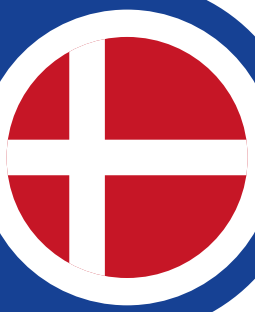
European Commission









State of Health in the EU

Denmark

Country Health Profile 2019

OECD
BETTER POLICIES FOR BETTER LIVES

European Observatory on Health Systems and Policies
a partnership hosted by WHO

The Country Health Profile series

The *State of Health in the EU*'s Country Health Profiles provide a concise and policy-relevant overview of health and health systems in the EU/European Economic Area. They emphasise the particular characteristics and challenges in each country against a backdrop of cross-country comparisons. The aim is to support policymakers and influencers with a means for mutual learning and voluntary exchange.

The profiles are the joint work of the OECD and the European Observatory on Health Systems and Policies, in cooperation with the European Commission. The team is grateful for the valuable comments and suggestions provided by the Health Systems and Policy Monitor network, the OECD Health Committee and the EU Expert Group on Health Information.

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Data and information sources

The data and information in the Country Health Profiles are based mainly on national official statistics provided to Eurostat and the OECD, which were validated to ensure the highest standards of data comparability. The sources and methods underlying these data are available in the Eurostat Database and the OECD health database. Some additional data also come from the Institute for Health Metrics and Evaluation (IHME), the European Centre for Disease Prevention and Control (ECDC), the Health Behaviour in School-Aged Children (HBSC) surveys and the World Health Organization (WHO), as well as other national sources.

The calculated EU averages are weighted averages of the 28 Member States unless otherwise noted. These EU averages do not include Iceland and Norway.

This profile was completed in August 2019, based on data available in July 2019.

To download the Excel spreadsheet matching all the tables and graphs in this profile, just type the following URL into your Internet browser: http://www.oecd.org/health/Country-Health-Profiles-2019-Denmark.xls

Demographic and socioeconomic context in Denmark, 2017

Demographic factors	Denmark	EU
Population size (mid-year estimates)	5 765 000	511 876 000
Share of population over age 65 (%)	19.1	19.4
Fertility rate[1]	1.8	1.6
Socioeconomic factors		
GDP per capita (EUR PPP[2])	38 400	30 000
Relative poverty rate[3] (%)	12.4	16.9
Unemployment rate (%)	5.7	7.6

1. Number of children born per woman aged 15-49. 2. Purchasing power parity (PPP) is defined as the rate of currency conversion that equalises the purchasing power of different currencies by eliminating the differences in price levels between countries. 3. Percentage of persons living with less than 60 % of median equivalised disposable income.
Source: Eurostat Database.

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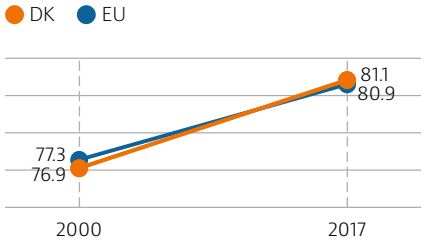
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1 Highlights

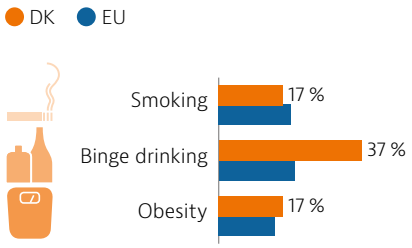
The Danish population may have seen encouraging improvements in life expectancy over the past two decades, but many of the years gained are spent with health issues or disabilities. As a result, demands on health and long-term care have been growing. Health spending per capita in Denmark is higher than the EU average, and the health system performs well in providing good access to high-quality care. Greater public health and prevention efforts could help to improve population health further and reduce health inequalities.



Life expectancy at birth, years

Health status

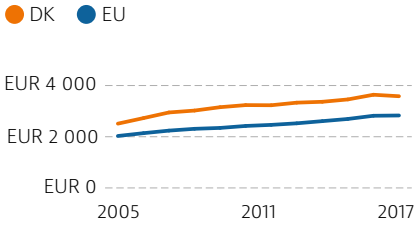
Life expectancy at birth in Denmark increased by over four years since 2000 to reach 81.1 years in 2017, slightly higher than the EU average. These gains have been driven by reductions in deaths from cardiovascular diseases, linked to reductions in some risk factors like smoking. Improvements in acute care for heart attacks and strokes have also contributed significantly.



% of adults

Risk factors

In 2017, 17 % of adults in Denmark were daily smokers, down from 30 % in 2000, and below the EU average. On a less positive note, the prevalence of other risk factors is higher than the EU average. More than one-third of adults (37 %) reported regular heavy alcohol consumption in 2014, nearly twice the EU average (20 %). As in many other countries, Denmark's obesity rate has gone up: 17 % of adults were obese in 2017, slightly higher than the EU average (15 %).



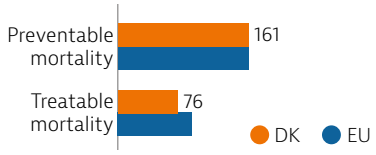
Per capita spending (EUR PPP)

Health system

Health spending in Denmark has increased at a moderate rate over the past 10 years. At EUR 3 695 per person in 2017, spending is more than 25 % higher than the EU average. Health spending accounted for 10.1 % of Denmark's GDP in 2017, above the EU average of 9.8 %. Public funding accounted for 84 % of all health spending (above the EU average of 79 %), with the remaining spending mostly paid directly out of pocket by households, mainly for pharmaceuticals and dental care.

Effectiveness

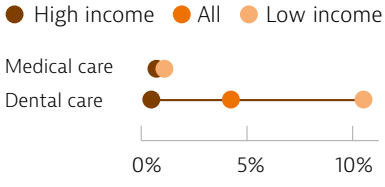
Treatable causes of mortality are lower in Denmark than the EU average, signalling that the health care system delivers effective care for potentially fatal conditions. Nonetheless, preventable mortality is only close to the EU average, indicating that a greater focus on public health could prevent many premature deaths.



Age-standardised mortality rate per 100 000 population, 2016

Accessibility

Overall, Danish people report very low unmet needs for medical care. However, unmet needs are higher for services that are less well covered by the public health insurance system such as dental care, particularly for people on low incomes.



% reporting unmet needs, 2017

Resilience

Health and long-term care expenditure is expected to continue growing in the years ahead as the Danish population ages and the burden of disease and disability shifts accordingly. Some progress has been achieved over the past decade in improving efficiency in the hospital sector and moving activities from hospital to primary and community care. Denmark's main challenges are to improve further access to primary care and secure better care coordination in the management of chronic conditions.

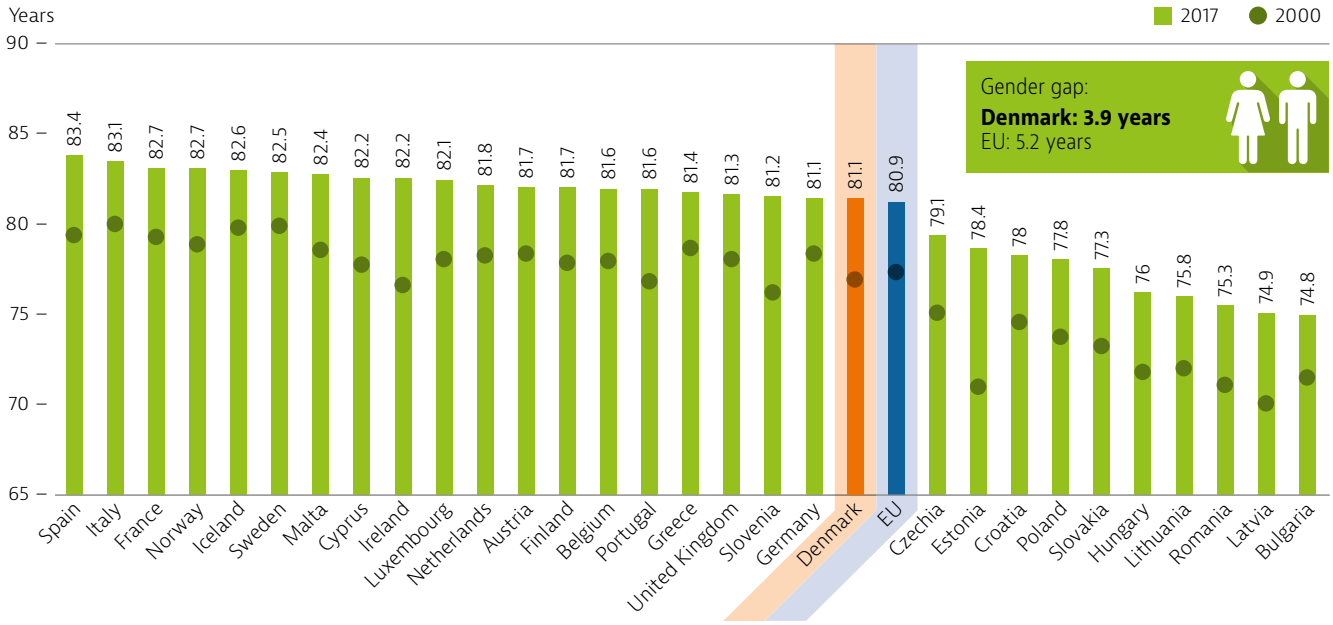
2 Health in Denmark

Life expectancy is lower than in most western European countries

In 2017, the life expectancy at birth of the Danish population was 81.1 years, close to the EU average (80.9 years). While life expectancy increased by four years between 2000 and 2017, it continues to be lower than in most other western European countries and in all Nordic countries (Figure 1).

Danish women live almost four years longer than men (83.1 and 79.2 years, respectively), but this gender gap has narrowed by nearly one year since 2000 and is now below the EU average (5.2 years).

Figure 1. Life expectancy of Danish people is lower than in most western European countries



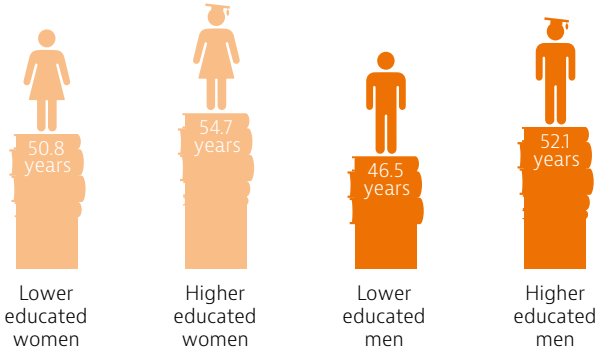
Source: Eurostat Database.

Denmark has a significant socioeconomic gap in life expectancy

As shown in Figure 2, life expectancy at age 30 of Danish men with the lowest level of education was more than five years lower than for those with the highest level in 2016. The gap was smaller among women (four years).

