GERMAN PHARMACIES FIGURES · DATA · FACTS

ABOUT THE ABDA

- The ABDA Federal Union of German Associations of Pharmacists is the top-level organisation for pharmacists in Germany. The ABDA represents the interests of the pharmaceutical healthcare professions in politics and society while promoting high-quality, comprehensive pharmaceutical care in Germany.
- The ABDA has 34 members: 17 regional chambers of pharmacists and 17 regional associations of pharmacists one from each of Germany's 16 federal states plus an additional representative from North Rhine-Westphalia which has been divided into North Rhine and Westphalia-Lippe due to its size.
- The 17 chambers of the Federal Chamber of Pharmacists (BAK) and the 17 associations in the German Pharmacists' Association (DAV) are combined under one roof in ABDA. Membership in the Chamber of Pharmacists is mandatory for all pharmacists while membership in associations for pharmacy owners, on the other hand, is voluntary.
- » ABDA's Executive Board is composed of 13 members: the president, the vice president, an employed pharmacist from a community pharmacy along with five members each from the BAK and DAV executive boards.
- The annual general assembly for pharmacists takes place once per year as part of German Pharmacists' Assembly. The annual general assembly is used to form political positions. Its resolutions are binding for the ABDA committees' actions.
- » The offices of ABDA, BAK and DAV are in Berlin and are run by the general manager. In addition to the four business areas, a) pharmacy, b) pharmaceuticals, c) economics and d) law, there are staff positions for a) finances, personnel and administration, b) communications and c) European affairs.
- » European representation for ABDA is headquartered in Brussels (Belgium) and is responsible for representing its interests in European Union (EU) institutions.
- » The ABDA is a member of the German Federation of Independent Professionals (BFB), the Pharmaceutical Group of the European Union (PGEU), and the International Pharmaceutical Federation (FIP).
- The ABDA receives professional support from many institutions, including the Drug Commission of German Pharmacists (AMK), the German Institute for Drug Use Evaluation (DAPI) as well as the Central Laboratory of German Pharmacists (ZL).

PHARMACIES IN GERMANY

- » In order to work as a pharmacist in Germany, one must study for 5 years at university: 2 years each of basic and main studies and 1 year of practical training. Each course of study ends with a state examination. Upon successful completion, one must apply for a license to practice pharmacy, which is authorisation to exercise the profession.
- » Pharmacists with a foreign pharmaceutical diploma or certificate need to have it recognised prior to starting to work. There is a responsible authority for the recognition in every federal state. The responsible authority will check the equivalency level of the qualification. If there are significant divergences in the qualification, the responsible authority might propose measures to compensate the gaps. Moreover, applicants need to give proof of their language skills in German.
- » Pharmacists in Germany are not only part of the healthcare professions (like doctors) and freelance professions (such as architects), but also pharmacy owners which means they are also merchants who are therefore required to pay business taxes.
- » Freedom of establishment has been created for pharmacists in Germany. According to this principle, a pharmacist may establish a pharmacy anywhere and anytime, provided that he complies with the law. This also means that no pharmacist is protected from unwanted competition in the vicinity.
- » In Germany, the owner/operator of a pharmacy must always be a pharmacist. This third-party ownership ban emphasises a pharmacist's personal responsibility and liability – and decouples the provisioning of pharmaceuticals from corporate profit goals.
- The ownership of multiple pharmacies is forbidden in Germany. However, a pharmacist may, in addition to the main pharmacy, operate up to three subsidiary pharmacies in the nearby local vicinity. Each of these locations must also have a pharmacist in place as subsidiary manager. There are no pharmacy chains in Germany.
- » Selling pharmaceuticals via mail order is allowed in Germany. Approved mail order pharmacies are "normal" community pharmacies with a special mail order permit. According to a list from the Federal Ministry of Health, the mail order trade is also allowed from a few other European countries.
- Prices for prescription-only pharmaceuticals are uniform nationwide; this is stipulated by the Drug Price Ordinance to protect patients and pharmacists. Since the Pharmacy Strengthening Act (VOASG) came into force in December 2020, mail order pharmacies have been prohibited from offering discounts on prescription drugs to SHI-insured patients. The amendment to § 129 German Social Code V (SGB V) thus restored equal pricing/nationwide fixed prices between community pharmacies and mail order pharmacies. In contrast, all pharmacies are free to set their own price for non-prescription medications.
- The pharmacist's fee for consultation on a prescription medication is regulated by the Drug Price Ordinance. Broadly speaking, this is a fixed fee of 8,35 euros per package. Each pharmacist may calculate their own fee for non-prescription pharmaceuticals.
- » Pharmacists in Germany assume an obligation for the common good of society. This is not individually remunerated but, rather, it is individually subsidised. This includes creating formulations, dispensing narcotic substances and performing comprehensive evening and emergency services.
- Since 2022, German pharmacies have implemented two important new service ranges for their customers: With the electronic prescription (e-prescription), patients can access their pharmacy not only in person, but also online at any time, and have their medications delivered by a courier. With new pharmaceutical services, pharmacies can offer their patients free, comprehensive, personal consultation, regardless of the individual prescription, e.g. with the "Extended Medication Advice in case of Polymedication" for chronically ill patients.

MAP OF GERMANY

The red pharmacy A (with chalice and snake) is the identifying symbol for community pharmacies in Germany. This registered trademark of the German Pharmacists' Association (DAV) enjoys special legal protection throughout Germany and Europe.



"APOTHEKE 2030" PERSPECTIVE PAPER

- The policy paper "Pharmacy 2030 Perspectives on provision of pharmacy services in Germany" ("Apotheke 2030"), was adopted by a vast majority on German Pharmacist Day 2014 in Munich. This was preceded by an opinion-forming process in which several thousand pharmacists participated over the course of an entire year.
- The preamble reads as follows: "Pharmacists in Germany are experts in pharmaceuticals. Based on this core competency, they make an indispensable contribution to patients' well-being in outpatient care. As freelance health professionals, they carry out their legal mandate of comprehensive pharmaceutical provisioning to the German public via public, owner-operated pharmacies."
- The healthcare system in Germany faces great challenges such as demography, a lack of professionals and financial pressure on resources. Therefore, for the benefit of our patients, the healthcare role of the pharmacy must be actively defined so that healthcare may maintain a key role in the future as well.
- "Apotheke 2030" describes how the pharmacy's role and range of services should be advanced as a pillar of the healthcare system. Essentially, it concerns ways in which pharmacies may strengthen their role in healthcare while collaborating as part of a network with doctors and other specialised professionals thus making true medication management for patients possible.
- Three issues are at the forefront when strategically implementing the document: First, pharmacists must define the correct way in which to systematically implement medication management. Secondly, provisioning frameworks must be adapted for the future. Thirdly, pharmacists must determine what the future holds regarding pharmacist qualification (education, advanced and continuing education).
- » Pharmacies in Germany wish to continue offering medication management as a crucial instrument for safe, effective and economical pharmaceutical therapy in the future. In so doing, all of a patient's medication, including self-medication, will be continually analysed. The goal is to avoid, detect, and solve problems related to pharmaceuticals and, in so doing, increase the effectiveness and efficiency of pharmaceutical therapy.
- » Pharmacists wish to collaborate collegially both among each other and with other health-care professions as part of a healthcare network. Pharmacies will actively co-design the healthcare network with clearly defined competencies and interfaces. As an integral component of the network, they will assume responsibility for pharmaceuticals, the safety of pharmaceutical therapy and the optimization of practices.
- » An updated and expanded perspective paper, "Apotheke 2030", was released in January 2022. It was adjusted to reflect the latest developments in society, politics and science.

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LEGAL INFORMATION

AN OVERVIEW OF PATIENT CARE SERVICES

Pharmacies have the legal mandate to ensure pharmaceutical supply to the population. This applies to every individual pharmacy as well as the nationwide distribution of all pharmacies across Germany. As well as providing finished dosage forms (FDF), pharmacies fulfil obligations to the common good, such as nighttime and emergency services and the preparation of formulations.

18,068

community pharmacies supply pharmaceuticals to the people of Germany (as of late 2022).

1 billion

patient interactions per year in community pharmacies.

3 million

patients served per day in community pharmacies.

300,000

courier deliveries completed per day.

6 million

industrially produced pharmaceuticals tested by pharmacists annually.

88%

of patients who regularly take three or more medications usually visit the same pharmacy.

83%

of German citizens trust their pharmacist.

83%

of adults describe the quality of health care services provided by local pharmacies as good to excellent.

92%

of German citizens are satisfied or very satisfied with local pharmacies.

Source: ABDA statistics, Forsa Gesellschaft für Sozialforschung und statistische Analyse mbH, infas Institut für angewandte Sozialwissenschaft GmbH, YouGov Deutschland GmbH, marpinion GmbH

PHARMACEUTICAL SERVICES

With the introduction of the Local Pharmacy Strengthening Act (VOASG) in 2020, patients' entitlement to new pharmaceutical services became enshrined in law. This refers to services that transcend the obligation to provide information and consultation outlined in § 20 of the Ordinance on the Operation of Pharmacies and to improve the care provided to patients. In June 2022, the DAV and the National Association of Statutory Health Insurance Funds agreed on the framework conditions for the new services. Since then, pharmacies have been allowed to offer these services at the expense of SHI. The pharmaceutical services in particular cover pharmacy measures to improve the safety and efficacy of drug therapies (§ 129 para. 5e SGB V). At current, this important instrument allows local pharmacies to offer patients five low-threshold health-promotion services.

Standardised risk identification for high blood pressure

Around the world, over **10 million** deaths can be traced back to high blood pressure (hypertension) every year. According to the latest data, over **30 per cent** of adults in Germany are affected by high blood pressure. At least **30 per cent** of hypertensive patients have blood pressure outside the target range; this is often due to inadequate adherence to treatment.

Extended instruction on correct administration of medicines using inhalation technology

In Germany, some **12 million** people suffer from a chronic respiratory illness (asthma, COPD). Many of these people are dependent on inhaled medicines. In the VITA study in German pharmacies, almost **80 per cent** of patients administered their inhaled medicines incorrectly.

Extended medication advice in case of polymedication

7.6 million German citizens aged **65 years** and older take **5 or more** prescribed medicines per day. One in three people between the ages of **75 and 80** takes more than 8 prescribed medicines.

Pharmaceutical care for organ-transplant recipients

Despite often having to wait a long time for a donor organ, only around **40 per cent** of organ-transplant recipients regularly take their medicine. This is one of the leading causes of transplant rejection. Studies on kidney transplantation have shown that intensive pharmaceutical support significantly increases adherence to treatment.

Pharmaceutical care in case of oral anti-tumor therapy

Oral anti-tumour therapy is often a long-term drug therapy. Despite this, only around **50 per cent** of patients take their medication regularly. Studies have shown that providing patients with longer-term pharmaceutical support can lead to improved compliance and a reduction of side effects.

