064 | 2,525 | 2,347 |
| **Spending on preventive care based on SHA (CBS)** | **2,401** | **2,447** | **2,497** |

Sources: (de Bekker-Grob et al., 2006[10]; Post et al., 2010[11]; VZ Info, n.d.[12]); OECD Health Statistics 2025.

# 3 Assessing the quality of current reporting and identifying gaps

Chapter 2 discusses how the SHA 2011-based data collection on health expenditure and financing (JHAQ) provides the most appropriate framework to analyse spending on prevention but data gaps as well as issues with reporting quality impede to a certain degree the international comparability of these figures. This chapter aims to *qualify* and *quantify* the reporting gaps for EU and EEA countries.

## 3.1 Assessing the quality of reporting of preventive spending data under the SHA 2011 framework

In August 2025, a questionnaire was sent to health accounts experts in OECD and EU countries to assess the comprehensiveness and the quality of reporting of preventive spending data submitted under the annual JHAQ data collection. The survey inquired about countries' accounting practices for reference year 2023 (the most recent year for which preventive spending data was submitted under the 2025 JHAQ collection round[8]). The questionnaire was structured around three broad sets of questions.

***The first question asked country experts to self-assess the quality of the reporting of their preventive care spending estimates based on their most recent JHAQ submission***. For the aggregated preventive spending category (HC.6) and for each of the six HC.6 subcategories, health accounts experts were invited to signal whether the spending category is:

- ***Fully reported,*** if all key activities are included in the respective category without major gaps.
- ***Partially reported,*** if some key activities are included but others are not (though they may be reported under a different HC category).
- ***Overreported***, if all key activities are included, plus some activities that should be reported under a different category (for example, HC.6.1 includes all HC.6.1 activities but also elements that belong under HC.6.4 or are part of curative care).
- ***Not reported,*** if activities that are part of this category are not included in the JHAQ at all, thus missing entirely from preventive care spending and current health expenditure.

***The second question asked experts to report how around 20 individual key activities and transactions in the area of public health and prevention were currently recorded in their national health accounts submissions***. They were asked to specify under which function and provider category these activities were recorded, and for which financing schemes data is collected.

***The third question investigated the comprehensiveness of reporting but also the potential to obtain additional granularity for some of the existing preventive spending categories.*** Under each of the existing preventive care subcategories, a number of programmes that target individual population groups

[8] For some countries, the latest submitted data referred to 2022, In this case, the questions on reporting practices referred to that year.

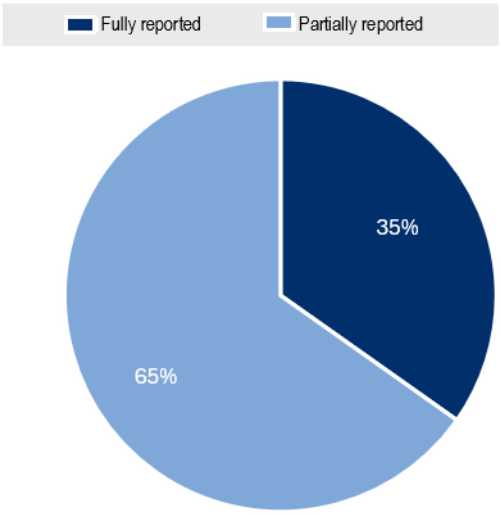
or risk factors were listed and health accounts experts were asked to confirm whether the costs for these programmes were included in their health accounts and whether programme costs could be identified separately (the latter part will be analysed further in Chapter 4).

In total, 35 countries had responded to the survey by June 2026 (of which 23 EU and EEA countries), giving the OECD Secretariat a critical evidence base for assessing how preventive spending is currently reported in national health accounts at the moment.

### *Countries' self-assessment of reporting points to some gaps with spending on disaster preparedness not reported by more than half of countries*

Figure 3.1 summarises the self-assessment of countries with regards to their reporting of preventive spending under the JHAQ on the highest level of aggregation (HC.6). Just over one-third of European countries (that responded to the survey) believe they have - from an activity or service perspective - spending on preventive care fully captured, which means 'without significant data gaps or over-reporting of spending that should not be considered as preventive care'. This includes Croatia, Denmark, Estonia, France, Ireland, Latvia, Lithuania and Poland. By contrast, in the majority of countries (65%), preventive care is only partially recorded in JHAQ submissions.[9]

## Figure 3.1. Nearly two-thirds of countries asses their coverage of preventive care spending as only partial




Note: "Fully reported" should be chosen if all key activities are included in the respective category without major gaps. "Partially reported" should be chosen if some key activities are included in the respective category but others are not (some of them may however be reported under a different HC category.
Source: OECD Questionnaire on accounting for preventive care expenditure 2022-23.

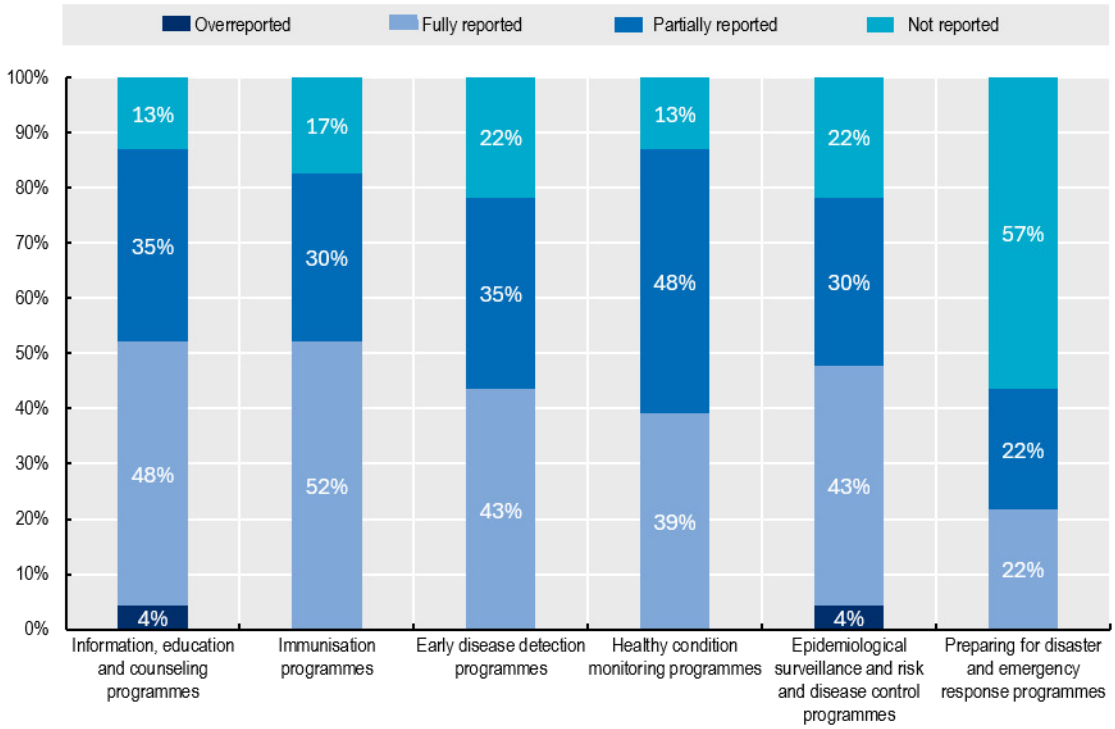
A more in-depth analysis can be carried out when comparing countries' self-assessment of reporting practices across the six preventive care subcategories (Figure 3.2 and Annex C). *Immunisation programmes* (HC.6.2) were the most comprehensively reported, with more than half of all countries indicating no (significant) gaps in coverage. *Information and counselling programmes* (HC.6.1), *early disease detection* (HC.6.3) and *epidemiological surveillance* (HC.6.5) followed closely, with more than 40%

[9] Annex C includes an overview of countries' self-assessment for on an aggregate level but also for all preventive subcategories.

of countries considering their reporting of spending for these categories as comprehensive. Fewer countries considered their reporting of spending on *healthy condition monitoring* (HC.6.4) as complete. Reporting of *preparedness for disaster and emergency response* (HC.6.6) appears to be the most challenging, with more than half of all countries not reporting this item at all in their latest JHAQ submission round[10] and only a quarter of countries believing they have this item fully covered in their health accounts. This reporting gap means that spending on some preparedness activities is not systematically tracked. Although HC.6.6 represents a relatively small component of spending on prevention, preparedness and response (PPR) to global health threats, more complete reporting would help make estimates of this broader aggregate more robust and comprehensive. Only partial reporting was common for subcategories healthy condition monitoring, early disease detection and information education and counselling progammes (with at least one-third of countries). Over-reporting was indicated in only two cases: Denmark for epidemiological surveillance (HC.6.5) and Sweden for information and counselling (HC.6.1), largely reflecting methodological challenges in separating various preventive activities rather than double-counting. However, it can be assumed that over-reporting of some specific preventive care categories also exists in other countries.

### Figure 3.2. Immunisation programmes is the preventive subcategory where most countries assess their reporting as comprehensive

Share of countries by self-assessment category for each subcategory of preventive care




Note: "Fully reported" should be chosen if all key activities are included in the respective category without major gaps. "Partially reported" should be chosen if some key activities are included in the respective category but others are not (some of them may however be reported under a different HC category). "Overreported" should be chosen if all key activities described below are included in the respective category plus some activities that should be reported under a different category. "Not reported" should be chosen if the category is not reported in the JHAQ.
Source: OECD Questionnaire on accounting for preventive care expenditure 2022-23.

[10] A number of countries stopped reporting spending preparedness for disaster and emergency response (HC.6.6) with reporting year 2023, possibly related to the fact that with the phasing out of COVID-19 measures no other items that fit in this category could be identified in public health budgets.

Where countries flag that preventive spending for some subcategories is only partially reported, some specific preventive activities may be embedded within other healthcare functions and cannot be separately distinguished. This can lead to an underestimation of total preventive spending but not of overall health spending. It can also mean that some preventive care spending is allocated to the wrong sub-category. For example,

- cancer screening (HC.6.3) or general health check-ups (HC.6.4) may be recorded under curative outpatient care (HC.1.3) rather than prevention;
- development of policies to address public health risks is reported under governance and health system administration (HC.7.1); expenditure related to the administration of immunisation programmes or other preventive initiatives may also be captured here;
- routine dental check-ups and other preventive oral health services may be recorded under outpatient dental care (HC.1.3.2), rather than under healthy condition monitoring programmes (HC.6.4);
- disaster preparedness and emergency response (HC.6.6) may be included under epidemiological surveillance (HC.6.5) if budget items covering both cannot be separated.

While countries' self-assessments do not provide any quantification of the missing preventive spending, they can already help to better interpret the existing figures. Annex C highlights, for example, that the Slovak Republic has all its preventive subcategories either marked as only partially reported or not reported at all – signalling important data gaps. This contributes to explaining why their overall share of preventive spending in total health expenditure is comparatively low (Figure 2.2). The opposite is true for Croatia who judge their reporting as comprehensive across all categories and are ranked among the highest preventive spenders. However, this reasoning does not explain why e.g. France (who assess their reporting as comprehensive) report a low share of preventive spending, and why the Netherlands ranks highest (albeit signalling some data gaps for some activities).

***Prevention delivered through private financing or by unconventional providers is likely under-reported in many countries but may have limited consequence for comparability***

As part of Question 1, health accounts experts were also asked to indicate possible reporting gaps from a provider or financing perspective for preventive spending. This refers to whether preventive activities can be reported for all relevant facilities and settings and whether all possible payers financing preventive activities are fully captured in the JHAQ submissions.[11] Responses suggest that, from a financing perspective, coverage may be incomplete for household out-of-pocket payments (HF.3) and other private financing. This can be true, for example, for cost-sharing or self-pay for vaccinations and health check-ups, or preventive interventions financed by employers or voluntary health insurance. From a provider perspective, reporting gaps can exist for services delivered outside hospitals (HP.1) and ambulatory providers (HP.3), referring to possible preventive activities occurring in pharmacies (HP.5), schools and workplaces (HP.8.2), or in long-term care institutions (HP.2). The potential of this under-reporting is difficult to quantify. Reporting gaps for private spending, however, can generally be assumed to have a limited impact on the comparability of the overall preventive spending data, since many of the prevention and public health interventions are financed to a great extent by government or compulsory insurances schemes in OECD countries; occupational health care may be an exception to this though.

[11] Which providers and financing schemes are relevant for preventive can be very country-specific, reflecting the organisation of healthcare and public health as well as the health financing architecture in a country.

***Underreporting of preventive spending can reflect challenges to disentangle preventive activities from other healthcare functions***

To complement countries' broad self-assessment of the quality of their reported preventive spending data discussed under Question 1, national experts were invited to comment on whether and how they classify 19 *specific* preventive activities/transactions grouped into 8 broader preventive programmes in Question 2. This covered for example, the medical check-up programmes, with the public information campaign, and the actual medical examinations as individual programme activities. This should help provide more information on the comparability of countries' reporting practices.

Responses to the second survey question indicate that most countries capture a wide range of preventive programmes—such as immunisation, screening, family planning and general health check-ups— in their health accounts. However, the associated expenditure is not always reported under HC.6. Preventive activities may be embedded in curative or administrative functions, or expenditure for a single programme may be divided across several preventive and non-preventive categories. These practices make it difficult to isolate programme costs and reduce comparability across the HC.6 subcategories.

Looking across individual activity –and based on countries' self-assessments– immunisation and cancer screening are among the most consistently captured preventive programmes. Reporting is more uneven for general medical examinations, occupational health care, and maternity and child health services. Maternity and child health expenditure can be particularly difficult to isolate because preventive monitoring is often delivered alongside curative care. Reporting patterns also differ considerably across activities and countries:

- **General medical examinations (Check-ups):** Most countries state that they report expenditure on routine health check-ups at least partly, generally under HC.6.4, although some costs are classified under curative care or other preventive functions.
- **Occupational health:** Among responding countries, most indicated that occupational health expenditure was either fully or partially captured. HC.6.4 was the most common classification, while countries reporting partial coverage frequently divided expenditure between HC.6.4 and HC.6.1. In some cases, components were allocated outside preventive care, particularly to curative outpatient care or health system administration.
- **Regular dentist visits for routine check-ups:** These are generally reported under curative outpatient dental care (HC.1.3.2), although some countries classify them under healthy condition monitoring (HC.6.4) or early disease detection (HC.6.3).
- **Maternity care:** Antenatal and postnatal check-ups are generally included in current health expenditure but are not always classified as preventive care. In some countries, they are recorded under curative (HC.1.3) making the preventive component difficult to identify.

Overall, the second survey question highlights that some core preventive programmes such as immunisation, information and education campaigns and early disease detection appear to be generally captured well in health accounts, with most countries able to provide at least partial reporting and allocating them to preventive care. However, looking at how the *individual activity* is classified there appears to be some variation how they grouped on a second digit level. For occupational healthcare services, there is a higher chance that these services are only partially included under health spending or not at all. Less prominent preventive activity such as dental check-ups are frequently not included under preventive spending but rather curative care. Maternity and child health services are often recorded under curative care functions rather than under prevention. These differences reduce the comparability of preventive spending across countries and HC.6 subcategories.

### *Additional granularity is possible, but comparability needs to be strengthened*

Responses to the third survey question show that the potential to obtain greater detail differs substantially across preventive care categories. The strongest prospects arise where programmes have clearly defined target populations, interventions and delivery channels. This is particularly the case for immunisation programmes (HC.6.2), where some countries can identify expenditure for some types of vaccine (e.g. COVID-19) or target group, and early disease detection (HC.6.3), where several countries stated that expenditure on major cancer screening programmes can be distinguished. Healthy condition monitoring (HC.6.4) also offers scope for additional detail in some countries.