This education gap in longevity can be explained at least partly by differences in exposure to various risk factors and lifestyles, including higher smoking rates, poorer nutrition and higher obesity rates among men and women with low levels of education (see Section 3).

Figure 2. The education gap in life expectancy is 5.6 years for men and 3.9 years for women



Education gap in life expectancy at age 30:

Denmark: 3.9 years
EU21: 4.1 years

Denmark: 5.6 years
EU21: 7.6 years

Note: Data refer to life expectancy at age 30. High education is defined as people who have completed tertiary education (ISCED 5-8) whereas low education is defined as people who have not completed secondary education (ISCED 0-2).
Source: Eurostat Database (data refer to 2016).

Cardiovascular, cancer and respiratory diseases are the leading causes of death in Denmark

The increase in life expectancy in Denmark since 2000 has been driven mainly by reductions in mortality rates from circulatory diseases, notably ischaemic heart disease and stroke (Figure 3). These result from reductions in risk factors like smoking (see Section 3) and from improvements in acute care for people with these potentially fatal diseases (see Section 5.1).

Mortality rates from chronic obstructive pulmonary disease (COPD) have also come down since 2000 (also due mainly to reductions in smoking), although they remain much higher than the EU average.

Lung cancer is still the most frequent cause of cancer death among Danish men and women, although mortality rates have decreased since 2000, again due to reductions in smoking. Mortality rates from other types of cancer – like colorectal, prostate and breast cancer – remain significant but have also decreased since 2000.

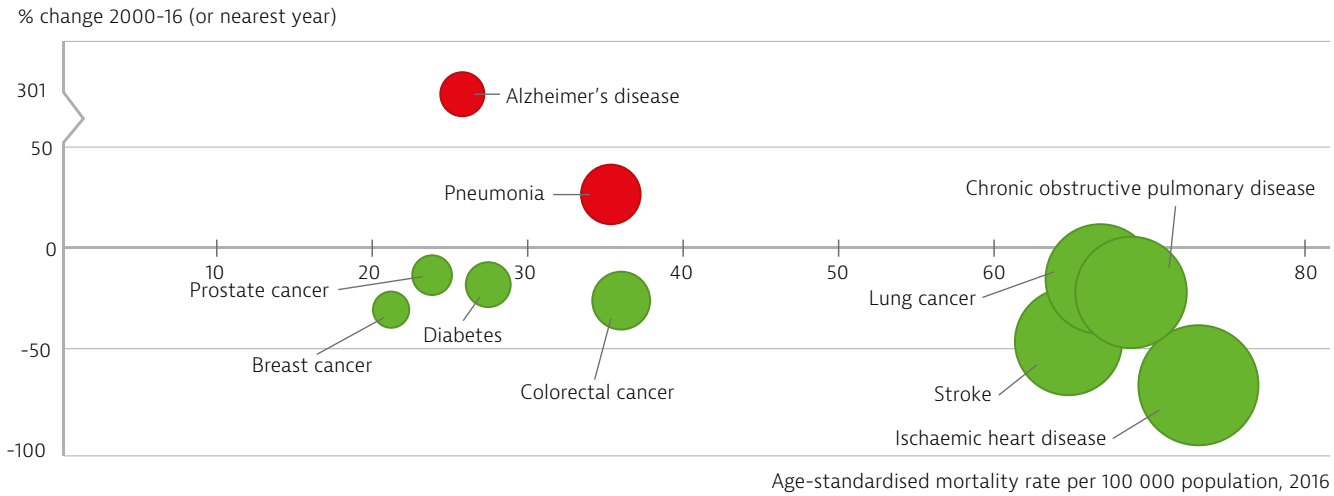
Mortality rates from Alzheimer's disease have increased greatly since 2000, becoming one of the main causes of death in Denmark. This huge increase is mainly due to improvements in diagnostics and changes in death registration practices. Mortality rates from pneumonia (which mainly affects older people) have also increased, but more modestly.

Danes live longer, but the burden of disease and disability is significant in later years

In 2017, Danes reaching the age of 65 could expect to live another 19.6 years, 2.5 years more than in 2000, although many of these years are lived with some health issues and disabilities (Figure 4). The gender gap in life expectancy at age 65 is 2.5 years in favour of women, but the gap in the number of healthy life years is much smaller because Danish women live a greater part of their lives in old age with some health issues and disabilities.[1]

While about half reported having at least one chronic condition, this does not mean that older Danes cannot lead a normal life and carry on their usual activities, and most people are able to continue to live independenly in old age. However, one in eight Danish people aged 65 and over reported some limitations in basic activities of daily living (ADL) such as dressing and eating.

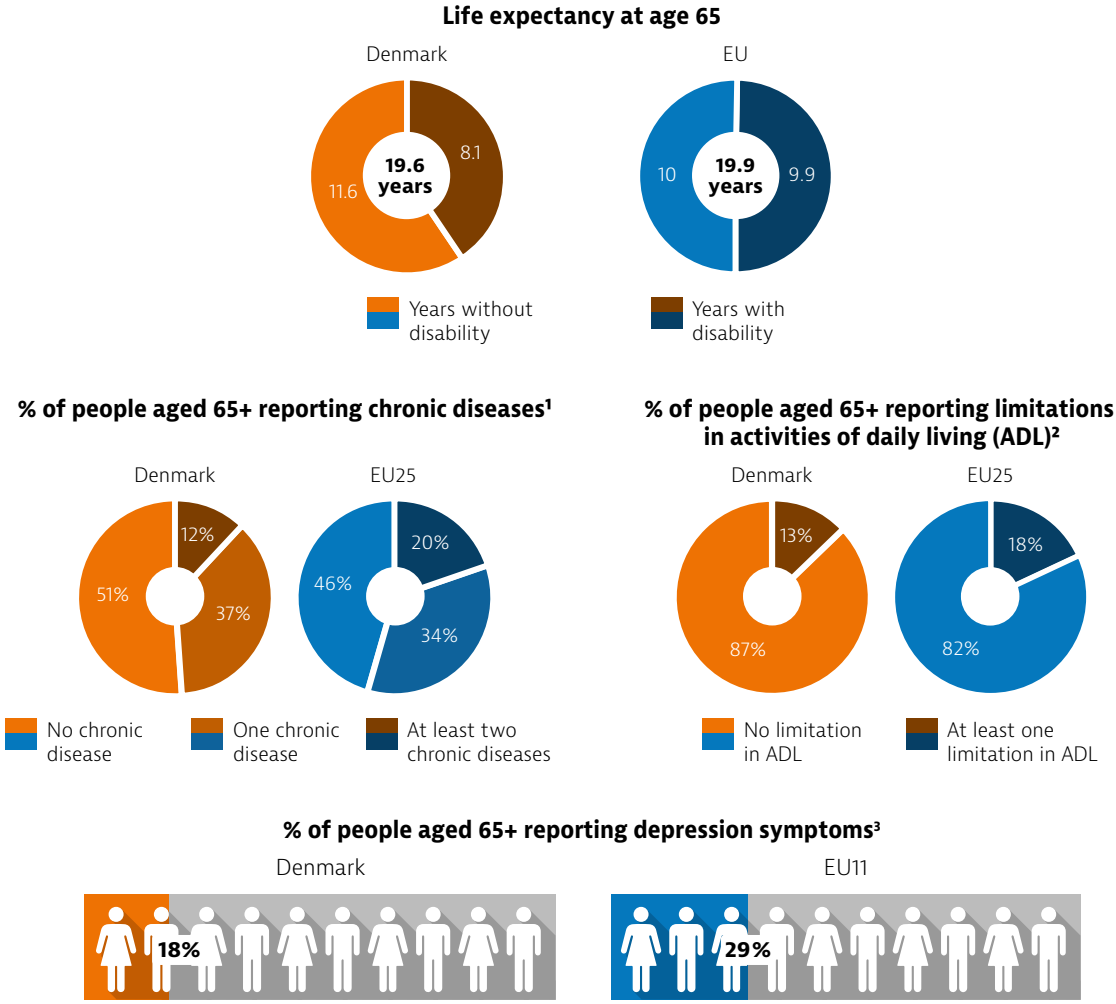
Figure 3. Death rates from cardiovascular diseases and cancer are decreasing, but increasing for Alzheimer's disease and pneumonia



Note: The size of the bubbles is proportional to the mortality rates in 2016. The increase in mortality rates from Alzheimer's and other dementias is largely due to changes in diagnostic and death registration practices.
Source: Eurostat Database.

1: 'Healthy life years' measures the number of years that people can expect to live free of disability at different ages.

Figure 4. About half of Danes over age 65 have at least one chronic disease



Note: 1. Chronic diseases include heart attack, stroke, diabetes, Parkinson disease, Alzheimer's disease and rheumatoid arthritis or osteoarthritis. 2. Basic activities of daily living include dressing, walking across a room, bathing or showering, eating, getting in or out of bed and using the toilet. 3. People are considered to have moderate depression symptoms if they report more than three depression symptoms (out of 12 possible variables).
Source: Eurostat Database for life expectancy and healthy life years (data refer to 2017); SHARE survey for other indicators (data refer to 2017).

3 Risk factors

More than two out of five deaths in Denmark can be attributed to behavioural risk factors

Estimates suggest that more than two-fifths of deaths in Denmark can be attributed to behavioural risk factors, including dietary risks, tobacco smoking, alcohol consumption and low physical activity (Figure 5; IHME, 2018).

More than one in five (12 000) deaths in 2017 can be attributed to tobacco consumption (including direct and second-hand smoking), a higher proportion than the EU average. Dietary risks (including low fruit and vegetable intake, and high sugar and salt consumption) are responsible for an estimated 13 % (over 7 000) of all deaths, a lower proportion than the EU average. About 6 % (3 500) of deaths are related to alcohol consumption and 2 % (1 200) to low physical activity, close to the EU average.

Figure 5. Behavioural risk factors account for more than 40 % of all deaths in Denmark



Note: The overall number of deaths related to these risk factors (22 000) is lower than the sum of each one taken individually (24 000), because the same death can be attributed to more than one risk factor. Dietary risks include 14 components such as low fruit and vegetable consumption, and high sugar-sweetened beverages and salt consumption.
Source: IHME (2018), Global Health Data Exchange (estimates refer to 2017).

Tobacco smoking has declined sharply and is now relatively low in Denmark

The proportion of daily smokers among adults decreased from over 30 % in 2000 to 17 % in 2017, one of the sharpest declines among all EU countries: Denmark had one of the highest smoking rates in the year 2000, but is now in the one-third of countries with the lowest rates (Figure 6).

Smoking rates among adolescents are also lower in Denmark than in most other EU countries. In 2015, among 15- to 16-year-olds, 21 % of girls and 17 % of boys reported that they had smoked cigarettes in the past month. However, in recent years tobacco products other than traditional cigarettes, like e-cigarettes, have started to become more popular, especially among younger Danes.

Excessive alcohol consumption is a major public health concern in Denmark

Limited progress has been achieved in tackling excessive alcohol consumption among adolescents. In 2015, more than half of 15- and 16-year-old boys and girls reported at least one episode of heavy episodic drinking (binge drinking[2]) during the past month, the highest proportion among all EU countries.