Source: ABDA – Federal Union of German Associations of Pharmacists

PHARMACIES IN THE PANDEMIC RESPONSE

Since the outbreak of the COVID-19 pandemic in spring 2020, Germany's community pharmacies have not only ensured the supply of everyday pharmaceuticals – they have also assumed numerous special tasks to reduce the risk of transmission, as well as safely supplying medications to people self-isolating at home. Courier services, disinfectant, face masks, rapid tests, vaccines and vaccination certificates – these phrases are representative of the wide, and sometimes novel, range of services offered by pharmacies during the pandemic. Often within just a few days, pharmacies adapted to extensive legal regulations in order to offer the best-possible support for their patients during this difficult time. Since early 2022, administration of COVID-19 vaccines has also been permitted in pharmacies specially qualified and equipped for this purpose.

5.1 million

litres of disinfectant were produced by pharmacies between March and May 2020 to compensate for supply shortages from industrial production.

440 million

FFP2 masks were procured, prepared and distributed for 30 million people. Pharmacies were charged with this supply mandate between 15 December 2020 and 15 April 2021.

4,500

pharmacies performed free COVID-19 rapid tests in 2022.

40.6%

less time has been spent by pharmacies on the management of delivery shortages since the start of the pandemic and the loosening of legal requirements for dispensing of rebatecontract medications.

Source: German Pharmacists' Association (DAV), ABDA statistics, Forsa Gesellschaft für Sozialforschung und statistische Analyse mbH, infas Institut für angewandte Sozialwissenschaft GmbH, marpinion GmbH

130 million

vaccination and recovery certificates were issued by pharmacies between 2021 and 2022.

56 million

flu vaccine doses were supplied to doctors in 2020, 2021 and 2022.

127 million

COVID-19 vaccine doses were distributed to medical practices and company doctors by pharmacies in 2021 and 2022.

1,600

pharmacies comply with the necessary conditions and offer COVID-19 vaccines (March 2023).

342,000

COVID-19 vaccines were administered in community pharmacies up to and including March 2023.

Source: German Pharmacists' Association (DAV), ABDA statistics, Robert Koch Institute (RKI)

NIGHTTIME AND EMERGENCY SERVICE

The nighttime and emergency service is one of the most important obligations to the common good that pharmacies fulfil. Each pharmacy is assigned to do this by its regional chamber of pharmacists at regular intervals as required. Pharmacies receive a subsidy from the Emergency Service Fund of the German Pharmacists' Association to cover the additional cost, which is financed by a surcharge on each dispensed package of prescription drugs. Apothekenfinder 22 8 33 is a service that allows patients to find the nearest (emergency) pharmacy quickly and easily.

Night and emerge	endy shifts in 2022	430,000
of which	full shifts (20:00 - 6:00)	390,000
of which	part shifts	40,000
Pharmacies open	per night and emergency shift	1,200
Patients served p	er night and emergency shift	20,000

Different pharmacies have to provide emergency service to varying degrees. This can be seen in an example from the state of Bavaria: a pharmacy in Munich provides emergency service 14 times per year, whereas in Rothenburg, a much smaller town, it is over 70 times a year.

Prescriptions without emergency service fees for SHI-insured patients in 2022

Many patients use pharmacies' night and emergency services for urgent self-medication (such as the "morning-after pill") or to collect prescriptions. These can include private prescriptions or pink prescriptions charged to the SHI. If the doctor providing the emergency service crosses the "noctu" (Latin for "night") box on the pink prescription, the patient is not required to pay the emergency service fee of € 2.50 and the fee is covered by their health insurance. Patients with statutory health insurance were exempt from this fee for more than 1.4 million packages in 2022.

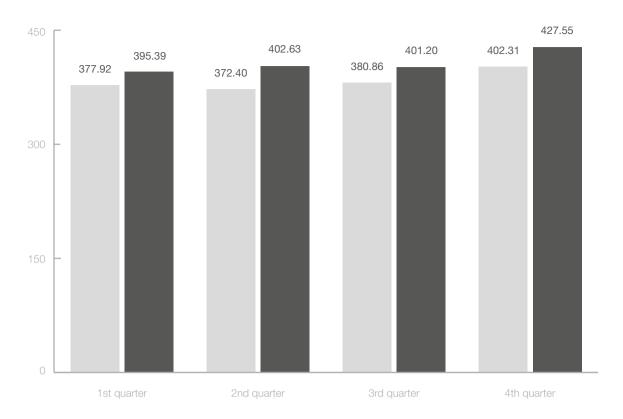
Pharmaceuticals dispensed for SHI patients in emergency service without emergency service fees ("noctu") in 2022

Total	1,407,000 packages
non-prescription drugs	377,000
prescription drugs	1,030,000

Finished dosage forms dispensed in community pharmacies at the expense of SHI

Source: Emergency Service Fund, aponet.de, German Institute for Drug Use Evaluation (DAPI)

Emergency service charge per full shift performed (in EUR)



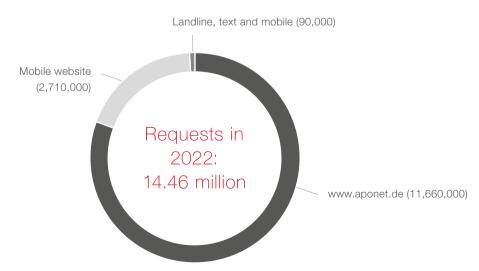
2021

average: 383 EUR

2022

average: 407 EUR

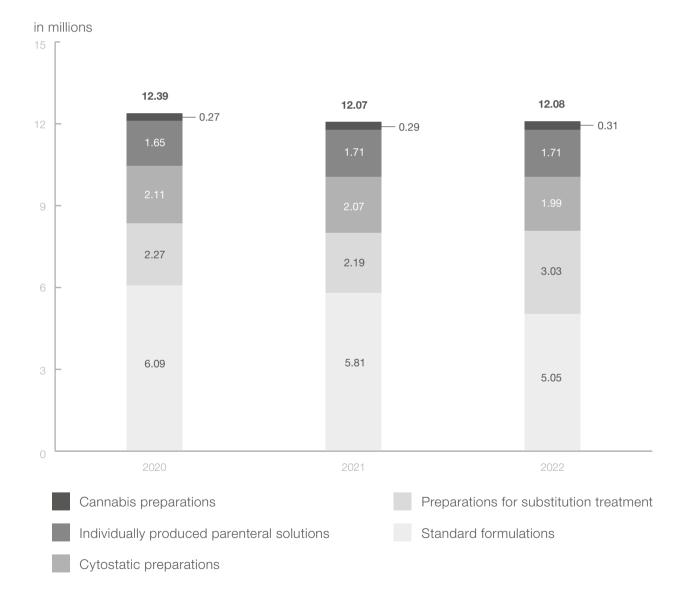
Apothekenfinder 22 8 33



Source: Emergency Service Fund, aponet.de

FORMULATIONS

It is often the case that no finished dosage forms exist for a patient's specific pharmaceutical needs. Pharmacies bridge this gap by preparing individual formulations according to doctors' prescriptions. In 2022, over 12 million formulations were produced just for patients with statutory health insurance (SHI).



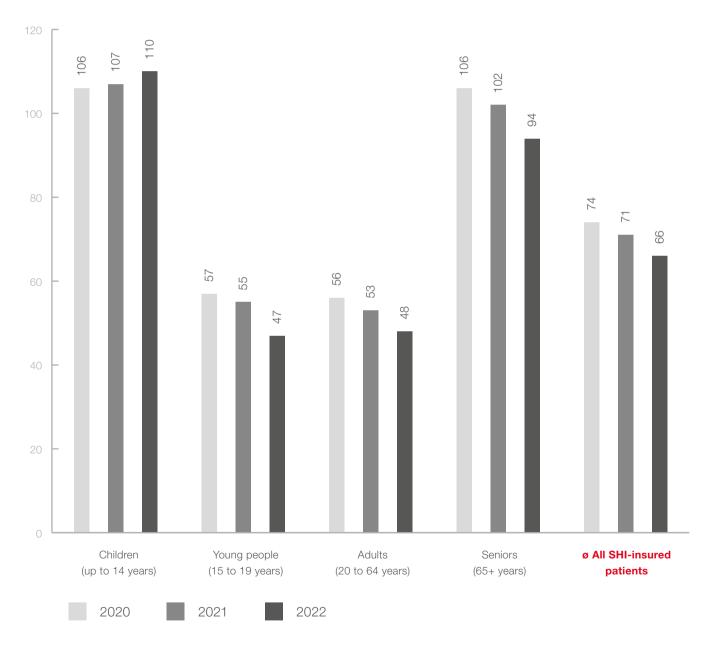
Source: National Association of Statutory Health Insurance Funds, ABDA statistics

STANDARD FORMULATIONS

Every year, pharmacies produce around five million standard formulations for SHI-insured patients as prescribed by doctors. Whether it's skin cream or fever-relief suppositories, any pharmacy can produce it in line with the patient's needs. Children in particular benefit from this. For example, if a medication is not available as a finished dosage form in a specific dosage, this can be specially prepared for them. Many seniors also need "special preparations".

Standard formulations per age group

Number per 1,000 SHI-insured patients

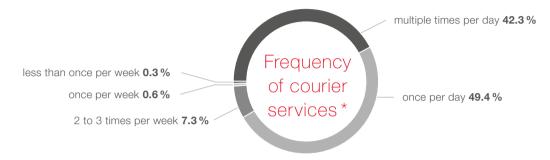


Formulations dispensed in community pharmacies at the expense of SHI.

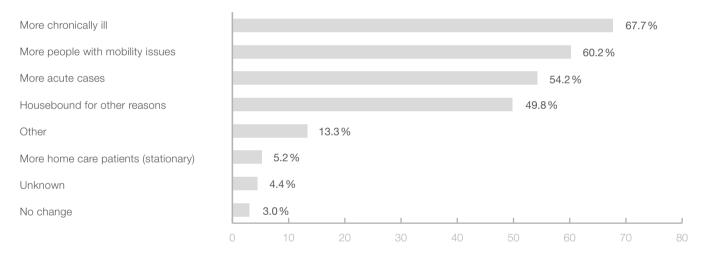
Source: German Institute for Drug Use Evaluation (DAPI)

COURIER SERVICES

Almost all pharmacies (98.0%) offer courier services to save patients having to travel to collect their medications. This is particularly helpful for patients with mobility issues. Pharmacy staff render this service about 300,000 times a day. At the start of the COVID-19 pandemic in spring 2020, this number exceeded 450,000. Consultation about the medications is usually given beforehand at the pharmacy, over the phone or by pharmacy staff upon delivery. Since April 2020, it has been possible to bill a portion of the cost of the delivery service to statutory health insurance funds.