However, greater granularity must be interpreted in the context of differences in national policies and service provision. Under HC.6.1, countries may jointly group activities to target different risk factors, such as tobacco use, alcohol consumption, nutrition, physical inactivity or mental health, depending on national priorities and available budget classifications. Under HC.6.2, some vaccines are mandatory or included in national immunisation schedules, while others may only be recommended, targeted at particular population groups or not routinely provided. Similarly, national bowel cancer screening programmes and other services classified under HC.6.3 may differ in whether they exist, are organised nationally and follow recommended screening intervals and target populations. Preventive dental care also varies considerably: regular preventive check-ups are common and publicly supported in some countries but less frequently provided, privately financed or absent from preventive programmes in others. These differences mean that more detailed categories would not necessarily capture equivalent programmes across countries.

Survey responses also highlight the very important distinction between programme coverage and data granularity. Countries may confirm that a programme is included in their health accounts but remain unable to report its expenditure separately because it is embedded in a broader payment, provider account or government budget line. This is common where several preventive and curative activities are delivered during the same contact or financed through the same payment mechanism or included in the same budget line item. Consequently, the number of countries able to confirm the inclusion of an activity is generally much greater than the number able to provide a separate expenditure estimate.

Greater disaggregation appears more difficult for collective preventive services. Information, education and counselling programmes (HC.6.1) may sometimes be distinguished by risk factor, but they are often financed through broad health-promotion budgets covering several objectives. Epidemiological surveillance (HC.6.5) and disaster and emergency response preparedness (HC.6.6) are even less amenable to programme-level reporting because expenditure frequently supports shared staff, laboratories, information systems and institutional capacity.

Obtaining additional details seems most feasible for established immunisation and screening programmes and for certain components of healthy condition monitoring. For international comparisons, any further breakdown would need clear definitions and consistent boundaries, particularly regarding programme administration, information activities and follow-up services. Chapter 4 examines these options in greater detail and assesses where additional granularity could be introduced without weakening cross-country comparability.

### *Based on an OECD evaluation nearly all countries appear to underestimate some areas of preventive spending in their annual JHAQ collections*

For an objective assessment of the reporting quality of preventive spending, the OECD Secretariat could not fully rely on countries' self-assessments which, by nature, are subjective and countries' individual interpretation of the content of subcategories may differ. Moreover, not all EU and EEA countries have participated in the survey. For this reason, the Secretariat evaluated the quality of reporting for each of the six preventive spending subcategories as well as on an aggregate level for all 30 EU/EEA countries. This assessment was based on

- The responses of countries to the OECD survey on preventive spending;
- The 2023 (or 2022) data file submitted during the 2025 JHAQ submission round;
- The corresponding metadata file submitted during the 2025 JHAQ submission round;
- Information obtained from semi-structured interviews carried out with around 15 countries after the submission of the OECD survey on preventive spending;
- Possible additional information on country-specific preventive spending if available.

Table 3.1 summarized the assessment (more detailed assessment in Annex D) based on the available information. For some countries, there is significant uncertainty in making this judgement due to the limited information available. This qualitative assessment is the starting point for the quantification of existing reporting gaps to compare preventive spending across EU/EEA without reporting limitations. Overall, nearly all countries appear to underestimate some areas of preventive spending in their annual JHAQ collections.

### Table 3.1. Qualitative OECD assessment of reporting on preventive spending in EU/EEA countries

| Country | HC6 | HC61 | HC62 | HC63 | HC64 | HC65 | HC66 |
|---|---|---|---|---|---|---|---|
| Austria | under slight | full | under | under | over and under | full | under |
| Belgium | under strong | under | under | under | under | under | under |
| Bulgaria | full | full | full | over | under | full | missing |
| Croatia | full | full | full | full | under | full | full |
| Cyprus | under strong | under | full | under | under | under | missing |
| Czechia | under slight | full | full | full | full | missing | missing |
| Denmark | under slight | full | under | under | under | over | under |
| Estonia | under slight | full | full | full | under | full | full |
| Finland | under slight | full | full | under | over and under | missing | missing |
| France | under slight | full | full | full | under | full | full |
| Germany | full | under | full | over | under | over | missing |
| Greece | under strong | full | full | missing | under | over | missing (in other HC6) |
| Hungary* | under slight | full | full | full | under | full | full |
| Iceland | under slight | full | full | full | under | full | full |
| Ireland* | under slight | full | full | full | under | full | full |
| Italy* | under slight | full | full | full | under | full | full |
| Latvia | under slight | under | full | full | under | under | missing |
| Liechtenstein | under strong | under | full | under | under | full | missing |
| Lithuania | full | full | full | over | under | full | full |
| Luxembourg | under slight | over | over and under | under | under | under | under |
| Malta | under strong | under | full | under | missing | full | missing |
| Netherlands* | full | full | full | full | under | full | under |
| Norway (2022) | under slight | over | missing (in other HC6) | missing | over and under | missing (in other HC6) | missing (in other HC6) |
| Poland | under slight | full | full | full | under | full | missing |
| Portugal* | under strong | under | under | under | under | missing | missing |
| Romania | under slight | under | full | under | under | full | missing |
| Slovak Republic | under strong | under | missing | over | under | missing | missing |
| Slovenia | under slight | under | full | over | under | over and under | under |
| Spain* | under slight | full | full | full | under | full | full |
| Sweden | under slight | over | under | missing (partly in other HC6) | under | under | missing |

Note: More explanations for this evaluation can be found in Annex D. “Full” means that all relevant activity is reported in category. “Over” means that some activity not belonging in this category is included. “Under” means that some relevant activity is not reported in category. “Over and under” means that some relevant activity is not reported n category but some activity not belonging in this category included. “Missing” means that category is not reported and data missing from HC6. “Missing (in other HC6)” means category is not reported, but data is reported in other HC6 categories. Information refers to accounting practice applied in the 2025 JHAQ submission. In Luxembourg the methodology to estimate preventive spending has changed with the 2026 JHAQ submission. *Country only reports HC6 on aggregate level. Assumptions had to be made on the reporting status for some countries.
Source: Authors’ evaluation.

## 3.2 Filling reporting gaps on preventive spending to enable a comprehensive comparison

### *A mix-method approach is used to fill data gaps taking account of different challenges in the six subcategories of preventive spending*

Having identified the principal reporting gaps in preventive care expenditure in Section 3.1, the next step is to estimate, as far as possible, the expenditure associated with activities that are only partly captured or not reported at all. The objective is to derive more comparable estimates of preventive spending across countries by reducing the impact of partial reporting and missing estimates (or overreporting), rather than to replace figures compiled by national health accountants that have been assessed as compliant. To address the effects of partial and missing reporting, the assessment presented in Table 3.1 is used to identify gaps within each preventive care subcategory and, where appropriate, applied to the subcategory-specific estimation methods described in detail below. These estimates should therefore be viewed as evidence-based benchmarks, intended to support international comparisons and to potentially inform future improvements in the reporting of HC.6 preventive expenditure.

Estimating preventive spending is inherently challenging. As discussed in the previous section, there remains considerable uncertainty regarding both the completeness of reported expenditure and the precise nature of the reporting gaps. In some countries, missing expenditure can be linked to clearly identifiable activities, while in others only broader indications of under-reporting exist. Moreover, even where there is reasonable confidence that spending is incomplete, it cannot be assumed that all missing preventive activities have been identified. This means that any estimation exercise necessarily involves assumptions regarding both the scope of missing expenditure and the methods used to quantify it.

A further challenge is that preventive care, and more particularly some of the subcomponents, encompasses a diverse set of activities with very different characteristics. Some interventions, such as immunisation programmes, organised cancer screening or routine standard health check-ups, are delivered to identifiable individuals and are associated with measurable service volumes. Where information on programme coverage, target populations or utilisation is available, expenditure might be approximated by combining estimates of activity with representative unit costs. Though, even in these examples, there can be significant variation in the scope or type of activity that can impact the unit cost. In contrast, population-based activities such as health promotion, epidemiological surveillance or planning for public health emergencies generally do not generate comparable measures of service volumes, nor do they have readily observable unit costs. Attempting to apply a common estimation method across all six preventive care subcategories, or for total preventive spending, would therefore be unlikely to produce robust or credible results.

For this reason, the estimation strategy adopted follows a ***mixed-method approach*** in which the methodology is tailored to the characteristics of each preventive care subcategory (Figure 3.3).

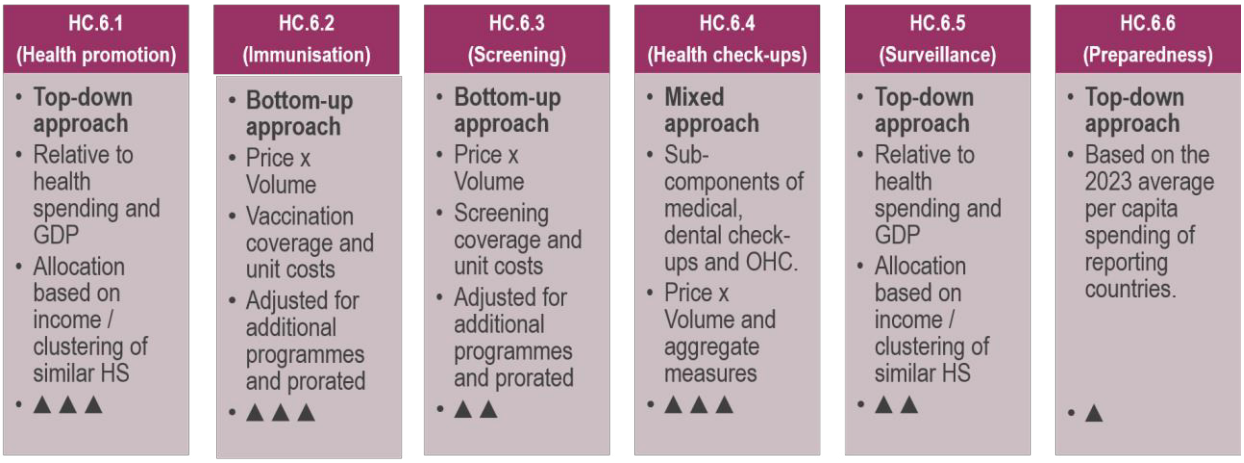
- For the ***collective prevention*** categories - information, education and counselling (HC.6.1), epidemiological surveillance (HC.6.5) and disaster preparedness (HC.6.6) - a top-down benchmarking approach is used. For HC.6.1 and HC.6.5 expected expenditure is estimated using

statistical models that relate reported spending to broader country characteristics, including income levels and health system features, and these estimates are used to assess the likely magnitude of reporting gaps. A simplified approach is used to fill reporting gaps for HC.6.6.

- For the ***individual prevention*** categories -immunisation (HC.6.2) and early disease detection (HC.6.3) -a bottom-up approach is applied, combining information on programme volumes with representative unit costs to estimate expenditure associated with missing or partially reported activities, as well as providing a plausibility check for reported expenditures. Healthy condition monitoring (HC.6.4) requires elements of both approaches, reflecting the diversity of activities included under this category and the varying availability of supporting information. Although the precision of these estimates varies between preventive care functions, the use of methods that are appropriate to each category is considered preferable to applying a single methodology across the whole of HC.6.

The following sections describe the general estimation approach for all preventive care subcategories HC.6.1 to HC.6.6 (a more detailed description is available in the support materials accompanying this Working Paper). After deriving revised estimates for each component and a possible consolidation of estimates, they are brought together to produce updated estimates, with, in some cases, a necessary recalibration or adjustment of existing reporting. Comparing these estimates with currently reported expenditure provides an indication of the likely scale of under-reporting across countries and helps identify areas where further improvements in health accounts reporting could have the greatest impact on the international comparability of preventive spending.

### Figure 3.3. Overall approach to filling data reporting gaps for EU and EEA countries




Note: The symbol ▲ indicates the relative importance of the subcategory in terms of the contribution to overall HC.6 spending. HS refers to health systems. OHC refers to occupational healthcare.
Source: Authors.

#### *Estimating gaps for HC.6.1*

Unlike individual prevention functions, expenditure on ***information, education and counselling programmes*** (HC.6.1) cannot readily be estimated using a bottom-up approach. Health promotion encompasses a diverse range of interventions, including health education campaigns, smoking cessation services, obesity prevention programmes and other initiatives to influence health behaviours, which are delivered through multiple provision and financing arrangements. Information on programme activity, service volumes and costs is rarely available in a sufficiently consistent form to estimate expenditure directly. Moreover, cross-country differences in reported HC.6.1 spending reflect not only genuine variation

in investment but also important differences in accounting practices, as the various health promotion activities are frequently embedded within broader public health or disease-specific programmes and are not separately identifiable in national health accounts.

A top-down benchmarking approach was therefore adopted. Rather than estimating individual programme costs, the methodology predicts the aggregate level of health promotion expenditure expected for a country given its level of economic development and the broad characteristics of its health system. Expenditure was modelled as a share of GDP, which provides a more stable basis for international comparison than per capita expenditure or expenditure as a share of current health expenditure. Exploratory analysis showed that behavioural risk factors, including smoking, alcohol consumption and obesity, were not consistently associated with reported HC.6.1 expenditure and were therefore excluded from the final specification. Instead, the preferred model includes two explanatory variables: the natural logarithm of Actual Individual Consumption (AIC) per capita expressed in EUR PPP, which captures the non-linear relationship between national income and preventive spending, and a health system cluster classification reflecting similarities in the organisation and financing of health systems across OECD countries.

The model was estimated using ordinary least squares on countries assessed as comprehensively reporting HC.6.1 expenditure. Several alternative specifications were evaluated, including models incorporating COVID-19 effects and different clustering approaches, but the preferred specification combined log AIC with the primary health system cluster classification. The estimated model was subsequently used to generate benchmark estimates for countries with identified reporting gaps, allowing expected expenditure to be compared with reported values while accounting for systematic differences in economic development and health system design.

The preferred model can be expressed as:

$$ln\left(HC.6.1_c^{GDP}\right) = \beta_0 + \beta_1\, ln(AIC_c) + \sum_{k=1}^{K-1} \gamma_k D_{kc} + \varepsilon_c$$

where $HC.6.1_c^{GDP}$ *is* expenditure on health promotion expressed as a share of GDP, $AIC_c$ is Actual Individual Consumption per capita (EUR PPP), $D_{kc}$ the health-system cluster to which country $c$ belongs, and $\varepsilon_c$is the error term. The estimated model provides benchmark values for countries where reported HC.6.1 expenditure is missing or considered incomplete.

### *Estimating gaps for HC.6.2*

The estimation of expenditure on ***immunisation programmes*** (HC.6.2) aims to address reporting gaps while preserving reported expenditure wherever possible. Rather than replacing country submissions, the methodology identifies missing components of immunisation spending and adds only those elements judged to be absent. Under SHA 2011, HC.6.2 should include all costs associated with delivering vaccination programmes, including vaccine procurement, distribution, programme management and outreach, as well as the costs of administering vaccines, and should also cover private immunisation costs. In practice, however, these components are sometimes recorded separately. Vaccine purchases may be reported within public health programmes, while costs of administering the vaccines are often recorded under curative care, and privately financed immunisations may not be captured at all. Because comparable information on vaccine quantities, purchaser prices and administration fees is not consistently available across countries, a comprehensive bottom-up estimation based on prices and volumes was not considered feasible.