The proportion of adults who report heavy episodic alcohol consumption has decreased in recent years, although in 2017 more than one in four Danish adults (27 %) reported binge drinking at least once per month over the past year. The proportion among men (35 %) was almost double that among women (18 %).

2: Binge drinking is defined as consuming five or more alcoholic drinks on a single occasion for adolescents.

Adult obesity rates are growing in Denmark

More than one in six adults in Denmark (17 %) were defined as obese in 2017, a rate that has grown continuously over the past decade and is now higher than in most other EU countries. This rising trend can be partly explained by poor nutritional habits. Almost half of Danish adults report that they do not eat at least one fruit (46 %) or at least one vegetable (41 %) daily.

A greater proportion of Danish adults report doing at least moderate physical activity each week than in most other EU countries. Nonetheless, more than a quarter of adults did not meet the WHO-recommended guideline for minimum physical activity per week in 2017.

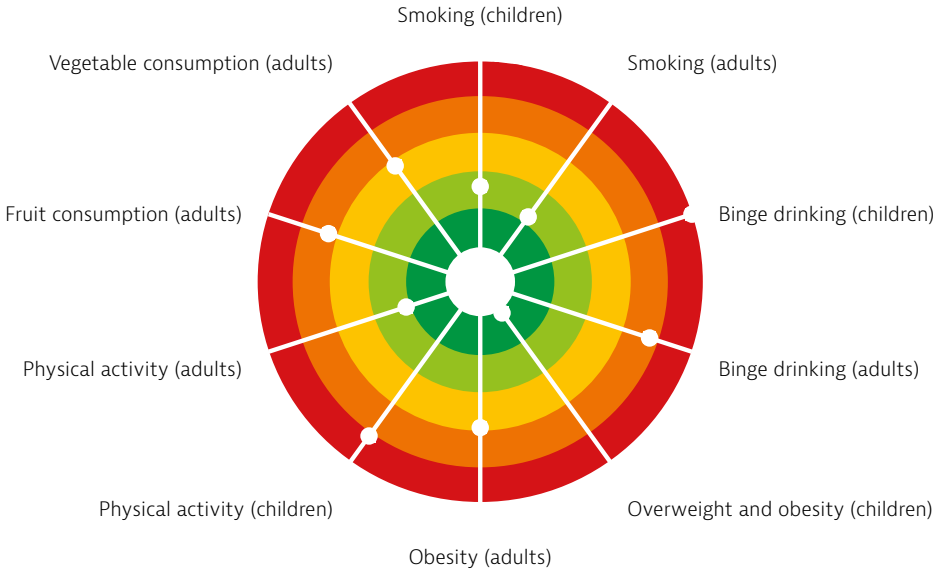
The proportion of Danish teenagers who report engaging in at least moderate physical activity each day is among the lowest across EU countries. This is particularly the case among teenage girls: only 7 % of 15-year-old girls in Denmark reported doing at least moderate physical activity in 2013-14, less than half the proportion of 15-year-old boys (16 %).

Danish municipalities have launched various initiatives to improve nutrition and physical activity as part of their general responsibilities on prevention and health promotion.

Social inequality contributes to health risks

Several behavioural risk factors in Denmark are more common among people with lower levels of education or income. For example, in 2017, smoking rates among adults with the lowest level of education were almost three times greater than among those with tertiary education. It has been estimated that social inequalities in smoking, physical activity, diet and alcohol consumption account for approximately 60 % of inequalities in mortality (Danish Health Authority, 2011).

Figure 6. Excessive alcohol consumption and growing obesity rates among adults are major public health issues in Denmark



Note: The closer the dot is to the centre, the better the country performs compared to other EU countries. No country is in the white 'target area' as there is room for progress in all countries in all areas.
Source: OECD calculations based on ESPAD survey 2015 and HBSC survey 2013-14 for children indicators; and EU-SILC 2017, EHIS 2014 and a national survey in 2017 for adults indicators.

4 The health system

Danish regional and local governments take the lead in health care planning and delivery

The Danish health system remains decentralised for service provision and public health, although there has been gradual centralisation of overall planning and regulation to the national level (Box 1). The national government takes the lead in regulation, supervision, general planning and quality monitoring; the regions are responsible for detailed planning, defining and delivering health services in hospital; and the municipalities have responsibility for health promotion, disease prevention, rehabilitation, home care and non-specialised long-term care. National health authorities set standards and assesses the quality of care.

Box 1. Recent reforms have reorganised the delivery of care

Structural reforms in 2007 merged 14 counties into five bigger regions and consolidated the municipalities from 275 to 98. These reforms also rationalised the hospital network to create fewer, larger and more specialised hospitals. Improving quality and cost control provided the political impetus for these reforms to centralise and concentrate resources. Alongside hospital modernisation, the reforms also sought to ensure more coherent patient pathways (notably for cancer and heart disease) and to strengthen quality control.

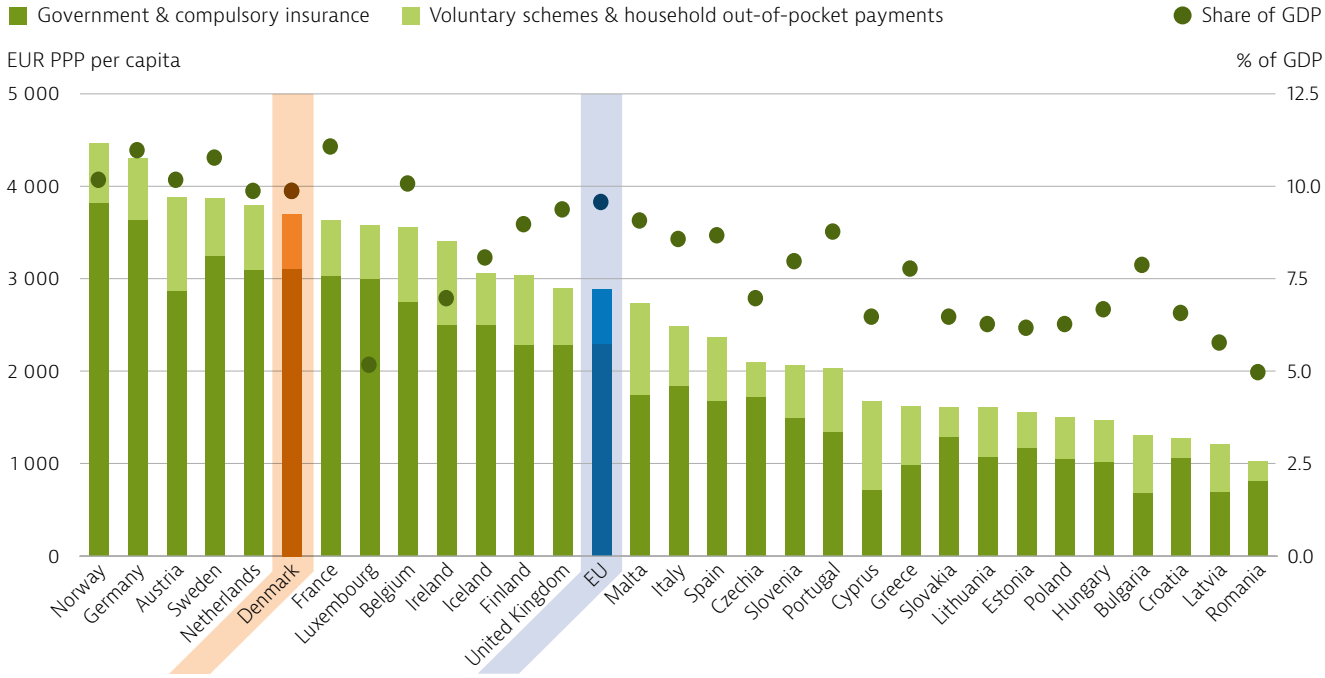
A new series of initiatives was launched in 2018 to strengthen coordination of care at all levels. These included efforts to address the shortage of general practitioners (GPs) in underserved areas and, more broadly, to better meet the needs of patients with chronic conditions.

Health spending in Denmark is higher than in most other EU countries

In 2017, Denmark spent 10.1 % of its GDP on health, above the EU average (9.8 %), but a lower share than in other Nordic countries like Sweden and Norway (Figure 7). Spending per person was also higher than the EU average – EUR 3 695 in 2017 compared to EUR 2 884 (adjusted for differences in purchasing power).

Health spending in real terms has grown at a rate of 1.4 % per year on average since 2009, a growth rate similar to that in the EU as a whole.

Figure 7. Spending on health in Denmark is high both on a per capita basis and as a share of GDP



Source: OECD Health Statistics 2019 (data refer to 2017).

Outpatient care is the main category of health spending in Denmark

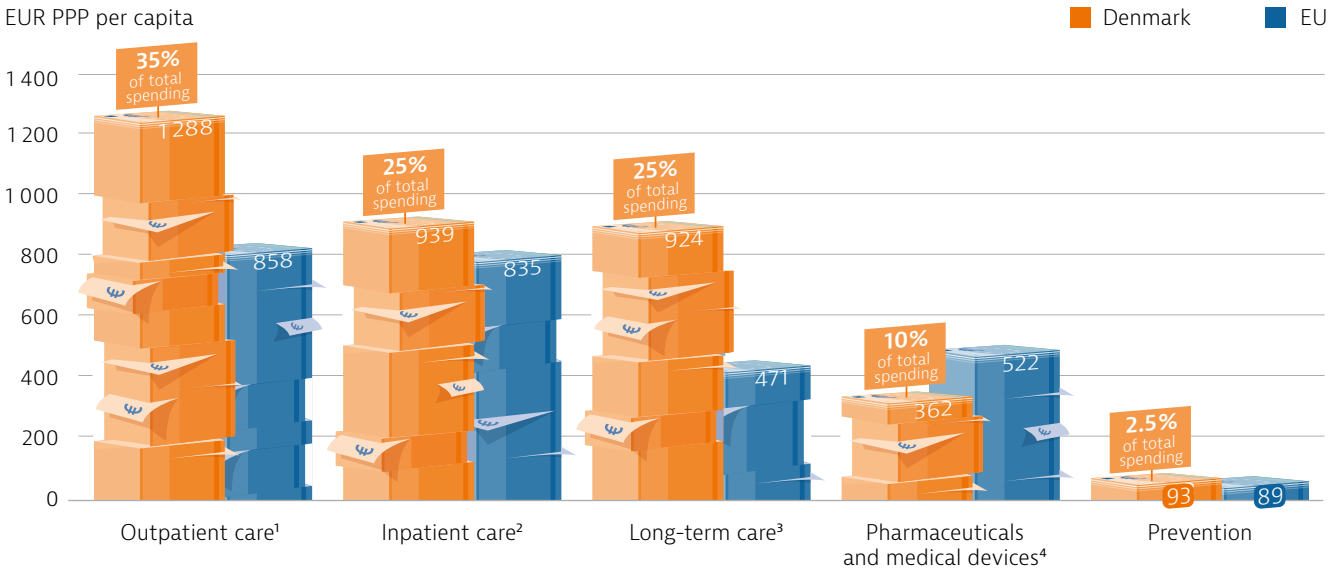
The largest category of health spending in Denmark is outpatient care (mostly including GP appointments and ambulatory care in and outside hospital), which accounted for over one-third of all health spending in 2017 (Figure 8). This reflects reform efforts that have sought to contain spending on inpatient hospital care while developing ambulatory care.

