

# OECD Health Statistics 2023

## Definitions, Sources and Methods

### Total pharmaceutical sales

Total sales of pharmaceutical products on the domestic market, in total and by selected **Anatomical Therapeutic Chemical (ATC)** classification groups, based on retail prices (which means the final price paid by the customer).

The ATC codes below are based on the [2023 version of the ATC Index](#).

All alterations implemented from January 2023 are available on the WHO Collaborating Centre for Drug Statistics Methodology website at

[http://www.whocc.no/atc/lists\\_of\\_new\\_atc\\_ddds\\_and\\_altera/alterations\\_in\\_atc\\_ddd/](http://www.whocc.no/atc/lists_of_new_atc_ddds_and_altera/alterations_in_atc_ddd/).

**Note:** There are at least three possible sources of under-reporting of drug sales in different countries: 1) sales data may only cover those drugs that are reimbursed by public insurance schemes; 2) they may be based on ex-factory or wholesale prices rather than retail prices; and 3) sales data may exclude drug consumption in hospitals.

**i** Data for the following countries under-estimate pharmaceutical sales reported in this section because of one of these limitations: Australia, Austria, France, Germany, Greece, Japan, Luxembourg, the Netherlands, the Slovak Republic (before 2016) and Spain. (For further information, see the country-specific information below).

Please also note that depending on the allocation of pharmaceutical products with more than one use, differences in reporting of specific drugs may occur across countries, thereby affecting the relative size of specific ATC groups.

Data should reflect total sales for each drug category, based on retail prices, and including sales in hospitals where possible. Also, sales data should include all drugs regardless of whether they are reimbursed or not.

<u>Main groups / groups based on three levels</u>	<u>Codes (2023 Index)</u>
<b>Total pharmaceutical sales</b>	-
<b>A-Alimentary tract and metabolism</b>	<b>A</b>
Antacids	A02A
Drugs for peptic ulcer and gastro-oesophageal reflux diseases (GORD)	A02B
Drugs used in diabetes	A10
<b>B-Blood and blood forming organs</b>	<b>B</b>
<b>C-Cardiovascular system</b>	<b>C</b>
Cardiac glycosides	C01A
Antiarrhythmics, Class I and III	C01B
Antihypertensives	C02
Diuretics	C03
Beta blocking agents	C07
Calcium channel blockers	C08
Agents acting on the Renin-Angiotensin system	C09
Lipid modifying agents	C10
<b>G-Genito urinary system and sex hormones</b>	<b>G</b>

Sex hormones and modulators of the genital system <b>H-Systemic hormonal preparations, excluding sex hormones and insulins</b> <b>J-Anti-infectives for systemic use</b> Antibacterials for systemic use <b>M-Musculo-skeletal system</b> Antiinflammatory and antirheumatic products non-steroids <b>N-Nervous system</b> Analgesics Anxiolytics Hypnotics and sedatives Antidepressants <b>R-Respiratory system</b> Drugs for obstructive airway diseases Products not elsewhere classified	G03 H J J01 M M01A N N02 N05B N05C N06A R R03 -
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### Summary table

	Data include <b>drugs dispensed in hospitals</b>	Data include <b>non-reimbursed drugs</b>	Data include <b>OTC drugs</b>	Major deviation from the OECD definition: <b>prices and VAT</b>	
<b>Australia</b>	No	<u>From 2013 onwards</u> (inclusive), data include the estimated cost of under co-payment prescriptions (private prescriptions data are still excluded). Data prior to 2013 do not include non-reimbursed drugs.	No	-	No goods and services tax (GST) on pharmaceuticals.
<b>Austria</b>	No, drug consumption in hospitals is excluded. Hospital ambulances are only included if they have prescription authorisation for the outpatient sector.	Data cover only drugs reimbursed by the sickness funds within the statutory health insurance.	No	Data based on reimbursement prices paid by the sickness funds. - Data for pharmaceuticals with a price below the prescription charge are only included for prescriptions with prescription charge exemptions.	-
<b>Belgium</b>	Yes	Yes	Yes	Ex-factory method. Wholesale prices for the retail sector.	VAT included.
<b>Canada</b>	No	-	-	The estimated total dollars for retail pharmacies includes dispensing fees and mark-ups.	-
<b>Chile</b>	-	-	-	Data include sales plus intermediation margin, plus value added tax.	-
<b>Colombia</b>	-	-	-	-	-
<b>Costa Rica</b>	Yes	Note that public hospitals and clinics do not reimburse drugs	No, only drugs provided in public facilities prior to a	Data correspond to the prices charged to the public facilities of the National Social Insurance, most of them were	VAT is not included, since public facilities are exempted.

		purchased in private facilities.	medical prescription.	wholesale prices, a proportion are retail prices but only when extraordinary purchases were needed, for example a special drug for a rare disease for one or a few patients.	
<b>Croatia</b>	Yes	Yes	Yes	-	-
<b>Czech Republic</b>	Yes	Yes	Yes	Maximum allowed retail prices.	VAT included and including retail margin.
<b>Denmark</b>	Yes	Yes	Yes	Pharmaceutical retail prices.	VAT included.
<b>Estonia</b>	Yes	Yes	Yes	Wholesale price.	VAT not included.
<b>Finland</b>	Yes	Yes	Yes	Wholesale price.	VAT not included.
<b>France</b>	Yes	Yes	Yes	Ex-factory price.	VAT not included.
<b>Germany</b>	No	-	-	The sales figures are based in principle on pharmacy sales prices including the discounts of manufacturers and pharmacies as well as the extra payments of the patients and the value added tax.	-
<b>Greece</b>	Yes	Yes	Yes	Data include all pharmaceutical sales to private pharmacies (retail prices), public hospitals (hospital prices), wholesalers (whole sales prices), private clinics (whole sales prices) and sales through public competition.	VAT only included in retail prices of pharmacies.
<b>Hungary</b>	Up to 2006 only.	Up to 2006 only.	Up to 2006 only.	From 2007: retail price in million forints. Prior to 2007: wholesale price in million forints.	-
<b>Iceland</b>	Yes	Yes	No, since 2011.	Retail prices according to the reference price list including VAT.	VAT included.
<b>Ireland</b>	No, but a significant proportion of hospital-initiated medicines are captured in the Irish data under the High Tech Medicine Schemes.	No	No	See details below for information on the Primary Care Reimbursement Schemes included.	VAT included where appropriate.
<b>Israel</b>	Data not available	Data not available	Data not available	Data not available	Data not available
<b>Italy</b>	Yes	No	No	Sales of the retail distribution are indicated at Pharmacy Retail Prices paid by the customer, including VAT.	VAT included.
<b>Japan</b>	No	Yes	Yes	Prices are selling prices of production or distribution facilities.	VAT included.
<b>Korea</b>	Yes	Yes	Yes	Reimbursed drugs are expressed in retail prices (84% of the total pharmaceutical expenditure	VAT included in the price of reimbursed drugs.

				in 2015) and non-reimbursed drugs including OTC drugs are expressed in wholesale prices (16% of the total pharmaceutical expenditure in 2015).	
	Data include <b>drugs dispensed in hospitals</b>	Data include <b>non-reimbursed drugs</b>	Data include <b>OTC drugs</b>	Major deviation from the OECD definition: <b>prices and VAT</b>	
<b>Latvia</b>	-	-	-	Wholesale prices.	-
<b>Lithuania</b>	Data not available	Data not available	Data not available	Data not available	Data not available
<b>Luxembourg</b>	No up until 2020. Data on medication reimbursed by health insurance include since 2021 pharmaceuticals delivered in hospitals for outpatient consumption	No	No	Neither ex-factory prices nor wholesale prices, but are public prices set up by the administration.	VAT included.
<b>Mexico</b>	Yes	-	Yes	-	VAT included.
<b>Netherlands</b>	No	No	No	Retail price from 1998 onwards; prior to 1998, calculations based on producer prices.	VAT included.
<b>New Zealand</b>	No	No	-	Ex-manufacturer costs.	GST not included.
<b>Norway</b>	Yes	Yes	Yes	Retail prices estimated from pharmacy purchase prices.	VAT included.
<b>Poland</b>	Data not available	Data not available	Data not available	Data not available	Data not available
<b>Portugal</b>	No	Yes	Yes, but only OTCs sold in pharmacies.	Ex-pharmacy price: Ex-factory price + wholesaler mark-up + pharmacy mark-up + VAT.	VAT included.
<b>Romania</b>	Yes	Yes	Yes	Data do not include the drugs that are the subject of cost-volume and cost-volume-result contracts.	-
<b>Slovak Republic</b>	Yes	Yes	Yes	-	VAT excluded. Up until 2015: Ex-factory prices without VAT.
<b>Slovenia</b>	No, but it includes drugs prescribed to hospital patients at discharge, to be collected in a community pharmacy.	Yes	Only with a medical prescription.	Retail price.	VAT included.
<b>Spain</b>	Hospital consumption for hospitals belonging to the public network of the National Health System.	No	No	Gross retail price.	VAT included.
<b>Sweden</b>	Yes	Yes	Yes, both from pharmacies	Pharmacy retail (sales) prices (i.e., AUP: <i>Apotekens</i>	VAT not included.

			and other retailers.	UtförsäljningsPris).	
<b>Switzerland</b>	Up until 2001 only.	From 2002 onwards, data include sales of all medicines, including non-reimbursed drugs and OTC drugs, delivered in pharmacies or drugstores and dispensed by physicians;		Retail price.	VAT included.
<b>Türkiye</b>	Yes	Yes	Yes	Ex-factory prices represent sales from the wholesalers to the community pharmacies and average tendered prices represent sales from the wholesalers to the hospitals in Türkiye. VAT rates are not included. Prices include mandatory discounts.	VAT not included.
<b>United Kingdom</b>	From 2009 onwards.	From 2009 onwards, except for OTC drugs.	Up until 2009.	Drug tariff (reimbursement price for generics) or manufacturer list price.	VAT not included.
<b>United States</b>	Data not available	Data not available	Data not available	Data not available	Data not available

## Sources and Methods

### Australia

#### Sources:

2013 onwards: Australian Institute of Health and Welfare analysis of **Pharmaceutical Benefits and Repatriation Pharmaceutical Benefits Schemes (PBS and RPBS)** data maintained by the **Department of Health** and sourced from the **Department of Human Services**.