A component-based adjustment approach was therefore adopted. Countries were first assessed according to the completeness of their reported HC.6.2 expenditure using information from the questionnaire, supplemented where available by follow-up discussions with national correspondents. Reported expenditure was retained unchanged where reporting was considered comprehensive. For countries

where specific expenditure components were identified as missing, the reported value was adjusted only for those components. Depending on the reporting assessment, this involved adding the estimated costs of vaccine administration, privately financed immunisations (HF.3), or both. This approach preserves the reported expenditure while correcting for the most common omissions in national health accounts.

A separate procedure was applied where no reliable HC.6.2 expenditure was available or where reported values were considered implausibly low relative to comparable countries. In these cases, total immunisation expenditure was estimated using average expenditure per capita from geographically proximate comparator countries, expressed in EUR PPP. All calculations were undertaken on a per capita basis in 2023 and then converted back to national expenditure. The methodology therefore combines qualitative evidence on reporting completeness with empirical adjustments derived from countries with more comprehensive reporting, producing benchmark estimates that remain closely aligned with the reported health accounts data.

The estimation can be summarised as:

$$\widehat{HC.6.2}_c = \begin{cases} R_c, & \text{if reporting is complete} \\ \dfrac{R_c}{1 - S_A}, & \text{if administration costs are missing} \\ \dfrac{R_c}{1 - S_{HF3}}, & \text{if HF.3 expenditure is missing} \\ \dfrac{R_c}{(1 - S_A)(1 - S_{HF3})}, & \text{if both components are missing} \end{cases}$$

where $R_c$,is the reported HC.6.2 expenditure for country $c$, $S_A$ is the estimated share attributable to vaccine administration costs, and $S_{HF3}$is the estimated share of privately financed immunisation expenditure. For countries with no reliable reported value, expenditure is instead estimated using the average per capita spending of an appropriate group of comparator countries.

### *Estimating gaps for HC.6.3*

The estimation approach adopts a pragmatic bottom-up methodology to derive plausible estimates of expenditure on ***early disease detection programmes*** (HC.6.3) where reported values are missing, incomplete or implausible. Rather than replacing official health accounts, the estimates serve as a benchmark for validating reported data and identifying potential under- or over-reporting. The method begins by estimating spending on the three principal organised cancer screening programmes (breast, cervical and colorectal) which are expected to account for the majority of non-COVID screening expenditure in most European countries. Activity volumes are derived from target populations and screening uptake or coverage rates, annualised where coverage is reported over multi-year intervals, and multiplied by representative unit costs expressed in EUR PPP to improve international comparability.

Because the three major cancer screening programmes do not capture the full scope of HC.6.3, an adjustment is applied to account for other screening activities such as infectious disease testing and other organised or opportunistic programmes. Based on comparisons between estimated programme costs and reported expenditure, these three programmes are assumed to represent around two-thirds of total screening expenditure in a typical European country, implying an uplift factor of approximately 1.33. This adjustment should be refined in future work for countries with broader screening programmes or evidence of systematically higher expenditure outside the three main cancer sites.

For 2023, an additional adjustment is incorporated to reflect the continuing impact of COVID-19 testing. Where countries explicitly reported COVID-19 testing expenditure, these values are included directly. Otherwise, an indirect adjustment is applied using each country's COVID-19 testing intensity relative to the

EU average, based on ECDC testing data, scaled against an observed average COVID-related increase in screening expenditure of around 50%.

The final estimation model can therefore be expressed as:

$$HC.6.3_c = \sum_{s=1}^{n} \left(N_{c,s} \times UC_{c,s}\right) \times q \times (1 + \theta_c \times 0.5)$$

where $N_{c,s}$ is the estimated number of screening tests for programme $s$, $UC_{c,s}$ is the corresponding unit cost, $q$ is the adjustment factor for other non-COVID screening activities (typically 1.33), and $\theta_c$ is the country's COVID-19 testing intensity relative to the EU average.

### *Estimating gaps for HC.6.4*

The estimation of expenditure on ***healthy condition monitoring programmes*** (HC.6.4) is inherently more complex than for early disease detection because the category encompasses a heterogeneous set of preventive services, including adult and child health check-ups, maternity care, occupational health surveillance and dental check-ups. In addition, countries differ substantially in the existence and scope of these programmes, while preventive activities are frequently recorded under curative care or other SHA categories. As a result, a bottom-up estimation approach was adopted, combining estimated activity volumes with representative unit costs for each major component of HC.6.4. This approach provides a pragmatic benchmark for assessing likely expenditure where reporting is incomplete while recognising that country-specific organisation and financing arrangements vary considerably.

Separate estimation methods were developed for each of the five principal components of HC.6.4. For adult health check-ups, expenditure was estimated by applying an average participation rate of 7% of the adult population (aged 20 years and over) to an average unit cost of EUR 50 PPP, derived from fee schedules and programme costs across a number of European and OECD countries. Child health monitoring was estimated using the average annual cost of recommended check-ups during the first six years of life (EUR 54 PPP), multiplied by the population aged under six years and assuming 95% participation. Maternity care was estimated using the average cost of recommended prenatal and postnatal care over the pregnancy cycle (EUR 440 PPP), excluding delivery and high-risk pregnancy costs, multiplied by the annual number of births as a proxy for pregnancies, again assuming 95% participation. Occupational health was estimated differently: average employer expenditure on preventive services per employee (EUR 26 PPP) was adjusted using relative labour cost indices before being applied to countries where reporting gaps were identified. Finally, for dental check-ups, rather than estimating activity volumes directly, missing preventive expenditure was derived by reallocating 7% of expenditure reported for dental practices (HP.3.2) from curative dental services (HC.1.3.2) to HC.6.4, reflecting the average preventive share observed in countries with explicit reporting.

The final estimates were produced by combining these five components only where evidence suggested that expenditure was wholly or partly missing from reported health accounts. The methodology therefore supplements, rather than replaces, reported data and allows different reporting gaps to be addressed separately according to the services affected. While the approach necessarily relies on a number of simplifying assumptions regarding participation rates, programme costs and the allocation of activities between preventive and curative care, it provides a transparent and internally consistent framework for producing plausible estimates of HC.6.4 expenditure across countries.

The estimation can be summarised as:

$$HC.6.4_c = AH_c + CH_c + MAT_c + OHC_c + DEN_c$$

where:

- $AH_c$ = estimated expenditure on adult health check-ups;
- $CH_c$ = expenditure on infant and child health check-ups;
- $MAT_c$ = expenditure on maternity (prenatal and postnatal) care;
- $OHC_c$ = expenditure on occupational health surveillance; and
- $DEN_C$ = expenditure on preventive dental check-ups.

Each component is estimated as the product of an eligible population (or other volume measure) and an average unit cost, except for dental check-ups, where expenditure is estimated by reallocating a fixed share of reported expenditure in dental practices to preventive care.

### *Estimating gaps of HC.6.5*

Expenditure on ***epidemiological surveillance and risk and disease control*** (HC.6.5) cannot readily be estimated using a bottom-up approach because the activities covered are highly heterogeneous and generally cannot be expressed as comparable volumes and unit costs. HC.6.5 includes surveillance systems, disease registries, outbreak investigation, risk assessment and activities to monitor and control communicable and non-communicable diseases. These functions are typically embedded within broader public health institutions and programmes, with staff, laboratories, information systems and administrative resources shared across multiple preventive activities. Consequently, observed cross-country differences in reported expenditure reflect not only genuine differences in investment but also variation in the way shared public health costs are allocated within national health accounts.

A top-down benchmarking approach was therefore adopted, following the same broad framework as that used for HC.6.1. Expenditure was modelled as a share of GDP, providing a comparable measure of the resources devoted to surveillance and disease control across countries of different economic size. Several explanatory variables were evaluated during model development, including government financing shares, health system classifications, a COVID-19 indicator and the Global Health Security (GHS) Index. Although the GHS Index is conceptually relevant because it captures countries' surveillance and reporting capacity, it showed no consistent relationship with reported HC.6.5 expenditure and was therefore retained only as part of sensitivity analyses.

The preferred model combines the natural logarithm of Actual Individual Consumption (AIC) per capita, a five-cluster health system classification and a COVID-19 indicator to capture the exceptional increase in surveillance expenditure during the pandemic. The model was estimated using pooled country-year observations and ordinary least squares regression. Unlike the HC.6.1 model, the estimation sample was not restricted according to the assessment of reporting completeness, reflecting the relatively limited number of observations and the greater uncertainty surrounding the identification of comprehensive HC.6.5 reporting. The resulting model provides benchmark estimates of expected expenditure that can be compared with reported values to identify potential reporting gaps.

The preferred specification is:

$$HC.6.5_c^{GDP} = \beta_0 + \beta_1 \, ln(AIC_c) + \beta_2 \, COVID_t + \sum_{k=1}^{K-1} \gamma_k D_{kc} + \varepsilon_c$$

where $HC.6.5_c^{GDP}$ is expenditure on epidemiological surveillance and risk and disease control expressed as a share of GDP, $AIC_c$ is Actual Individual Consumption per capita (EUR PPP), $COVID_t$ captures the temporary increase in expenditure during the pandemic, $D_{kc}$ denotes the health system cluster

to which country $c$ belongs, and $\varepsilon_c$ is the error term. The estimated model is used to generate benchmark expenditure levels for countries where reported HC.6.5 expenditure is missing or considered incomplete.

*Estimating gaps of HC.6.6*

Activities to ***prepare for disasters and emergency response programmes*** (HC.6.6) are generally difficult to identify for health accountants, which is why this category is poorly filled. In 2023, only eight countries were able to provide information on this spending item separately and on average it accounted for only around EUR 2 per capita (after adjusting for PPP). In the acute phase of COVID-19, more countries could report this spending item and the amounts reported were substantially higher. For those countries who are not able to identify this spending, it is frequently included either under administrative spending (HC.7) or under epidemiological surveillance (HC.6.5) since much of this activity, such as the organisation of emergency responses or health emergency training drills would fall under the responsibilities of health ministries, or civil protection or public health agencies.

Preparing for disaster and the organisation of emergency responses are important responsibilities in European health systems, so the non-reporting of this category does not mean that this category does not exist in a country. Yet, given the relatively small amounts dedicated to this task a simplified approach has been used to fill data gaps for countries not reporting this item. For the 22 countries without data, the assumption was made that after adjusting for PPP they allocate the same amount to this task as the average amounts reported (EUR 2).

### *New estimates that adjust for reporting gaps suggest that preventive spending is one quarter above reported figures across EU countries*

The approaches described above were used to fill reporting gaps for individual HC6 2nd digit categories. However, a final consolidation procedure is necessary to ensure that one approach to fill data gaps does not lead to double-counting for some activity that is wrongly reported in other categories leading to overreporting there.

Table 3.2 and Figure 3.4 summarise the results after addressing the data gaps identified by countries and the additional evaluation by the Secretariat and after consolidation. ***Overall, after this adjustment, the total spending on prevention increased on average by around one quarter from 3.1% to 3.8% as a share of current health expenditure***. The applied corrections wary widely. In countries that were assessed to be more of less fully compliant with reporting of preventive spending, such as Bulgaria, France, Germany, and the Netherlands, only small refinement were made. On the other hand, the equivalent of 1 percentage point of current health expenditure or more was added to countries' preventive spending where underreporting was deemed substantial, such as in Belgium, Cyprus, Greece, Luxembourg, Malta and the Slovak Republic.

**Table 3.2. Spending on prevention after filling gaps, 2023, in EUR PPP per capita and as share of current health expenditure**

| | HC.6 | HC.6.1 | HC.6.2 | HC.6.3 | HC.6.4 | HC.6.5 | HC.6.6 | HC.6 as % of CHE |
|---|---|---|---|---|---|---|---|---|
| Austria | 252 | 18 | 52 E | 87 E | 83 E | 9 | 2 E | 5.1 |
| Belgium | 128 | 35 | 8 E | 15 E | 48 E | 22 E | 1 | 2.8 |
| Czechia | 99 | 10 | 10 | 9 | 52 | 17 E | 2 E | 3.4 |
| Denmark | 136 | 53 | 7 E | 18 E | 42 E | 14 | 2 E | 3.3 |
| Estonia | 114 | 6 | 7 E | 13 | 58 E | 20 | 10 | 5.3 |
| Finland | 209 | 21 | 37 | 20 E | 109 E | 21 | 2 E | 5.2 |
| France | 113 | 11 | 20 | 11 | 64 E | 4 | 3 | 2.6 |

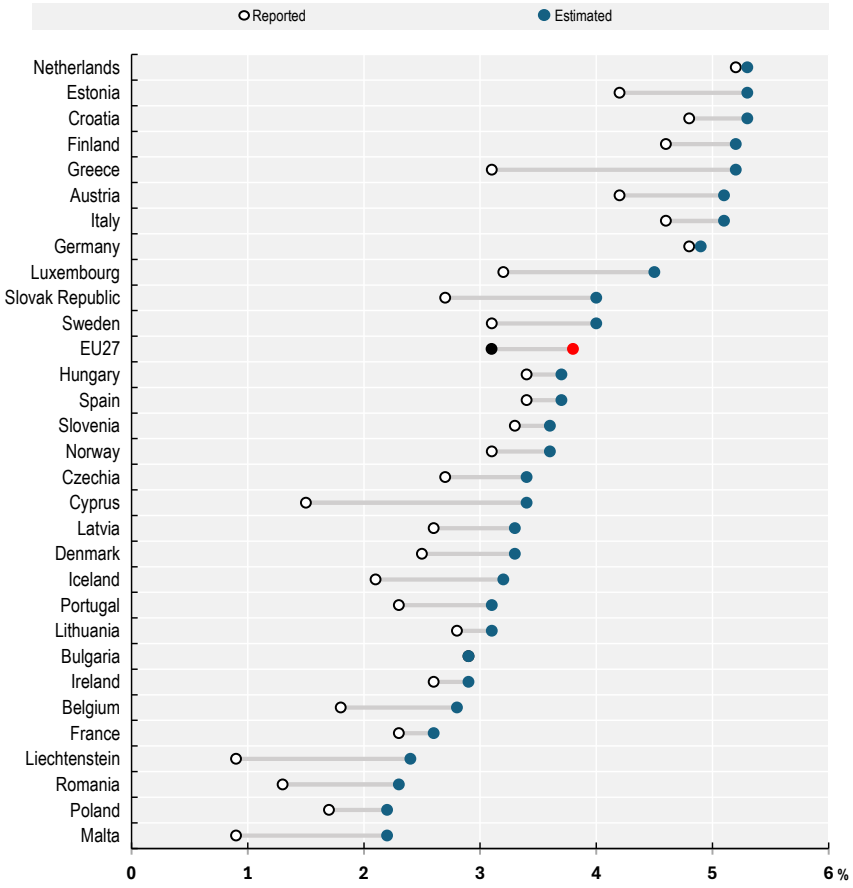
| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Germany | 265 | 37 | 57 E | 37 | 66 E | 67 | 2 E | 4.9 |
| Greece | 113 | 14 | 35 E | 30 E | 17 E | 16 | 2 E | 5.2 |
| Hungary | 72 | 4E | 14 E | 6 E | 31 E | 14 E | 2 E | 3.7 |
| Iceland | 124 | 17 | 24 E | 8 | 67 E | 6 | 1 | 3.2 |
| Ireland | 129 | 18 E | 18 E | 17 E | 39 E | 35 E | 2 E | 2.9 |
| Italy | 158 | 10 E | 34 E | 19 E | 74 E | 19 E | 2 E | 5.1 |
| Latvia | 65 | 7 | 2 E | 16 | 31 E | 8 E | 2 E | 3.3 |
| Lithuania | 75 | 24 | 10 E | 5 | 27 E | 6 | 1 | 3.1 |
| Luxembourg | 208 | 52 | 24 E | 30 | 58 E | 41 E | 2 E | 4.5 |
| Netherlands | 258 | 46 E | 50 E | 28 E | 110 E | 22 E | 2 E | 5.3 |
| Norway | 190 | 18 E | 32 E | 14 E | 104 E | 21 E | 2 E | 3.6 |
| Poland | 50 | 5 | 3 E | 6 | 24 E | 10 | 2 E | 2.2 |
| Portugal | 94 | 7 E | 21 E | 10 E | 46 E | 9 E | 2 E | 3.1 |
| Slovak Republic | 85 | 18 | 20 | 16 E | 20 E | 9 E | 2 E | 4.0 |
| Slovenia | 113 | 8 E | 30 E | 9 | 55 E | 11 E | 1 | 3.6 |
| Spain | 115 | 7 E | 25 E | 14 E | 56 E | 10 E | 2 E | 3.7 |
| Sweden | 188 | 53 | 34 E | 14 E | 73 E | 13 E | 2 E | 4.0 |
| Bulgaria | 60 | 6 | 9 | 6 E | 34 E | 4 | 2 E | 2.9 |
| Croatia | 107 | 22 | 36 | 6 | 31 E | 13 | 0 | 5.3 |
| Cyprus | 94 | 21 E | 24 | 8 | 24 E | 15 | 2 E | 3.4 |
| Malta | 79 | 9 E | 3 E | 16 E | 25 E | 24 E | 2 E | 2.2 |
| Romania | 41 | 6 E | 7 | 3 E | 11 E | 12 | 2 E | 2.3 |
| Liechtenstein | 140 | 42 E | 14 | 24 | 50 E | 8 | 2 E | 2.4 |
| **EU27** | 127 | 20 | 22 | 17 | 48 | 17 | 2 | **3.8** |