Inpatient care (typically provided in hospitals) accounted for one-quarter of health spending, a lower share than a decade ago. Long-term care also accounted for one-quarter of health spending, nearly twice as much as the EU average, although somewhat lower than in Sweden and Norway.

On the other hand, spending on pharmaceuticals and medical devices dispensed outside hospitals is low in Denmark, accounting for just 10 % of total health expenditure in 2017 (compared to 18 % in the EU as a whole). This reflects ongoing efforts to control the growth of pharmaceutical spending (see Section 5.3). It is also important to note that this does not include pharmaceutical expenditure in hospitals, which is reported under inpatient or outpatient care. The inclusion of pharmaceutical spending in hospitals would add another 70 % to the retail spending.

Only 2.5 % of health spending in Denmark was allocated to prevention programmes in 2017, less than the 3.1 % EU average. However, there is significant uncertainty concerning resources allocated to prevention and health promotion because some activities are included in outpatient care and in general municipal budgets.

Figure 8. The main categories of health spending are outpatient, inpatient and long-term care



Note: Administration costs are not included. 1. Includes home care; 2. Includes curative-rehabilitative care in hospital and other settings; 3. Includes only the health component; 4. Includes only the outpatient market.
Source: OECD Health Statistics 2018; Eurostat Database (data refer to 2017).

Danish residents have universal access to a wide range of health services free of charge

Financing for the health system is from general proportional income tax for the central budget and proportional income tax at the local level. The public share of health spending has remained relatively stable at around 84 % of total health expenditure, substantially higher than the EU average (79 % in 2017).

Out-of-pocket (OOP) spending is low overall, accounting for only 14 % of all health spending in 2017 (compared with an EU average of 16 %), but still plays a major role in paying for medicines, dental services, physiotherapy and glasses. While a significant proportion of the population are covered by some private health insurance (approximately 40 % by complementary private insurance and 35 % by duplicate private insurance), spending through voluntary health insurance amounts to less than 3 % of all health spending.

Hospitals are mostly publicly owned while most GPs are self-employed

Residents in Denmark are generally required to register with a GP who provides primary care as well as playing a gatekeeping role for access to hospital and specialist care. GPs are predominantly self-employed in private solo or group practices and contract with regional health authorities.

Almost all hospitals are owned and operated by the Danish regions (fewer than 5 % of hospital beds are in private hospitals). Most hospitals provide both inpatient and outpatient care, as well as 24-hour emergency care.

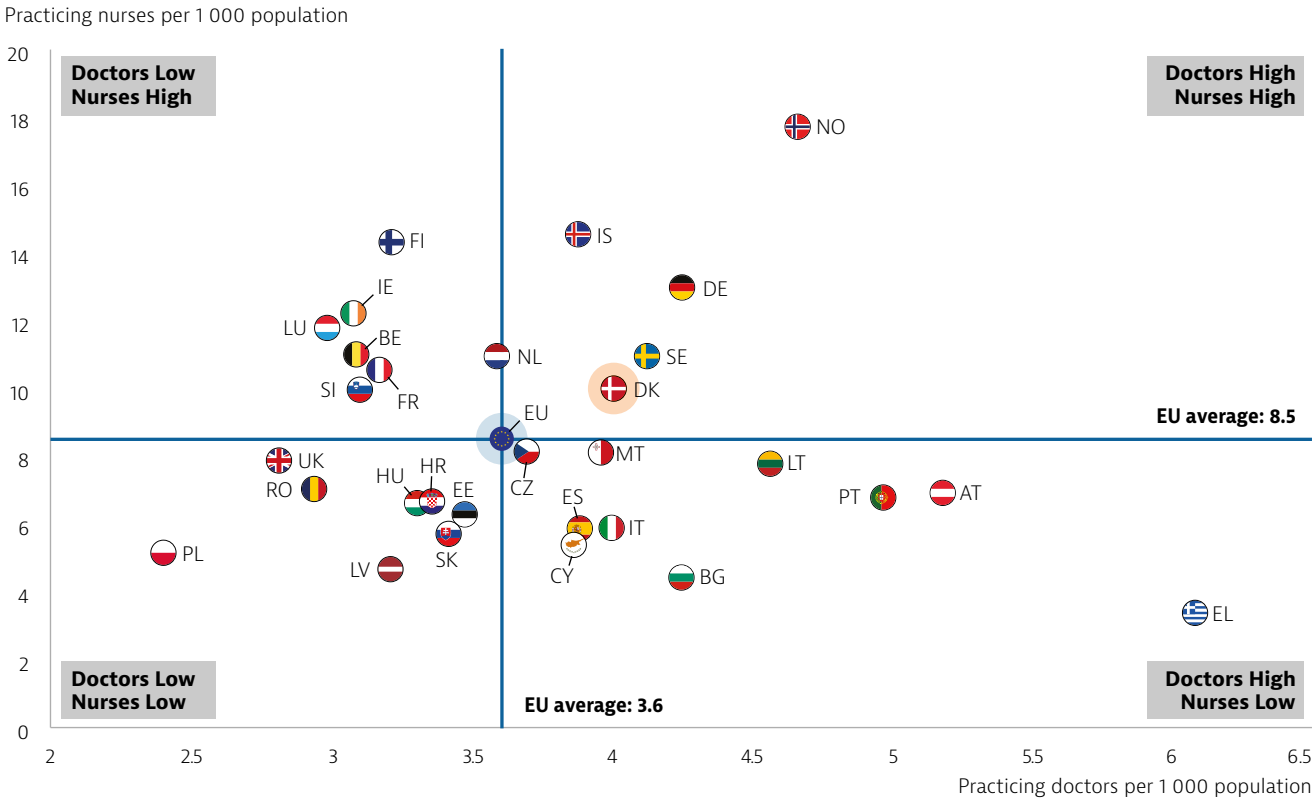
Denmark has relatively few hospital beds and a short average length of stay

The number of hospital beds per population has declined steadily in Denmark since the early 1990s, and in 2016 was only about half the EU average. The average length of stay (ALOS) in hospital has also declined through changes in treatment options and policies to promote earlier discharge from hospital for patients who no longer need to stay (see Section 5.3).

Denmark has a sizeable health workforce

The number of doctors and nurses per population in Denmark is higher than the EU average, although it is lower than in Sweden and Norway (Figure 9). About one-fifth of doctors are GPs; most others are specialists.

Figure 9. Denmark has a higher number of doctors and nurses than the EU average



Note: The number of nurses in Denmark is lower than previously reported because the group of health personnel formerly reported in the category of 'associate professional nurses' is now reported in the category of 'caring personnel'. In Portugal and Greece, the data refer to all doctors licensed to practise, resulting in a large overestimation of the number of practising doctors (e.g. of around 30 % in Portugal). In Austria and Greece, the number of nurses is underestimated as it only includes those working in hospital.
Source: Eurostat Database (data refer to 2017 or the nearest year).

5 Performance of the health system

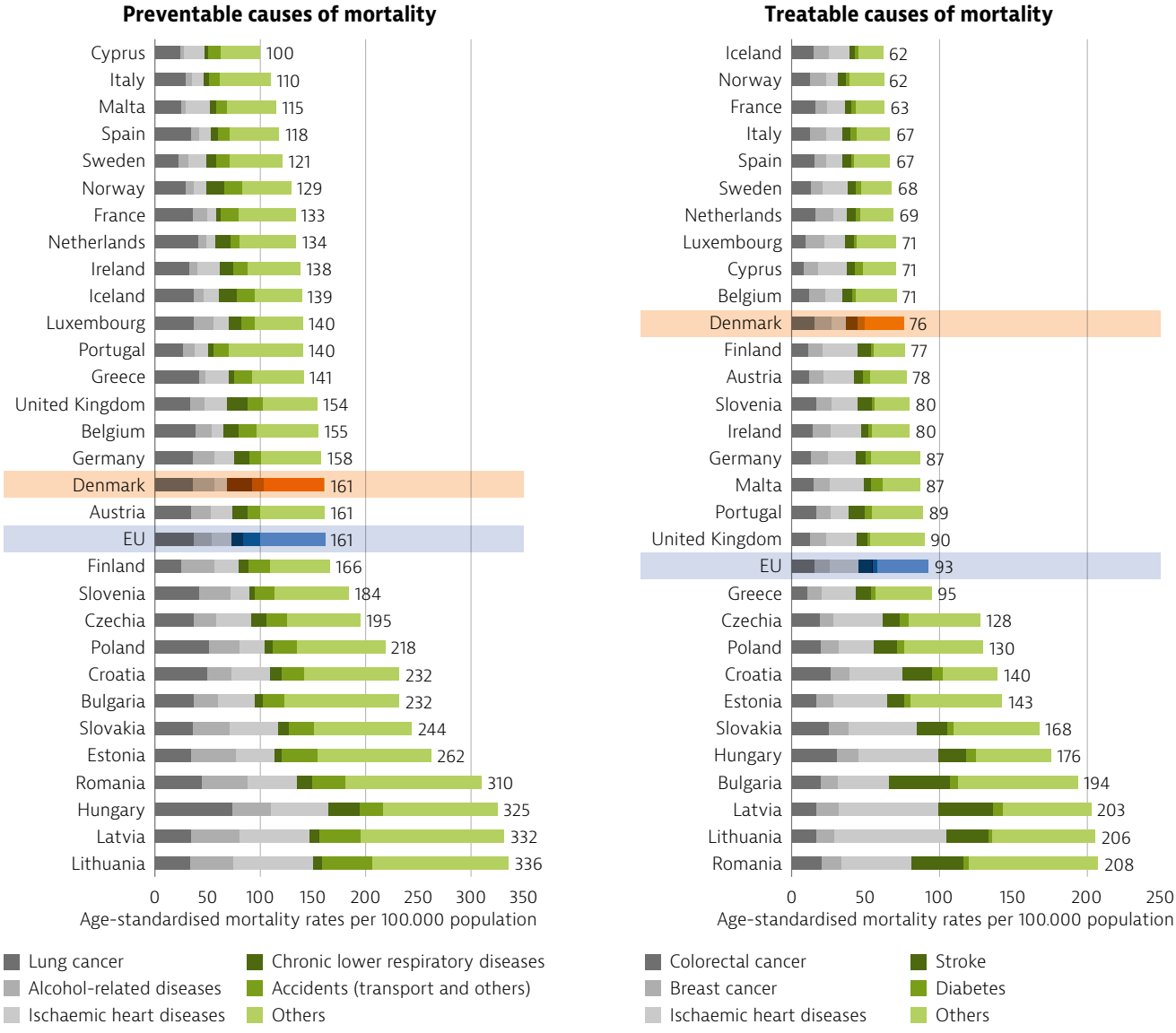
5.1. Effectiveness

Preventable mortality is close to the EU average but mortality from treatable causes is low

Preventable causes of mortality in Denmark are only slightly below the EU average, suggesting that giving greater priority to prevention might aid in reducing future premature deaths. The main causes of preventable mortality in Denmark are lung cancer, accidents (including road accidents and other types of accidental deaths), alcohol-related deaths and ischaemic heart disease (Figure 10). The preventable mortality rate fell by over 10 % between 2011 and 2016, due mainly to reductions in mortality from ischaemic heart disease.