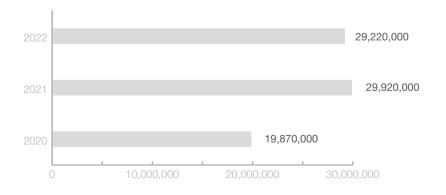


Patient groups supplied via courier services during the pandemic



Billed delivery services for SHI-insured patients

(special ID code 06461110)



*survey as part of the 2022 ABDA data panel

Source: ABDA data panel, German Pharmacists' Association (DAV), German Institute for Drug Use Evaluation (DAPI)

DIGITAL PHARMACY

Digitalisation is gathering speed in the health care industry. However, pharmacies have given themselves a head start by introducing the use of information technology (IT) in their daily work before the other participants in the market. They now use it for a wide range of tasks, such as ordering pharmaceuticals from wholesalers, managing stock inventories, implementing rebate contracts, using databases to check side effects and interactions of medications as well as carrying out billing with health insurance funds via computer centres. The processes and services that lead to the pharmacy, such a e-prescriptions, e-medication plans and e-patient records, are also being digitalised at an increasing rate. The goal is to provide better care for patients.

42 million

times per week. This how often medications are scanned in pharmacies to rule out drug counterfeiting using a data matrix code in the securPharm system.

17.75 million

data sets are stored in pharmacy computer systems for the purpose of allocating rebate contracts to health insurance funds, manufacturers and pharmaceuticals (January 2023).

14.46 million

searches (mostly online) are carried out every year by patients in Apothekenfinder 22 8 33 to find the nearest emergency pharmacy, whose address and opening times are currently found there.

610,000

contract and pre-qualification checks are conducted every week by pharmacies on the online contract portal (OVP) to provide their patients with medical aids.

105,000

drugs approved in Germany can be found in the pharmacy computer system using their pharmaceutical registration number (PZN) (January 2023).

55,000

Instruction leaflets and items of specialist information are stored in the ABDA-Datenbank² to assist consultations in pharmacies and minimise risks (March 2023).

21,000

different drugs (pharmaceutical registration numbers) are listed as rebate drugs by health insurance funds (January 2023).

13,000

images of finished dosage forms are stored in the ABDA-Datenbank² to improve drug safety in pharmacies (March 2023).

Source: ABDA - Federal Union of German Associations of Pharmacists, ABDATA, aponet.de, ACS PharmaProtect GmbH

TELEMATICS INFRASTRUCTURE AND E-PRESCRIPTIONS

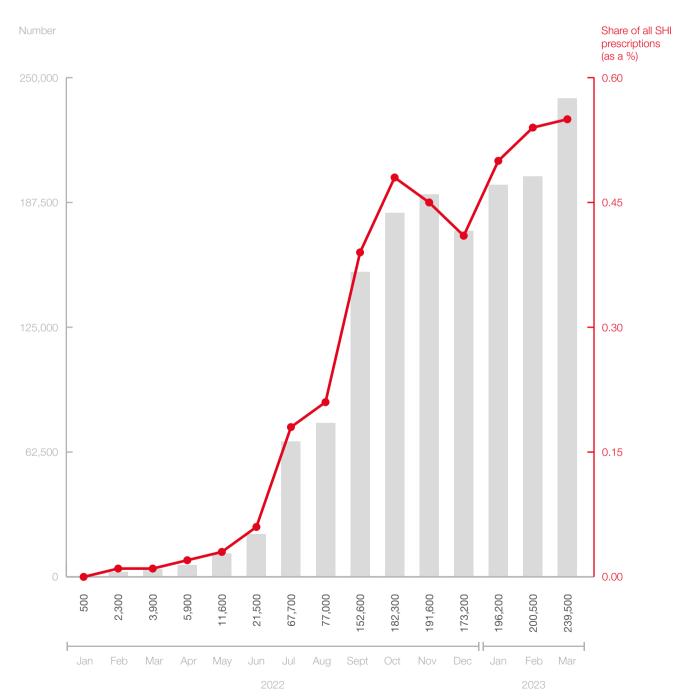
The formal introduction of e-prescriptions in September 2022 represented a significant change for pharmacies. Surveys have shown that pharmacists are ambivalent about the change. 86.6% of pharmacy owners are worried that e-prescriptions will lead to an increase in mail-order trade. The electronic prescription was intended to replace the pink paper prescription in 2022, but as yet, very few e-prescriptions have reached pharmacies, which have all long been prepared for them. The technical standards for this are being defined by gematik GmbH on behalf of the Federal Ministry of Health (BMG).

Integration into telematics infrastructure

100%	of pharmacies have institution cards (SMC-B).
100%	of pharmacy owners and managers have an electronic healthcare professional card (HBA).
99%	of pharmacies are connected to the healthcare network of the telematics infrastructure (TI) via "e-health connectors" (December 2022).
75 %	of pharmacies (approx. 13,600) are equipped for e-prescriptions according to the gematik directory service (April 2023).
54%	of pharmacies (approx. 9,800) redeem e-prescriptions (April 2023).
34%	of pharmacies (approx. 6,100) have already integrated the e-medication plan (eMP) into their software systems (December 2022).
21 %	of pharmacies (approx. 3,800) have already integrated the electronic patient record (ePA) into their software systems (December 2022).
12 %	of pharmacies (approx. 2,100) have a KIM address which allows them to communicate digitally with other actors in the healthcare sector (February 2023).

Source: German Pharmacists' Association (DAV), gematik GmbH, pharmacy climate index 2021 (marpinion GmbH)

Redeemed e-prescriptions



Source: gematik GmbH, ABDA statistics

What do pharmacy owners expect to result from the introduction of the e-prescription?

More mail-order trade for pharmaceuticals	86.6%
Tougher competition between community pharmacies	48.4 %
Less customer loyalty and fewer regular customers	41.0%
Fast, convenient purchase of medications for patients	27.2%
Fewer refusals for reimbursement from health insurance funds	25.4%
Fewer forged prescriptions	18.8%
Fewer consultations with doctors	16.8%
Avoidance of unnecessary contact like in the COVID-19 pandemic	4.6 %
None of the above	1.6%

What internal steps and measures are pharmacy owners planning for the introduction of the e-prescription?

Restructuring teams and workflows	67.0%
Expanding courier services	51.2%
Investing in digital marketing	38.0%
Offering pharmaceutical teleconsultations	24.2 %
Expanding existing mail-order trade activity	9.4%
Establishing mail-order trade	9.4%
No measures	13.4%

Source: Pharmacy climate index 2021 (marpinion GmbH)

Refinancing of the telematics infrastructure (TI) from 2020 to 2022

17,000

community pharmacies have applied for refinancing of their new TI equipment

125.6 million EUR

have been reimbursed to pharmacies by funding agencies and paid out via the DAV's Emergency Service Fund

this included

88.4 million EUR

for new equipment

20.2 million EUR

for operating cost allowances

11.5 million EUR

for reimbursement for healthcare professional cards (HBA)

5.3 million EUR

for reimbursement for the PTV-4 upgrade, which is required for the e-prescription and the electronic patient record.

0.1 million EUR

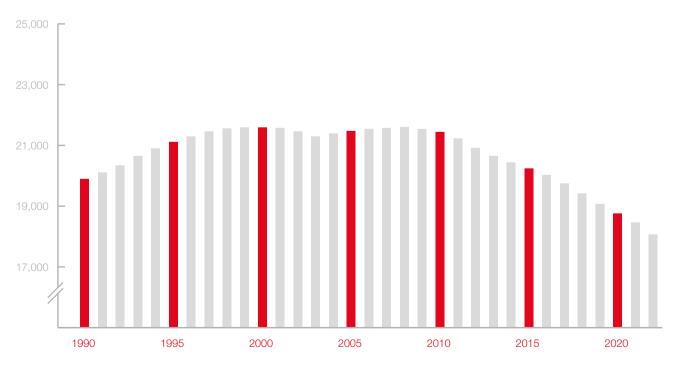
attachment devices for stationary card terminals

Source: Emergency Service Fund

CHANGING NUMBERS OF PHARMACIES

The number of community pharmacies in Germany has been falling since 2009, and in 2022 it dropped to its lowest point since the early 1980s, at 18,068. Reasons for this include competition among different pharmacies and the conditions brought about by health policy. At current, there is no danger that the population will be unable to access medications anywhere in the country.

	1990	1995	2000	2005	2010	2015	2020	2021	2022
Number of pharmacies (incl. subsidiaries)	19,898	21,119	21,592	21,476	21,441	20,249	18,753	18,461	18,068
of which									
Main/individual pharmacies	19,898	21,119	21,592	20,248	17,963	15,968	14,110	13,718	13,355
Subsidiaries	_	_	_	1,228	3,478	4,281	4,643	4,743	4,713
Openings	_	372	187	326	263	154	85	77	68
Closures	_	156	185	242	370	346	407	369	461
Change	_	+216	+2	+84	-107	-192	-322	-292	-393



All figures as at year end

^{*} pharmacies with an operating licence according to §2 German Pharmacies Act (ApoG)

NUMBER OF PHARMACIES BY FEDERAL STATE

The number of pharmacies in a given state depends, among other things, on the size and structure of the population and the land mass. North Rhine-Westphalia, which is divided into the chamber districts of North Rhine and Westphalia-Lippe, is Germany's most populous state. As such, it also has the highest number of pharmacies (3,800).