Note: Results based on mixed-methods approach described above E indicates estimated expenditure used to fill gaps where an entire category, or part of a category, was missing or not reported. It could also include estimates of expenditure previously recorded under other HC.6 subcategory or health care function and reallocated to the correct HC.6 subcategory without changing total health care expenditure. Both types of adjustment may apply within the same category. Figures without a code are officially reported expenditure that were used unchanged. Information refers to accounting practice applied in the 2025 JHAQ submission. In Luxembourg the methodology to estimate preventive spending has changed with the 2026 JHAQ submission.
Source: Authors' calculation.

After correcting for the assumed underreporting (and in some instances overreporting), the new estimates suggest that spending on prevention accounts for more than 5% of current health expenditure in seven countries (the Netherlands, Estonia, Croatia, Finland, Greece, Austria and Italy) and is close to 2% in Romania, Poland and Malta (Figure 3.4). Generally, these estimates are believed to be conservative, and in some instances the gaps may actually be higher. While an attempt was made to methodically fill all know data gaps, there remains considerably uncertainty about it. OECD's assessment was based on the interpretation of a qualitative survey submitted by countries, while in some instances, it had to be exclusively made on reported data and metadata files. The various methods to fill data gaps include many simplifying assumptions. Finally, the OECD assessment did not review the data sources used by countries and their estimation techniques applied to compile preventive spending data in the context of their national health accounts. Some countries may find it useful to explore options whether more appropriate data sources exist ad whether their estimation methods fully capture all preventive spending. With that mind, the data presented in Figure 3.4 are not expected to replace the preventive spending data submitted annually under the JHAQ but rather to complement them, and to serve as a starting point for a discussion on possible improvements to better measure preventive spending within the JHAQ.

## Figure 3.4. New estimates on preventive spending that take account of gaps in reporting are on average around one quarter higher than reported figures

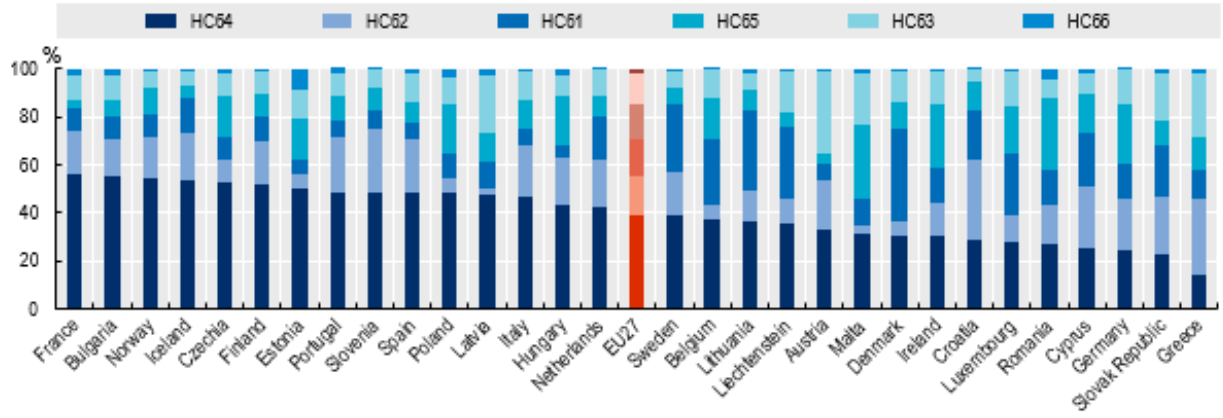
Spending on prevention as share of current health expenditure, estimated compared with reported figures, 2023




Note: Data represents estimates after correcting for presumed over- or underreporting, if necessary. Adjustments were made based on information regarding the accounting practice applied in the 2025 JHAQ submission. In Luxembourg the methodology to estimate preventive spending has changed with the 2026 JHAQ submission
Source: Authors' calculations and OECD Health Statistics 2025.

Compared with the analysis of the reported figures under the JHAQ data collection, the distribution of preventive spending across subcategories has also changed after filling data gaps (Figure 3.5). Overall, the variation across countries was reduced. It is estimated that across the EU healthy condition monitoring programmes constitute nearly two-fifths of overall preventive spending, followed by immunisation programmes with 17%. Education and information campaigns, early disease detection programmes and epidemiological surveillance each represent around 13-15% of all preventive costs on average. Finally, disaster preparedness and emergency response accounts for 2% of total preventive spending. The reason why the share of healthy condition monitoring has drastically increased after comparing the adjusted figures is due to the fact that, in terms of total spending, the most important upwards adjustments of preventive spending occurred for in this category, namely for dental check-ups, occupational healthcare and adult check-ups. This was followed by corrections in epidemiological surveillance and immunisation spending.

## Figure 3.5. Composition of estimated preventive spending by subcategory, 2023




Note: HC.6.1 refers to information, education and counselling programmes; HC.6.2 to immunisation programmes; HC.6.3 to early disease detection programmes; HC.6.4 to healthy condition monitoring programmes; HC.6.5 to epidemiological surveillance programmes; and HC.6.6 to disaster preparedness programmes. The assessment is based on the 2025 JHAQ submission for reporting year 2023. In Luxembourg the methodology to estimate preventive spending has changed with the 2026 JHAQ submission.
Source: Authors' calculations and OECD Health Statistics 2025.

# 4 Adding granularity to existing data on preventive spending

***More granular data on preventive spending can be obtained but not necessarily through the JHAQ submissions***

In addition to qualifying and quantifying data gaps, a further objective is to explore whether more granular information on preventive spending is available in countries beyond the existing six preventive care subcategories (HC.6.1 to HC.6.6). A particular interest lies in obtaining information for spending on various risk factors, population groups and diseases.

The 3rd question of the survey described in Chapter 3 inquired whether the data sources that countries use in constructing health accounts to report preventive spending would also allow to break preventive spending down further. The overriding conclusion suggested that in most cases this would be either difficult, or health accounts experts would be unaware of additional sources. In some instances, however, respondents confirmed that additional data was readily available, although mostly limited to specific preventive subcategories or to specific payers.

Generally, a variety of approaches can be used to further break down (selected) preventive spending data by risk factors, population groups, diseases or programmes.

- In a best-case scenario, data is directly linked to the reported SHA figures by subcategory, as is the case in Estonia and France. This ensures the consistent application of SHA boundaries and linkage to existing international classifications.
- An alternative approach is to identify appropriate complementary data sources that can be linked to published SHA-figures to create distribution keys to allocate spending by subcategory further into additional categories. Such data sources exist, for example in Germany or Czechia for some subcategories.
- The work presented in Chapter 3 to fill data gaps, in particular for categories HC.6.2, HC.6.3 or HC.6.4, can also help in generating additional granular information. However, some assumptions need to be made how this data can be linked to the reported SHA aggregate values.
- Finally, as discussed in Chapter 2, in countries such as Austria and the Netherlands, granular preventive spending data exists from work carried out completely outside of the SHA framework.

Overall, it appears that granular data is more readily available for individual preventive services (immunisation programmes, early disease detection programmes and healthy condition monitoring) than for collective services (information and education campaigns, epidemiological surveillance and disaster preparedness). A key challenge in all approaches, however, appears to be a lack of international comparability of any of the chosen additional categories. The subdivisions are based on national interest and/or data availability. For granular data that are also comparable Internationally, most promising appears to be breakdowns of vaccination and cancer screening.

## 4.1 Analysing granularity for preventive subcomponents within the SHA context

In their survey responses, SHA experts suggested that additional spending data on risk factors, population groups or programmes beyond the existing SHA preventive care subcategories are not widely available or is not in the public domain and could thus not be shared (or they did not know about it). Yet, a number of countries can further decompose spending for selected preventive subcategories or respondents could point to complementary data sources that would allow for such a complementary analysis. However, the additional categories by which the various preventive subcategories can be broken down into differ by country which complicates any international comparisons of this information.

### *Generating comparable breakdowns of information, education and counselling programmes is challenging*

Information, education and counselling programmes that promote healthy behaviour and lifestyles among the population as a whole or for groups at risk are key public health functions. Depending on the country, these tasks can be performed by different actors, such as public health agencies at the local, regional or central government level but also by various outpatient health providers. They may be financed through government schemes, health insurers or other payers. Consequently, both data availability and the level of detail reported can vary across providers and financing schemes. In some countries, a budget line item may only refer broadly to “health promotion” and is therefore allocated to HC.6.1 in the health accounts without further detail, while in others, additional information is available. Table 4.1 provides an overview of three countries (France, Estonia and Sweden) where health accounts can provide additional detail on the spending components included under HC.6.1. The table illustrates the range of activities captured under this category and the different levels of detail available across countries. Generally, the type of additional granularity that can obtained when breaking down spending for HC.6.1 appears to be for specific risk factors and settings.

### Table 4.1. Breakdown of spending of information, education and counselling programmes

Spending in million National Currency Units, 2023

| | France | Estonia | Sweden |
|---|---|---|---|
| **Total costs** | **778** | **3*** | **8,923** |
| Health information, promotion and education | 288 | | |
| Addiction prevention and control | 104 | | |
| Counselling to quit using tobacco | | 0 | |
| Prevention of alcohol use disorder | | 1 | |
| School health services | 350 | | 1,892** |
| School-based mental-health prevention | | | |
| Nutrition and health | 36 | | |
| Reproductive health counselling for young people | | 2 | |
| Unclear* | | 0 | |
| Estimated activities related to information and education within government agencies | | | 252 |
| Public health matters and other primary care financed by regions | | | 6,297 |
| Occupational health care (information and education part) | | | 332 |
| Patient fees | | | 150 |

Note: Total costs refer to all financing schemes in France and Sweden and only to spending by social health insurance in Estonia. The Swedish figures are Health Accounts estimates based on National Accounts data. *There is a small discrepancy in total spending on HC61 by HF121 and the individual identifiable subcomponents. ** Refers to the information and education part of school health services financed by municipalities. Figures refer to expenditure in 2023 and are expressed in millions of national currency units.
Source: (DREES, 2025[8]), (Tervisekassa, 2024[13]), CBS for Sweden.

Denmark provides a further example of the detail available from central government budget documents. The 2023 Finance Act allocated DKK 47.9 million to the central government account for "health promotion and disease prevention" (Finansministeriet, 2023[14]), of which DKK 45.3 million was spent in 2023 (Sundhedsstyrelsen, 2024[15]). Additional central government allocations included DKK 13.5 million to promote sexual and reproductive health; DKK 10.2 million for smoking-cessation programmes; DKK 10.0 million for the Centre for Healthy Life and Well-being; DKK 6.4 million for preventing asthma among children; DKK 4.1 million for enhanced guidance for people with asthma; and DKK 1.9 million to continue workplace mental-health partnerships. However, this information is not representative for all government spending for HC.6.1 as municipalities also play a substantial (but different) role in financing and delivering preventive activities in Denmark.

Interviews with national data compilers provided additional information on the scope of HC.6.1 even where expenditure cannot be broken down by activity. For example, Lithuanian health accounts experts indicated that HC.6.1 includes all public health bureaus operating in the country. Their activities include lectures, training and seminars on nutrition, physical activity and mental health; consultations on healthy lifestyles; support for cardiovascular disease and cancer prevention programmes; vaccination promotion; and dissemination of information on early diagnosis programmes. Expenditure also includes spending by the Ministry of the Interior relating to border guards and the Lithuanian Police School, as well as earmarked state-budget grants for municipalities to perform delegated public health functions in schools and communities.

Yet, in more countries more detail on the various elements included under HC.6.1 should be available. This would, however, require a full analysis of budgets of health ministries or public health agencies at central, regional and local level -otherwise there is a risk that the picture would be incomplete when only focusing on selected payers.

More detailed information on the various items of health promotion – an important element of information, education and counselling programmes, are available from the non-SHA-related separate preventive care accounting exercise to be discussed in more detail in Section 4.2 (Table 4.2). This data shows, again, that additional information on risk factors targeted by health promotion policies and the settings where they occur are of interest to countries.

**Table 4.2. Breakdown of spending on health promotion in the Netherlands (2015) and Austria (2016)**
Spending in million EUR

| Netherlands | | Austria | |
|---|---|---|---|
| **Health promotion** | **647** | **Health promotion and primary prevention 1 and 2** | **314** |
| Working conditions and occupational safety | 160 | Dental health | 101 |
| General health (unspecified) | 107 | Prevention of occupational accidents and work-related diseases | 81 |
| Physical inactivity and sport | 96 | Nutrition and physical activity to prevent specific diseases | 16 |
| Mental disorders | 67 | Health information/health literacy for the population | 16 |
| Healthy eating and obesity | 55 | Occupational medicine / workplace health-promotion measures undertaken in the role of employer / preventive services | 14 |
| Alcohol abuse | 24 | School and other educational institutions | 13 |
| Reducing health inequalities | 22 | Municipality/city (community setting) | 12 |
| Road safety | 21 | Psychosocial intervention | 10 |
| Prevention of sport injuries | 19 | Family / home environment | 8 |
| Sexual health | 17 | Workplace | 8 |
| Prevention of private accidents | 14 | preventing the development of addictive disorders | 7 |
| Gambling addiction | 11 | Parent and child health | 7 |
| Other | 34 | Other | 21 |

Note: Health promotion refers to sector "Gezondheidsbevordering" in the Netherlands, and Health promotion and primary prevention 1 and 2 to sectors „Gestaltung der Lebenswelt von Bevölkerungsgruppen", „Förderung einer gesunden Lebensweise bzw. Verhinderung von Krankheiten" und „Vermeidung der Entstehung von Suchterkrankungen" in Austria. Not all activities listed would necessarily qualify to be put in category HC.6.1 when applying the SHA 2011 methodology.
Source : (VZ Info, n.d.[12]), (BMASGK, 2019[9]).