Denmark fares better in terms of treatable causes of mortality, indicating that the health system is effective in saving the lives of people with life-threatening conditions. The leading causes of treatable mortality are colorectal and breast cancer, ischaemic heart diseases and stroke. Between 2011 and 2016, the treatable mortality rate fell by 16 % to well below the EU average.

Figure 10. Preventable mortality is around the EU average but mortality from treatable causes is low



Note: Preventable mortality is defined as death that can be mainly avoided through public health and primary prevention interventions. Mortality from treatable (or amenable) causes is defined as death that can be mainly avoided through health care interventions, including screening and treatment. Both indicators refer to premature mortality (under age 75). The data are based on the revised OECD/Eurostat lists.
Source: Eurostat Database (data refer to 2016).

Tobacco policies have reduced tobacco-related deaths, but further progress is possible

Smoking rates have fallen sharply in Denmark since 2000 and are now much closer to the level seen in other Nordic countries, but new tobacco products (such as e-cigarettes) are becoming more popular and pose new challenges. The potential to further reduce smoking rates among adults is considerable, as nearly three-quarters of daily smokers reported in 2017 that they wanted to stop smoking (Danish Health Authority et al., 2017).

National smoking cessation programmes have been put in place to supplement municipal services for those who do not want to participate in individual counselling programmes. A digital (mHealth) programme is available for adult smokers (E-kvit) and another has been created for young people (XHALE).

The Danish Act on Tobacco, adopted in June 2016, includes a series of regulations such as requirements for health warnings on tobacco products, a ban on any labelling suggesting that a specific tobacco product is less harmful than others, and a ban on the sale of snuff (although the sale of chewing tobacco remains legal). High taxation on tobacco products is also used to provide a financial disincentive for young people to start smoking, and to encourage current smokers to stop.

Alcohol control policies have had little impact in reducing underage and excessive drinking

Underage and excessive alcohol consumption are still major public health issues in Denmark (see Section 3). One in 14 adults (7 %) in 2017 exceeded the high-risk threshold for alcohol consumption set by the Danish Health Authority. At least one-third of this group recognised that they had a drinking problem and said they would like to reduce their consumption (Danish Health Authority, 2017).

A national law prohibits the sale of alcohol to anyone under the age of 16. Nonetheless, a large proportion of Danish adolescents drink alcohol and many report having been drunk more than once. The Danish Health Authority's alcohol control activities focus mainly on preventing alcohol abuse in certain settings through projects such as 'Serving drinks responsibly' and 'Youth and alcohol' campaigns at festivals and music venues. The Danish Health Authority also provides evidence-based recommendations concerning alcohol prevention to municipalities.

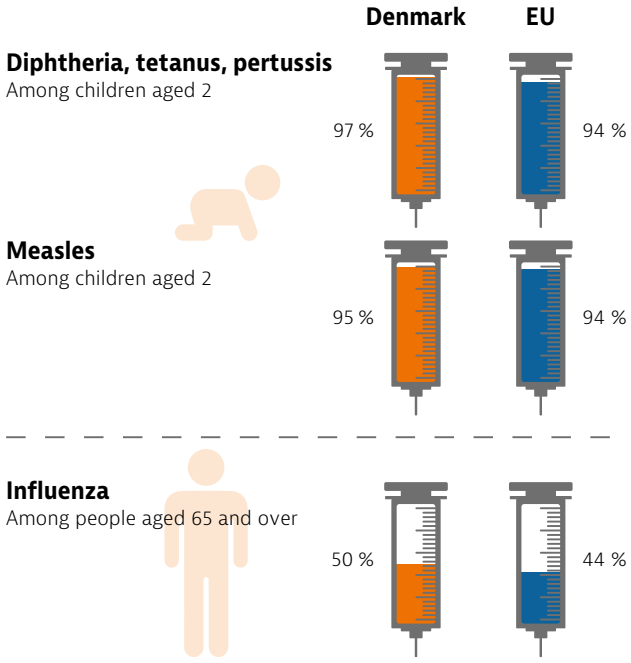
Vaccination is high among Danish children but could be improved among older people

Vaccination remains one of the most effective ways to reduce the spread of infectious diseases. The Danish Health Authority is responsible for developing and overseeing the implementation of national vaccination programmes for children and adults. The Authority recommends different types of vaccines for children, although none is mandatory, and recommends vaccination against influenza among elderly people and other at-risk groups (Rechel, Richardson and McKee, 2018).

The vaccination rates of Danish children for measles, diphtheria, tetanus and pertussis are high, reaching 95 % or more, as recommended by WHO (Figure 11).

Vaccination against influenza is free of charge for people aged 65 and over as well as for other at-risk groups. Although coverage in this population group remains well below the 75 % target recommended by WHO, it increased in recent years from 44 % in 2015-16 to 50 % in 2017-18. However, part of this increase may simply be due to improved registration of vaccinations given to elderly people in the Danish Vaccination Register.

Figure 11. Vaccination rates are high for children, but only half of older people are vaccinated against influenza



Note: The data refer to the third dose for diphtheria, tetanus and pertussis, and the first dose for measles.
Source: WHO/UNICEF data for children; OECD Health Statistics 2019 (for people aged 65 and over). Data refer to 2018 or nearest year.

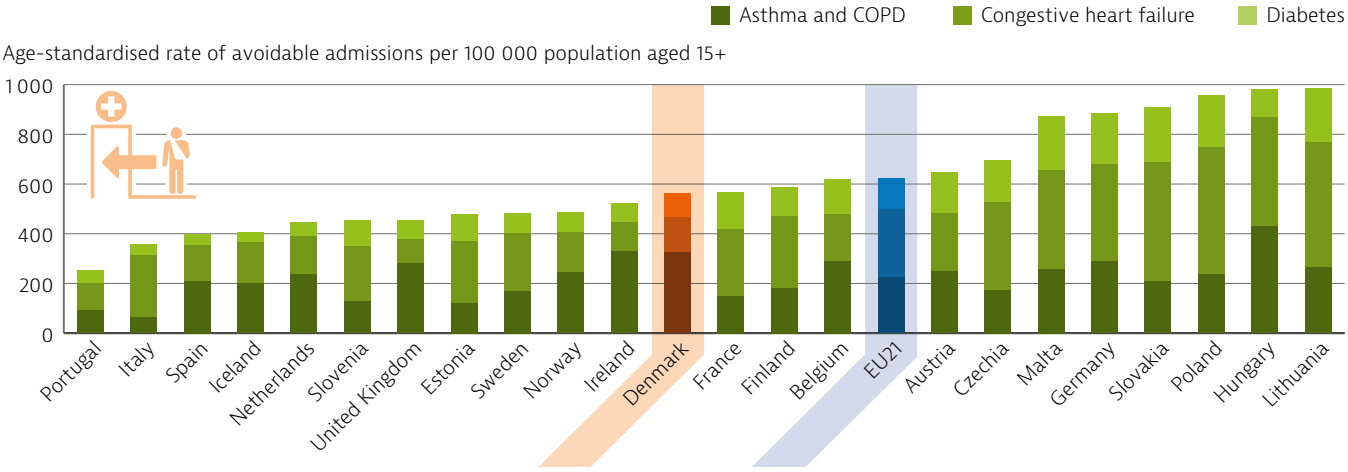
The management of chronic conditions could be improved

Hospital admission rates in Denmark remain relatively high for some chronic conditions that could be better managed in primary care to prevent hospitalisations. This is particularly the case for asthma and COPD, for which Denmark has one of the highest potentially avoidable admission rates (Figure 12).

Considerable variation also exists between regions and municipalities in potentially avoidable admissions. For example, admission rates for diabetes varied by 50 % across regions in 2015 (controlling for the number of people with diabetes in each region). More broadly, avoidable admissions of people over age 65 were twice higher in some municipalities than in others in 2015 (ranging from less than 40 to over 90 per 1 000 population aged over 65). These admissions were positively correlated with proximity to a hospital (OECD, 2017).

Denmark is pursuing efforts to promote greater use of eHealth and more specifically telehealth to improve the quality and efficiency of care for people with chronic conditions and reduce hospital admissions (Box 2).

Figure 12. Potentially avoidable hospital admissions are high for some chronic diseases



Source: OECD Health Statistics 2019 (data refer to 2017 or nearest year).

Box 2. A renewed effort to promote telehealth in Denmark

In March 2018, a broad partnership under Healthcare Denmark released a White Paper outlining the Danish approach to the national implementation of telehealth to improve quality and efficiency of care. The partnership includes the Ministry of Health, the Danish regions and a number of industry partners.

The White Paper builds on many years of telehealth development and aims to further implement and deploy a number of successful telehealth projects across the country. For example, between 2013 and 2018, approximately 1 400 patients with COPD in the North Denmark region participated in a home monitoring programme offered by TeleCare North. These participants reported improved quality of life, and the number and length of hospitalisations were reduced by 11 % and 20 %, respectively. Building on these positive results, the offer of home monitoring will be expanded to patients with heart failure.

The White Paper also promotes use of telehealth for prevention purposes and to increase patient awareness of risk factors. Some telehealth projects are designed to motivate patients with chronic diseases to adopt healthier lifestyles and improve compliance with treatment.

Source: Healthcare Denmark (2018).

Hospitals provide high-quality treatment for people requiring acute care

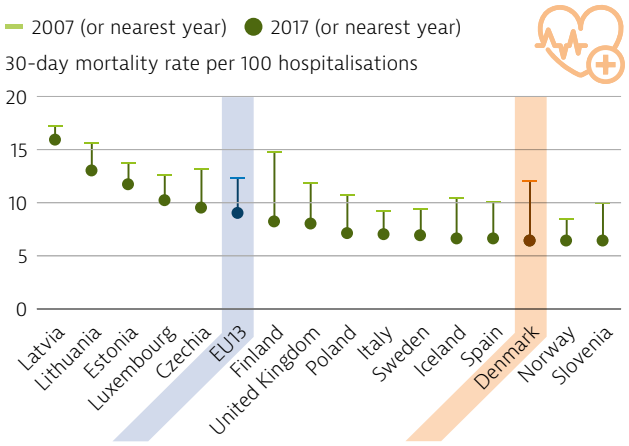
Hospitals in Denmark provide effective treatment for people requiring acute care for life-threatening conditions, notably in the area of cardiovascular diseases. Substantial progress has been achieved over the past decade in reducing mortality rates for people admitted to hospital for acute myocardial infarction (AMI) through streamlining emergency care processes and improving acute care treatments (Figure 13).

