

**Documentation of statistics for  
Sale of Prescription Drugs (Experimental Statistics) 2021**

## **1 Introduction**

The aim of the experimental statistics "Sales of prescription medicine" is to elucidate the population's purchase of medicines via prescription. The statistics can be used to get insight into the distribution of redeemed prescriptions in relation to type of medicine, gender, age, geography and social conditions.

## **2 Statistical presentation**

The statistics "Sales of prescription medicine (Experimental statistics)" contain information on all sales of human medicines in Denmark, which took place via prescription. The statistics also cover the sale of medicines that do not require a prescription but are sold on prescription. Sales are calculated in relation to the number of people who have redeemed a prescription and the number of prescriptions redeemed. The statistic covers the period from the 1st of January 2016 to the 31st of December for people with registered residence in Denmark by 1st of January of the related year.

### **2.1 Data description**

Both the number of individuals and the number of redeemed prescriptions are used as units of measurement for this statistics. Thereby the number of people with redeemed prescriptions and the number of redeemed prescriptions can be estimated in relation to type of medicine, gender, age, place of residence, origin and education.

## 2.2 Classification system

When publishing the statistics "Sales of prescription medicine (Experimental statistics)" the following classifications are used:

- Type of medicine: The medicines are grouped according to the ATC system (Anatomical Therapeutic Chemical Classification System). In the ATC system, human medicines are classified according to the active substances, as well as therapeutic and pharmacological properties. The ATC system is divided into five hierarchical levels. In the statistics "Sales of prescription medicine (Experimental statistics)" the medicines are divided according to the two upper levels of the ATC system. Under the 1st level, the medicine is divided into 14 groups according to the human organ system:

A: Alimentary tract and metabolism B: Blood and blood forming organs C: Cardiovascular system D: Dermatologicals G: Genito urinary system and sex hormones H: Systemic hormonal preparations, excl. Sex hormones and insulins J: Antiinfectives for systemic use I: Antineoplastic and immunomodulating agents M: Muscle relaxants N: Nervous system P: Antiparasitic products, insecticides and repellent R: Respiratory system S: Sensory organs V: Various

Under the 2nd level, the medicines are further divided into therapeutic/pharmacological subgroups.

An overview of [ATC](#)

- Highest Education Attained classified on [DISCED-15](#) and is divided into the following categories: Pre-primary or not elsewhere classified; primary; upper secondary education; Vocational; short-term further education; intermediate higher education; bachelors degree; masters degree, or equivalent tertiary education level.
- Ancestry is divided into the following categories; persons of Danish origin ; immigrants from western countries; immigrants from non-western countries; descendants from western countries; descendants from non-western countries.
- Residence is divided into municipal; region.

## 2.3 Sector coverage

The pharmacy sector in Denmark.

## 2.4 Statistical concepts and definitions

Prescription: An instruction from a doctor for the administration of medicines.

Medicine: Agent used to treat diseases in humans, e.g. in the form of pills.

## 2.5 Statistical unit

Persons who have redeemed at least one prescription in the reference year.

Redeemed prescriptions.

## **2.6 Statistical population**

Persons who have redeemed at least one prescription in the reference year and with permanent residence in Denmark on the 1st of January in the reference year.

## **2.7 Reference area**

Denmark

## **2.8 Time coverage**

The statistics cover the period 1st of January 2016 to 31st of December 2021.

## **2.9 Base period**

Not relevant for this statistic

## **2.10 Unit of measure**

Number Proportion

## **2.11 Reference period**

The year of the date of sales

## **2.12 Frequency of dissemination**

Only planned publication.

## **2.13 Legal acts and other agreements**

There is no EU regulation concerning the statistics.

## **2.14 Cost and burden**

There is no response burden as the data are collected via administrative registers.

## **2.15 Comment**

[Consultations with physicians](#)

### **3 Statistical processing**

Source data comes from the Danish Health Data Agency, which once a month calculates all sales of human and veterinary medicines in Denmark, after they have validated and quality checked the data.

#### **3.1 Source data**

External sources: The Register of Pharmaceutical Sales, the Danish Health Data Agency.

Internal sources: [The register of Population](#) and The register of [Highest Education Attained](#)

#### **3.2 Frequency of data collection**

The pharmacies reports the information to the Danish Health Data Agency every month.

#### **3.3 Data collection**

The pharmacies reports electronically to the Danish Health Data Agency's FTP-server through Medicinnettet.

#### **3.4 Data validation**

The Danish Health Data Agency validates and quality checks the reported data from the pharmacies.

Totals and subtotals in the statbank are compared with numbers from [medstat](#) from The Danish Health Data Agency.

#### **3.5 Data compilation**

Sales are calculated on an annual basis and the population is limited to people who were in the population on 1st of January of the reference year. Medicines are grouped by medicine type and merged with information of age, sex, place of residence and education.

#### **3.6 Adjustment**

Not relevant to this statistic

### **4 Relevance**

The statistics may be relevant for authorities who wish to gain an insight into the population's redemption of prescriptions and an insight into the redemption of prescriptions among certain population groups with regard to e.g. gender, age, geography and social conditions.

#### **4.1 User Needs**

The statistics can be relevant to ministries, researchers and the general public.

#### **4.2 User Satisfaction**

Not relevant for this statistic

#### **4.3 Data completeness rate**

Not relevant for this statistic

### **5 Accuracy and reliability**

Pharmacies are required by law to report data to The Danish Health Data Authority, but source data only cover sales of human medicines via prescription. This does not necessarily mean that the person who bought the medicine has taken the medicine. At the same time, the statistics do not contain information on the purchase of medicines without a prescription and it does not contain information about medicines used in hospitals or in medical practices. The statistics are not expected to be revised, as The Danish Health Data Authority very rarely corrects source data back in time.