1990-2012: **Department of Health** analysis of **PBS/RPBS** data.

#### Methodology:

 Data are based on the ATC Index 2022 for the latest year.


- Data are from records of prescriptions submitted for payment of a subsidy under the Pharmaceutical Benefits and Repatriation Pharmaceutical Benefits Schemes (PBS/RPBS).

- Expenditure data are the total prescription cost for PBS/RPBS as approved by the Government, and include both government and patient contributions.

 **Deviation from the definition:** Sales data do not include drugs dispensed to in-patients in public hospitals and do not include OTC drugs

- There is no goods and services tax (GST) on pharmaceuticals in Australia.

**Note:** Expenditure for J-Anti-infectives for systemic use in 2016 increased significantly compared to 2015. This was due to the listing of new drugs to treat chronic hepatitis C from 1 March 2016.

 **Break in series in 2013:** From 2013 onwards (inclusive), data include the estimated cost of under co-payment prescriptions (private prescriptions data are still excluded). Data prior to 2013 do not include non-reimbursed drugs since cost information for under co-payment drugs and private prescriptions were not collected by DUSC.

 **Break in series in 1991:** The decrease in sales between 1990 and 1991 was a result of a change in co-payments.

In November 1990, co-payments for pensioners (a population group with high usage) were introduced. See also: McManus et al. 1996. Prescription drug utilisation following patient co-payment changes in Australia.

Pharmacoepidemiology & Drug Safety. 5(6): 385-392.

- Between 2002 and 2003, there was a noticeable reduction in the consumption of pharmaceuticals related to the Genitourinary system and sex hormones (G) and Sex hormones and modulators of the genital system (G03). This was due to falls in prescriptions for estrogens, progestogens and combinations. This may reflect broader public concerns surrounding hormone-replacement therapy which were prominent from 2003.

-From 2012 to 2013, an increase may be seen in the amount of pharmaceutical sales and this is a result of the inclusion of under co-payment drugs from years 2013 and onwards.

### Austria

**Source: Dachverband der österreichischen Sozialversicherungsträger (Vertragspartner Medikamente) /**  
Federation of Social Insurances (Department of Pharmaceutical Affairs).

**i Methodology:** The classification used is the current version of the WHO ATC-DDD Classification, adapted for the Austrian pharmaceutical market (“Erstattungskodex”).

**Coverage:**

- Data are based on reimbursement prices paid by the sickness funds (“Kassenverkaufspreis”).
- Data are based on the cash sale price.
- Data cover only drugs reimbursed by the sickness funds within the statutory health insurance.
- Drug consumption in hospitals is excluded.
- Hospital ambulances are only included if they have prescription authorisation for the outpatient sector.

**i Deviation from the definition:** Data for pharmaceuticals with a price below the prescription charge are only included for prescriptions with prescription charge exemptions.

**Note:** The share of drugs below the prescription charge which are not included in the dataset is increasing every year due to the yearly increase of the prescription charge and due to patent expiries with price decreases, leading to some limitations in the data.

**Further information:** [www.sozialversicherung.at](http://www.sozialversicherung.at) (in German).

## Belgium

**Source: Pharma.be - Federation of pharmaceutical industry in Belgium** (based on IQVIA data).

**Methodology:**

- Data are gathered according to the 2023 ATC classification.
- Sales data include drugs dispensed in hospitals, non-reimbursed drugs and OTC drugs.
- Estimation of consumption at mean weighted sales price for the year concerned based on public prices for ambulatory sales and “ex-factory” prices for hospital pharmacies, for both reimbursable and non-reimbursable medication. Data are wholesale prices for the retail sector. VAT is included.

**Further information:** <http://www.pharma.be>.

## Canada

**Sources:**

From 2018: IQVIA Solutions Canada Inc., MIDAS data.

The MIDAS data reflect prescription drug sales in Canadian retail pharmacies based on ex-factory prices. The Canadian Institute for Health Information prepared sales estimates at retail prices in 2018, 2019, 2020, 2021, 2022, by ATC group, in assuming that the annual percentage increases in sales at retail prices from 2017 to 2022 were the same as the percentage increases in sales at ex-factory prices.

2012-2017: IQVIA Solutions Canada Inc., CompuScript data.

The statements, findings, conclusions, views, and opinions contained and expressed in this analysis are based, in part on the data obtained under license from IQVIA Solutions Canada Inc. concerning the following information service(s): CompuScript, data period January 2012 to December 2017. All Rights Reserved. The statements, findings, conclusions, views, and opinions contained and expressed herein are not necessarily those of IQVIA Solutions Canada Inc. or any of its affiliated or subsidiary entities. The CompuScript data reflect prescription drug sales in Canadian retail pharmacies based on retail prices (includes dispensing fees and mark-ups).

**Coverage:**

- i** Data are estimates based on prescriptions dispensed by Canadian retail pharmacies from all provinces and do not include in-hospital drug utilisation.
- The estimated total dollars for retail pharmacies includes dispensing fees and mark-ups.
- Data include non-drug products such as diabetic supplies, ostomy supplies, nutritional supplements and natural health products. These products, as well as such medications as biologics for rare diseases, multiple sclerosis drugs and cancer drugs, typically do not have an ATC assigned by Health Canada and are therefore included in the “Products not elsewhere classified” category and in the total sales figures.
- Data are not available for the Antacids category (A02A) after 2017, as most antacids are typically purchased over the counter and without a prescription in Canada.

**i Break in time series in 2018:** Starting in 2018, the sales data obtained were based on ex-factory prices. Estimates of sales at retail prices were prepared in assuming that the percentage increases in sales at retail prices

were the same as the percentage increases in sales at ex-factory prices.

**Methodology:** The ATC codes are based on the ATC Index as assigned by Health Canada ([http://www.hc-sc.gc.ca/dhp-mps/prodpharma/databasdon/dpd\\_bdpp\\_data\\_extract-eng.php](http://www.hc-sc.gc.ca/dhp-mps/prodpharma/databasdon/dpd_bdpp_data_extract-eng.php)).

## Chile

**Sources:** The data used for the estimation of sales of drugs in Chile come from the following sources:


- **“Public Market” Database.** This data include all the purchases made by the public sector through the **Central de Abastecimiento (CENABAST)**, institution in charge of making all the purchases for the different segments that depend on the State such as Hospitals, Municipalities, Armed Forces, Services of Health and other public entities.

**Methodology:** Each observation (row) in this database contains information regarding the quantity and price agreed between the purchasing public entities and the supplying laboratory. The total amount of pharmaceutical spending from this source includes sales plus intermediation margin, plus value added tax (the final price paid by the institutions).

- **Database “Private Market” (IQVIA).** This data include purchases of drugs dispensed in private pharmacies, hence the numbers of sell units account as purchases made by households directly in private pharmacies. The total amount of pharmaceutical spending from this source includes sales plus sales margins, plus value added tax (the final price paid by consumers).

**Coverage:** Data include medicines bought by people in the private market and medicines bought by public institutions.

**Methodology:** Data follow the ATC 2023 codes.

 **Break in time series in 2011:** Data include both private and public sales since 2011.

## Colombia


Data not available.

## Costa Rica

**Sources:** Caja Costarricense de Seguro Social (National Social Insurance Fund).

**Coverage:**

- Data include only drugs bought and prescribed at the public health facilities of the Social Insurance.
- Data include drugs dispensed in hospitals.
- Data include non-reimbursed drugs. Note that public hospitals and clinics do not reimburse drugs purchased in private facilities.
- Data do not include OTC drugs, but only drugs provided in public facilities prior to a medical prescription.- Data correspond to the prices charged to the public facilities of the National Social Insurance, most of them were wholesale prices, a proportion are retail prices but only when extraordinary purchases were needed, for example a special drug for a rare disease for one or a few patients.
- VAT is not included, since public facilities are exempted.

 **Break in time series in 2014** due to a change in the source of data from 2014 onwards, as different databases were used:

- From year 2014 onwards: Sistema Informático de Contabilidad de Suministros (SICS), Caja Costarricense de Seguro Social.


- From 2001 to 2013: Sistema de Gestión de Suministros (SIGES), Caja Costarricense de Seguro Social.

## Czech Republic

**Source:** State Institute for Drug Control.

**Coverage:** Data up until October 2019 include all pharmaceuticals. Data as from November 2019: price data are not monitored for pharmaceuticals that are not reimbursed (fully or partly) from the public health insurance. Therefore, the data on pharmaceutical consumption (all pharmaceuticals included) are not coherent with data reported for pharmaceutical sales since 2020 (as only pharmaceuticals reimbursed by public health insurance are included).