Federal State	Communi	ty pharmacies	of which main/individual pharmacies*	of which subsidiaries
	Number	Pharmacy density**		
Baden-Württemberg	2,303	21	1,666	637
Bavaria	2,882	22	2,133	749
Berlin	736	20	570	166
Brandenburg	553	22	394	159
Bremen	135	20	89	46
Hamburg	375	20	272	103
Hesse	1,389	22	1,025	364
Mecklenburg-Western Pomerania	372	23	282	90
Lower Saxony	1,755	22	1,296	459
North Rhine-Westphalia	3,804	21	2,811	993
North Rhine	2,044	21	1,524	520
Westphalia-Lippe	1,760	21	1,287	473
Rhineland-Palatinate	889	22	679	210
Saarland	273	28	206	67
Saxony	924	23	691	233
Saxony-Anhalt	568	26	418	150
Schleswig-Holstein	603	21	448	155
Thuringia	507	24	375	132
Total	18,068	22	13,355	4,713

All figures as at end of 2022

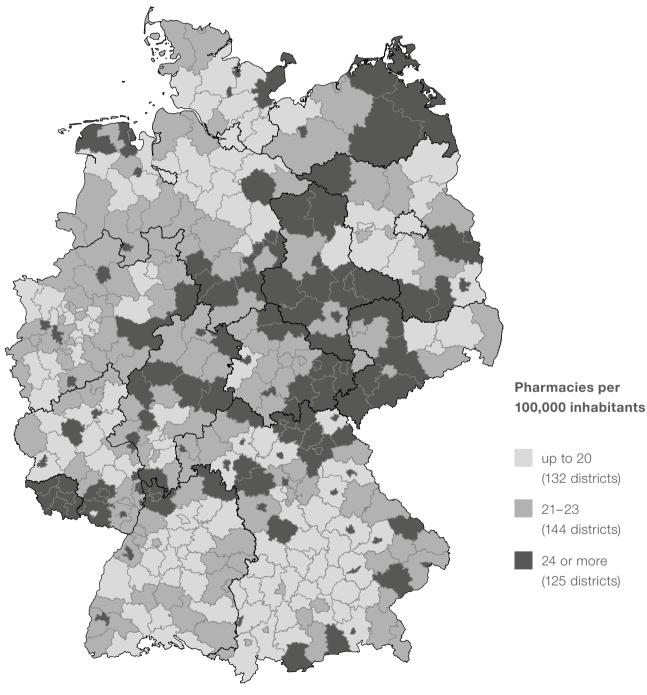
^{*} pharmacies with an operating licence according to §2 German Pharmacies Act (ApoG)

^{**} pharmacies per 100,000 inhabitants

GEOGRAPHICAL COVERAGE

On average, there are 22 pharmacies per 100,000 inhabitants in Germany, but of course this number varies from region to region. The pharmacy density can vary based on the population, urban density and structure of cities and administrative districts. At current, the supply of medications to the population is guaranteed throughout Germany.

Pharmacy density by administrative district 2022

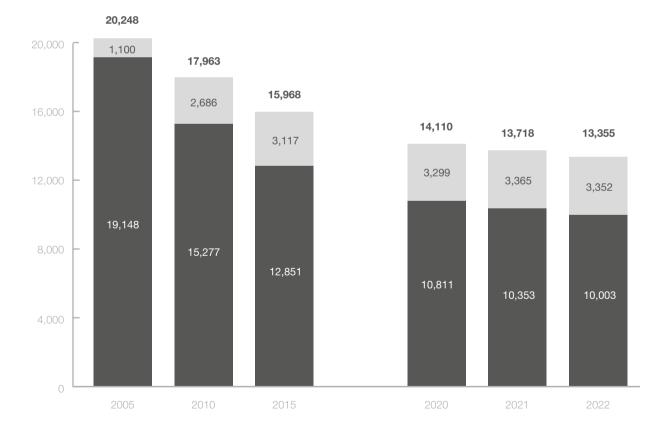


Note: number ranges changed since last year's publication

SUBSIDIARY STRUCTURE

At the end of 2022, there were 13,355 pharmacy owners in charge of 18,068 business locations. Under the 2004 SHI Modernisation Act, pharmacies can have up to three subsidiaries. Each subsidiary must have a pharmacist acting as the manager. Subsidiaries must be located in close proximity to main pharmacies. In 2022, the number of subsidiaries being opened decreased for the first time.

	2005	2010	2015	2020	2021	2022
Pharmacies without subsidiaries (individual pharmacies)	19,148	15,277	12,851	10,811	10,353	10,003
Main pharmacies with one subsidiary	989	2,057	2,229	2,278	2,314	2,306
Main pharmacies with two subsidiaries	94	466	612	698	724	731
Main pharmacies with three subsidiaries	17	163	276	323	327	315
Main/individual pharmacies	20,248	17,963	15,968	14,110	13,718	13,355



Pharmacies with at least one subsidiary

All figures as at year end

Source: ABDA statistics

Pharmacies without subsidiaries

SPECIFIC TYPES OF PHARMACY

Hospital pharmacies are not community pharmacies. All community pharmacies are owner-managed. With regard to the form of ownership, some pharmacies are run by several pharmacists as general partnerships (OHG). Leased pharmacies are established on a transitional basis, e.g. if the owner can no longer run the pharmacy due to old age. To ensure the supply of pharmaceuticals at local level, prescription collection points can also be approved which allow prescriptions to be transmitted, sometimes digitally, and supplied by an authorised pharmacy.

	2005	2010	2015	2020	2021	2022
Hospital pharmacies (§ 14 ApoG)	492	418	390	370	366	360
Pharmacies supplying hospitals (§ 1a Para. 1 (ApBetrO))	300	220	180	160	160	160
OHG pharmacies (§8 ApoG)	385	492	662	754	787	812
Leased pharmacies (§9 ApoG)	1,635	1,193	880	605	568	529
Military pharmacies (§ 15 ApoG)	N/A	N/A	N/A	N/A	N/A	8
Branch pharmacies (§ 16 ApoG)	39	12	11	10	10	11
Emergency pharmacies (§ 17 ApoG)	0	0	0	0	0	0

Prescription collection points (§ 24 ApBetrO) 2022

Baden-Württemberg	117
Bavaria	131
Berlin	0
Brandenburg	68
Bremen	0
Hamburg	0
Hesse	149
Mecklenburg-Western Pomerania	89
Lower Saxony	102

North Rhine-Westphalia	39
North Rhine	3
Westphalia-Lippe	36
Rhineland-Palatinate	56
Saarland	9
Saxony	115
Saxony-Anhalt	113
Schleswig-Holstein	46
Thuringia	78

Total 1,112

ApoG = German Pharmacies Act

ApBetrO = Ordinance on the Operation of Pharmacies

Source: ABDA statistics, IQVIA Commercial GmbH & Co. OHG

MAIL-ORDER TRADE

Mail-order sales of prescription and non-prescription medications have been permitted in Germany since 2004. The market share of the mail-order trade has already reached a double-digit percentage in the area of self-medication. The share is much lower for prescription drugs.

	Sa	les Volume 2022				
OTC drugs**	in millions of packages	Change from previous year	Market share	in million EUR	Change from previous year	Market share
Community Pharmacies	613	15.1%	79.7%	6,021	13.3%	79.3%
Mail-order trade (domestic and foreign)	157	11.7%	20.3%	1,572	10.5%	20.7 %

SHI pharmaceutical expenditure***

(BMG statistics KJ1 and KV45)

		2018		2019		2020		2021	2	2022****
	in million EUR	Market share								
Community Pharmacies	34,384	98.7%	35,409	98.8%	37,518	98.8%	41,075	99.1 %	42,948	99.1 %
Foreign mail-order trade	437	1.3%	422	1.2%	458	1.2%	359	0.9%	384	0.9%

Pharmacies with a mail-order licence (§ 11a ApoG)



* valued at effective sales prices

** excluding non-pharmaceuticals

 *** the majority of SHI expenditure is on prescription drugs

**** preliminary

***** professional webshop and price search engine listings

ApoG = German Pharmacies Act

Source: Insight Health GmbH, Datamed IQ GmbH, Federal Ministry of Health (BMG), ABDA statistics, own calculations

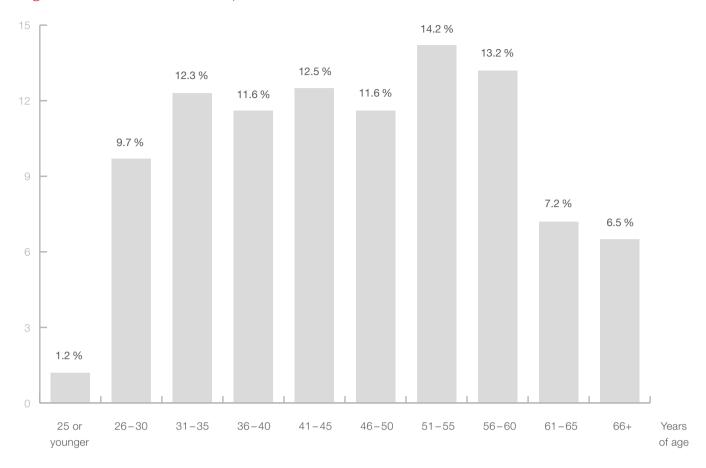
NUMBER AND AGE OF PHARMACISTS

At the end of 2022, there were around 70,000 pharmacists operating in Germany, with this number continuing to rise. The overwhelming majority work in community pharmacies, but pharmacists are also employed in the pharmaceutical industry, hospital pharmacies, universities and public authorities. Almost three quarters of licensed pharmacists are women.

Active pharmacists at:	2005	2010	2015	2020	2021	2022	Female percentage 2022
Community pharmacies	46,276	48,695	50,356	52,996	53,285	53,461	73.6%
of whom pharmacy managers*	20,591	18,525	16,848	14,649	14,285	13,980	49.5%
Hospital pharmacies	1,782	1,909	2,212	2,677	2,774	2,921	73.6%
Industry, administration, professional organisations, academia	6,450	8,328	10,189	12,183	12,732	13,243	63.0%
Pharmaceutical industry	_	4,405	5,867	7,436	7,856	8,026	64.1 %
Universities	_	1,225	1,187	1,307	1,314	1,485	53.5 %
Authorities and bodies	_	801	937	1,140	1,177	1,231	67.7%
Educational institutions and vocational schools	_	511	465	551	566	569	80.7%
German armed forces	_	199	229	242	231	252	34.1%
Other areas	_	1,187	1,504	1,507	1,588	1,680	61.3%
Total	54,508	58,932	62,757	67,856	68,791	69,625	71.6%

owners (incl. partners), leaseholders and administrators; not employed subsidiary managers

Age distribution of active pharmacists*



Average age of pharmacists*

Age (in years) of active pharmacists at:	overall	female	male
Community pharmacies	47.8	46.9	50.6
of whom pharmacy managers	53.5	52.5	54.4
of whom licensed employees	45.6	45.5	46.0
Hospital pharmacies	42.2	40.4	46.8
Industry, administration, professional organisations, academia	42.8	41.4	45.1
All areas of activity	46.8	45.8	49.2

Source: Federal Chamber of Pharmacists (BAK)

^{*} latest figures from 31.12.2019

JOBS AT PHARMACIES

There were around 159,000 people employed in community pharmacies in 2022, around one third of whom are licensed pharmacists. Two thirds work as pharmaceutical technical assistants (PTA) or pharmaceutical commercial clerks (PCE).