Cancer care is generally good but incidence and mortality remain high

Survival rates following diagnosis for different types of cancer have also improved in Denmark over the past decade and compare favourably with other EU countries (Figure 14). In the case of breast cancer, the high survival rate is partly due to relatively high screening rates, resulting in earlier diagnosis: in 2016 over 80 % of Danish women aged 50-69 had been screened within the past two years as recommended, compared with only about 60 % in the EU as a whole (OECD, 2019).

However, mortality rates for many types of cancer remain higher in Denmark than in most other EU countries because of higher incidence of new cases, notably for lung and colorectal cancer. The new tobacco control policies adopted since 2016 should help to reduce mortality from lung cancer further.

Figure 13. Mortality rates following hospital admission for acute myocardial infarction are low



Note: Figures are based on patient data and have been age-sex standardised to the 2010 OECD population aged 45+ admitted to hospital for AMI.
Source: OECD Health Statistics 2019.

The current cancer plan (which is Denmark's fourth) was launched in February 2017 and will run until 2020. The plan is based on an agreement between the national government, Danish regions and local government, and its implementation is monitored by the Ministry of Health and the National Board of Health. The national government has allocated a budget of 2.2 billion krone (about EUR 295 million) for 2017-20 to improve cancer prevention, detection and treatment. The plan includes three national goals and a series of 16 new initiatives such as promoting a greater use of home-based treatments or treatments close to the patient's home, and increasing screening and early detection efforts.

Figure 14. Five-year cancer survival rates are generally higher than the EU average



Prostate cancer
Denmark: 86 %
EU26: 87 %

Breast cancer
Denmark: 86 %
EU26: 83 %

Colon cancer
Denmark: 62 %
EU26: 60 %

Lung cancer
Denmark: 17 %
EU26: 15 %

Note: Data refer to survival five years after diagnosis for people diagnosed between 2010 and 2014.
Source: CONCORD programme, London School of Hygiene and Tropical Medicine.

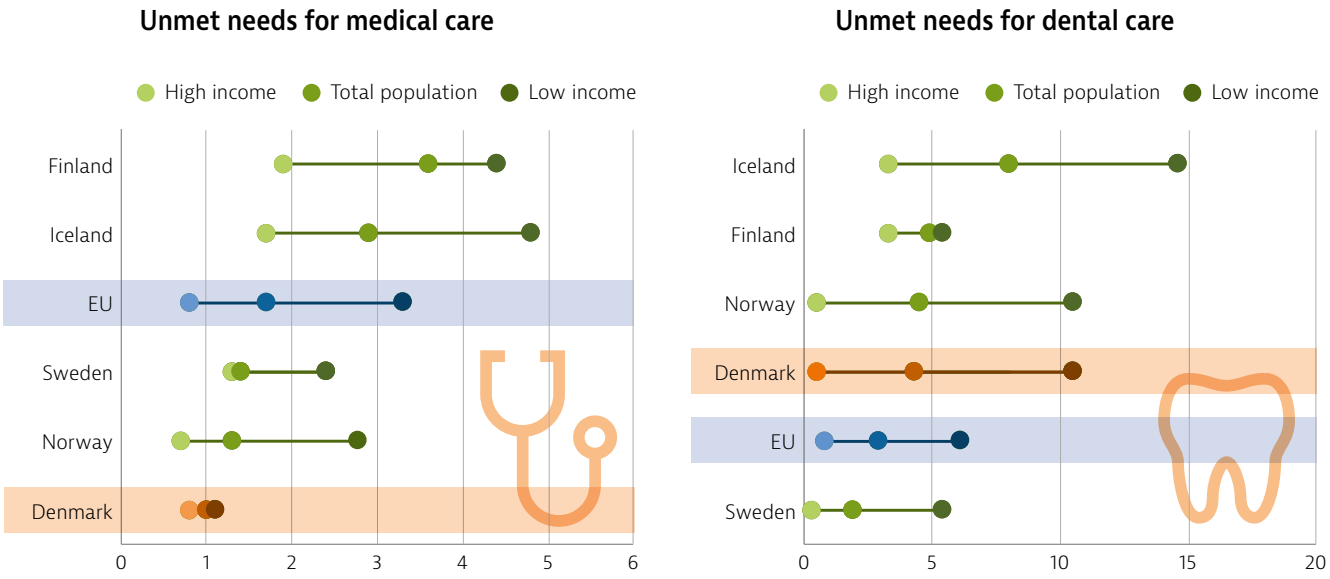
5.2. Accessibility

Extensive public coverage for medical services results in low levels of unmet needs

All Danish citizens are covered by the public health insurance system, which covers most of the cost of medical services provided (see Section 4). Unmet needs for medical care due to cost, distance or waiting times are very low, reported by only 1 % of the population in 2017. There is also almost no difference in unmet care needs reported by people in the lowest and highest income quintile (Figure 15).

However, unmet needs are greater for services that are less covered by public health insurance. For example, just over 4 % of Danish people reported some unmet needs for dental care in 2017, mainly for financial reasons. This proportion was much greater among people in the lowest income quintile (more than 10 %).

Figure 15. Levels of unmet needs are low for medical care but higher for dental care



Note: The data refer to unmet needs for medical or dental examination or treatment due to costs, distance to travel or waiting times.
Source: Eurostat Database, based on EU-SILC (data refer to 2017).

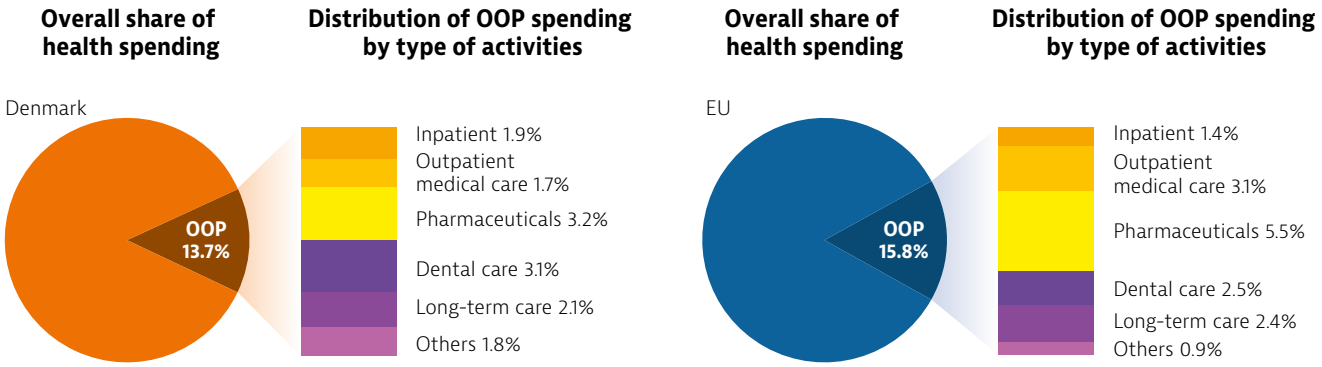
Denmark's out-of-pocket payment caps protect vulnerable groups from high spending

While there is no cost-sharing for core hospital and primary care services, people pay out of pocket for adult dental care (35-100 % of total costs), pharmaceutical prescriptions purchased outside hospitals and other medical devices like hearing aids and eyeglasses. Subsidies for outpatient pharmaceuticals increase progressively and there is an overall cap of 4 030 krone (EUR 550) per year. Additional means-tested social assistance for older people and socially disadvantaged people also exists (Commonwealth Fund, 2017).

A growing proportion of Danish people purchase complementary voluntary insurance to pay for pharmaceuticals, dental care, physiotherapy and other services, while supplementary (duplicate) insurance (providing expanded and faster access to private providers) is often provided as an employment benefit. Nonetheless, payments through voluntary health insurance amount to less than 3 % of all health spending.

People in Denmark pay for about 14 % of their health care costs directly out of pocket, a lower share than in the EU as a whole (Figure 16). This share has remained fairly stable over the past decade. A large part of OOP payments go to pharmaceuticals and dental care.

Figure 16. Out-of-pocket spending is mainly on pharmaceuticals and dental care



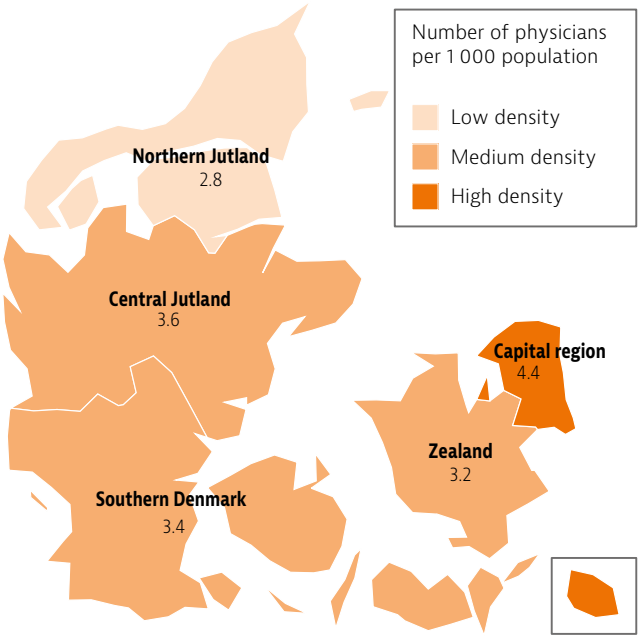
Source: OECD Health Statistics 2019 (data refer to 2017).

Denmark has a high number of health professionals, but some shortages exist

The number of doctors and nurses per population in Denmark is slightly higher than the EU average (see Section 4). However, only about 20 % of doctors are GPs, and Denmark faces shortages, particularly in rural and remote areas, including in the more remote islands and the northern part of the country (Figure 17).

There are also large differences across municipalities in the country. In March 2018, more than 90 % of GPs in 12 municipalities were no longer accepting new patients, whereas this proportion was less 30 % in 12 other municipalities.

Figure 17. The number of doctors per population is lower in Northern Jutland than in other regions



Source: Eurostat Database (data refer to 2015).

More remote areas can use a range of measures to deal with the shortage of doctors. For instance, changes to the Health Act in 2013 made it possible for regions to outsource general medicine services to a private health care provider or to establish an intermediate regional primary health care clinic.