### *Comparable data on more detailed analyses of immunisation spending generally exist*

Within the context of health accounts, a disaggregation of immunisation spending by type of vaccination could only be found in France. However, in other countries, this information is often available from different sources, collected for different purposes and distribution keys could be created to allocate the reported immunisation spending by type of vaccine. Yet, this approach requires some assumptions, in particular regarding the various cost components of immunisation.

An important part of immunisation spending in recent years has been the vaccination against the SARS-CoV-2 virus. More than half of European countries were able to report this data as part of an ad-hoc JHAQ data collection in one or more years between 2020 and 2024. Twelve countries provided data in a times series for 2021 through 2023.[12] For those countries, ***COVID-19 immunisation costs represented, on average, 18% of all immunisation costs in 2023***, down from 56% in 2022 and 75% in 2021.

In the context of immunisation spending, there are different components that should all be included when applying the concept of purchasers' prices: the cost of vaccine procurement (net of any possible rebates), including distribution costs and logistics and value added tax (where applicable), the doctor's, nurse's or pharmacist's fees to administer the vaccine, and all eventual programme-related costs.[13] There is relatively little information on the decomposition of these cost items, and they heavily depend on the type of vaccination. There are also country-specific factors, regarding pharmaceutical prices but also price differences depending on who is administering the vaccine.

Reviewing the decomposition of the total costs of COVID-19 vaccination programmes, Chen et al. found that the vaccine procurement cost accounted for around 57% of total costs globally but with a higher proportion of administrative costs in high income countries than in countries with lower income levels (Chen et al., 2025[16]). When analysing the cost-effectiveness of the expansion influenza vaccination in France, Béraud et al. identified different costs for administering the vaccine (depending on the provider) that led to average costs of administering the influenza vaccination similar to the price of the vaccine itself (EUR 11.75) (Béraud et al., 2025[17]). However, for more expansive vaccines, the share of administering the vaccine can be drastically lower. In a health economic evaluation for vaccines against Herpes Zoster in Germany, Ultsch et al. assumed the share of administration to be only around 5% of total vaccination costs (Ultsch et al., 2013[18]). Across all immunisations financed by the social health insurance scheme (excluding COVID-19 vaccination), data from Germany suggests that between 14 and 22 % of total costs were allocated to providers administering the vaccine in the period 2014-2022 (Bundesministerium für Gesundheit, 2025[19]).

When it comes to the breakdown of vaccination spending by type of vaccine, France provides the most integrated overview as it is directly linked to their SHA figures. For Germany, data is available from the German association of pharmacists but refers only to the costs of vaccines acquired from pharmacies. Data for Czechia also only covers the costs of vaccines. For Sweden, estimates were derived by combining vaccine prices provided by the Swedish eHealth Agency with vaccination volumes from the WHO Immunization Data Portal. Interpreting a breakdown based on national data sources is challenging, also

[12] Countries with implausible data (i.e. Covid-19 immunisation costs higher than total immunisation costs) were excluded from this analysis.

[13] In the case of patient-initiated vaccinations, such as travel vaccination, programme costs do not exist.

given the different levels of detail that is published (Table 4.3). That said, data suggests that influenza typically accounts for 10-25% of immunisation/vaccines costs across the four countries and pneumococcal vaccines for 10-15%. Vaccines against meningitis are the largest spending category in Czechia (24%) and also represent a substantial amount in France (22%). On the other hand, in Germany, most is spent on vaccines against the varicella zoster virus, reflecting the fact that shingles vaccination is recommended since 2018 and the comparably high price of this vaccine (ABDA – Bundesvereinigung Deutscher Apothekerverbände e. V., 2025[20]).

### Table 4.3. Breakdown of immunisation/vaccine spending by type of vaccine

Spending by Social Health Insurance, excluding COVID-19, 2023

| | France | | Germany | | Czechia | | Sweden | |
|---|---|---|---|---|---|---|---|---|
| | In million EUR | % | In million EUR | % | In million CZK | % | In million SEK | % |
| **Total** | **847** | | **2,321** | | **3,260** | | **3,315** | |
| Human Papillomavirus | ~205 | ~24% | 160 | 7% | 499 | 15% | 823 | 25% |
| Influenza | ~155 | ~18% | 503 | 22% | 324 | 10% | 866 | 26% |
| Pneumococcal vaccines | ~90 | ~11% | 189 | 8% | 291 | 9% | 509 | 15% |
| Meningococcal vaccines | 186 | 22% | 50 | 2% | 775 | 24% | | |
| Hexavalent (DTaP-IPV-Hib-HepB) | | | | | | | 639 | 20% |
| DTaP-IPV booster | | | | | | | 45 | 1% |
| Varicella Zoster | | | 674 | 29% | | | | |
| Tick-borne Encephalitis | | | 196 | 8% | 478 | 15% | | |
| Bacterial and viral combination vaccines | ~150 | ~18% | | 0% | | | | |
| Pertussis * | | | 276 | 12% | | | | |
| Measles ** | | | 131 | 6% | | | 141 | 4% |
| Rotavirus | | | 85 | 4% | | | 293 | 9% |
| Hepatitis | | | 37 | 2% | | | | |
| Other vaccines | 64 | 8% | 18 | 1% | 894 | 27% | | |

Note: In France, spending refers to total immunisation costs, including the administration of the vaccine. In Germany, data refers to total costs of acquiring vaccines from pharmacies, including VAT. This is the standard way of vaccine procurement of medical practices, but alternatives exist. In Czechia, data refers to reimbursements of health insurance funds to vaccine distributors, including mark-ups and VAT. For Sweden, estimates were derived by combining vaccine prices provided by the Swedish eHealth Agency with vaccination volumes from the WHO Immunization Data Portal.
Source: (DREES, 2025[8]), (ABDA – Bundesvereinigung Deutscher Apothekerverbände e. V., 2025[20]), Institute of Health Information and Statistics of Czechia, Swedish eHealth Agency and WHO Immunization data portal.

Analysing immunisation expenditure by population group does not appear to be widespread in countries. However, many vaccination programmes have clearly defined target populations, allowing an indicative breakdown by age and sex to be constructed. Table 4.4 presents estimates for an approximate age breakdown of vaccine-specific expenditure for nine countries, calculated by multiplying the country-reported number of doses administered from the WHO Immunization Data Portal with the average purchase price per vaccine reported in the WHO MI4A database for high-income countries in the WHO European Region. No separate allowance was made for domestic distribution or vaccine administration costs. The estimates therefore show how expenditure on vaccines are distributed across age groups, based on vaccination

volumes and average purchase prices, rather than providing a comprehensive measure of immunisation expenditure. Vaccine-specific expenditure was linked to the target ages identified in national vaccination schedules. Vaccines administered exclusively to infants and children; adolescents or adults were assigned directly to the corresponding group. Where a vaccine covered more than one age group, expenditure was divided between the relevant groups.

Based on such an estimation, infant and child vaccination accounts for the largest share of expenditure in all nine countries, ranging from 48% in France to 74% in Bulgaria. Adult shares range from 15% to 36%, while adolescent shares range from 11% to 26%. These differences reflect vaccination schedules, dose requirements, target population sizes and uptake. Higher adult shares may reflect larger populations aged 65 and over and greater influenza vaccination uptake, while adolescent shares are shaped mainly by HPV eligibility and uptake, as well as booster and meningococcal programmes.

### Table 4.4. Distribution of vaccine expenditure by target age group, 2023

| Country | Infant/child (%) | Adolescent (%) | Adult (%) |
|---|---|---|---|
| Bulgaria | 74 | 11 | 15 |
| Croatia | 63 | 16 | 21 |
| Cyprus | 62 | 19 | 19 |
| France | 47 | 17 | 36 |
| Ireland | 65 | 20 | 16 |
| Lithuania | 51 | 21 | 28 |
| Spain | 53 | 19 | 29 |
| Italy | 56 | 16 | 28 |
| Norway | 52 | 26 | 22 |

Note: Age-group allocations are based on the national vaccination schedules applicable in 2023. Expenditure covering doses in more than one age group was divided between the relevant groups. Vaccine prices are based on WHO MI4A average prices for high-income countries in Europe, and vaccination volumes are drawn from the WHO Immunization Data database.
Source (WHO, 2023[21]); (WHO, 2023[22]); (European Centre for Disease Prevention and Control, 2026[23])

### *Identifying cancer screening programmes seems possible but may require using additional data sources on prices and participation rates*

For early disease detection programmes, more countries appear to have some information available but again, only in France is this spending directly visible in the produced health accounts. In Estonia, very detailed information that can be directly linked to health accounts results is available on an interactive platform provided by the Estonian Health Insurance Fund (Tervisekassa, 2026[24]). For other payers, less detail is available. In Czechia and Germany, some information can be obtained via publications of the social health insurance funds or the ministry of health.

Table 4.5 provides an overview of the reporting of France, the Czechia, Estonia and Germany. Spending on cancer screening can be identified by all countries separately and is the key component of early disease detection spending in Czechia, Estonia and Germany. Insurance data from Czechia and Estonia allow to break down cancer screening into four types of screening programmes that currently exist in the country – breast cancer, colorectal cancer, cervical cancer and lung cancer – with breast cancer consuming most financial resources in both countries. In Germany, official statistics used in the construction of health accounts only divide between cancer screening spending by sex, with around 80% occurring for women,

as a result of a higher volumes but also higher prices for the screening procedures.[14] COVID-19 PCR and antigen test still played a role in in 2023, accounting for between 4% of all early disease detection programmes in Estonia and over 40% in France. Screening for infectious diseases has been identified as a key cost component in France. In other countries, these costs may be included in the "other" cost item of HC.6.3 or may be allocated to a different prevention category altogether, for example under HC.6.1 or HC.6.5 if these services are provided by local public health units.

Further granularity beyond these figures is available in Estonia, where all cancer screening costs can be broken down by beneficiary characteristics such as age, sex and region (Tervisekassa, 2026[24]). The data shows, for example, that 22% of all breast cancer screening costs occur for women in the 50-54 age bracket, and 70% of all lung cancer screening costs are attributable to men.

### Table 4.5. Breakdown of spending on early disease detection programmes

Spending in million National Currency Units, 2023

| | France | Czechia | Estonia | Germany |
|---|---|---|---|---|
| Total costs | **839** | **1,987*** | **10** | **2,350** |
| Cancer screening | 162 | 1,859 | 8 | 1,279 |
| Breast cancer | | 726 | 4 | |
| Colorectal cancer | | 488 | 2 | |
| Cervical cancer | | 623 | 2 | |
| Lung cancer | | 22 | 0 | |
| Cancer Women | | | | 1040 |
| Cancer Men | | | | 239 |
| Screening and control of infectious diseases | 255 | | | |
| COVID-19 PCR and antigen tests | 365 | 235 | 0 | 753 |
| Prevention of myopia in children | | | 0 | |
| Screening for other diseases | 57 | | 1** | 318*** |

Note: Total costs refer to all financing schemes in France and to only spending by social health insurance in the other 3 countries. *The total amount report in the JHAQ (1,987) is not identical to the subcomponents based on another source provided by the Ministry of Health. **Other includes screening for tuberculosis; HIV (counseling and testing and case management); STD (diagnostics and treatment), harm reduction and substitution treatment for opioid addiction. ***Includes partial costs of check-ups for healthy adults which would be better allocated to HC.6.4.
Source: (DREES, 2025[8]), Institute of Health Information and Statistics of Czechia, (Tervisekassa, 2024[13]), (Bundesministerium für Gesundheit, 2025[19])

While information regarding a more granular breakdown directly derived from the SHA data submissions is limited, Chapter 3 has shown that relevant information from other sources exists in many European countries that were used to fill the gaps of early disease detection spending, for example by looking into prices and volumes for screenings (Table 4.6). This data (and method) can of course also be used in an approach to add granularity to the early disease detection spending figures (see support materials).

[14] However, further breakdowns to allocate cancer screening costs by type of cancer could be generated in Germany with complementary statistics from individual insurers.

### Table 4.6. Estimated expenditure on screening programmes for breast, cervical and colorectal cancer, in million EUR (PPP), 2023

| | Breast | Cervical | Colorectal |
|---|---|---|---|
| Austria | 26 | 13 | 60 |
| Belgium | 19 | 19 | 33 |
| Denmark | 19 | 4 | 19 |
| Finland | 18 | 9 | 10 |
| Greece | 7 | 15 | 24 |
| Hungary | 15 | 3 | 2 |
| Ireland | 13 | 11 | 5 |
| Italy | 156 | 116 | 110 |
| Latvia | 3 | 6 | 3 |
| Lithuania | 6 | 8 | 12 |
| Luxembourg | 1 | 2 | 2 |
| Netherlands | 63 | 28 | 40 |
| Norway | 28 | 3 | 1 |
| Poland | 59 | 20 | 31 |
| Portugal | 28 | 9 | 4 |
| Slovak Republic | 10 | 18 | 8 |
| Slovenia | 7 | 8 | 8 |
| Spain | 75 | 42 | 115 |
| Bulgaria | 11 | 15 | 1 |
| Croatia | 11 | 18 | 6 |
| Cyprus | 1 | 4 | 0 |
| Romania | 8 | 8 | 6 |

Note: Estimates are based on the number of screening tests undertaken and the corresponding estimated unit cost for each programme. They cover breast, cervical and colorectal cancer screening and may exclude programme administration, invitations, follow-up investigations and other associated costs where these could not be separately identified. Figures are for 2023 and are expressed in EUR millions, converted using purchasing power parities.
Source: OECD calculations based on sources described in support materials.

### *Huge variation by progamme type can be detected when disaggregating healthy condition monitoring spending which are affected by reporting gaps that countries should prioritise filling*

As seen in Chapter 3, the category of health conditions monitoring programmes includes a range of quite different preventive activities including health check-ups for adults, for infants and children, maternity care, dental care and occupational healthcare as well as potentially school health - each with different target groups.

Among these categories, dental care and occupational healthcare can be identified separately in more than half of European countries. Excluding Greece and the Slovak Republic (where it is the only item reported under category HC.6.4), ***occupational healthcare represents on average 26% of spending*** for HC.6.4 among 18 EU countries with data. The target group are clearly people of working age. For some countries, there may be a possibility of breaking this further down by main industries (but this has not been explored). ***A further 14% of all HC.6.4 spending is allocated to dental check-ups***, based on data from 14 EU countries. Which population groups benefit most from these check-ups is very country-specific but overall, children and vulnerable population groups often have broader public coverage for dental care (Winkelmann, Gómez Rossi and van Ginneken, 2022[25]).

Similar to the other subcategories of preventive spending, only a few countries provide a full breakdown for their reported spending on HC.6.4 in the context of SHA. Yet, even in these cases, the breakdown is quite general, and categories differ across countries impeding an in-depth international comparison (Table 4.7).