	2005	2010	2015	2020	2021	2022	Female percent-age 2022
Pharmacists	46,276	48,695	50,356	52,996	53,285	53,461	73.6%
Pre-approbation trainee pharmacists (PhiP)	1,534	1,367	1,608	1,656	1,692	1,663	76.2%
Pharmacists' assistants, Pharmaceutical engineers	9,266	7,701	6,145	4,661	4,389	4,140	96.4%
Pharmaceutical technical assistants (incl. trainees)							
	46,432	55,345	63,660	68,765	68,323	68,148	97.1%
Pharmaceutical commercial employees (PCE)*	35,832	34,719	32,759	32,376	32,094	31,930	94.7%
Total jobs	139,340	147,827	154,528	160,454	159,783	159,342	89.1%

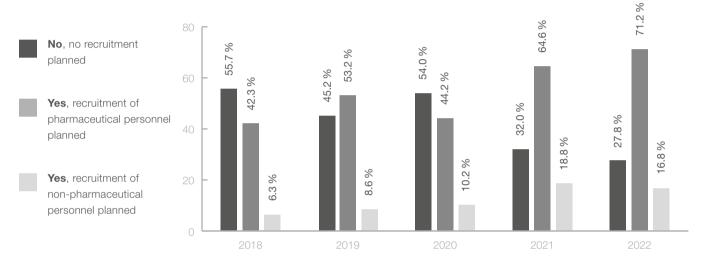
All figures as at year end

^{*} incl. pharmacy assistants, skilled workers, assistants, pharmaceutical assistants and PCE in training

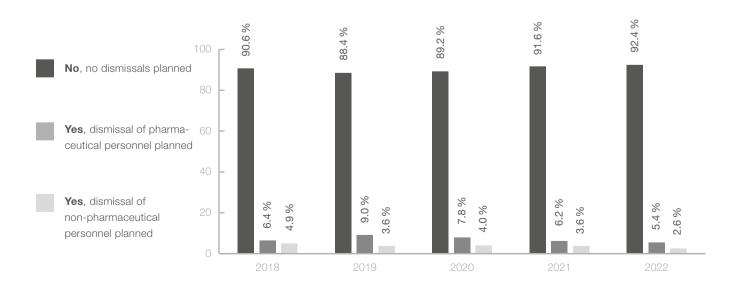
PERSONNEL PLANNING

In addition to ascertainable employee numbers, plans for recruitment and dismissals in pharmacies also play a role in assessing staffing needs. Nearly three quarters of pharmacy owners plan to recruit skilled workers in the next two to three years. Nine out of ten owners do not plan to dismiss any employees, meaning that jobs in pharmacies are very safe overall.

Do pharmacy owners plan to hire new employees in the next two to three years?



Do pharmacy owners plan to dismiss employees in the next two to three years?



Source: Pharmacy climate index 2022 (marpinion GmbH)

APPRENTICESHIPS IN PHARMACIES

Pharmacies provide apprenticeships for around 7,700 young people who complete their practical training there either as part of a dual training programme to become a PCE, a school-based PTA apprenticeship or in the final stage of their pharmacy studies. Roughly half of all pharmacies are currently training staff.

	2020	2021	2022
Pharmaceutical commercial employees (PCE) in training	3,504	3,652	3,893
Pharmaceutical technical assistants (PTA) in training	2,119	2,068	2,129
Pre-approbation trainee pharmacists (PhiP)	1,656	1,692	1,663
Total number of apprenticeships	7,279	7,412	7,685

Do pharmacy owners currently train employees at their (main) pharmacy?

No, I'm not training anyone at present	48.2 %
Yes, other apprenticeships, e.g. student apprentices or apprentices in other careers	30.2 %
Yes, one or more apprentice PTAs	22.0%
Yes, one or more apprentice PCEs	17.2%
Yes, one or more trainee pharmacists (PhiPs)	16.6%

Source: ABDA statistics, pharmacy climate index 2022 (marpinion GmbH)

PHARMACY STUDENTS AND APPROBATIONS

There is a growing number of pharmacy students and newly licensed pharmacists in Germany. However, demand for pharmacists on the job market, e.g. in industry and hospitals, is also on the rise. Pharmacy study programmes are offered at 22 universities in 14 Federal States, with the programmes split into three stages: basic studies (two years), main studies (two years), and practical training (one year).

Academic year*	Students	New students	Approbations	Promotions
2021	16,208	2,710	2,390	360
2020	16,307	2,702	2,551	356
2019	16,123	2,756	2,304	362
2018	15,986	2,821	2,281	372
2017	15,894	2,810	2,233	374
2016	15,682	2,798	2,202	415
2015	15,548	2,811	2,025	385
2014	15,268	2,706	2,079	407
2013	14,632	2,701	1,947	350
2012	14,183	2,761	1,929	329

Source: Federal Statistical Office of Germany (DESTATIS), state authorities

^{*}the academic year begins on 1 October and ends on 30 September of the following year.

PLACES OF STUDY

Federal State	University	Admissions in winter semester 2021/2022	Admissions in summer semester 2022
	Freiburg	90	0
Baden-Württemberg	Heidelberg	45	0
	Tübingen	140	0
	Erlangen-Nuremberg	120	0
	University of Munich	105	75
Bavaria	Regensburg	128	0
	Würzburg	69	58
Berlin	FU Berlin	75	73
Brandenburg	_	_	_
Bremen	_	_	_
Hamburg	Hamburg	64	0
	Frankfurt am Main	71	67
Hesse	Marburg	140	85
Mecklenburg-Western Pomerania	Greifswald	64	63
Lower Saxony	Braunschweig	74	70
	Bonn	80	84
North Rhine-Westphalia	Düsseldorf	63	63
	Münster	80	72
Rhineland-Palatinate	Mainz	46	45
Saarland	Saarbrücken	135	0
Saxony	Leipzig	49	0
Saxony-Anhalt	Halle-Wittenberg	135	0
Schleswig-Holstein	Kiel	59	60
Thuringia	Jena	75	0
Total		1,907	815

Source: University Admissions Foundation (ZVS)

CONTINUING PROFESSIONAL EDUCATION AND POSTGRADUATE SPECIALISATION

Continuing professional education (CPE) helps to refresh and expand upon existing knowledge. Postgraduate specialisation refers to extra-occupational acquisition of specialised knowledge and skills in a specific field or area of pharmacy. Completing a three-year training programme in one of these areas allows a pharmacist to adopt the title of "specialised pharmacist". Following a one-year programme in one of these fields, the corresponding designation may be used.

CPE events offered by the regional chambers of pharmacists (LAK) and regional pharmacists' associations (LAV)

	2020	2021	2022
Events	2,141	2,294	3,124
Number of participants	185,122	222,891	218,621

Postgraduate specialisation completions per year

(by area and field)

	2020	2021	2022
Number of postgraduate specialisation completions	364	409	326

Pharmacists with postgraduate specialisation (end of 2022)

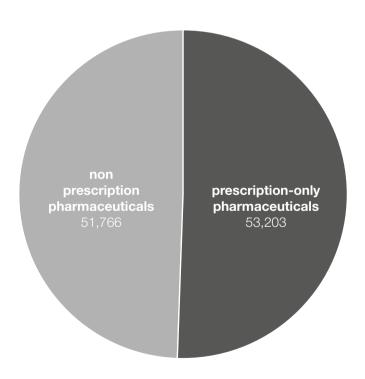
Area		Field	
General Pharmacy	8,900	Naturopathy and Homeopathy	2,181
Clinical Pharmacy	1,984	Nutrition counselling	2,181
Pharmaceutical Analytics	856	Geriatric Pharmacy	1,069
Pharmaceutical Information	695	Prevention and Health Promotion	488
Pharmaceutical technology	510	Oncological Pharmacy	305
Theoretical and practical training	144	Infectiology	272
Public Healthcare	129	Medication Management in Hospitals	107
Toxicology and Oncology	127	Care Services	45
Pharmaceutical Analytics and Technology	100		1
Clinical Chemistry	4		
Specialist pharmacist titles – total	13,449	Field designations – total	6,648

Source: Federal Chamber of Pharmacists (BAK)

PHARMACEUTICALS APPROVED IN GERMANY

More than 100,000 pharmaceuticals are officially approved in Germany. Each package size, potency or dosage form is considered an individual pharmaceutical even if the brand name is the same. About half of all medications are prescription-only. Official approval can be granted at national level in accordance with the German Medicinal Products Act (AMG) or at European level.

Prescription narcotics*	2,677
Pharmaceuticals requiring a special prescription (T prescription)**	17
Other prescription drugs	50,509
Pharmacy-only drugs	17,168
Unrestricted OTC drugs	34,598
Total number of marketable pharmaceuticals	104,969



^{*} pharmaceuticals that are subject to the Narcotics Prescription Regulation (BtMVV) due to their effect, e.g. strong painkillers

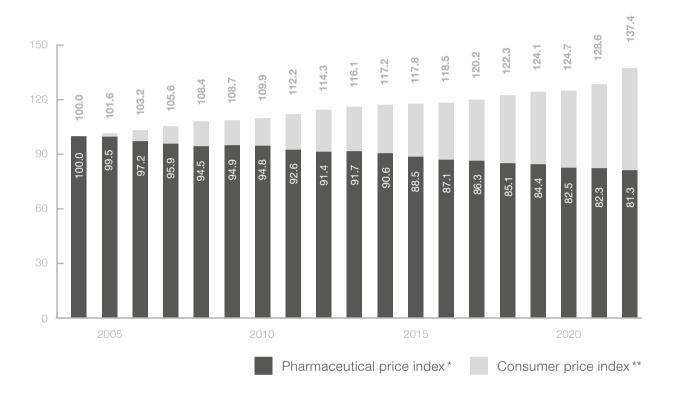
As of: January 2023

Source: Federal Institute for Drugs and Medical Devices (BfArM)

^{**} pharmaceuticals that may only be used in very specific circumstances due to their risk potential, e.g. those containing thalidomide

PHARMACEUTICAL PRICE INDEX

The pharmaceutical price index describes the average price development (incl. VAT) of pharmaceuticals prescribed at the expense of statutory health insurance (SHI) funds. Pharmaceutical prices have been falling for over 15 years, while consumer prices have continued to rise.



Source: AOK Research Institute (WIdO), Federal Statistical Office of Germany (DESTATIS)

^{*} pharmacy markdowns, manufacturer markdowns, rebate contract savings and co-payments are not factored into this.

^{**} the Federal Statistical Office of Germany amended this figure in February 2023, resulting in slight deviations from the previous year's figures.

PRICING FOR FINISHED DOSAGE FORMS

The sales prices of prescription pharmaceuticals and pharmacy fees are set in line with the legal provisions of the Drug Price Ordinance (AMPreisV). In order to ease the financial burden on health insurance funds, lawmakers have stipulated markdowns along with co-payments from insured individuals.

Example of a prescription-only finished dosage form

Manufacturer sales price (ApU)	50.00 EUR
+ maximum wholesale mark-up (3.15% on ApU + 0.70 EUR)	2.28 EUR
= Pharmacy purchase price (AEP)	52.28 EUR
+ pharmacy mark-up (3 % on AEP + 8.35 EUR)	9.92 EUR
+ Emergency service mark-up (0.21 EUR)	0.21 EUR
+ Mark-up to fund pharmaceutical services (0.20 EUR)	0.20 EUR
= net pharmacy retail price (net AVP)	62.61 EUR
+ Value-added tax (19% on net AVP)	11.90 EUR
= pharmacy retail price (AVP)	74.51 EUR
- statutory co-payment from the insured individual (10% of gross AVP)	7.45 EUR
statutory pharmacy markdown* (2.00 EUR)	2.00 EUR
- statutory manufacturer markdown** (12% of ApU)	6.00 EUR
= Effective expenditure of SHI***	59.06 EUR

SGB = German Social Code (Sozialgesetzbuch)

Source: ABDA statistics

^{*} with the enactment of the SHI Financial Stabilisation Act in 2022, lawmakers imposed on pharmacies an increase of the discount from 1.77 euros to 2.00 euros for a fixed term of two years to help stabilise SHI finances in the short term.