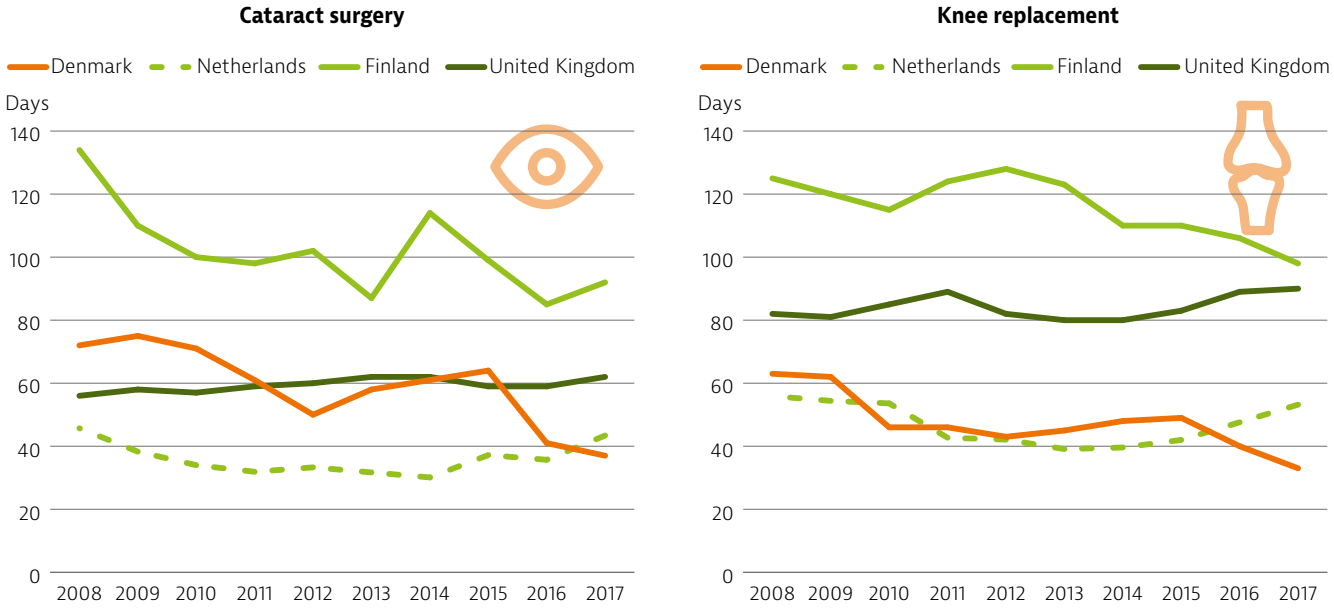
In 2018, the government launched a new strategy to strengthen general practice throughout the country, accompanied by a series of 16 initiatives. These include increasing the number of students choosing general practice as a specialty and improving the working conditions of GPs, retaining older GPs (notably by exempting them from the new re-accreditation requirement), promoting greater task-sharing with nurses and other competent staff in general practice, and reducing the administrative burden of patient records and developing better digital solutions to communicate with patients and other health care providers.

Policies to reduce waiting times have been effective

One of the principles of the Danish Health Act is to ensure short waiting times for care. Denmark started using a combination of maximum waiting time guarantees and patient choice of provider to reduce waiting times in the 2000s. In 2002, patients had a maximum waiting time guarantee of two months, reduced to one month in 2007, combined with a free choice of provider. Under this scheme, if the hospital anticipates that the guarantee will not be fulfilled, it is obliged to inform the patient about alternative options, which may be in other public or private hospitals. If the treatment is outside the region's own hospitals, expenses are covered by the region where the patient lives. In addition to these measures, there has been considerable success in increasing activities and productivity in public hospitals by reducing the average length of stay (ALOS) and shifting to ambulatory treatment.

This combination of policies led to a reduction in waiting times for a cataract surgery from about 70 days in 2008 to 50 days in 2012 and less than 40 days in 2017. For knee replacement, the waiting times went down from about 60 days in 2008 to less than 40 days in 2017. These waiting times in Denmark are much lower than in many other EU countries (Figure 18).

Figure 18. Waiting times for elective surgery are lower in Denmark than in many EU countries



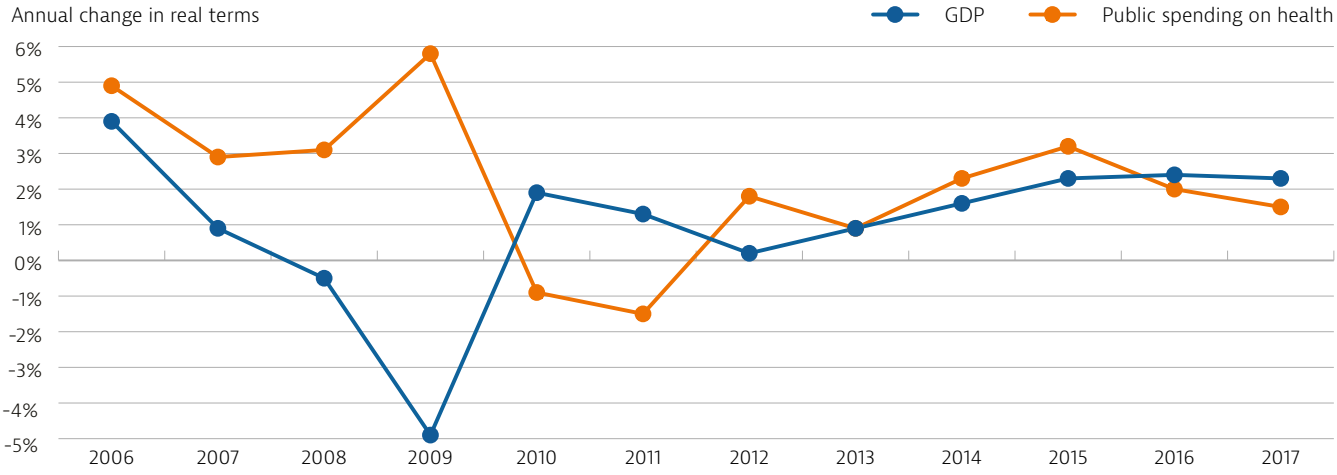
Note: The data relate to median waiting times, except for the Netherlands, where they relate to average waiting times (resulting in an overestimation).
Source: OECD Health Statistics 2019.

5.3. Resilience[3]

Public spending on health is high, but long-term fiscal sustainability is not threatened

Health expenditure in Denmark exceeded 10 % of GDP in 2017 and is mostly financed by public sources (see Section 4). Following reductions in 2010 and 2011 after the economic crisis, public spending on health has grown more or less at the same rate as GDP since 2012 (Figure 19), and the share of GDP allocated to health has therefore remained fairly stable. This slow growth in health spending reflects cost-control efforts, notably to limit costs in hospitals and for pharmaceuticals.

Figure 19. Public spending on health has grown at the same rate as GDP in recent years



Source: OECD Health Statistics 2019.

3: Resilience refers to health systems' capacity to adapt effectively to changing environments, sudden shocks or crises.

Looking to the future, demographic changes and technological progress are projected to add pressures to health and long-term care spending. According to the latest projections of the European Commission's Ageing Working Group, public spending on health as a share of GDP is projected to grow by 1.0 percentage point between 2016 and 2070, while pressures are expected to be greater on long-term care expenditure with public spending expected to growth by 2.2 percentage points of GDP over this period (European Commission-EPC, 2018). This highlights the challenge of responding efficiently to the growing needs for health and long-term care in the years ahead.

The efficiency of the hospital system has improved

Between the early 2000s and 2018, hospitals were subject to an annual 2 % productivity increase requirement (that is, each hospital was expected to achieve a 2 % increase in activity without a corresponding increase in funding). Productivity increased by 2.4 % on average per year between 2003 and 2015. However, this measure was abandoned in 2018 due to concerns that it was providing incentives to keep some activities in hospital which could be moved outside.

Denmark has a comparatively low number of hospital beds per population and average length of stay (Figure 20). The reduction over the past decade in hospital beds does not seem to have resulted in any discernible reduction in quality, suggesting that the hospital system is functioning more efficiently.

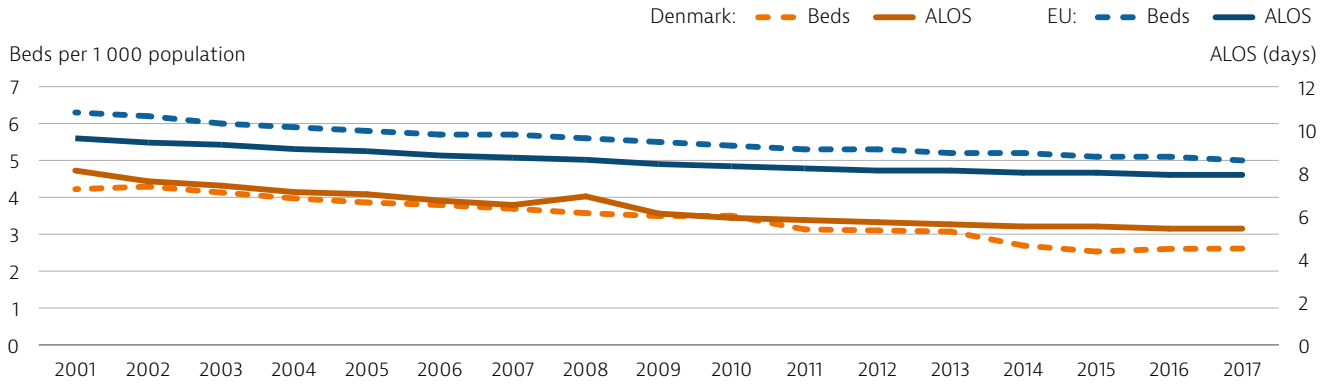
Substantial progress has been achieved, notably in reducing delayed discharges from hospitals, thereby reducing the length of stay for patients who no longer need to remain in hospital. In 2016, delayed discharges (relative to the size of the population) were much lower in Denmark than in Norway, Sweden, the United Kingdom and Ireland (Table 1).

Table 1. Bed days related to delayed discharges are much lower than in other countries (2016)

	Number of bed days	Bed days/1 000 population
Denmark	30 844	5
Ireland	201 977	43
Norway	81 411	16
Sweden	393 124	40
England	2 254 821	34

Source: Suzuki (forthcoming), 'Reducing delays in hospital discharge', OECD Health Working Papers.

Figure 20. Numbers of hospital beds and average length of stay have fallen and are relatively low



Source: Eurostat Database.

Financial penalties are imposed on municipalities (who are responsible for delivering rehabilitation and long-term care in the community) for every additional day a patient spends in hospital after they are ready for discharge. A sharp increase in these penalties in January 2017 – from 1 976 krone (EUR 265) to 3 952 krone (EUR 530) per day, rising to 5 928 krone (EUR 795) for the third and all subsequent days of delay – has been associated with a further reduction in the number of delayed discharges reported by hospitals (OECD/EU, 2018).

The implementation of acute care teams, including expanded roles for nurses and care assistants, has also contributed to preventing hospitalisation and enabling early discharge (Box 3).

Box 3. The development of home-based care options is helping to reduce hospitalisation

Municipalities in Denmark are responsible for providing home nursing services when prescribed by a medical doctor or on the basis of an assessment of an individual need. A recent development that has occurred in nearly all municipalities is the delivery of more acute care services at home, providing more intensive treatment than what used to be possible under more traditional home nursing services.