### Table 4.7. Breakdown of spending for healthy condition monitoring programmes

Spending in million National Currency Units, 2023

| | France | | Luxembourg | | Sweden | | Estonia | |
|---|---|---|---|---|---|---|---|---|
| **Total costs** | **3,860** | | **39** | | **7,964** | | **15** | |
| Dental health check-ups | 91 | 2% | | | | | | |
| Occupational health services (including risk prevention) | 2,170 | 56% | 29 | 75% | 1,582 | 20% | | |
| School health services | 338 | 9% | | | 1,870** | 23% | 13 | 86% |
| Maternal and Child Protection (PMI) – Family planning | 883 | 23% | | | | | | |
| Monitoring programmes for specific population groups | 179 | 5% | | | | | | |
| Check-ups for maternity and small children | | | 5* | 12% | 4,412*** | 55% | | |
| Prevention financing by Department of Health (e.g. dental) | | | 5 | 13% | | | | |
| Patient fees | | | | | 58 | 1% | | |
| Health check-ups in special schools and armed forces | | | | | 42 | 1% | | |
| Health checks for young athletes | | | | | | | 2 | 14% |

Note: Total costs refer to all financing schemes in France, Luxembourg and Sweden and to only spending by social health insurance in Estonia. The Swedish figures are Health Accounts estimates based on National Accounts data. * Refers to preventive services financed by social health insurance with includes check-ups for maternity and small children. ** Refers to check-ups as part of school health services financed by municipalities. *** Refers to services financed by regions. The information refers to reporting practices for 2023 under the 2025 JHAQ. The methodology of reporting preventive spending changed in Luxembourg with the 2026 JHAQ.
Source: (DREES, 2025[8]), IGSS for Luxembourg, CBS for Sweden, (Tervisekassa, 2024[13]).

Further granularity could eventually be generated by using the methods to fill data gaps for adult health check-ups, health check-ups for infants and children, maternity care, dental check-ups and occupational health care as described in Chapter 3 and the support materials. As mentioned, at the moment, these methods are based on a number of simplifying assumptions. That said, summing up these five individual components and eventually school health services (in countries where they exist) should provide for a quite comprehensive estimate of spending for HC.6.4. Since most of these components have a specific age-related target group an approximative age breakdown of total spending of HC.6.4 might be generated. Given the substantial differences across countries in the unit costs of the individual components, a wide variation in such a distribution would be expected.

More work could eventually be done by drilling down further into the individual check-up components. For example, there is some variation in the target groups, potentially benefiting from adult check-ups across countries. In Austria, all adults have annually access to one free health check-up; in Germany, adults are entitled to have a check-up paid by the social health insurance scheme once between the age 18 and 34 and every 3 years from 35 onwards; finally in Slovenia, general health check-ups are available for the everyone over 30 years old every 5 years. The size of the target group and the check-up frequency clearly have consequences for overall preventive spending, but this information would need to be gathered outside of the health accounts framework.

### *Further breakdowns of epidemiological surveillance and disaster preparedness spending are very limited but efforts should be made to identify their individual components*

More granular information for spending on epidemiological surveillance and risk and disease control programmes (HC.6.5) and preparing for disaster and emergency response programmes (HC.6.6) does not appear to be systematically available in national health accounts production in European countries but, at least for HC.6.5, some assumptions could be made to generate a breakdown.

In some countries, spending for HC.6.5 is only reported for government schemes and refers to the costs of one or few agencies. This is the case for example in Sweden, where it captures part of the costs of the Public Health Agency (whose costs are split between HC.6.1 and HC.6.5), or in Lithuania, where it covers the costs of the National Public Health Centre (NVSC), or in Austria, where spending on HC.6.5 in 2023 referred to the costs of COVID-19 surveillance financed by the federal government and the costs of the Austrian Agency of Health and Food Safety (AGES).

In Germany, HC.6.5 is nearly exclusively financed by the general government and the tasks of epidemiological surveillance and disease control are carried out by various actors at the local, state and federal level. Around 380 local public health offices are responsible, for example, for infection control, hygiene monitoring, health promotion or health examinations before starting school. The states and the federal government have various public health and prevention institutes. Spending for HC.6.5 is identified based on very broad financial statistics from the three layers of government, which differ in their granularity. In that country, one option to create a breakdown of spending for HC.6.5 by the type of activity could be to create a distribution key based on a newly establish labour statistics for all staff in public health institutes and agencies which allocates staff to their main tasks (Gesundheitsberichterstattung des Bundes, 2026[26]) (Table 4.8).

**Table 4.8. Distribution of staff in public health institutes and agencies ("Öffentlicher Gesundheitsdienst") according to their main function, Germany, 2023**

| Function | Total in FTE | % |
|---|---|---|
| Total | 23,770 | |
| Child and youth health | 3,935 | 17% |
| Mental health | 2,400 | 10% |
| Infection control | 2,330 | 10% |
| Health assessment of adults | 1,350 | 6% |
| Health promotion | 1,185 | 5% |
| Hygiene control | 1,160 | 5% |
| Dental health | 1,005 | 4% |
| Coordination and communication | 980 | 4% |
| Drinking water control | 935 | 4% |
| Medical Affairs ("Medizinalwesen") | 685 | 3% |
| Epidemiological crisis management | 445 | 2% |
| Counseling of pregnant women and mothers | 425 | 2% |
| Environmental health | 410 | 2% |
| Addiction counselling | 310 | 1% |
| Other | 6215 | 26% |

Note: Refers to staff of the "Öffentlichen Gesundheitsdienst" on a local and state level (excluding the federal level) in full-time equivalents.
Source: (Gesundheitsberichterstattung des Bundes, 2026[26])

Spending on HC.6.6 was only reported by a very limited number of European countries in 2023 although it generally accounted for a very small proportion of overall preventive spending. The reason for this is that countries only allocate a few clearly identifiable budget items to this subcategory. This refers, for example, to COVID-19 crisis task forces at the state level in Austria, to three items in clearly identifiable budget programme in France (including the management of health alerts and crises and the prevention of emerging infectious risks and preparedness for health crises), or various actions included in the Estonian budget, such as renewing and maintaining the state's operational reserve, the support of crisis continuity of health care providers (by the National Health Board), or training and exercises in crisis management (by Ministry of Social Affairs). Spending breakdowns of these various actions were not available. Although HC.6.6 represents a relatively small area of spending, more complete reporting would help make tracking of overall PPR spending more robust and comprehensive.

### *More granular analysis of the payer of preventive services could provide welcome additional information*

While the key objective to obtain additional granular information of preventive spending is to allocate spending to risk factors, population groups or disease, one complementary option would also be to break down the financing classification further. This can be done, for example, in the health accounts in Germany, where the various social security branches that contribute to preventive spending (e.g. social health insurance, social accident insurance, social long-term care insurance) could be disentangled, or in Sweden, where data sources allow to separately identify preventive spending by the central government, the regions and the municipalities. Such an analysis could be a valuable contribution to a better understanding of differences in the financing and organisational responsibilities of public health across Europe. Generally, it could be expected that in many European countries such a breakdown could be generated.

## 4.2 Breaking down preventive spending at the overall level without using health accounts

In a number of countries, overall preventive spending can be broken down into area of intervention or different programmes but without being aligned with SHA reporting. This is, for example, the case of Austria or the Netherlands. In ***Austria***, the public health institute (GÖG) has been reporting total preventive spending in irregular intervals. The latest report estimated total public preventive spending for year 2016 with a total value of EUR 920 million for primary and secondary prevention plus preventive activity at outpatient doctors (Table 4.9). Primary prevention, secondary prevention as well as preventive expenditure at the level of outpatient doctors (such as colonoscopies, laboratory test) each accounted for around 30 % of preventive spending.

### Table 4.9. Breakdown of preventive spending in Austria based on study by GÖG, 2016

| Intervention level | Expenditure in EUR | % of all preventive spending |
|---|---|---|
| Health promotion (shaping the living environments of population groups) | 69,843,627 | 8% |
| Primary Prevention | 322,177,821 | 35% |
| *Primary Prevention 1 (promoting a healthy lifestyle and preventing disease)* | *237,305,228* | *26%* |
| *Primary Prevention 2 (preventing the development of addictive disorders)* | *7,250,562* | *1%* |
| *Primary Prevention 3 (prevention of communicable diseases)* | *52,503,601* | *6%* |
| *Primary Prevention 4 (health protection)* | *25,118,430* | *3%* |
| Secondary prevention (early detection of existing diseases) | 290,830,270 | 32% |

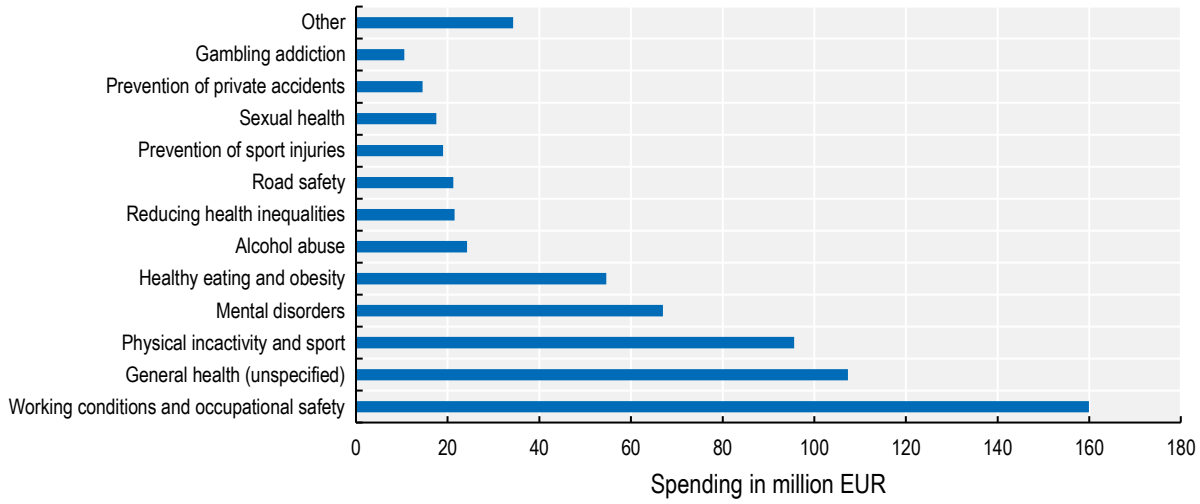
| | | |
|---|---|---|
| Preventive expenditure in the outpatient sector (not allocable) | 237,354,300 | 26% |
| **GÖG prevention expenditure excluding tertiary prevention** | 920,206,018 | 100% |

Note: Preventive spending includes all public spending by the federal, regional and local governments and social insurance.
Source: (BMASGK, 2019[9]).

In total, around 50 areas of interventions can be identified separately in this analysis (see Annex E). Important individual preventive spending items in this clustering are the prevention of dental health issues, accidents at the workplace and occupational diseases, vaccination, parent-child health as well as "healthy check-ups" to which all residents above the age of 18 are entitled to annually (and financed by social health insurance). Another important item refers to preventive activity by outpatient doctors outside of organised preventive programmes.

In the ***Netherlands***, a study from 2015 estimated the total spending on prevention including sectors outside health of around EUR 12 466 million, of which EUR 647 million fall on health promotion, EUR 9 472 million on health protection and EUR 2 347 million on disease prevention. For each of the preventive categories 10-20 areas of interventions are described for which information on programme level is provided (VZ Info, n.d.[12]). A breakdown of areas of intervention for health promotion can be seen in Figure 4.1 and for all prevention groups in Annex E. Based on a rough estimations, around EUR 4.6 billion of the EUR 12.5 billion could qualify for health spending as HC.6 under current health expenditure in SHA with the remainder being generally considered as multi-sectoral approaches.

## Figure 4.1. Spending on health promotion in the Netherlands, 2015, by area of intervention




Note: Category "other" includes, for example, health promotion activities to address the risk smoking, cancer, CVD, drug abuse and others.
Source : (VZ Info, n.d.[12])

# 5 Conclusion and moving forward

Greater investment in disease prevention and health promotion has been identified as a key priority in many EU and OECD health systems and as a crucial instrument in making health spending growth more sustainable in the long run. While the official data on preventive spending suggest that it accounts for only around 3% of all health expenditure across the EU, this Health Working Paper highlights that these figures are generally underestimated, and the effective resources allocated to this aim are closer to 4% after identified gaps are filled. This implies that estimates of preventive expenditure currently reported through the JHAQ may be underestimated by around one-quarter.

The Working Paper also reveals the important challenges that national data compilers face in comprehensively accounting for spending on prevention in a systematic and international comparable way. In many instances, available data sources, such as budgets at central, regional and municipality level or from health insurers only provide high level information on the outlays for preventive spending, potentially with broad boundaries. This can make it difficult to fully understand which specific transactions are included under these items, leading to considerable uncertainty on the actual content of preventive spending figures. In other cases, important variation in data available across various levels of government responsible for different preventive activity exist. Thus, national health accounts experts may only have comprehensive information on preventive spending by some of the key payers. Finally, in some instances, data compilers may only have an incomplete understanding of the national landscape of all actors in the field of health promotion and disease prevention, which as a consequence- may explain some existing data gaps.

These realities also impact the capacity to assess the quality of reported preventive spending figures. This assessment was mainly done based on information obtained through a qualitative survey. It did not include a review of whether national data compilers use the most appropriate national data sources available and methodology to generate preventive spending figures.[15] That said, a first attempt is made in this document to qualify and quantify existing data gaps across the six preventive care subcategories. A combination of a top-down and bottom-up approaches for the various subcategories was considered as the most adequate method but in this first attempt many simplifying assumptions were made as many country-specific information to fill data gaps were missing. For this reason, the estimated “full” preventive spending figures should be seen as a starting point for a discussion on how gaps can be filled; these estimates are not expected to replace the preventive spending data that is annually compiled as part of the JHAQ data collection.

Regarding the feasibility of additional granularity of preventive spending, the results are somewhat mixed. In many countries some data is available to provide more detail on particular preventive activities of interest. However, in most cases this data is not directly identifiable or embedded within health accounts. As a result, some adjustments are often needed to ensure that any derived additional breakdown of subcategories of preventive spending is aligned with the reported JHAQ figures. In a few countries, very detailed analyses of preventive spending have been carried out – but independently and completely detached from the health accounts production process.

[15] This work is generally done within the context of a National Health Accounts review where reporting practices and data used are compared against international best practice. However, this work is not limited to only reviewing preventive spending accounting practices but also looks into other spending areas.