**Methodology:**

 Data as from 2010 compiled according to the current national adaptation of the ATC Index (ATC index valid in 2023); data up until 2009 according to the ATC index valid in 2012.

- Data express the value of distributed medicines at maximum allowed retail prices, including VAT and including retail margin.

- Data include drugs dispensed in hospitals, non-reimbursed drugs and OTC drugs.

- Data not available before 1985 for Agents acting on the Renin-Angiotensin system (C09) as this group of pharmaceuticals was registered in 1984 only.

 **Break in time series in 2020:** The decrease in 2020 for most drugs is due to a change in coverage. Since November 2019, price data are not monitored for pharmaceuticals that are not reimbursed (fully or partly) from the public health insurance. That is why in one case (A02A), there are 0 sales from 2020 onwards as no drug in this ATC group is reimbursable from public health insurance.

**Further information:** <http://www.sukl.cz>.

## Denmark

**Source:** The Danish Health Data Authority.

**Coverage:**

- The Danish Health Data Authority is publishing only the total turnover for the hospital sector and the turnover for the main ATC groups.

- The prices are pharmaceutical retail prices. VAT is included.

**Methodology:**

- Data follow the ATC 2023.

- The figures are based on the requested groups, according to the Anatomic Therapeutic Chemical Classification (ATC).

**Further information:** <http://www.medstat.dk/en>.

## Estonia

**Source:** State Agency of Medicines.

**Coverage:**


- Data include OTC drugs, reimbursed and non-reimbursed drugs and drugs dispensed in hospitals (i.e., the total drug consumption in Estonia).

- Data include sales from the wholesalers to general and hospital pharmacies and to other institutions in wholesale prices, which include the price of the manufacturer and wholesaler's mark-up. VAT is not included.

**Methodology:**

- When interpreting the figures provided by the wholesalers it is worth noting that some drugs may not be consumed by patients.

- All data are presented in Euros.

 **Break in time series in 2006:** 2006-2022 data are reported according to the latest ATC classification (2023 ATC Index). Data for 1999-2005 are presented according to the 2005 ATC Index.

**Further information:** <http://www.ravimiamet.ee/en/statistics-medicines>.

## Finland

**Source:** FIMEA Finnish Medicines Agency, Kuopio/Helsinki.

**Methodology:**

- Data are based on the most recent ATC codes.

- The declines in 2010 in the groups A02B-Drugs for peptic ulcer and gastro-oesophageal reflux diseases, GORD and C-Cardiovascular system are caused by the introduction of new generic drugs.

- The increase in 2010 in the group A10-Drugs used in diabetes is caused by new, more expensive medication.

**Coverage:**

- Sales from wholesaler to retail pharmacy according to specific ATC groups.

- Total sales figures include sales to hospitals, reimbursed and non-reimbursed medicines as well as medicines sold over the counter.


- The figures do not include VAT.



## France

**Source:** Agence nationale de sécurité du médicament et des produits de santé (ANSM), *Analyse des ventes de médicaments en France en 2013*, ANSM, June 2014 (p.6).

### Coverage:

-  Starting from 2003, ANSM data refer to metropolitan France and D.O.M. (overseas departments), but the population ratio for the entire series since 1988 is calculated on this basis.
- Sales data take into account discounts and refer to the pharmaceutical market.
- Data include consumption both in hospitals and in pharmacies, and include non-reimbursed drugs and OTC for all medications (including generics).

### Methodology:


- Data refer to sales to pharmacies and hospitals, according to the ATC classification.
- Sales figures are ex-factory prices. Public prices are not included. VAT is not included.
- All the data have been compiled from sales declarations sent to ANSM every year by March 31. Those declarations, which appear in the article L 5121-17 and following in the "Code de la Santé Publique" (Public Health Code), are mandatory.
- DDDs have been calculated based on the DDDs published by the WHO in January 2010.
- Data for the category A02A-Antacids have been calculated by removing data for the category A02B-Drugs for peptic ulcer and gastro-oesophageal reflux diseases (GORD) from the total A02.
- In France, prices for reimbursable medication are fixed by the government, whereas prices for non-reimbursable medication and medication for collectivities are set up freely by the pharmaceutical industry.
- Regarding the hospital market, sales data are calculated based on effective sales prices, and include sales to various collectivities (private clinics, community centers, immunisation centers, etc).
- No disaggregation is possible between the categories "Various" and "Products not classified elsewhere", hence data are displayed in the "Products n.e.c." category.

## Germany


**Source:** AOK Research Institute (WIdO), **German Drug Index**; special evaluation by the AOK Research Institute (WIdO).


### Methodology:


- Classification: Current version of the WHO's ATC classification with DDDs (January 2023) and additional classifications of specific drugs for the German drug market by the AOK Research Institute (WIdO) for the German Drug Index (Fricke U, Günther J, Niepraschk-von Dollen K, Zawinell A (2022): *Anatomisch-therapeutisch-chemische Klassifikation mit Tagesdosen für den deutschen Arzneimittelmarkt*. WIdO, Berlin).


 **Total sales:** In Germany, data come from statutory health insurance expenditure, which is only a part of total sales. The important decline observed in 2004 is due to the last reform. This shows how problematic the use of public health insurance reimbursements is as a proxy for sales. **Data are highly underestimated compared to other countries.**

### Coverage:

-  Data do not include sales to hospitals. The sales figures are based in principle on pharmacy sales prices including the discounts of manufacturers and pharmacies as well as the extra payments of the patients and the value added tax.
- Sales of drugs in German Statutory Health Insurance in millions of Euros including co-payments of the patients.

 Data cover only the ambulatory sector.

 **Break in series in 2018:** Following a significant change in account assignment in the official expenditure statistics, the data now additionally include a portion of prescriptions from hospital pharmacies.

 **Break in series in 2004:** With the Healthcare Modernisation Act (GMG), non-prescription drugs have been largely excluded from reimbursement. Therefore, the market basket of goods of 2004 differs from that of previous years.

**Further information:** <http://www.wido.de> (in German).

## Greece

2005 onwards:

**Source:** National Organisation for Medicines (EOF). <http://www.eof.gr> (in Greek).

**Coverage:**

- Data include all pharmaceutical sales to private pharmacies (retail prices), public hospitals (hospital prices), wholesalers (whole sales prices), private clinics (whole sales prices) and sales through public competition.
- Data include non-reimbursed drugs and OTC drugs.
- VAT is only included in retail prices of pharmacies.

**Methodology:**

- ❗ Data for 2022 based on the ATC 2022 version. 2021 data based on the ATC 2021. 2016-2020 data based on the ATC 2020. 2015 data based on the ATC 2016. 2014 data based on the ATC 2015. 2011 to 2013 data based on the ATC 2012. 2010 data based on the ATC 2011. For the years 2008 and 2009, data are based on the ATC 2009.
- Remarkable increases in some categories are due to the introduction of new medicines.

Up until 2004:

**Source:** Institute of Pharmaceuticals Research and Technology - IFET (subsidiary of National Organisation for Medicines).

**Coverage:**

- Pharmaceutical sales include drugs dispensed in hospitals, non-reimbursed drugs and OTC drugs.
- Data include parallel exports.
- Prices are not ex-factory.
- VAT is included in retail prices concerning pharmacies, while it is excluded from the whole sales prices and hospital prices.

**Methodology:**

- ❗ Data are based on the ATC 2004 version.
- Total value is the sum of sales to public hospitals (i.e. using hospital prices) and to wholesalers/pharmacies (i.e. using wholesale and retail prices).

## Hungary

From 2007 onwards:

**Sources:**

From 2017 onwards: National Institute of Health Insurance Fund Management (NEAK, in Hungarian).

2007-2016: Hungarian National Health Insurance Fund (OEP, in Hungarian).

**Methodology:**

- Pharmaceutical preparations are given their ATC classification by the National Institute of Pharmacy and Nutrition during the registration process, based on the ATC Index currently available on the WHO's webpage.
- A02A-Antacids and N05C-Hypnotics and sedatives: Data from 2008 onwards reflect the fact that the Hungarian National Health Insurance Fund (OEP, in Hungarian) offers no or minimal subsidies for those ATC codes as of 2008, thus both the consumption and the sale data are null or close to 0 in those ATC codes.
- Data are not expressed in wholesale price, but in retail price in million forints.

❗ **Coverage:**

- Data include only pharmaceutical purchases subsidised by social health insurance only in pharmacies, and do not include pharmaceutical purchases not subsidised by social health insurance in pharmacies nor in hospitals.
- From 2007: Data do not include drugs dispensed in hospitals, do not include non-reimbursed drugs and do not include OTC drugs.

**Further information:** <http://www.oep.hu>.

Up to 2006: PharmMIS Index review of the Hungarian pharmaceutical market Yearbook.

**Coverage:** Data include all pharmaceutical purchases of pharmacies and hospitals (subsidised and not subsidised by social health insurance), in wholesale price, expressed in million forints.

## Iceland

**Source:** Icelandic Medicines Agency.


**Coverage:**

- ❗ From 2011 onwards: Data do not include OTC drugs, only prescription medicines.


- Data include sales of drugs with marketing authorisation from wholesalers.
- Prices are retail prices according to the reference price list including VAT.
- Total sales figures include sales to hospitals and non-reimbursed medicines, but not the value of OTC drugs as of 2011.