^{**} the manufacturer markdown for drugs not bound to fixed prices is 12% for the duration of 2023 (after which it will return to the previous value of 7%); meanwhile, drugs which are bound to fixed prices will generally have a 10% discount. If the pharmaceutical price is 30% less than the fixed price, the manufacturer discount no longer applies (§ 130a German Social Code (SGB) V).

^{***} rebate contracts that reduce costs for SHI funds are not taken into account

PRICING FOR STANDARD FORMULATIONS

The sales prices of standard formulations are set in line with the legal provisions of the Drug Price Ordinance (AMPreisV), similarly to industrially produced prescription drugs. The regulation sets out the surcharges and discounts in detail. The remuneration rules for standard formulations were adjusted in 2017.

Example for a prescription-only ointment (100 g)

= pharmacy purchase price (AEP) for an active ingredient (1 g powder), base(99 g ointment base) and container (1 dispenser for 100 g)	5.00 EUR
+ fixed mark-up (90 % on AEP)	4.50 EUR
+ formulation mark-up for production (6.00 EUR for preparation of ointments up to 200 g)	6.00 EUR
+ fixed fee	8.35 EUR
= net pharmacy retail price (net AVP)	23.85 EUR
+ value-added tax (19 % on net AVP)	4.53 EUR
= pharmacy retail price (AVP)	28.38 EUR
- statutory co-payment from the insured individual (10% of gross AVP; minimum of 5 EUR)	5.00 EUR
- statutory pharmacy markdown (2.00 EUR)	2.00 EUR
= Effective expenditure of SHI	21.38 EUR

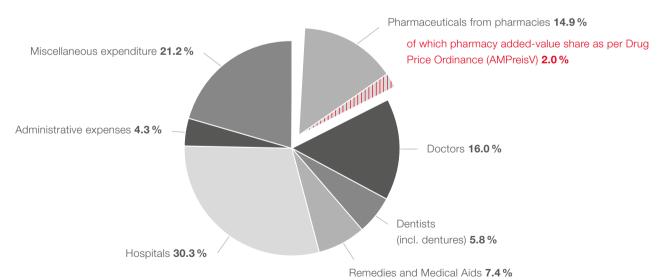
Source: ABDA statistics

BREAKDOWN OF TOTAL SHI EXPENDITURE

Of the over 290 billion euros spent by statutory health insurance (SHI) in 2022, the largest shares went to hospitals and doctors. Pharmaceuticals (incl. pharmacies) came in third place with 14.9 %. At 2.0 percentage points, the costs of pharmacies and their services in the system accounted for less than half of SHI administrative expenditure (4.3 %).

	Total SHI expenditure	es e	Dentists	rentures) Ren	nedies ad Medical Aids Hospie	Adm.	Miso.	Phamac	of which of states of which of states of which of the or
2022***	288.9	16.0	5.8	7.4	30.3	4.3	21.2	14.9	2.0
2021	285.0	15.7	5.7	7.1	30.1	4.1	22.8	14.4	1.9
2020	262.9	16.7	5.7	6.9	31.0	4.5	21.0	14.3	2.1
2019	252.3	16.3	6.0	7.0	31.6	4.4	20.8	14.0	2.1
2018	239.3	16.5	6.1	6.7	31.9	4.8	19.7	14.4	2.2
2015	213.7	16.3	6.3	6.4	32.5	4.9	19.0	14.6	2.3
2010	176.0	15.4	6.5	6.0	33.0	5.4	18.1	15.6	2.5
2005	143.8	15.2	6.9	6.2	33.7	5.7	16.3	15.9	2.8

SHI total expenditure 2022 ***: 288.86 billion EUR



- * including transfer of assets to the healthcare fund (8.0 billion EUR) in 2021
- ** from community pharmacies (excl. foreign mail-order trade, hospital pharmacies and others)

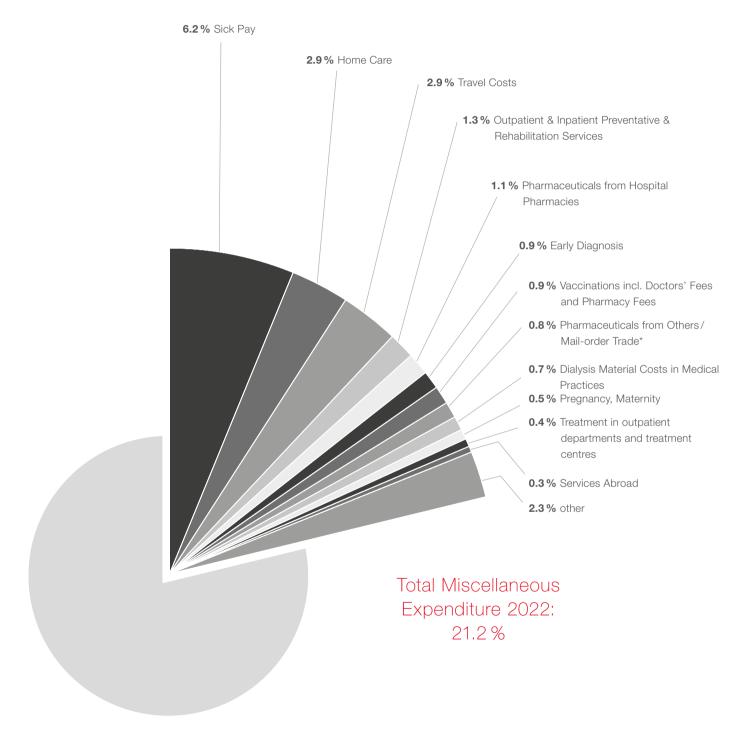
AMPreisV = Drug Price Ordinance

Source: Federal Ministry of Health (BMG), ABDA statistics

^{***} preliminary

MISCELLANEOUS HEALTH INSURANCE FUND EXPENDITURE

Miscellaneous SHI expenditure includes sick pay, home care and travel costs. "Pharmaceuticals from Others/Mail-order Trade" refers to foreign mail-order pharmacies or health authorities. Miscellaneous expenditure also includes "Vaccinations incl. Doctors' Fees".



^{* 0.8%} is equivalent to 2.29 billion EUR, with 384 million EUR attributable to foreign mail-order trade (see chapter "Mail-order trade").

Pharmaceuticals from hospital pharmacies were classified as miscellaneous expenditure until 2018, but they are now shown separately.

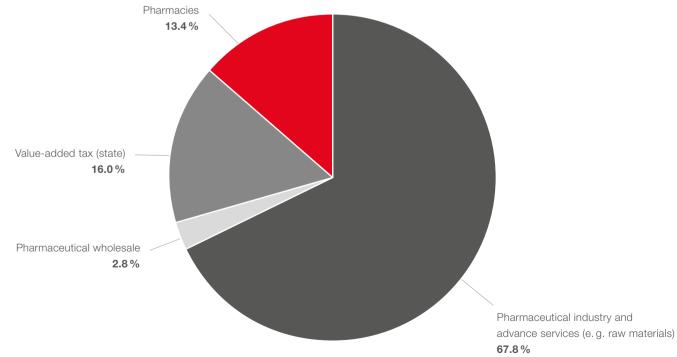
Source: Federal Ministry of Health (BMG), ABDA statistics

SHI EXPENDITURE FOR PHARMACEUTICALS

Around two thirds of statutory health insurance (SHI) pharmaceuticals expenditure is attributable to the pharmaceutical industry. In 2022, the expenditure for the 19 % VAT on medicinal products was still higher than the expenditure for the services rendered by pharmacies.

	2020		2021			2022*
	in billion EUR		in billion EUR		in billion EUR	
Pharmaceutical industry and advance services (e.g. raw materials)	25.32	67.5%	27.87	67.8%	29.13	67.8%
Pharmaceutical wholesale	1.13	3.1%	1.15	2.8 %	1.20	2.8%
Value-added tax (state)	5.59	14.9%	6.56	16.0%	6.86	16.0%
Pharmacies	5.48	14.6%	5.50	13.4%	5.76	13.4%
Total SHI expenditure on pharmaceuticals**	37.52	100.0%	41.08	100.0%	42.95	100.0 %

SHI expenditure on pharmaceuticals in 2022: 42.95 billion EUR



^{*} preliminary

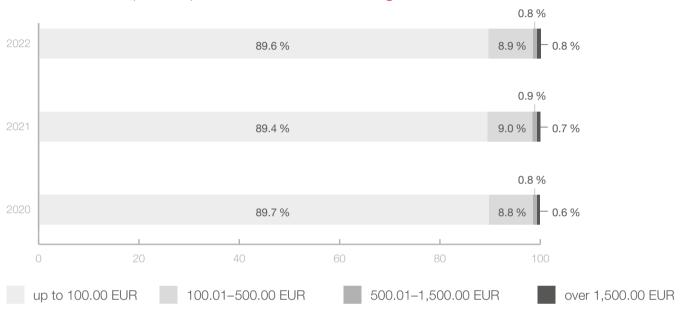
Source: Federal Ministry of Health (BMG), ABDA statistics

^{**} finished dosage forms, formulations and dressing materials from community pharmacies (excl. foreign mail-order trade, hospital pharmacies and others)

PHARMACEUTICALS BY PRICE CLASSES

The pharmacy retail price (AVP) of every prescription drug is determined by law through the Drug Price Ordinance (AMPreisV) based on the manufacturer sales price (ApU). For nine out of ten medications, this sum is no more than 100 euros. Despite lower package volumes, higher-priced, innovative pharmaceuticals make up a growing share of total revenue.