In summary, the study highlights how the comprehensiveness of the reporting of preventive spending could be strengthened but also suggests some promising avenues for future work:

- At the country level, ***national health accountants should revisit the robustness of their preventive spending estimates for future JHAQ submissions***. All six preventive subcategories exist across all EU and OECD countries and efforts should be intensified to report them separately. This means either reallocating misclassified spending to the appropriate preventive subcategory or filling gaps if data is missing entirely from reported figures.
- A starting point is ensuring that all preventive spending by all relevant financing schemes is identified. Depending on the country this will involve government schemes at the central, regional and local level, insurance funds, household out-of-pocket spending, voluntary health insurance, charities and employers. Preventive services can be provided by a wide range of actors. Hence, ***it is recommended that national data compilers map all financing schemes and providers of preventive care that exist in their country and connect them with all respective preventive care services that they finance or provide***. National public health experts may be able to provide valuable input to this.
- The overall quality of reported preventive spending data is determined by the data used, estimation techniques and the methodology by which health accounts are formulated in the first place. Preventive spending from public payers is identified by analysing budgets from central, regional and local governments as well as from social insurance schemes. ***It is recommended to allocate the relevant budget items to the respective preventive categories at the most detailed level possible*** rather than relying on aggregated budget statistics for "public health spending" that may lack granularity. That said, secondary statistics (e.g., based on activity data) may be needed for the construction of allocation keys to further allocate preventive spending in case the "primary statistics" are too aggregated. ***Other approaches will be necessary to identify spending by other payers.*** Household budget surveys can be a starting point to estimate out-of-pocket spending but might not provide sufficient detail to identify (separate) preventive activities. In this case, alternative approaches by using provider statistics or dedicated surveys may be an option. For the reporting of occupational healthcare (by employer financing schemes) analysing data from national accounts' input-output tables or statistics on business costs could be a starting point. Particular surveys may exist for preventive spending by NPISH financing schemes.
- ***When filling reporting gaps, areas where the most frequent underreporting was identified should be prioritised***. This includes spending for health check-ups for adults, dental check-ups and occupational healthcare for the subcategory of healthy condition monitoring, capturing all costs for immunisation spending and providing a comprehensive picture of spending on epidemiological surveillance. Spending on disaster preparedness and emergency response may need a special focus since the relevant spending items appear to be harder to identify than others. It may require a more thorough review of spending items within health ministries and other agencies planning and executing these tasks. A better understanding of this spending would also be beneficial for estimates on wider spending on PPR against global health threats.
- To ensure international comparability in reporting of preventive spending and its consistency, the ***JHAQ reporting guidelines should be strengthened***. There may be scope to include more examples for relevant transactions and to state more explicitly those activities that are clearly preventive should be classified as preventive spending, even when they are not part of a broader programme. Clearer guidance may also be needed to help data compilers to decide when a national screening programme should be considered under category "early disease detection" and when under "healthy conditions monitoring".

- For ***some preventive subcategories, there could be value in further exploring additional data granularity***. This appears to be most promising for "early disease detection" and in particular cancer screening where total costs could be estimated for the main programmes by identifying tariffs and population uptake. But this may be further refined by adding associated programmes costs and exploring emerging screening programmes. The approach to combine volume and unit price data could also be applied to other areas of screening (beyond cancer), wider preventive check-ups and immunisation data.
- ***The category 'healthy condition monitoring" covers a wide range of activities and obtaining a comprehensive assessment is particularly complex***. But more granular data exist in some countries for each of the various components. It could be worth analysing and comparing these components further. For example, looking into the variation of the content (and costs) of adult health check-up programmes, for maternity care, check-ups for children and occupational health care.
- ***More work could also be done to explore how non-health ministries and other agencies outside of the typical health actor landscape contribute to financing disease prevention and health promotion***. In health accounts reporting, they are typically not identifiable separately, but depending on the country, they may play an important role in financing public health activities.
- Finally, the analysis presented in this report highlights significant differences in how disease prevention and health promotion is organised across countries, both from the angle of payers and providers. ***This could be explored and mapped further for example, which levels of government*** (i.e. central, regional or local) ***are responsible for financing the various preventive activities across countries***. Comparing the providers (e.g. hospitals, public health institutes, GPs) delivering the different preventive activity and analysing the associated costs could help identifying where the provision of preventive care is most cost-effective.

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# Annex A. Key classifications of the System of Health Accounts 2011

## Table A.1. Classification of Health Care Functions (HC)

| HC-Categories | | Description |
|---|---|---|
| **HC.1** | | **Curative care** |
| | HC.1.1 | Inpatient curative care |
| | HC.1.2 | Day curative care |
| | HC.1.3 | Outpatient curative care |
| | HC.1.4 | Home-based curative care |
| **HC.2** | | **Rehabilitative care** |
| | HC.2.1 | Inpatient rehabilitative care |
| | HC.2.2 | Day rehabilitative care |
| | HC.2.3 | Outpatient rehabilitative care |
| | HC.2.4 | Home-based rehabilitative care |
| **HC.3** | | **Long-term care (health)** |
| | HC.3.1 | Inpatient long-term care (health) |
| | HC.3.2 | Day long-term care (health) |
| | HC.3.3 | Outpatient long-term care (health) |
| | HC.3.4 | Home-based long-term care (health) |
| **HC.4** | | **Ancillary services (non-specified by function)** |
| | HC.4.1 | Laboratory services |
| | HC.4.2 | Imaging services |
| | HC.4.3 | Patient transportation |
| **HC.5** | | **Medical goods (non-specified by function)** |
| | HC.5.1 | Pharmaceuticals and other medical non-durable goods |
| | HC.5.2 | Therapeutic appliances and other medical durable goods |
| **HC.6** | | **Preventive care** |
| | HC.6.1 | Education, information and counselling programmes |
| | HC.6.2 | Immunisation programmes |
| | HC.6.3 | Early disease detection programmes |
| | HC.6.4 | Healthy condition monitoring programmes |
| | HC.6.5 | Epidemiological surveillance and risk and disease control programmes |
| | HC.6.6 | Preparing for disaster and emergency response programmes |
| **HC.7** | | **Governance and health system and financing administration** |
| **All HC** | | **All functions = Current Health Expenditure** |

Source: OECD/WHO/Eurostat (2011[27]), *A System of Health Accounts: 2011 Edition*, https://doi.org/10.1787/9789264116016-en.

## Table A.2. Classification of Health Care Providers (HP)

| HP-Categories | | Description |
|---|---|---|
| **HP.1** | | **Hospitals** |
| | HP.1.1 | General hospitals |
| | HP.1.2 | Mental health hospitals |
| | HP.1.3 | Specialised hospitals (other than mental health hospitals) |
| **HP.2** | | **Residential long-term care facilities** |
| **HP.3** | | **Providers of ambulatory healthcare** |
| | HP.3.1 | Medical practices |
| | HP.3.2 | Dental practices |
| | HP.3.3 | Other healthcare practitioners |
| | HP.3.4 | Ambulatory healthcare centres |
| | HP.3.5 | Providers of home healthcare services |
| **HP.4** | | **Providers of ancillary services** |
| | HP.4.1 | Providers of patient transportation and emergency rescue |
| | HP.4.2 | Medical and diagnostic laboratories |
| | HP.4.9 | Other providers of ancillary services |
| **HP.5** | | **Retailers and other providers of medical goods** |
| | HP.5.1 | Pharmacies |
| | HP.5.2 | Retail sellers and other suppliers of durable medical goods and medical appliances |
| | HP.5.9 | All other misc. sellers and other suppliers of pharmaceuticals and medical goods |
| **HP.6** | | **Providers of preventive care** |
| **HP.7** | | **Providers of healthcare system administration and financing** |
| **HP.8** | | **Rest of economy** |
| | HP.8.1 | Households as providers of home healthcare |
| | HP.8.2 | All other industries as |
| **HP.9** | | **Rest of the world** |
| **All HP** | | **All providers = Current Health Expenditure** |

Source: OECD/WHO/Eurostat (2011[27]), *A System of Health Accounts: 2011 Edition*, https://doi.org/10.1787/9789264116016-en.

## Table A.3. Classification of Health Care Financing Schemes (HF)

| HF-Categories | | Description |
|---|---|---|
| **HF.1** | | **Government schemes and compulsory contributory healthcare financing schemes** |
| | HF.1.1 | Government schemes |
| | HF.1.2 | Compulsory contributory health insurance schemes |
| | HF.1.2.1 | Social health insurance schemes |
| | HF.1.2.2 | Compulsory private insurance schemes |
| **HF.2** | | **Voluntary healthcare payment schemes** |
| | HF.2.1 | Voluntary health insurance schemes |
| | HF.2.2 | NPISH financing schemes |
| | HF.2.3 | Enterprise financing schemes |
| **HF.3** | | **Household out-of-pocket payment** |
| **HF.4** | | **Rest of the world financing schemes (non-resident)** |
| **All HF** | | **All financing schemes = Current Health Expenditure** |

Source: OECD/WHO/Eurostat (2011[27]), *A System of Health Accounts: 2011 Edition*, https://doi.org/10.1787/9789264116016-en.

# Annex B. Reported spending on prevention in European countries based on the 2025 JHAQ (using the SHA 2011 methodology)

## Table B.1. Spending on preventive care per capita, 2023, in EUR PPP, current prices

| | **HC6** | HC61 | HC62 | HC63 | HC64 | HC65 | HC66 |
|---|---|---|---|---|---|---|---|
| Austria | **208** | 17 | 39 | 68 | 73 | 9 | 2 |
| Belgium | **81** | 34 | 6 | 0 | 30 | 10 | 1 |
| Bulgaria | **60** | 6 | 9 | 15 | 27 | 4 | |
| Croatia | **97** | 22 | 36 | 6 | 20 | 12 | 0 |
| Cyprus | **42** | 8 | 24 | 8 | 1 | 1 | |
| Czechia | **80** | 10 | 10 | 9 | 52 | | |
| Denmark | **104** | 53 | 5 | 4 | 26 | 16 | |
| Estonia | **90** | 6 | 7 | 13 | 34 | 20 | 10 |
| Finland | **182** | 21 | 37 | 2 | 123 | | |
| France | **101** | 10 | 20 | 11 | 52 | 4 | 3 |
| Germany | **260** | 20 | 54 | 40 | 62 | 83 | |
| Greece | **67** | 14 | 33 | | 3 | 18 | |
| Hungary | **66** | | | | | | |
| Ireland | **118** | | | | | | |
| Italy | **143** | | | | | | |
| Latvia | **51** | 7 | 1 | 16 | 23 | 3 | |
| Lithuania | **68** | 24 | 10 | 22 | 4 | 6 | 1 |
| Luxembourg | **145** | 53 | 21 | 30 | 39 | 2 | |
| Malta | **34** | 2 | 2 | 5 | | 24 | |
| Netherlands | **251** | | | | | | |
| Poland | **38** | 5 | 3 | 6 | 14 | 10 | |
| Portugal | **69** | | | | | | |
| Romania | **22** | 0 | 7 | 1 | 2 | 12 | |
| Slovak Republic | **56** | 18 | | 35 | 3 | | |
| Slovenia | **101** | 5 | 28 | 18 | 41 | 9 | 1 |
| Spain | **105** | | | | | | |
| Sweden | **146** | 60 | 26 | | 54 | 6 | |
| **EU27** | **103** | | | | | | |
| Iceland | **82** | 18 | 23 | 8 | 25 | 6 | 1 |
| Liechtenstein | **51** | 11 | 14 | 7 | 10 | 8 | |
| Norway (2022) | **164** | 46 | | | 118 | | |

Note: HC6 refers to total preventive care. HC61 refers to information, education and counseling programmes. HC62 refers to immunisation programmes. HC63 refers to early disease detection programmes. HC64 refers to healthy condition monitoring programmes. HC65 refers to epidemiological surveillance and risk and disease control programmes. HC66 refers to preparing for disaster and emergency response programmes. EU average is unweighted.
Source: OECD Health Statistics 2025 (refers to the data submission for which the qualitative survey was developed).

## Table B.2. Spending on preventive care as share of current health expenditure, 2023

| | HC6 | HC61 | HC62 | HC63 | HC64 | HC65 | HC66 |
|---|---|---|---|---|---|---|---|
| Austria | **4.2** | 0.4 | 0.8 | 1.4 | 1.5 | 0.2 | 0.0 |
| Belgium | **1.8** | 0.8 | 0.1 | 0.0 | 0.7 | 0.2 | 0.0 |
| Bulgaria | **2.9** | 0.3 | 0.4 | 0.7 | 1.3 | 0.2 | |
| Croatia | **4.8** | 1.1 | 1.7 | 0.3 | 1.0 | 0.6 | 0.0 |
| Cyprus | **1.5** | 0.3 | 0.9 | 0.3 | 0.0 | 0.0 | |
| Czechia | **2.7** | 0.3 | 0.3 | 0.3 | 1.8 | | |
| Denmark | **2.5** | 1.3 | 0.1 | 0.1 | 0.6 | 0.4 | |
| Estonia | **4.2** | 0.3 | 0.3 | 0.6 | 1.6 | 0.9 | 0.5 |
| Finland | **4.6** | 0.5 | 0.9 | 0.0 | 3.1 | | |
| France | **2.3** | 0.2 | 0.5 | 0.3 | 1.2 | 0.1 | 0.1 |
| Germany | **4.8** | 0.4 | 1.0 | 0.7 | 1.1 | 1.5 | |
| Greece | **3.1** | 0.6 | 1.5 | | 0.1 | 0.8 | |
| Hungary | **3.4** | | | | | | |
| Ireland | **2.6** | | | | | | |
| Italy | **4.6** | | | | | | |
| Latvia | **2.6** | 0.4 | 0.1 | 0.8 | 1.2 | 0.2 | |
| Lithuania | **2.8** | 1.0 | 0.4 | 0.9 | 0.2 | 0.3 | 0.1 |
| Luxembourg | **3.2** | 1.2 | 0.5 | 0.7 | 0.8 | 0.0 | |
| Malta | **0.9** | 0.1 | 0.1 | 0.1 | | 0.7 | |
| Netherlands | **5.2** | | | | | | |
| Poland | **1.7** | 0.2 | 0.1 | 0.3 | 0.6 | 0.4 | |
| Portugal | **2.3** | | | | | | |
| Romania | **1.3** | 0.0 | 0.4 | 0.0 | 0.1 | 0.7 | |
| Slovak Republic | **2.7** | 0.9 | | 1.7 | 0.1 | | |
| Slovenia | **3.3** | 0.2 | 0.9 | 0.6 | 1.3 | 0.3 | 0.0 |
| Spain | **3.4** | | | | | | |
| Sweden | **3.1** | 1.3 | 0.6 | | 1.1 | 0.1 | |
| **EU27** | **3.1** | | | | | | |
| Iceland | **2.1** | 0.5 | 0.6 | 0.2 | 0.6 | 0.2 | 0.0 |
| Liechtenstein | **0.9** | 0.2 | 0.2 | 0.1 | 0.2 | 0.1 | |
| Norway (2022) | **3.1** | 0.9 | | | 2.2 | | |

Note: HC6 refers to total preventive care. HC61 refers to information, education and counseling programmes. HC62 refers to immunisation programmes. HC63 refers to early disease detection programmes. HC64 refers to healthy condition monitoring programmes. HC65 refers to epidemiological surveillance and risk and disease control programmes. HC66 refers to preparing for disaster and emergency response programmes. EU average is unweighted.
Source: OECD Health Statistics 2025 (refers to the data submission for which the qualitative survey was developed).