#### **Methodology:**

- Decrease in data for Lipid modifying agents from 2008 to 2011 as Health Authorities in Iceland have been working systematically on decreasing the expenditure on Lipid modifying agents by a change in the reimbursement.

 Data as of 2007 are based on the requested groups, according to the version of the ATC/DDD classification of each year. Data for previous years are not updated with newer versions of the ATC.

- As of 2007, the sales value is calculated according to the price list on a monthly basis, whereas before it was calculated for the whole year according to the price list of December of the year before. This can affect the total sales value as prices may change during the year, e.g. as the exchange rate fluctuates.

 **Break in time series in 1989:** Figures before 1989 are not corrected for changes in ATC group definitions. Figures as of 1989 are corrected for changes in ATC and are presented according to definitions in the 2006 ATC.

## **Ireland**

**Source: HSE Primary Care Reimbursement Service, Claims & Payment Systems, Statistical Analysis of Claims and Payments.** Claims and Payments Data as of 31<sup>st</sup> December of each year.

[http://www.hse.ie/eng/staff/PCRS/PCRS\\_Publications](http://www.hse.ie/eng/staff/PCRS/PCRS_Publications).

**Methodology:** The data provided represent the value of all items reimbursed under the Public Health Primary Care Reimbursement Schemes to Primary Care Contractors who have a General Medical Service Contract with the Health Service Executive. The HSE commenced in 2013 the centralised reimbursement of selected Oncology and Hepatitis C drugs and the centralised reimbursement of Outpatient Parenteral Antimicrobial Therapy (OPAT) drugs, medicines and appliances administered by healthcare professionals or self-administered by patients in the community.

#### **Deviation from the definition:**

- Data relate to the following Primary Care Reimbursement Schemes:

- **GMS** - General Medical Services Scheme: Ingredient cost ex-factory plus 8% mark-up, fridge items plus 12% mark up, plus VAT where appropriate (see the note on Break in series in 2013 below).

- **DPS** - Drug Payment Scheme: Ingredient cost ex-factory plus 8% plus VAT where appropriate. It includes all DPS claims under and over the co-payment threshold (see the note on Break in series in 2013 below).

- **LTI** - Long Term Illness Scheme: Ingredient cost ex-factory plus 8% plus VAT where appropriate (see the note on Break in series in 2013 below).


- **Health Amendment Act Scheme:** Ingredient cost ex-factory plus 8% plus VAT where appropriate.

- **Generics** (includes branded generics).

- **High Tech Medicines Scheme:** Purchased by the HSE directly from the supplier - (ingredient cost ex-factory plus 8% mark-up plus VAT where appropriate) - and dispensed through the Community Pharmacies who receive a patient care fee. **Note:** It is important to emphasize these are medicines initiated under the supervision of hospital specialists which in Ireland are supplied via special arrangements through Community Pharmacies. They include medicines such as tumor necrosis factor inhibitors which are supplied through hospitals in some other OECD countries.


- The HSE commenced the centralised reimbursement of selected Oncology and Hepatitis C drugs in 2013. The National Cancer Control Programme (NCCP) established the National Cancer Drug Management Programme to develop and improve the care provided to patients receiving treatment with oncology drugs. A national management system for cancer drugs was set up within the PCRS to facilitate centralised reimbursement and data capture of selected high-cost oncology drugs. This allows national oversight of the expenditure on high-cost oncology drugs in line with approved indications, improved service planning and budgetary projections and a national approach to provision of oncology drugs. The Hepatitis C drugs are dispensed to patients in the designated adult hepatology units.

- The HSE commenced the centralised reimbursement of Outpatient Parenteral Antimicrobial Therapy (OPAT) drugs, medicines and appliances administered by healthcare professionals or self-administered by patients in the community.

 Reimbursement data do not include drugs dispensed in hospitals (with the exception of selected Oncology and Hepatitis C drugs as outlined above) but a significant proportion of hospital-initiated medicines are captured in the

Irish data under the High Tech Medicine Schemes. The reimbursement data do not include non-reimbursed drugs or OTC items (all claim items reimbursed have been reimbursed based on prescriptions provided by a Medical Practitioner and claimed by the pharmacy after dispensing).

**Note:** The decrease in the sales of **C10-Lipid Modifying agents** in 2014 is due to a policy change in the HSE. Since mid-2013, the HSE has been undertaking the introduction of a system for generic substitution and reference pricing on an incremental basis. This change has affected the cost of C10-Lipid Modifying agents. This has been possible due to the commencement of the Health (Pricing and Supply of Medical Goods) Act 2013. This Act provides for the introduction of a system of generic substitution and reference pricing. It also sets out statutory procedures governing the supply, reimbursement and pricing of medicines and other items to patients under the GMS and community drug schemes.

 **Break in series in 2013:** In accordance with the Health Professionals (Reduction of Payments to Community Pharmacy Contractors) Regulations 2013 (S.I. No. 279 of 2013), the mark-up on ingredient cost for DPS, LTI, EEA, and Health (Amendment) Act 1996 was removed, effective from the 24<sup>th</sup> July 2013. For further information see <http://www.irishstatutebook.ie/eli/2013/si/279/made/en/print>.

**Further information:** <http://www.pcrs.ie/>.

## Israel


Data not available.

## Italy

**Source:** AIFA (Agenzia Italiana del Farmaco) - Italian Medicines Agency, "The Use of Pharmaceuticals in Italy", National Report 2011-2020, and AIFA internal database.

**Coverage:**


- Data do not include non-reimbursed drugs and OTC products.
- Data include drugs dispensed in hospitals.
- Sales of the retail distribution are indicated at Pharmacy Retail Prices paid by the customer, including VAT.
- Data updated for the whole period due to a revision in the resident population.

 **Methodology:** Data are reported according to the 2021 Anatomic Therapeutic Chemical Classification (ATC).

## Japan

**Source:** Ministry of Health, Labour and Welfare, Statistics of Production by Pharmaceutical Industry.

**Methodology:**

 The Japanese statistical classification does not use the ATC/DDD.

- Data were reclassified according to ATC groups with the cooperation of the Ministry of Health and Welfare. Some groups that could not be recalculated were excluded (e.g. Musculoskeletal system) as well as categories that are not internationally comparable (e.g. vitamin compounds, Chinese medicine).

- Summary of the current system of the **National Health Insurance drug price list:**


- Drug prices which are paid from health insurance to insurance medical institutions or health insurance pharmacies are defined by the National Health Insurance drug price list.
- The National Health Insurance drug price is based on the notice of "Criteria of calculation for National Health Insurance drug price" and shall be publicly notified by the Minister of Health, Labour and Welfare.
- Drug prices defined by the National Health Insurance drug price list are reviewed regularly based on the result of the drug price survey. The survey investigates the actual selling price for the medical institutions and pharmacies.

- Number of products listed in the National Health Insurance drug price list (implementation of the NHI drug price list: 1<sup>st</sup> April 2013):

Oral medicine	Injection drug	External medicine	Dental medicine	Total
9668	4012	2511	27	16218

**Coverage:**

- Data refer to the amount of production (domestic production only).


 Data do not include drugs dispensed in hospitals.


- Data include non-refunded drugs.

- Data include OTC drugs.

- Prices are selling prices of production or distribution facilities.

- VAT (consumption tax) is included.

 **Break in series in 2019:** The survey method has changed from 2019 onwards, which resulted in an increase in the collection rate and a clarification of the definition of terms in the survey, leading to a significant change in the figures from 2018 to 2019.

 **Break in series in 2005:** The survey method has changed from 2005 to 2018, as products made through subdividing imported medicine in Japan are excluded.

**Further information:** <https://www.mhlw.go.jp/toukei/list/105-1.html> (in Japanese only).

## Korea


**Sources:**

From 2011: Ministry of Health and Welfare, Health Insurance Review & Assessment Service, Administrative data from National Health Insurance, Medical Aid, Veterans Benefits, Industrial Accident and Occupational Disease Insurance, and Auto Insurance, and supply data from wholesalers to retail pharmacy, hospitals and other retailers.

Until 2010: Ministry of Health and Welfare, *Survey on the Sales and Consumption of Pharmaceuticals in Korea*.

**Coverage:** Data encompass all pharmaceutical products supplied in Korea.

**Methodology:**

 From 2014, data are based on the following year's version of the ATC classification (i.e. 2021 data based on the 2022 ATC Classification, 2020 data based on the 2021 ATC classification, 2019 data based on the 2020 ATC classification, 2018 data based on the 2019 ATC classification, 2017 data based on the 2018 ATC classification, etc.). 2011-2013 data based on the 2014 ATC classification. 2010 data based on the 2013 ATC classification. 2009 data based on the 2009 ATC classification, and 2008 data based on the 2008 ATC classification

From 2016:

- Overall reimbursed drugs consumption is added up by using the current year's administrative data.

- Non-reimbursed drugs consumption is added up by using the current year's supply data.

2011-2015:

- Overall reimbursed drugs consumption is added up by using the last 3 years of administrative data.

- Non-reimbursed drugs consumption was estimated by using the last 3 years of supply data.

- Reimbursed drugs are expressed in retail prices (84% of the total pharmaceutical expenditure in 2015) and non-reimbursed drugs including OTC drugs are expressed in wholesale prices (16% of the total pharmaceutical expenditure in 2015).

- VAT is included in the price of reimbursed drugs.

- Non-reimbursed drugs were estimated using data mining (random forest) model by algorithm based on reimbursed drugs.