Sales share of prescription SHI finished dosage forms



Revenue share of prescription SHI finished dosage forms

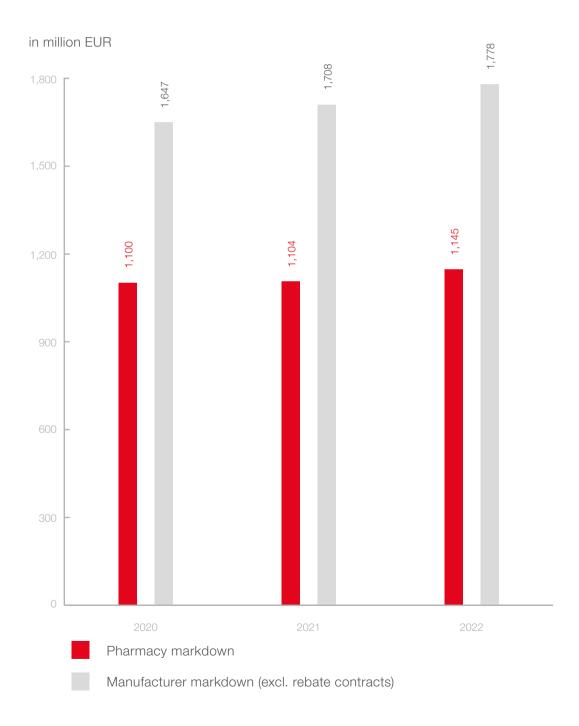


Finished dosage forms dispensed in community pharmacies at the expense of SHI, incl. consultation room supplies. Price categories refer to pharmacy retail prices.

Source: German Institute for Drug Use Evaluation (DAPI)

PHARMACY AND MANUFACTURER MARKDOWNS

Over the years, lawmakers have introduced various instruments to limit statutory health insurance (SHI) expenditure on medicinal products. Pharmacies, like drug manufacturers, must grant SHI funds markdown on the dispensing of prescription drugs. With the enactment of the SHI Financial Stabilisation Act in 2022, lawmakers imposed on pharmacies an increase of the markdown from 1.77 euros to 2.00 euros (incl. VAT) for a fixed term of two years from 1 February 2023 to 31 January 2025 to help stabilise SHI finances in the short term. This amount must be reimbursed to the health insurance fund from the pharmacy fees for each package dispensed at the expense of the SHI. The discount adds up to more than one billion euros.



Source: German Pharmacists' Association (DAV)

REBATE CONTRACTS

Since 2007, health insurance funds have been able to conclude rebate contracts with pharmaceutical manufacturers to reduce the costs of dispensing medications. There are now around 39,000 fund-specific rebate contracts that stipulate which insured individuals can receive which preparation from which manufacturer. Taking the growing number of these contracts into account in patient care represents a high administrative burden for pharmacies, but savings in the billions for health insurance funds.

5.5 billion EUR

of SHI savings from rebate contracts in 2022

383 million

generic drug packages with rebate contracts in 2021 *

44 million

original drug packages with rebate contracts in 2021 *

39,000

rebate contracts at end of 2022

21,000

rebate pharmaceuticals (pharmaceutical registration numbers) at end of 2022

239

pharmaceutical companies involved as at end of 2022

22%

of rebate prescription medications with exemptions from or reductions in co-payments at the end of 2022

Rebate pharmaceuticals: Comparison of contracts and SHI savings

	2020	2021	2022
Number of rebate contracts at year end	32,700	35,900	38,600
SHI savings over the full year	5.0 billion EUR	5.1 billion EUR	5.5 billion EUR

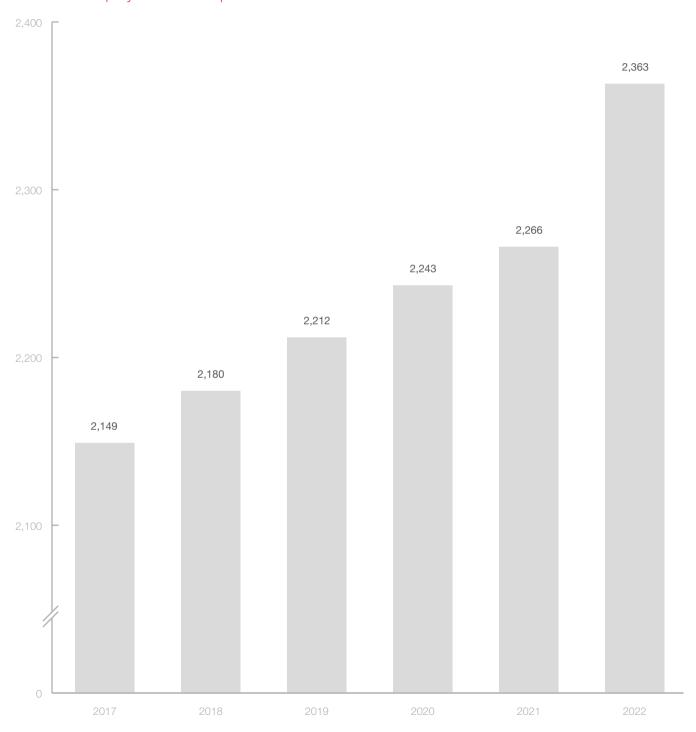
^{*} No figures for 2022 were available by the editorial deadline.

Source: ABDATA, Pro Generika e. V., Federal Ministry of Health (BMG), IQVIA Commercial GmbH & Co. OHG

PATIENT CO-PAYMENTS

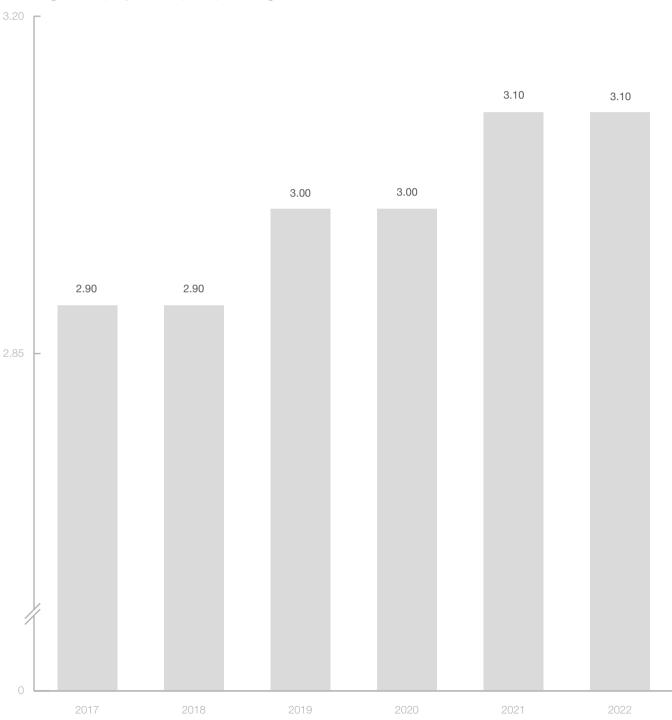
SHI-insured patients have to make co-payments to their health insurance funds for specific services. For prescribed medications, this is 10% of the price of the medication, but at least 5 and no more than 10 euros. The average co-payment amounts to 3.10 euros as some medications, and some patients, are exempt from co-payment. Thanks to the co-payments that pharmacies have to charge result in savings for health insurance funds – currently two billion euros per year, and rising.

Patient co-payments for pharmaceuticals in million EUR



Source: German Pharmacists' Association (DAV)

Average co-payment per package in EUR



Source: German Pharmacists' Association (DAV)

CO-PAYMENT EXEMPTIONS

A hardship provision in § 62 SGB V stipulates that people with statutory health insurance have to pay a maximum of two percent of their gross annual income for co-payments. For chronically ill people, this limit is set at 1%. This means that, of the approximately 73 million people with statutory health insurance in Germany, about one in every fourteen is exempt from further co-payments. For several years, the number of people with exemptions has been on the decline.

Co-payment exemptions	2005	2010	2015	2019	2020	2021
Chronically ill patients (in millions)	6.4	6.8	6.2	5.5	5.2	5.1
Other patients (in millions)	0.6	0.4	0.3	0.3	0.2	0.2
Total patients exempt from co-payment (in millions)	7.0	7.2	6.5	5.8	5.4	5.3
Proportion of SHI-insured individuals exempt from co-payment	9.9%	10.3%	9.2%	7.9%	7.4%	7.2%

SGB = German Social Code (Sozialgesetzbuch)

Source: Federal Ministry of Health (BMG)

GUIDELINES AND WORKING AIDS

The guidelines of the Federal Chamber of Pharmacists, including their comments and working aids, are recommendations which address typical situations in pharmacies to help ensure high-quality service. They take into account the applicable laws and regulations and are based on the state of the art in science and technology, but do not release individuals from their responsibilities as healthcare professionals. Materials are available for the following pharmacy-related topics and activities:

- 1. Pharmaceutical Information
- 2. Pharmaceutical risks
- 3. Asthma
- 4. Blood pressure measurement
- 5. Blood tests
- 6. COVID-19 vaccination
- 7. Dosage forms
- 8. Diabetes
- 9. Nutrition counselling
- **10.** Influenza vaccination (regular supply)
- 11. Influenza vaccination (pilot project)
- 12. Supply to care homes
- 13. Hygiene management
- **14.** Supply to hospitals
- **15.** Manual repackaging
- 16. Medication analysis
- **17.** Opioid substitution
- **18.** Production of parenterals
- 19. Inspection of source materials/primary packaging
- 20. Inspection of finished dosage forms
- 21. Prescription delivery
- **22.** Formulations/batch preparations
- 23. Self-medication

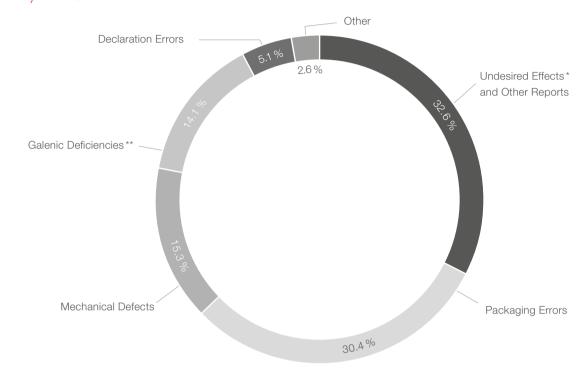
Materials available at: www.abda.de/fuer-apotheker/qualitaetssicherung/leitlinien/leitlinien-und-arbeitshilfen

Source: Federal Chamber of Pharmacists (BAK)

AMK: REPORTING OF PHARMACEUTICAL RISKS

Pharmacists test the quality of pharmaceuticals and report quality issues to the Drug Commission of German Pharmacists (AMK). It records and evaluates reported risks of pharmaceuticals and, if necessary, issues warnings, which are an important instrument of consumer protection.