In 2018, 99 % of municipalities were delivering such acute care services as part of their home nursing services. The delivery of these acute care services at home must meet national standards set up by the Danish Health Authority. The services involve different health professionals, such as nurses and care assistants with extensive experience. These acute care services must be available 24 hours a day, 7 days a week. Both general home nursing services and these more acute care services also work closely with general practices and hospitals.

Care coordination could be improved

Denmark's reduction in the number of hospital beds has placed more pressure on primary and community care. Despite added pressure, primary care services in Denmark appear to be performing efficiently under growing demands. Access to GP practices outside normal working hours has been improved in several ways to reduce the number of visits to hospital emergency departments. The first point of contact, most often a physician but potentially a nurse in Zealand and the Capital region, is reached via a regional telephone service and decides whether to refer the patient for a home visit or to an after-hours clinic, usually co-located with a hospital emergency department. GPs can choose to take on more or less work within this programme and receive higher payment for after-hours work (Commonwealth Fund, 2017).

The need for better care coordination and cost control have been the key drivers behind the reorganisation of primary care and efforts to foster greater team work and more efficient task-sharing. Nonetheless, the lack of care coordination is still a major issue, particularly for patients with chronic conditions, hence some municipalities have created 'health centres', where general practice, allied health personnel and office-based specialist services are provided on the same site. However, evaluation of the health centres suggests that although they offer various services under one roof, they do not in practice contribute significantly to increased integration of care (OECD, 2017).

A number of initiatives promote access to new medicines and control pharmaceutical costs

Coverage decisions for new pharmaceuticals are relatively quick in Denmark, taking approximately 1-2 months. Patient organisations (represented by the Association of Danish Patients) are involved in decisions taken by the recently established Medicine Council, recommending and prioritising new pharmaceutical treatments.

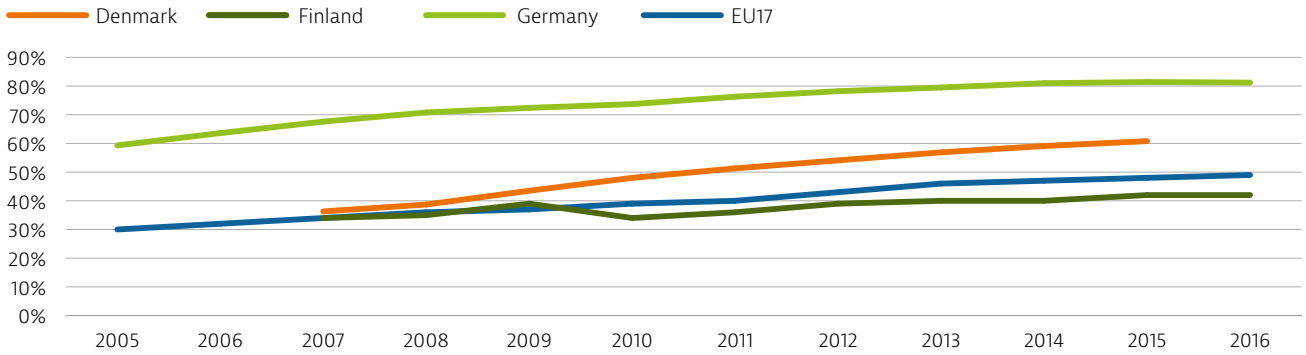
The Danish government has implemented a number of policies to control the growth of pharmaceutical spending in and outside hospitals for many years, including price control and promotion of generics. The creation of a single purchaser for pharmaceuticals dispensed in hospitals (AMGROS) has played an important role in controlling pharmaceutical costs. AMGROS was founded in 1990, but since 2007 its responsibilities have expanded to managing procurement for hospital pharmacies nationwide and supporting the regulation of medicines.

In 2018, the government also announced new initiatives to control pharmaceutical spending, which were due to be implemented in 2019. External reference prices from nine European countries will be used to calculate the maximum list price for both hospital medicines and medicines eligible for subsidy not covered under the 2016 agreement with the Danish Association of the Pharmaceutical Industry (this agreement involves a 10 % reduction in the list prices of hospital medicines from 2016 to 2019).

In September 2018 a new agreement with the Norwegian government to facilitate joint tenders for hospital drugs and sharing of information concerning new pharmaceuticals was announced. This collaboration also aims to increase access to generics in both markets.

Development of the generic market has been promoted over the past decade through a series of measures targeting physicians, pharmacists and patients. The share of generics has increased from less than 40 % in 2007 to over 60 % in 2015 (Figure 21).

Figure 21. The generic market share has increased rapidly over the past decade in Denmark



Note: Data refer to the share of generics in volume.
Source: OECD Health Statistics 2019.

The share of biosimilars has also increased rapidly for some categories of pharmaceutical drugs, although it lags behind other countries for others. For example, while biosimilars had a market share of 90 % for some medicines to treat rheumatoid arthritis in 2015 (compared to an EU average of 24 %), the biosimilar market share for some medicines for renal failure was only 5 % (EU average of 45 %) (OECD/EU, 2018).

The health system has a first-class information infrastructure

Denmark's strong information infrastructure enables national exchange of data. A national electronic medical record (EMR) system allows access to individual patient medical records for patients and health professionals at all levels. There are currently two EMR systems at the hospital level and a number of systems at the GP level, but a set of shared standards enables access to key data for patients and professionals at all levels. All GP practices use EMRs and all prescriptions and referrals are digital.

The Danish government, Danish regions and local government bodies are collaborating on a Strategy for Digital Health to be implemented between 2018 and 2022. Among its key goals it includes creating better opportunities for patients to participate in their own care pathways by providing them with greater insight into their own medical information, and promoting more flexible contacts with the health care system, including through services provided in the patient's own home (Ministry of Health, Local Government Denmark and Danish Regions, 2018).

Some initiatives are also under way to promote more effective use of health data, through a national programme and local initiatives. This includes the development of Danish clinical registries to support the provision of data on activity and quality in real time for hospital staff and patients. Indicators of health care quality include not only clinical measures but also, increasingly, patient-reported experiences and outcomes (Box 4).

Box 4. A strategy for the nationwide implementation of patient-reported outcome data

Embedding patient-reported information in the care process is high on the policy agenda. In 2017, Denmark launched a comprehensive national programme to foster nationwide implementation of patient-reported outcome measures (PROMs). A national steering group was created to support the standardisation of PROMs across all sectors in the health care system and to support their use in daily clinical practice and for quality improvement. A secretariat was also set up to carry on the operational work of establishing and maintaining terminology, establishing a bank of questionnaires, developing guidelines for standardised use of PROMs, supporting adoption of international PROMs, and sharing knowledge about PROMs.

In primary care, Danish GPs can use an electronic data platform (called Web-Patient) to access data uploaded by patients, including measurements taken at home and PROMs. This tool fosters ongoing monitoring and dialogue during consultations.

In hospital care, PROMs have been embedded in a number of clinical registries, including those for rheumatology, urology, gynaecology, obstetrics, different types of cancer (prostate and lung) and palliative care. In 2019, a new initiative was launched to create a national set of PROMs for patients with mental illnesses (such as depression and schizophrenia) and epilepsy for national use.

6 Key findings

- The life expectancy of Danish people has increased rapidly since 2000 and now slightly exceeds the EU average, although it remains lower than in all other Nordic countries. This is partly due to persistently high mortality rates from causes of death that could be avoided through more effective public health and prevention policies.

- Some behavioural risk factors such as tobacco smoking have been addressed effectively, although new tobacco products such as e-cigarettes are becoming more popular and pose new challenges. Binge drinking among adolescents and adults remains an important public health issue. Despite measures to promote more responsible alcohol consumption, the effects appear to have been limited so far. Overweight and obesity rates are also of growing concern among both adults and teenagers.

- Accessibility to health care in Denmark is relatively good. Residents enjoy access to a comprehensive package of health services. Unmet needs for medical care are low, but because dental care is less well covered, unmet needs for dental services are higher, particularly among lower income groups.

- Denmark spent 10.1 % of GDP on health care in 2017, a higher share than the EU average. Overall, the system appears to allocate and use its resources efficiently. Reductions in the number of hospital beds and average length of stay over the past decade have been accommodated by greater supply and access to primary and community care. The implementation of various eHealth and telehealth options has enhanced access to care, including in patients' own homes. However, there is scope for further improvement in care coordination outside hospitals for people with chronic conditions.

- The Danish government launched a new strategy in 2018 to strengthen general practice across the country by increasing the number of students choosing general medicine and improving the remuneration and working conditions of general practitioners. Another element of the strategy is to provide additional training for nurses to play more advanced roles in general practice.

- The government has also taken a number of measures over the past decade to ensure timely access to new medicines while at the same controlling the growth of pharmaceutical costs. The creation and expansion of a single purchaser for pharmaceuticals dispensed in hospitals has contributed greatly to achieving this dual goal. Outside hospitals, greater use of generics has been promoted through a series of measures targeting physicians, pharmacists and patients, although further progress could be achieved in the area of biosimilars.

- The Danish health system has a first-rate information infrastructure, including an electronic medical record system that has a large degree of interoperability across settings and is used across the whole health care system. The Strategy for Digital Health aims to provide greater opportunities for patients to participate in their own care. Monitoring progress in the quality of care will include not only traditional clinical measures but also increasingly patient-reported outcome measures, to reflect more thoroughly what matters to patients.

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Country abbreviations

Austria	AT	Denmark	DK	Hungary	HU	Luxembourg	LU	Romania	RO
Belgium	BE	Estonia	EE	Iceland	IS	Malta	MT	Slovakia	SK
Bulgaria	BG	Finland	FI	Ireland	IE	Netherlands	NL	Slovenia	SI
Croatia	HR	France	FR	Italy	IT	Norway	NO	Spain	ES
Cyprus	CY	Germany	DE	Latvia	LV	Poland	PL	Sweden	SE
Czechia	CZ	Greece	EL	Lithuania	LT	Portugal	PT	United Kingdom	UK

European Commission

State of Health in the EU
Country Health Profile 2019

The Country Health Profiles are an important step in the European Commission's ongoing *State of Health in the EU* cycle of knowledge brokering, produced with the financial assistance of the European Union. The profiles are the result of joint work between the Organisation for Economic Co-operation and Development (OECD) and the European Observatory on Health Systems and Policies, in cooperation with the European Commission.

The concise, policy-relevant profiles are based on a transparent, consistent methodology, using both quantitative and qualitative data, yet flexibly adapted to the context of each EU/EEA country. The aim is to create a means for mutual learning and voluntary exchange that can be used by policymakers and policy influencers alike.

Each country profile provides a short synthesis of:

- health status in the country
- the determinants of health, focussing on behavioural risk factors
- the organisation of the health system
- the effectiveness, accessibility and resilience of the health system

The Commission is complementing the key findings of these country profiles with a Companion Report.

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BETTER POLICIES FOR BETTER LIVES

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