Until 2010:


- Pharmaceutical consumption data in Korea are collected either through National Health Insurance or through other sources. Data compiled by National Health Insurance (including Medical Aids and Veterans benefits) cover the whole reimbursed consumption. Data from other sources, such as non-payment items and OTC, are collected and estimated by sampling analysis (from survey of medical institutions and pharmacies).

- Data include drugs dispensed in hospitals, non-reimbursed drugs and OTC drugs.

- VAT is included.

- Data are expressed in consumer prices.

**Note:** The decrease in sales of A02A-Antacids, C07-Beta blocking agents and C08-Calcium channel blockers is explained by the fact that the government has carried out a policy to decrease the rising cost of medications and to promote the prescription of low-cost medications, such as those categories A02A, C07 and C08.

 **Breaks in time series in 2011 and 2016** due to a change in source and methodology.


## Latvia


**Source: State Agency of Medicines.**

**Coverage:** Only consumption of authorised medicines is included. Consumption of unauthorised medicines is roughly about 1% of the total market of medicines.

**Methodology:**

- Data are collected and compiled from all licensed wholesalers.

 Data for the period 2021-2022 are based on the ATC classification 2023. Data for 2020 are based on the ATC classification 2022. Data for 2019 are based on the ATC classification 2021. Data up until 2018 are based on the ATC classification 2020.

 **Deviation from the definition:** Sales data are based on wholesale prices (including VAT).

## Lithuania

Data not available.

## Luxembourg

**Sources:**

2008 onwards: **Caisse nationale de santé (CNS).**

2004-2007: **Fichiers de la sécurité sociale** (Social Security data files).

**Statistical extraction: General Inspectorate of Social Security (IGSS).**


**Coverage:**

- Data do not include:


- Pharmaceutical fees in hospitals;
- Pharmaceutical fees covered by the sickness insurance outside of the national territory;
- Pharmaceutical consumption of persons not covered by the general sickness insurance regime;
- Pharmaceutical fees left to insured persons, which concerns the non-reimbursable part of prescribed medication, as well as medication purchased without prescriptions.

- Prices are neither ex-factory prices nor wholesale prices, but are public prices set up by the administration.

- VAT is included.

 Hospitals have to follow a budget, and pharmaceutical fees linked to in-patient stays are not included in the statistical series.


**Methodology:**

 Data for 2020-2022 follow the ATC 2022. Data for 2017-2019 follow the ATC 2020. Data for 2016 follow the ATC 2019. Data for 2013-2015 follow the ATC 2017. Data for 2012 follow the ATC 2016. Data for 2010-2011 follow the ATC 2014. Data for the period 1995-2010 follow the ATC 2013.

- 2021-2022 data are preliminary.

- Gross amounts reimbursed by sickness insurance, in millions of Euros.

- Data can be under-estimated due to the lack of information for all sub-groups at the third level of the ATC classification.

 **Break in time series in 2021:** Data on medication reimbursed by health insurance include since 2021 pharmaceuticals delivered in hospitals for outpatient consumption (“médicaments à délivrance hospitalière”).  
*“Le ministère de la santé prend la décision concernant le mode de délivrance d'un médicament qui est propre à une autorisation de mise sur le marché. Le mode de délivrance se justifie par les caractéristiques pharmacologiques et le degré du médicament ou par un autre motif de santé publique. La délivrance, réservée aux pharmacies hospitalières, peut être faite à des patients ne séjournant pas en milieu hospitalier.”*

## Mexico

Total pharmaceutical sales:

**Source: National Institute of Statistics and Geography (INEGI),** Economic Census, Monthly Industrial Survey, Monthly Survey of the Manufacturing Industry, Employed Monthly Industrial Survey.

**Coverage:**

- Data include total pharmaceutical sales within Mexico (drugs dispensed in hospitals, in the ambulatory sector and others).

- Data refer to national consumption, and include OTC drugs and VAT.



**i Deviation from definition:** Total sales value of pharmaceutical products manufactured from activity class 325412-Manufacture of pharmaceutical preparations, which excludes medicinal products for veterinary use. The information is obtained from the Monthly Survey of the Manufacturing Industry (EMIM).

**i Note:** Data for total sales and data for sales by ATC categories are not compatible, due to the different sources used.

Information reported by ATC groups are obtained from:

Period 2013-2021: Monthly Survey of the Manufacturing Industry (EMIM) SCIAN 2013.

Period 2007-2012: Monthly Survey of the Manufacturing Industry (EMIM) SCIAN 2007.

Period 2005-2006: Employed Monthly Industrial Survey (EIMA) SCIAN 2002.

Period 2000-2004: Monthly Industrial Survey (EIM) CMAP 1994.

**Further information:** <http://www.inegi.org.mx>.

Sales by ATC categories:

**Source:** 2012-2017 estimates based on information about medicine purchasing in the public sector reported by States and Institutions to **DGPLADES (Dirección General de Planeación y Desarrollo en Salud)** through the **CESMed (Centro Sectorial de Gestión Web de Información sobre Medicamentos)**.

**Methodology:**

- Estimates are based exclusively on public purchasing drugs information (which by now is the only available information). This information is provided by States and Institutions to DGPLADES (Dirección General de Planeación y Desarrollo en Salud) through the CESMed (Centro Sectorial de Gestión Web de Información sobre Medicamentos). It is important to consider that for every year not all States and Institutions reported information, so figures may be underestimated.
- Vaccines and antiretroviral medicines are not included.
- Estimates include drugs dispensed in hospitals, emergency rooms and in the ambulatory services. OTC drugs do not apply as the figures reported are from the public sector and are provided to patients based on a prescription. In Mexico, all medicines are exempt of the value added tax.
- At first, estimates were made for the main groups (A-Alimentary tract and metabolism; B-Blood and blood forming organs; C-Cardiovascular system, G-Genito urinary system and sex hormones; H-Systemic hormonal preparations, excluding sex hormones and insulins; J-Anti-infectives for systemic use; M-musculo-skeletal system; N-Nervous system; R-Respiratory system). If the medicine corresponds to a group based on three levels, listed in the spreadsheet, the amount was assigned to the corresponding level.
- The information reported by the States and Institutions is classified based on the Basic Formulary Medications List and Healthcare Supplies Catalog (Cuadro Básico y Catálogo de Insumos del Sector Salud), administered by the General Health Council. To report information based on the Anatomic Therapeutic Chemical Classification system, a review of each medicine was made to properly classify it.
- The estimated amount of medicine purchasing made by the public sector reported by the State and Institutions through CESMED per year amounts to: 40,590.70 million of Mexican pesos (MP) for 2012; 46,395.36 MP for 2013; 57,586.33 MP for 2014, and 45,066.35 MP for 2015.
- Information is available at December of each year.

**i Note:** Data for total sales and data for sales by ATC categories are not compatible, due to the different sources used. Information reported by ATC categories is associated to medicine purchasing in the public sector, and could be considered as a proxy for sales to the public sector. That is, the information reported comes from purchasing reports of the States and Institutions of the public sector and not sales to the public sector reported by the industry or distributors.

## Netherlands

2001 onwards:

**Source:** GIP (Drug Information System of the Healthcare Insurance Board (CVZ)). The GIP is an information system of the Healthcare Insurance Board, in use since 1988, containing information on (external) expenditure on drugs in the Netherlands and the degree to which they are used. Data updated in October 2019 are used.

**2015 onwards:** The GIP-system no longer provides figures about pharmaceutical sales for the specified ATC-groups, due to a change in the declaration standard for pharmaceutical care from July 1<sup>st</sup> 2015. **Only the figure for total pharmaceutical sales is still available.**

**i** The 2021 ATC index has been used for 2017-2021 data. For 2016 data: ATC 2020; for 2015 data: ATC 2019; for 2014 data: ATC 2018, for 2013 data: ATC 2017; for 2012 data: ATC 2016; for 2011 data: ATC 2015; for 2010

data: ATC 2014; for 2008-2009 data: ATC 2012; for 2007 data: ATC 2011; for 2006 data: ATC 2010; for 2003-2005 data: ATC 2008; and for 2001-2002 data: ATC 2005.

- The GIP database of 2012 contains data from 25 of the 27 health insurance organisations. The sample of insured persons is around 16.1 million persons (almost 97% of the entire Dutch population).

**i** N05B-Anxiolytics and N05C-Hypnotics and sedatives: the decrease in 2009 is explained by the fact that these pharmaceuticals are no longer reimbursed by the compulsory healthcare insurance as of 2009, and thus have to be covered by OOP or by private insurance.

**i** G-Genito urinary system and sex hormones and G03-Sex hormones and modulators of the genital system: the increase in 2008 and the decrease in 2011 are explained by large fluctuations due to the renewed reimbursement of the contraception pill.

**i** The decrease in data for A-Alimentary tract, A02A-Antacids, G-Genito-urinary system and sex hormones and G03-Sex hormones and modulators of the genital system can be explained by the fact that from 2004 onwards, several over-the-counter medicines have been exempt from compensation by the health insurance fund and exempt from compensation by most of the private insurance as well.

- Data for the last 4 years are updated if new numbers were available in the GIP database. The GIP database only contains data for the last 5 years.

- The DDD used is valid in the most recent year available. This DDD is applied to the preceding years (from 2008). Data from 2008 onwards are comparable. Data before 2008 are sometimes not comparable to those after 2007 due to possible changes in DDDs.

#### **Coverage:**

- Data refer to reimbursed pharmaceuticals as sold by pharmacies and GPs with pharmaceutical sales.