# Annex C. Countries' self-assessment of JHAQ reporting across preventive care subcategories

## Table C.1. EU and other EEA countries' self-assessment of completeness of reporting for preventive care including all subcategories (HC.6.1–HC.6.6) under the 2025 JHAQ

| | Preventive care (HC6) | Information, education and counseling Programmes (HC61) | Immunisation Programmes (HC62) | Early disease detection Programmes (HC63) | Healthy condition monitoring Programmes (HC64) | Epidemiological surveillance and risk and disease control Programmes (HC65) | Partialeparing for disaster and emergency response Programmes (HC66) |
|---|---|---|---|---|---|---|---|
| Austria | Partial | Partial | Partial | Partial | Partial | Partial | Partial |
| Belgium | Partial | Partial | Partial | Partial | Partial | Partial | Partial |
| **Bulgaria** | Partial | Full | Full | Partial | Full | Full | Not reported |
| **Croatia** | Full | Full | Full | Full | Full | Full | Full |
| Cyprus | Partial | Partial | Partial | Partial | Partial | Partial | Not reported |
| Czechia | Partial | Full | Full | Full | Full | Not reported | Not reported |
| **Denmark** | Full | Full | Full | Full | Partial | Overreported | Partial |
| **Estonia** | Full | Full | Full | Full | Partial | Full | Full |
| **France** | Full | Full | Full | Full | Full | Full | Full |
| Germany | Partial | Partial | Full | Full | Partial | Partial | Not reported |
| Greece | Partial | Full | Full | Not reported | Partial | Full | Not reported |
| Hungary | Partial | Not reported | Not reported | Not reported | Not reported | Not reported | Not reported |
| **Ireland** | Full | Not reported | Not reported | Not reported | Not reported | Not reported | Not reported |
| Italy | Partial | Not reported | Not reported | Not reported | Not reported | Not reported | Not reported |
| **Latvia** | Full | Partial | Full | Full | Full | Partial | Not reported |
| **Lithuania** | Full | Full | Full | Full | Full | Full | Full |
| Luxembourg | Partial | Full | Partial | Full | Full | Full | Not reported |
| Netherlands | Partial | Partial | Full | Partial | Full | Full | Partial |
| **Poland** | Full | Full | Full | Full | Full | Full | Not reported |
| Portugal | Partial | Full | Partial | Partial | Partial | Full | Full |
| Slovak Republic | Partial | Partial | Not reported | Partial | Partial | Not reported | Not reported |
| Slovenia | Partial | Partial | Partial | Partial | Partial | Partial | Partial |
| Sweden | Partial | Overreported | Partial | Not reported | Partial | Partial | Not reported |

Note: Information refers to accounting practice applied in the 2025 JHAQ submission. In Luxembourg the methodology to estimate preventive spending has changed with the 2026 JHAQ submission.
Source: OECD Survey on preventive spending 2022-23.

# Annex D. In-depth assessment of the comprehensiveness of JHAQ reporting

## Table D.1. Assessment of the OECD Secretariat of the reporting quality of the JHAQ submissions

| | HC.6 | HC.6.1 | HC.6.2 | HC.6.3 | HC.6.4 | HC.6.5 | HC.6.6 |
|---|---|---|---|---|---|---|---|
| Austria | under slight | full | under (doctor's fees in HP3 is allocated to HC13; HF3 missing) | under (HC63 includes only Covid, non-organised screening under HC13, organised screening under HC64) | over and under (some cancer screening included, healthy check- ups outside programmes missing, dental check-ups missing) | full | under (only Covid included) |
| Belgium | under strong (some government spending missing) | under | under (low value, GP fees, pharmacist's fees may be missing, HF3 missing) | under (only organised screening, very low value) | under (adult check-ups missing, occupational health private sector missing, child check-ups partially missing - outside of school and programme) | under | under |
| Bulgaria | full | full | full | over (may also include some adult check- ups) | under (dental check-up missing, some HC64 may be in HC63) | full | missing |
| Croatia | full | full | full | full | under (dental check-up missing, low occupational health) | full | full |
| Cyprus | under strong | under | full (some reported under HC13 and HC51 but unclear what is missing) | Under (some reported as HC13 or HC42) | under (dental check-ups and maternity reported elsewhere, occupational health missing, adult check-ups and child health partly missing) | under (some under HC71) | missing |
| Czechia | under slight | full | full (but unclear if some under HC9) | full (but unclear if some under HC9) | full | missing | missing |
| Denmark | under slight | full | under (value low, doctor's fees missing, HF3 missing) | under (cancer screening under HC13, only some communicable disease testing and surveillance-related activities, unclear about COVID) | under (dental check-ups and adult health check-ups under HC13, occupational health missing but should be small) | over (includes HC66) | under (some included under HC65) |
| Estonia | under slight | full | full (but HF3 missing) | full | under (dental, adult health check-ups, maternity, children<6 under HC13) | full | full |
| Finland | under slight | full | full | under (low value, some HC63 assumed to be in | over and under (high value, some HC63 assumed to be in HC64, dental check-up | missing | missing |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | HC64) | missing) | | |
| France | under slight | full | full | full | under (adult check-ups outside of programme and child health and maternity care under HC13) | full (but low vale) | full |
| Germany | full | under (some HC61 in HC65) | full (but HF3 missing) | over (child health check-ups included under HC63) | under (child health check-ups under HC63) | over (high value, some HC61 included) | missing |
| Greece | under strong | full | full (but HF3 missing) | missing (reported under HC1/HC4) | under (only occupational health reported here) | over (HC66 included) | missing (included in HC65) |
| Hungary* | under slight | ? (presumed full) | ? (presumed full) | ? (presumed full) | under (not fully clear but dental check-up missing, other health check-ups potentially missing) | ? (presumed full) | ? (presumed full) |
| Iceland | under slight | full | full (but HF3 missing) | full | under (occupational health and dental presumably missing) | full | full |
| Ireland* | under slight | full | full | full | under (adult check-ups, maternity care, check-ups children all missing, but 10% of all PHC spending allocated to HC6) | full | full |
| Italy* | under slight | ? (presumed full) | full | full (but HF3 missing) | under (dental check-up and maternity check-ups missing) | ? (presumed full) | ? (presumed full) |
| Latvia | under slight | under | full (but HF3 missing, low value) | full | under (adult check-ups and occupational health reported outside HC6) | under | missing (included under HC4) |
| Liechtenstein | under strong | ? (presumed under) | ? (presumed full) | ? (presumed under) | under (dental check-ups and occupational healthcare missing, rest unclear) | ? (presumed full) | missing |
| Lithuania | full | full | full (but HF3 missing, low value) | over (dental and adult check-ups under HC63) | under (dental, adult check-ups under HC63, occupational health underreported, private facilities missing) | full | full |
| Luxembourg | under slight | over (high value, includes parts of HC65 and HC66) | over and under (doctor's fee not included; HF3 not included; includes some screening services) | under (some screening under HC62 andHC13) | under (adult check-up and dental check-ups under HC13) | under (low value, some parts presumed under HC61) | under (some included under HC61 and HC7) |
| Malta | under strong | ? (presumed under) | ? (presumed full) | ? (presumed under) | missing | ? (presumed full) | missing |
| Netherlands* | full | full | full | full | under (maternity check-up and adult check-ups missing) | full | under |
| Norway | under slight | over (presumed inclusion of | missing (included | missing (reported under HC1/HC4) | over and under (includes HC62; dental | missing (included in | missing (included in |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | HC65 and HC66) | under HC64) | | check-ups missing) | HC61) | HC61) |
| Poland | under slight | full (but some might be in HC7) | full (but HF3 missing, low value) | full | under (dental, adult health and maternity check-ups missing) | full | missing |
| Portugal* | under strong (some government spending missing) | under | under (some included under HC13) | under (some included under HC13, 41 or 42) | under (adult check-ups, children check-ups, maternity and dental check-up partly reported) | missing (some assumed under HC7) | missing (some assumed under HC7) |
| Romania | under slight | ? (presumed under) | full | ? (presumed under) | under (occupational health and dental check-ups missing, rest unclear) | full (presumed) | missing |
| Slovak Republic | under strong | under | missing (under HC13/HC51) | over (high value) | under (adult health, child health, maternity, dental check-ups missing) | missing (under HC7) | missing (under HC7) |
| Slovenia | under slight | Under (some non-profit providers missing, but some HC65 included) | full (but HF3 missing, low value) | over (dental check-ups included, children check-up included, some smaller screening items may be missing) | under (dental and child health check-ups under HC63, maternity under HC13, adult health check-ups partly missing) | over and under (some reported under HC61. some HC66 included) | under (some reported under HC65 and HC7) |
| Spain* | Under slight | ? (presumed full) | ? (presumed full but HF3 missing) | ? (presumed full) | ? (presumed under - occupational health missing) | ? (presumed full | ? (presumed full |
| Sweden | under slight | over (includes some HC63 screening and HC64 check-ups) | under (only childhood vaccination and Covid fully covered, other risk groups under HC13) | missing (reported under HC61 (if programme), under HC41 and HC42 if follow-up, and HC13 if own initiative) | under (dental under HC132, some under HC61) | under (some under HC7) | missing (reported under HC7) |

Note: “Full” means that all relevant activity is reported in category. “Over” means that some activity not belonging in this category is included. “Under” means that some relevant activity is not reported in category. “Over and under” means that some relevant activity is not reported n category but some activity not belonging in this category included. “Missing” means that category is not reported and data missing from HC6. “Missing (in other HC6)” means category is not reported, but data is reported in other HC6 categories. Information refers to accounting practice applied in the 2025 JHAQ submission. In Luxembourg the methodology to estimate preventive spending has changed with the 2026 JHAQ submission. *Country only reports HC6 on aggregate level. Assumptions had to be made on the reporting status for some countries.
Source: Authors’ evaluation based on responses to the OECD Survey on preventive spending 2022-23 and additional information,

# Annex E. Available granular data of preventive spending in two EU countries

## Table E.1. Detailed breakdown of preventive spending in Austria, 2016

| Intervention level | | Expenditure in EUR | % of all preventive spending |
|---|---|---|---|
| **Health promotion (shaping the living environments of population groups)** | | **69,843,627** | **8%** |
| | Family / home environment | 8,248,549 | 1% |
| | Kindergarten and nursery/day-care centre | 3,117,293 | 0% |
| | School and other educational institutions | 12,940,572 | 1% |
| | Workplace | 8,157,394 | 1% |
| | Municipality/city (community setting) | 11,895,078 | 1% |
| | Leisure and consumer environments (health promotion in leisure settings; consumer information promoting health literacy) | 2,639,229 | 0% |
| | Health promotion in public institutions | 2,141,848 | 0% |
| | Health information/health literacy for the population | 16,133,903 | 2% |
| | Opportunities for participation and self-help | 2,668,831 | 0% |
| | Other health promotion | 1,900,300 | 0% |
| **Primary Prevention 1 (promoting a healthy lifestyle and preventing disease)** | | **237,305,228** | **26%** |
| | Dental health | 101,326,614 | 11% |
| | Parent and child health | 6,628,917 | 1% |
| | Psychosocial intervention | 9,546,871 | 1% |
| | Accident prevention (leisure/household) | 847,534 | 0% |
| | Prevention of occupational accidents and work-related diseases | 80,581,052 | 9% |
| | Occupational medicine / workplace health-promotion measures undertaken in the role of employer / preventive services[7] | 13,963,581 | 2% |
| | Nutrition and physical activity to prevent specific diseases | 15,658,657 | 2% |
| | Substitute and respite care | 8,024,147 | 1% |
| | Other Primary Prevention 1 | 727,856 | 0% |
| **Primary Prevention 2** (preventing the development of addictive disorders) | | **7,250,562** | **1%** |
| **Primary Prevention 3** (prevention of communicable diseases) | | **52,503,601** | **6%** |
| | Vaccinations | 45,677,897 | 5% |
| | Tuberculosis prevention | 2,682,409 | 0% |
| | HIV / hepatitis C | 3,099,234 | 0% |
| | Other Primary Prevention 3 | 594,062 | 0% |
| **Primary Prevention 4** (health protection) | | **25,118,430** | **3%** |
| | Hygiene | 937,251 | 0% |
| | Pharmaceutical control | 190,478 | 0% |
| | Radiation protection | 1,815,121 | 0% |
| | Food and drinking-water control | 21,509,165 | 2% |
| | Other Primary Prevention 4 | 666,415 | 0% |
| **Secondary prevention** (Early detection of existing diseases) | | **290,830,270** | **32%** |
| | Parent-Child Health Passport | 65,635,560 | 7% |
| | Newborn screening | 1,077,855 | 0% |

| | | | |
|---|---|---|---|
| | Early-childhood examinations | 1,016,583 | 0% |
| | School medical examinations | 24,575,165 | 3% |
| | Adolescent health examination | 2,977,068 | 0% |
| | Vision and hearing tests | 1,412,912 | 0% |
| | Cancer screening | 6,933,552 | 1% |
| | Preventive medical examinations pursuant to Section 132b ASVG and other special social-insurance legislation ("Healthy check-ups") | 140,613,443 | 15% |
| | Other preventive medical examinations | 5,508,490 | 1% |
| | Smoking cessation | 1,668,343 | 0% |
| | Weight-reduction programmes | 1,252,128 | 0% |
| | Measures and programmes to prevent or delay work-related diseases | 14,914,645 | 2% |
| | Programmes to prevent or delay the need for long-term care | 2,577,403 | 0% |
| | Disease management programmes (DMPs) | 5,998,429 | 1% |
| | Epidemiological measures | 1,360,391 | 0% |
| | Other secondary prevention | 13,308,304 | 1% |
| **Preventive expenditure in the outpatient sector (not allocable)** | | **237,354,300** | **26%** |
| **GÖG prevention expenditure excluding tertiary prevention** | | **920,206,018** | **100%** |

Note: Refers to public spending by federal, regional, local governments and social insurance.
Source: (BMASGK, 2019[9])

## Table E.2. Spending on prevention in the Netherlands, 2015

| Intervention level | | Expenditure in million EUR | % of all preventive spending |
|---|---|---|---|
| **Health promotion** | | **647** | **5%** |
| | Working conditions and occupational safety | 160 | 1% |
| | General health (unspecified) | 107 | 1% |
| | Physical inactivity and sport | 96 | 1% |
| | Mental disorders | 67 | 1% |
| | Healthy eating and obesity | 55 | 0% |
| | Alcohol abuse | 24 | 0% |
| | Reducing health inequalities | 22 | 0% |
| | Road safety | 21 | 0% |
| | Prevention of sport injuries | 19 | 0% |
| | Sexual health | 17 | 0% |
| | Prevention of private accidents | 14 | 0% |
| | Gambling addiction | 11 | 0% |
| | Smoking | 9 | 0% |
| | Cancer prevention | 8 | 0% |
| | Prevention of CVD | 8 | 0% |
| | Drug abuse | 5 | 0% |
| | Diabetes | 3 | 0% |
| | Fire prevention | 1 | 0% |
| | Stomach, liver and intestinal disorders | 0 | 0% |
| | Dental care | 0 | 0% |
| | Prevention of skin cancer | 0 | 0% |
| **Health protection** | | **9472** | **76%** |
| | Sewerage | 3289 | 26% |
| | Drinking water quality | 1386 | 11% |
| | Air quality | 1386 | 11% |
| | Waste | 1242 | 10% |

| | | | |
|---|---|---|---|
| | Road safety | 1201 | 10% |
| | Environmental safety | 317 | 3% |
| | Noise pollution | 287 | 2% |
| | Food safety | 127 | 1% |
| | Fire prevention | 76 | 1% |
| | Public mental health care | 48 | 0% |
| | Product safety | 18 | 0% |
| | Medical environmental science | 18 | 0% |
| | Hygiene | 16 | 0% |
| | Alcohol abuse | 15 | 0% |
| | Violence | 14 | 0% |
| | Working conditions and occupational safety | 12 | 0% |
| | Preparation for providing assistance in the event of accidents and disasters | 10 | 0% |
| | Smoking | 7 | 0% |
| | Bathing water quality | 3 | 0% |
| **Disease prevention** | | **2347** | **19%** |
| | Dental care and dental check-ups | 675 | 5% |
| | Infectious diseases | 448 | 4% |
| | Hypertension | 319 | 3% |
| | Cholesterol | 235 | 2% |
| | Youth Health Care Screening | 155 | 1% |
| | Vitamines | 153 | 1% |
| | Cancer | 108 | 1% |
| | Congenital anomalies, perinatal disorders, and pregnancy complications | 96 | 1% |
| | Osteoporosis | 96 | 1% |
| | Mental disorders | 32 | 0% |
| | Smoking | 27 | 0% |
| | Pregnancies <21 years of age | 4 | 0% |
| **Total preventive spending** | | **12466** | **100%** |

Source : (VZ Info, n.d.[12])