#### **5.1 Overall accuracy**

Pharmacies are required by law to report the sale of prescription medicines. The pharmacies often reports through their own IT system, which reduces the risk of misreporting.

#### **5.2 Sampling error**

Not relevant for this statistic

#### **5.3 Non-sampling error**

The statistics cover the sale of medicines via prescription, it does not however guarantee that the medicines have actually been used.

The statistics only contain information on sales to persons, and no information on medicines sold to hospitals - the hospital sector or used in medical practices.

#### **5.4 Quality management**

Statistics Denmark follows the recommendations on organisation and management of quality given in the Code of Practice for European Statistics (CoP) and the implementation guidelines given in the Quality Assurance Framework of the European Statistical System (QAF). A Working Group on Quality and a central quality assurance function have been established to continuously carry through control of products and processes.

## 5.5 Quality assurance

Statistics Denmark follows the principles in the Code of Practice for European Statistics (CoP) and uses the Quality Assurance Framework of the European Statistical System (QAF) for the implementation of the principles. This involves continuous decentralized and central control of products and processes based on documentation following international standards. The central quality assurance function reports to the Working Group on Quality. Reports include suggestions for improvement that are assessed, decided and subsequently implemented.

## 5.6 Quality assessment

It is assessed that the quality of data from The Register of Pharmaceutical Sales is high.

## 5.7 Data revision - policy

Statistics Denmark revises published figures in accordance with the [Revision Policy for Statistics Denmark](#). The common procedures and principles of the Revision Policy are for some statistics supplemented by a specific revision practice.

## 5.8 Data revision practice

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## 6 Timeliness and punctuality

The statistics will be published in February 2023, and is currently not expected to be published again.

### 6.1 Timeliness and time lag - final results

The statistics is published 14 months after the end of the reference period.

### 6.2 Punctuality

Not relevant to this statistic

## 7 Comparability

Several comparable national and international statistics exist about the consumption of medicines. There are several factors that can influence the sales of prescription medicine. Regulations of witch medicines that require prescription and the amount of subsidies offered by the authorities, can vary from country to country and over time. Therefore it is important to be observant of these factors, if the statistics is used to evaluate the consumption of medicine over time or to compare consumption from country to country.

### **7.1 Comparability - geographical**

Sweden, Finland, Norway and Iceland, all have registers of the sales of prescription medicine. A Swedish statistic of sales of prescription medicine, is available via the Swedish [The social welfare agency](#).

### **7.2 Comparability over time**

Several factors influence the development of the sales of prescriptive medicines over time. Regulations of witch medicines that require prescription and the amount of subsidies offered by the authorities, can vary over time.

### **7.3 Coherence - cross domain**

The Danish Health Data Authority have several statistics, based on data from The Register of Pharmaceutical Sales. The Danish Health Data Authority have several statistics about medicine aimed at the treatment of certain diseases and the consumption of medicines in certain population groups.

### **7.4 Coherence - internal**

Not relevant for this statistic.

## **8 Accessibility and clarity**

The statistic can be found in the Statbank under the subject Health. It is ensured, that there are at least 5 observation per cell. At this time it is not possible to order a tailor-made statistic.

### **8.1 Release calendar**

The publication date appears in the release calendar. The date is confirmed in the weeks before.

### **8.3 User access**

Statistics are always published at 8:00 a.m. at the day announced in the release calendar. No one outside of Statistics Denmark can access the statistics before they are published.

### **8.2 Release calendar access**

The Release Calendar can be accessed on our English website: [Release Calendar](#).

### **8.4 News release**

These statistics are published in a Danish press release.

## 8.5 Publications

These statistics are only published in a Danish press release.

## 8.6 On-line database

The statistics are published in the StatBank under the subject in the following tables:

MEDI1A: Sales of prescription medicine (Experimental statistics) by region, type of medicine, indicators, sex and age group  
MEDI1B: Sales of prescription medicine (Experimental statistics) by area, type of medicine, indicators; sex and age group  
MEDICIN2: Sales of prescription medicine (Experimental statistics) by ancestry, type of medicine, indicators, sex and age group  
MEDICIN3: Sales of prescription medicine (Experimental statistics) by education, type of medicine, indicators, sex and age group  
MEDICIN4: Sales of prescription medicine (Experimental statistics) by type of medicine, indicators, sex and age group

## 8.7 Micro-data access

It is possible to gain access to de-identified [data](#)

## 8.8 Other

Read more at [The Danish Health Data Authority](#)

## 8.9 Confidentiality - policy

Publication from the register will be in accordance to the data privacy policy of Statistics Denmark: [Data privacy policy](#)

## 8.10 Confidentiality - data treatment

The statistics are not published at a level detailed enough for individuals to be identified.

## 8.11 Documentation on methodology

Not relevant for this statistic.

## 8.12 Quality documentation

Results from the quality evaluation of products and selected processes are available in detail for each statistics and in summary reports for the Working Group on Quality.

## 9 Contact

Administratively, the statistics are located in the Welfare and Health. The person in charge of statistics is Jonas Kirchheiner-Rasmussen, tel. 39 17 34 93, e-mail: [ras@dst.dk](mailto:ras@dst.dk)

**9.1 Contact organisation**

Statistics Denmark

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N/A