- The price is the retail price, including VAT (6%).

**i** Data do not include drugs dispensed in hospitals and do not include non-reimbursed drugs.

- OTC drugs are not included.

- The register includes prescription-related data on drugs that are:

- prescribed by general practitioners and specialists;

- dispensed by pharmacists, dispensing general practitioners and other outlets;

- and reimbursed under the Healthcare Insurance Act.

1998-2000:

**Source:** Data derived from the **Stichting Farmaceutische Kengetallen**.

#### **Coverage:**

**i** Data present the sales of the legally insured package of medicines from public pharmacies, excluding medicines delivered by general practitioners who also run a pharmacy, and excluding medicines delivered by and in hospitals.

- Cost includes 6% VAT but excludes payments by patients for medicines exceeding a price limit.

Up to and including 1997:

**Source:** **Nefarma** (Association of pharmaceutical industry and wholesalers).

**Coverage:** Data present the turnover of medicines in the Netherlands from factory or importer, rated at producers' prices, including medicines for self-medication, and including parallel imported medicines.

## **New Zealand**

**Source:** **PHARMAC - Pharmaceutical management agency**. Data provided from the **Pharmhouse database**.

#### **Coverage:**


- The expenditure data reported are of gross government subsidy by financial year ending 30 June, and include everything in the Community Pharmaceutical Budget (including condoms, diabetic meters and insulin pumps). Rebates that apply to some products cannot be disclosed due to confidentiality agreements, hence data reported are of gross cost, although the source data also quotes net cost of total expenditure.

- PHARMAC manages the Combined Pharmaceutical Budget (CPB) expenditure on products that were funded under the CPB can be quoted. Major budget transfers to the CPB are as detailed below:

July 2010	Nicotine replacement therapy pharmaceutical expenditure was transferred to the CPB.
July 2011	PCT budget and the former community pharmaceutical budget combined to make the Combined Pharmaceutical Budget.
July 2012	National Immunisation Schedule budget was transferred to the CPB.
February 2013	Influenza vaccine budget was transferred to the CPB.



July 2013	Haemophilia treatments budget was transferred to the CPB.
May 2018	Hospital Pharmaceutical Purchases made by District Health Boards transferred to CPB.

 The data provided for the specific ATC groups do not cover hospital or outpatient or non-reimbursed pharmaceuticals. The total cost provided does include pharmaceutical expenditure in hospitals.

- The provided drug cost ex-manufacturer figures include full and partial subsidies set by PHARMAC. They exclude pharmaceuticals funded through hospital budgets, subsidies paid for compounded preparations, rebates, patient co-payments, dispensing fees, mark-ups paid to pharmacies and GST.
- According to PHARMAC, each year they receive money paid back by way of rebates from the drug companies. These rebates are based on agreement to a capped expenditure for a particular drug. Any expenditure above the capped expenditure is paid back to PHARMAC by way of a rebate. It is used to protect the international price of a pharmaceutical. These amounts are detailed below in \$NZ millions. Unfortunately, the amounts cannot be broken down by Therapeutic group for confidentiality reasons. The pharmaceutical sales figures provided to the OECD are gross costs and rebates are paid that offset expenditure.

FYR	Total Pharmaceuticals Costs (\$m) excl. GST	Total Rebates (\$m) excl. GST
01-Jun-93	\$445	
01-Jun-94	\$487	
01-Jun-95	\$511	
01-Jun-96	\$514	
01-Jun-97	\$542	
01-Jun-98	\$553	\$3
01-Jun-99	\$515	\$13
01-Jun-00	\$527	\$11
01-Jun-01	\$536	\$20
01-Jun-02	\$540	\$34
01-Jun-03	\$576	\$66
01-Jun-04	\$621	\$86
01-Jun-05	\$651	\$94
01-Jun-06	\$690	\$132
01-Jun-07	\$732	\$134
01-Jun-08	\$749	\$115
01-Jun-09	\$765	\$109
01-Jun-10	\$749	\$57
01-Jun-11	\$817	\$112
01-Jun-12	\$924	\$159
01-Jun-13	\$923	\$139
01-Jun-14	\$960	\$149
01-Jun-15	\$988	\$196
01-Jun-16	\$1072	\$275
01-Jun-17	\$1262	\$412
01-Jun-18	\$1321	\$447
01-Jun-19	\$1492	\$517
01-Jun-20	\$1652	\$664
01-Jun-21	\$1777	\$686
01-Jun-22	\$1902	\$746

#### Methodology:

- From 2022 an updated ATC-DDD classification table has been purchased from [https://www.whocc.no/atc\\_ddd\\_index\\_and\\_guidelines/order/](https://www.whocc.no/atc_ddd_index_and_guidelines/order/), providing the necessary reference information in terms of the defined daily dose, unit of measure and the route of administration.
- The New Zealand Universal List of Medicines (<https://info.nzulm.org.nz/>) provides a mapping of pharmacodes (<https://www.pgnz.org.nz/about-us-1/pharmacode>) to WHO ATC, which can be viewed online at <https://search.nzulm.org.nz/nzmt/showwatchierarchy>.

- Using these two data sources enabled the mapping of pharmaceuticals to the WHO ATC 5 level and then make some assumptions on the route of administration.
- Figures between 1997 and 1998 have been increased due to an adjustment for missing North Health data (a regional health authority which was in operation in the 1990s) over that time.
- Costs are ex-manufacturer (Goods and Services Tax (GST) excluded). Costs to the patient vary as some pharmaceuticals are government-subsidised at various rates.
- Data cover the twelve months preceding June of the year concerned.

**Further information:**

- The decrease in sales of **C07-Beta blocking agents** in 2016 does not represent a volume reduction, but a few of the key pharmaceuticals in this group have had price reductions in late 2015 FYR and early 2016 FYR and therefore total cost has decreased significantly.

- The increase in sales of **J-Anti-infectives for systemic use** since 2013 is due to the expenditure on the new Hepatitis C treatments that were listed last financial year.

- 2019 financial year update:

- **N05C-Hypnotics and sedatives:** Melatonin was listed in the pharmaceutical schedule in July 2017. Expenditure on Melatonin has grown substantially.

- **Infections:** The cost of infections have been sporadic over recent years. This is due to the listing of Hepatitis C treatments which have low patient numbers but large costs per patient.

- **Products not elsewhere classified:** There is a spike in unmatched expenditure coming mostly from the fact that hospital medicine purchases made by district health boards are now listed as part of the combined pharmaceutical budget (CPB). These medicines are harder to match to the appropriate ATC code and mostly end up in the unmatched category.

- 2020 Financial Year Update:

- **Alimentary tract and metabolism**

- o Vildagliptin and Vildagliptin with metformin hydrochloride increased by \$9mil (Usage increase)
- o Insulin glargine increased by \$3mil (Usage increase)

- **Blood and blood forming organs**

- o Rivaroxaban increased by \$10mil (Usage increase)
- o Ferric Carboxymaltose (\$4m) now included under the Blood and blood forming organs group

- **Cardiovascular system**

- o Flecainide acetate decreased by \$1.4m (Price decrease)
- o Sacubitril with valsartan increased by \$3m (Usage increase)

- **Genito urinary system and sex hormones**

- o Levonorgestrel increased by \$4.6m (Usage increase)

- **Anti-infectives for systemic use**

- o The cost of infections have been sporadic over recent years. This is due to the listing of Hepatitis C treatments which have low patient numbers but large costs per patient.

- **Musculo-skeletal system**

- o Zoledronic acid decreased by \$7m (Price decrease)

- **Respiratory system**

- o Budesonide with eformoterol increased by \$4.4m (Usage increase)
- o Fluticasone furoate with vilanterol increased by \$2.7m (Usage increase)
- o Umeclidinium increased by \$1.3m (Usage increase)
- o Nintedanib increased by \$1.7m (Usage increase)

2021 Financial Year update:

• **Alimentary Tract and Metabolism –**

- o Vildagliptin with metformin hydrochloride increased by \$6mil
- o Empagliflozin was listed in February 2021. \$4mil usage in 2021

• **Blood and Blood Forming Organs –**

- o Rivaroxaban increased by \$9mil

• **Cardiovascular system –**

- o Sacubitril with valsartan increased by \$5mil

• **Anti-infectives for systemic use –**

- o The cost of infections have been sporadic over recent years. This is due to the listing of Hepatitis C treatments which have low patient numbers but large costs per patient.

• **Nervous System –**

- Ocrelizumab increased by \$6.5m
  - **Respiratory System and Allergies –**
    - Budesonide with eformoterol increased by \$8m
- 2022 financial year update: Pharmac has improved its mapping (using the system described above) across all groups. The Products not elsewhere classified now makes up half of the expenditure reported. With the improved mapping to the WHO ATC a further breakdown of this group is as follows:

ATC1_code	ATC1_Name	Total
D	DERMATOLOGICALS	\$25,410,303
L	ANTINEOPLASTIC AND IMMUNOMODULATING AGENTS	\$623,733,206
P	ANTIPARASITIC PRODUCTS, INSECTICIDES AND REPELLENTS	\$1,730,493
S	SENSORY ORGANS	\$35,822,982
V	VARIOUS	\$50,619,080
	Not categorised	\$275,093,935

## Norway

**Source:** Norwegian Drug Wholesales statistics database, The Norwegian Institute of Public Health (Department of Drug Statistics).

**Coverage:**

- Total sales from wholesalers to retail pharmacies, hospitals and outlets selling a selection of OTC products (e.g. grocery stores).
- Data thus include drugs dispensed in hospitals, non-reimbursed drugs, OTC drugs and VAT.
- The Norwegian total sales figures exclude veterinary medicines.
- ATC group J-Anti-infectives for systemic use includes sales of vaccines.
- Data for N02-Analgesics are updated due to ATC classification changes of pregabalin and gabapentin from N03AX to N02BF.

**Methodology:**

- Data for all years follow the ATC version January 2023.
- Total sales in pharmacy retail prices (AUP) including VAT are given per ATC main group (1<sup>st</sup> level).
- The retail prices are estimated from pharmacy purchase prices.

**Further information:** Norwegian Wholesales Statistics at <https://www.fhi.no/en/hn/drug/om-den-grossistbaserte-legemiddelforbruksstatistikken/>.

## Poland

Data not available.

## Portugal

**Source:** Ministry of Health - National Authority of Medicines and Health Products (INFARMED).

**Coverage:**

- ❗ Data do not include hospital consumption.
- Data include both reimbursed and non-reimbursed products.
- Data include OTC products sold in pharmacies but do not include OTCs sold outside of pharmacies in authorised establishments.
- Data are expressed in millions of NCU (EUR), and are derived from the so called ex-pharmacy price which is the price based on the following calculation: Ex-factory price + wholesaler mark-up + pharmacy mark-up + VAT.
- The decrease in sales of A02B-Drugs for peptic ulcer & gastro-oesophageal reflux diseases, GORD in 2012 is due to the policy changes implemented in order to reduce public expenditure with pharmaceuticals. Several measures were implemented in 2012, such as the reduction of profit margins for wholesalers and distributors and price revisions for brands and generics, thus resulting in a reduction in the prices of pharmaceutical products. The impact was very significant for patients and the National Health System, who now pay less for the same products.

**Methodology:**

- Data follow the ATC Index 2023.
- In 2023 the WHO Collaborating Center for Drug Statistics Methodology changed the classification of some drugs from ATC N03 to ATC N02 (see [https://www.whocc.no/atc\\_ddd\\_alterations\\_cumulative/atc\\_alterations/](https://www.whocc.no/atc_ddd_alterations_cumulative/atc_alterations/)). INN Gabapentin and Pregabalin changed from N03 to N02, and the entire time series for N02-Analgesics has been updated accordingly:

Previous ATC code	ATC level name	New ATC code
N03AX12	gabapentin	N02BF01
N03AX16	pregabalin	N02BF02


**Slovak Republic****Sources:**

From 2016 onwards: **National Health Information Center (NCZI).**


**Coverage:**

- Data include drugs dispensed in hospitals (and in hospital ambulances), reimbursed and non-reimbursed drugs and OTC drugs.
- All drugs are included in the calculation (except individual substances and special imports of drugs), and not only drugs with defined DDDs.

**Methodology:**

 Data for 2021 follow the 2023 version of the ATC classification, data for 2020 follow the 2022 ATC, data for 2019 follow the 2021 ATC, data for 2018 follow the 2020 ATC, data for 2017 follow the 2019 ATC, data for 2016 follow the 2018 ATC.

- Price does not include VAT. In the year 2020 PATC data for the year 2016 and 2017 were revised and recalculated. Data for 2016 follow the 2018 version of the ATC classification and data for 2017 follow the 2019 version of the ATC classification.

 **Break in time series in 2016** due to a change of data source. Since 2016, the new data source gathers quarterly statistical reports from public and hospital pharmacies and health insurance companies, which represents the real consumption by end-customers.


- Information on consumption is also available in electronic form in a NCZI software.

**For further information:** [www.nczisk.sk](http://www.nczisk.sk).

Up until 2015: **MCR, limited company**, Modra, Slovak Republic.


**Coverage:** Data include drugs dispensed in hospitals, reimbursed and non-reimbursed drugs and OTC drugs.

**Methodology:**

 Data for 2015 follow the 2016 version of the ATC classification, data for 2014 follow the ATC 2015, data for 2013 follow the ATC 2014, data for other years follow the ATC 2013. Final data.

- Information on drug consumption as a system of drug acquisition and processing comes from reports of wholesale distribution organisations. Following Act no. 140/1998 Coll., they provide information to the “State Institute for Drug Control” (Štátny ústav pre kontrolu liečiv, ŠÚKL) regarding the amounts of drugs sold to the population.


- Information on consumption is also available in printed and electronic form (database on cumulative quarterly data, in a software released by MCR, s.r.o. Modra).

 **Derivation from the OECD definition:** Ex-factory prices without VAT.

**Slovenia**

**Source:** **National Institute of Public Health, Slovenia**, Database on Out-patient prescribing of drugs in Slovenia.

**Coverage:**

 Data do not include drugs dispensed in hospitals, but do include drugs prescribed to hospital patients at discharge, to be collected in a community pharmacy. Data also include drugs dispensed in long-term care facilities.

- Data are required for all out-patient drug prescriptions issued.

- Data include all drugs, prescribed with a valid medical prescription, regardless of reimbursement.

- Data include retail value of product with the VAT (value when medicines delivered in a pharmacy).


**Methodology:**

- Data are based on the ATC Index 2023 for all years (2007-2022).
- Sales data for the year 2006 (prior to Slovenia joined the Euro area) were calculated using the Central Bank of Slovenia's official daily exchange rate SIT (Slovene tolar) into EUR.


## Spain


**Source: Ministerio de Sanidad (Ministry of Health), Directorate General for NHS Common Services Portfolio and Pharmacy.**

### Coverage:


- Since 2018, data refer both to:
  - Consumption of official medical prescriptions receipts issued by the National Health System and dispensed in pharmacies. Data exclude non-reimbursed drugs, OTC drugs and private medical prescriptions.
  - Hospital consumption, for hospitals belonging to the public network of the National Health System. Data coverage is total, for in-patients and out-patients.
-  Until 2018, data are obtained from official medical prescriptions receipts issued by the National Health System and dispensed in pharmacies. Data exclude non-reimbursed drugs, OTC drugs, private medical prescriptions and drugs used in hospitals.
- Data after 2012 are not available for the subgroup A02A-Antacids since these drugs were excluded from public reimbursement in September 2012.

### Methodology:

 2020, 2021 and 2022 data according to the ATC/DDD 2022 classification, 2019 data according to the ATC/DDD 2021 classification, 2017 data according to the ATC/DDD 2019 classification, 2016 data according to the ATC/DDD 2018 classification, 2015 data according to the ATC/DDD 2017 classification, 2014 data according to the ATC/DDD 2016 classification, 2013 data according to the ATC 2015 classification, 2012 data according to the ATC 2014 classification, 2011 data according to the ATC 2013 classification, 2010 data according to the ATC 2011 classification, 2009 data according to the ATC 2010 classification.

 **Break in time series in 2018:** Hospital consumption data are included for the first time in 2018. Due to the acquisition system of hospitals in the public network of the National Health System in Spain, hospital consumption data correspond to ex-factory prices, taking into account the applicable regulatory deductions. The rest of pharmaceutical sales data are provided according to official medical receipts issued by the National Health System and continuous referring, as in the previous series, to gross retail price (VAT included). Note that the important increase seen in the 2018 data for certain drug categories is due to the inclusion of hospital consumption (specifically for B-Blood and blood forming organs, C02-Antihypertensives, J-Anti-infectives for systemic use and J01-Antibacterials for systemic use):

- In 2018, the consumption of the anatomical main group B-BLOOD AND BLOOD FORMING ORGANS was 1.638,64 million €. The 103,27% increase over 2017 is due to the inclusion of the data on hospital consumption, which represents 45,48% of the total for 2018 (745,24).
- In 2018 the consumption of the therapeutic subgroup C02-ANTIHYPERTENSIVES, amounted to 116,81 million €. The increase of 158,28% over 2017 is due to the inclusion of the data on hospital consumption, which represents 58,46% of the total for 2018 (68,29 million €).
- In 2018, the consumption of the anatomical main group J-ANTIINFECTIVES FOR SYSTEMIC USE was 1.868,61 million €. The increase of 537,32% over 2017 is due to the inclusion of the data on hospital consumption, which represents 84,34% of the total for 2018 (1.575,98 million €).
- In 2018, consumption of the therapeutic subgroup J01-ANTIBACTERIAL FOR SYSTEMIC USE amounted to 480 million €. The increase of 102,21% over 2017 is due to the inclusion of the data on hospital consumption, which represents 51,07% of the total for 2018 (245,13).

 **Break in time series in 2014:** Prescription invoices data from special health insurance schemes such as the General Mutual Civil Servants (MUFACE), the Social Institute of the Armed Forces (ISFAS) and the General Mutual Judicial (MUGEJU) are included for the first time in 2014.

**Further information:** <https://www.sanidad.gob.es/profesionales/farmacia/datos/diciembre2014.htm>.

## Sweden

**Source: Swedish eHealth Agency (eHälsomyndigheten), Stockholm, Sweden.**

**Coverage:**

- Total sales of pharmaceutical products on the domestic market.
- Data include drugs dispensed in hospitals and non-reimbursed drugs, as well as OTC drugs (both from pharmacies and other retailers).
- The Swedish figures show Pharmacy retail (sales) prices (i.e., AUP: *Apotekens UtförsäljningsPris*).

**Methodology:**

- Data updated from 2000 onwards according to the ATC 2023.
  - Prices from 2000 onwards are pharmacy retail prices. VAT is not included.
  - Discounts, given to Swedish counties (public procurement), for hospital pharmaceuticals are not accounted for before 2010. Thereafter, counties started to report actual expenditure (i.e. taking discounts into account), one after another. This explains the stagnation of pharmaceutical sales around 2010-2013.
- Note:** The decrease in sales of *A02B-Drugs for peptic ulcer & gastro-oesophageal reflux diseases*, *GORD* is related to the expiration of the patent for Losec (ATC code A02BC01 Omeprazole) around 2003, which led to generic competition from other pharmaceuticals.

**Further information:**

- Swedish eHealth Agency: <http://www.ehalsomyndigheten.se/Om-oss-/Uppdrag-och-verksamhet/Other-languages/1/Swedish-eHealth-Agency/>.
- General guidelines for economic evaluations from the Pharmaceutical Benefits Board (LFNAR 2003:2), <http://www.tlv.se/Upload/English/Guidelines-for-economic-evaluations-LFNAR-2003-2.pdf>.
- The Dental and Pharmaceutical Benefits Agency (TLV) is a central government agency whose remit is to determine whether a pharmaceutical product or dental care procedure shall be subsidised by the state. The Swedish government subsidises medicines for various reasons, but particularly to ensure universal access to high-quality, effective medicinal products. Not all medicines are subsidised. See <http://www.tlv.se/in-english-old/medicines-new/pricing-and-reimbursement-of-medicines/>.
- TLV determines retail margins for all pharmacies in Sweden and publishes the lists of substitutable medicines where pharmacies must choose the cheapest available one when appropriate. Pharmacies are responsible for offering customers the most inexpensive medicinal product when different versions of equal effect exist. The high-cost threshold incrementally reduces patient costs for prescription medicines. See <http://www.tlv.se/in-english-old/medicines-new/the-swedish-high-cost-threshold/how-it-works/>.

## Switzerland

**Sources:**

From 2021 onwards: **IQVIA** (<https://www.iqvia.com/>).


2001-2020: **Interpharma** (formerly Pharma Information), Association of the research-based pharmaceutical companies in Basel, Switzerland. <http://www.interpharma.ch/>.


Data up to 2000: Total pharmaceutical sales: **Swiss Association of Pharmacists**. Other categories: **Interpharma**, Association of the research-based pharmaceutical companies in Basle, Switzerland.



**Methodology:**

 ATC codes are based on the classification of the **European Pharmaceutical Marketing Research Association (EphMRA)**.

- Sales for reimbursed medicines estimated to maximum retail price fixed by the Swiss Federal Office of Public Health (VAT included). Sales for non-reimbursed medicines estimated to recommended retail prices.

 **Break in time series in 2016:** As the ATC category K has been excluded from the data, there is a break in series in the categories “Total pharmaceutical sales” and “Products not elsewhere classified”. From 2015 onwards, the category “Products not elsewhere classified” consists of the ATC groups D, L, P, S, T and V.

 **Break in time series in 2006:** The increase in “Products not elsewhere classified” in 2006 is due to the fact that some products cannot be classified in the ATC categories requested by the OECD, and thus several ATC categories not included in the EphMRA classification are reported in this residual category. From 2006 onwards, the category “Products not elsewhere classified” consists of the ATC categories D, K, L, P, S, T and V.

 **Break in time series in 2002:**  From 2002 onwards, data include sales of all medicines, including non-reimbursed drugs and OTC drugs, delivered in pharmacies or drugstores and dispensed by physicians; data exclude sales in hospitals (this is because only Ex-Factory prices are available). The additional advice fee paid by patients in pharmacies is not included. Figures up to 2001 include sales in hospitals and sales of registered non-pharmaceuticals and medical non-durables.

## Türkiye

### Source:

2008 onwards: **Ministry of Health, Turkish Medicines and Medical Devices Agency** (via IQVIA, formerly IMS Health, Intercontinental Medical Statistics).

### Coverage:

- Data include drugs dispensed in pharmacies and hospitals, and also non-reimbursed drugs and OTC drugs.
- Ex-factory prices represent sales from the wholesalers to the community pharmacies and average tendered prices represent sales from the wholesalers to the hospitals in Türkiye. VAT rates are not included. Prices include mandatory discounts.

### Methodology:

- The IQVIA sales data, Türkiye Pharmaceutical Index (TPI), is the definitive measure of product sales from the wholesalers to the community pharmacies and from the wholesalers to the hospitals in Türkiye.
- ATC group data were obtained from IQVIA (formerly IMS Health).
- “Total pharmaceuticals sales” include all ATC categories except categories V06-General nutrients and V07-All other non-therapeutic products.
- “Products not elsewhere classified” are included in the total pharmaceutical sales.

### Notes:

- Important increases in sales prices in 2020 and 2021 are due to the depreciation of the Turkish lira.
- There is an important increase in 2019 for a few categories of drugs. The price changes of some products in these categories should be evaluated within the scope of currency updates and decisions of the Price Evaluation Commission. Also, the change in balance of market, especially the withdrawal of some products from the market and the increasing usage of pharmaceutical equivalents for those products, can lead to increases in sale prices of these categories.

## United Kingdom


From 2010 onwards:

**Source: IQVIA** (since 2017; previously named **IMS Health**).

### Coverage:

- Data for the UK include drugs dispensed in hospitals.
- Data for the UK do not include OTC non-reimbursed drugs but include OOP/private sales in NHS hospitals.
- Data for the UK do not include OTC drugs.
- Data are priced at drug tariff (reimbursement price for generics) or manufacturer list price to NHS (for on-patent products).
- The VAT is not included.

### Methodology:

-  Prescription Charge income for 2009 sourced from IMS Health.
- Figures for total pharmaceutical sales only, as no breakdown available by ATC code.
- Not all non Rx-bound pharmaceuticals are captured.

Up to 2009:


**Source: Department of Health and Prescription Pricing Authority.**


### Coverage:


- Prescription charges were abolished in Wales at the start of 2007, therefore the 2007 figure includes England, Scotland and Northern Ireland.
- Prescription charge income for Scotland for 2007/2008 was not available, therefore 2006/2007 was used, as figures have not changed significantly over the last nine years.
- 2002, 2003 and 2004 data use the previous year's component for dispensing costs. These are relatively stable and form a small part of the total. For example, for cardiovascular drugs they form less than 1/10th.
- 2003 inflation rate for Chemists goods taken from the ONS Business Monitor MM23 – Focus on Consumer Price Indices, December 2004.
- Over-the-counter expenditure data for 2003 have been estimated by adjusting the 2002 figure using the 2003 inflation rate on Chemists goods.
- 2002 data include estimates for Scotland.



**Methodology:**

- Sales by ATC category provided by Department of Health using data from the Prescriptions Pricing Authority.
-  Data for England only.
- Figures on prescription charge income for England, Wales and Northern Ireland are now sourced from the relevant devolved prescription information authorities. This change has been applied to all years, therefore the expenditure for 2000-2006 will vary with the previous estimates published.
- Data are not directly comparable before and after 1995 due to a change in the sources from which data is collected.
- The categories used from 1995 onwards may not exactly match the ATC classifications.
- To avoid giving a spuriously precise figure data have been rounded to the nearest 10000000.

 **Break in series in 2010:** From 2010 onwards, data have been revised to more accurately meet the definition, due to a change in source (note the break is reflected in the data by ATC categories in 2012, due to a gap in data reporting between 2005 and 2011).

 **Break in series in 1995:** From 1995, data are based on over-the-counter expenditure data for the UK from the 'Family Spending - A report on the Expenditure and Food Survey' (ONS) and its predecessor the 'Family Expenditure Survey', plus UK data published by the Office for Health Economics in the Compendium of Health Statistics which uses data from the Prescription Pricing Authority, Annual Abstract of Statistics and data from the UK Health Departments. This includes the cost of medicines dispensed in the community, pharmacists' remuneration in the form of dispensing fees, container costs, on-cost allowances, over-the-counter medicines and other medical non-durables.

Data up to 1994: Total sales figures (UK) provided by the **Department of Health**.

**United States**

Data not available.

**NON-OECD ECONOMIES****Croatia**

**Source:** HALMED, Croatian Agency for Medicinal Products and Medical Devices.

**Coverage:** Data include drugs dispensed in hospitals, non-reimbursed drugs, as well as OTC drugs.

**Methodology:**

- Total data are collected from pharmacies, hospital pharmacies and specialised drugstores.
- The obtained data can be displayed in the WHO ATC classification system.
- Significant variations have occurred due to changes in the defined daily doses for specific medicinal products in certain years.

**Further information:** <https://www.halmed.hr/Novosti-i-edukacije/Publikacije-i-izvjesca/Izvjesca-o-potrosnji-lijekova/Izvjesce-o-potrosnji-lijekova-u-Republici-Hrvatskoj-u-2023/>.

**Romania**

**Source:** National Health Insurance House.

**Coverage:**

- Data do not include the drugs that are the subject of cost-volume and cost-volume-result contracts.
- Data include the consumption values related to the drugs borne from the National Health Insurance House budget and the budget of the Ministry of Health issued through open-circuit pharmacies on the basis of medical prescription, and the values related to drugs issued through health units with beds and dialysis centers for the drugs used in the treatment of hospitalised patients and the drugs within the national health programs.
- Data include drugs dispensed in hospitals
- Data include non-reimbursed drugs
- Data include OTC drugs
- Major deviation from the OECD definition: prices and VAT.