Reasons for reports to the Drug Commission of German Pharmacists (AMK) in 2022



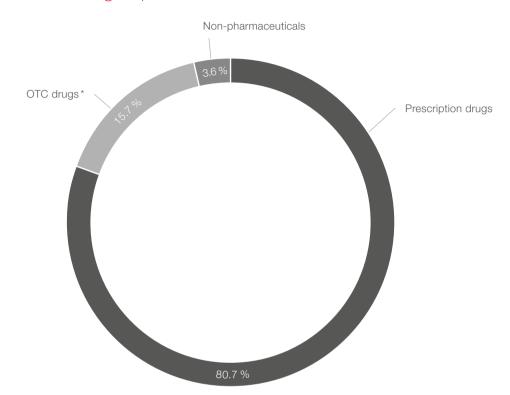
	2020	2021		2022	
	absolute	absolute	absolute	percentage	Change from previous year
Undesired Effects* and Other Reports	2,371	2,548	2,339	32.6%	-8,2%
Packaging Errors	2,652	2,354	2,180	30.4%	-7,4%
Mechanical Defects	1,512	1,295	1,101	15.3%	-15,0%
Galenic Deficiencies**	1,406	1,284	1,010	14.1%	-21,3%
Declaration Errors	499	333	368	5.1%	10.5%
Other	267	268	184	2.6%	-31,3%
Total	8,707	8,082	7,182	100.0 %	-11.1%

^{*} reporting of suspicious cases regarding pharmaceuticals and other product groups

Source: Drug Commission of German Pharmacists (AMK)

^{**} manufacturing/technological defects

Risks by pharmaceutical group in 2022



		2022
	absolute	percentage
Prescription drugs	5,796	80.7%
OTC drugs*	1,126	15.7%
Non-pharmaceuticals	260	3.6%
Total	7,182	100.0%

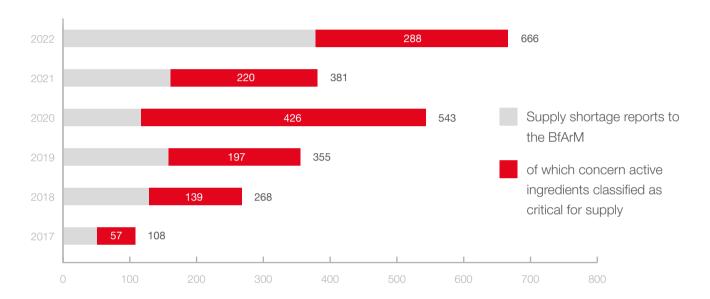
Source: Drug Commission of German Pharmacists (AMK)

^{*} OTC = over-the-counter = non-prescription pharmaceuticals

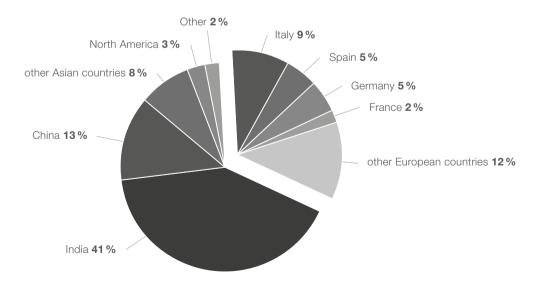
EXTENT OF SUPPLY SHORTAGES

Supply shortages of vital medications have been increasing for several years. One indication of this trend is the medications that pharmaceutical companies report voluntarily to the Federal Institute for Drugs and Medical Devices (BfArM). Since supply shortages are at least partly due to complex logistics around the globe, it is also important to note the enormous proportion of active ingredients produced in India, China and other faraway countries.

Reports of supply shortages to the BfArM



Origin of active ingredients of finished dosage forms approved in Europe*



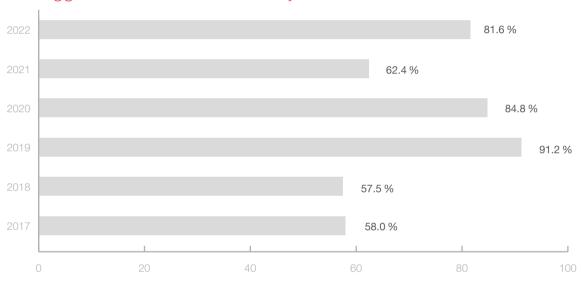
^{*} number of Certificate of Suitability of Monographs of the European Pharmacopoeia (CEP) on the quality of active ingredients used for approval of pharmaceuticals (as of 2020)

Source: Federal Institute for Drugs and Medical Devices (BfArM), Pro Generika e.V.

MANAGING SUPPLY SHORTAGES

Supply shortages present a risk to the high-quality supply of medications, affect various active ingredients and have been among the biggest nuisances to the daily operation of pharmacies in recent years. The majority of pharmacy owners (62.2%) report that more than 10% of their employees' working time is spent procuring substitute products. However, in a representative survey conducted in mid-2020, pharmacy owners also reported that they have saved 40.6% (mean) of team working time on managing supply shortages since the SARS-CoV-2 Drug Supply Ordinance facilitated replacement with substitute medicines which are available in stock.

Percentage of pharmacy owners who consider supply shortages to be one of the biggest nuisances in their daily work.



Percentage of pharmacy staff working time dedicated to managing supply shortages	Pharmacy owners 2019
Less than 1 %	1.2%
1 % to 5 %	11.2%
6% to 10%	25.4%
11 % to 15 %	24.0%
16 % to 20 %	Total 20.4 %
More than 20 %	17.8%

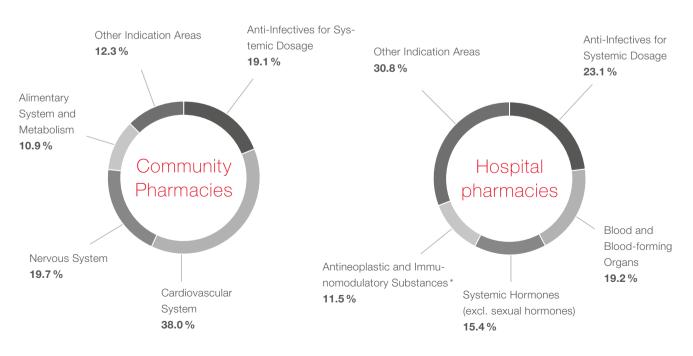
Source: Pharmacy climate index 2022 (marpinion GmbH)

CONSEQUENCES OF SUPPLY SHORTAGES

Surveys have found that supply shortages have not only become one of the main nuisances in the everyday operation of pharmacies: despite the best efforts of local pharmacies, they also lead in many cases to a deterioration in the quality of drug therapy provided to patients, as unavailable preparations cannot be replaced by equivalent products. This is confirmed by a reference pharmacy survey conducted by the Drug Commission of German Pharmacists (AMK) on the extent and effects of shortages.

In the last three months, how often have pharmaceutical supply shortages occurred in your pharmacy which, in your opinion, had or could have had health consequences for patients?

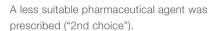
	Community pharmacies	Hospital pharmacies
never	11.4%	19.4%
fewer than 5 times	27.6%	25.0%
5 to 10 times	28.2 %	33.4%
11 to 15 times	10.4%	2.8%
more than 15 times	22.4%	19.4%
	100%	100%



*for use in cancer treatment.

Source: Drug Commission of German Pharmacists (AMK) 2017

What observation(s) have you made in your pharmacy in the last three months when delivery and supply shortages occurred? (multiple answers are possible)



A less suitable dosage form was used.

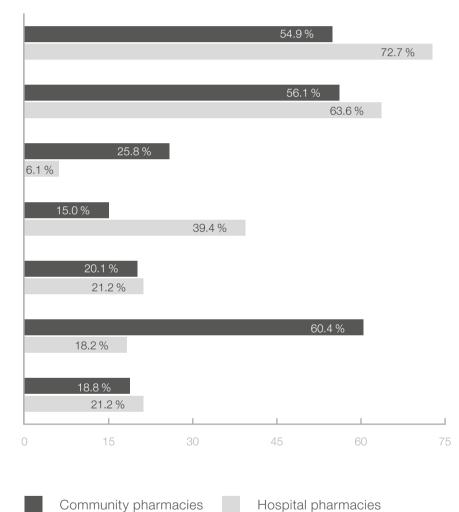
Treatment was discontinued, leading to patient risks.

A vital treatment could not be provided or was delayed.

The substitute medication was used incorrectly (medication error).

The patient's adherence to their treatment was impaired while using the substitute medication.

Other observations*



Source: Drug Commission of German Pharmacists (AMK) 2017

^{*}increased time expenditure and consultation effort, increased uncertainty of patients, etc.

QUALITY ASSURANCE OF FORMULATIONS

The Central Laboratory of German Pharmacists (ZL) in Eschborn contributes to the quality assurance of formulations with its ring trials. All pharmacies can participate by preparing formulations specified by the ZL, sending them in and having them checked for the identity, content and distribution of the active ingredient, as well as other test parameters such as pH value, particle size, density, etc. More than a third of pharmacies voluntarily have their formulations tested at least once a year.

Ring trials by the Central Laboratory of German Pharmacists (ZL)

Year	Number of participants (formulations tested)	Number of pharmacies*	Participation rate (relative to total number of pharmacies)
2022	8,014	6,318	34.3
2021	8,122	6,316	33.5
2020	8,709	6,706	35.1
2019	8,899	6,862	35.3
2018	8,945	6,684	33.8
2017	8,600	6,437	32.0
2016	7,733	6,019	29.5
2015	7,674	6,086	29.5
2014	8,079	5,706	27.4
2013	6,578	4,955	23.5
2012	5,877	4,191	19.6

Source: Central Laboratory of German Pharmacists (ZL)

^{*}community pharmacies and hospital pharmacies (participant count includes multiple participations of individual pharmacies)

SECURPHARM

The European Anti-Counterfeiting Directive came into force in 2019. In Germany, this protective mechanism against counterfeit pharmaceuticals is known as securPharm. While pharmaceutical companies upload each individual package of prescription drugs to a manufacturer database, pharmacies book each package from a corresponding pharmacy database when dispensing it to the patient. Since every package comes with tamper protection and a unique serial number, a second checkout would trigger a suspected counterfeit alarm, which would then lead to a thorough investigation. In this respect, securPharm makes medications from German pharmacies even safer than before.

securPharm system and usage in numbers

Stakeholders	2022
Pharmaceutical companies	565
Pharmaceutical wholesalers	660
Community pharmacies	18,068
Hospital pharmacies	354

	0))))		
	Transactions per week	Products that must be serialised	Uploaded packaging information
2022	42 million	63,209	3.9 billion
2021	39 million	62,156	2.9 billion
2020	34 million	62,465	2.1 billion

Source: ABDA - Federal Union of German Associations of Pharmacists, ACS PharmaProtect GmbH, IFA GmbH, NGDA - Netzgesellschaft Deutscher Apotheker mbH

THE CHALLENGE OF POLYMEDICATION

Polymedication (AKA "multimedication") is when patients take several medications – at least 3, or 5, depending on which definition is being applied – in parallel over the long term. Around a quarter of the German population permanently takes three or more medications. Various initiatives for medication management exist to counter the risks of polymedication, such as ARMIN (Medication Initiative Saxony-Thuringia) and PRIMA (Primary System Integration of Medication Plans with Acceptance Examination).

CPE events offered by the regional chambers of pharmacists (LAK) on the analysis and management of medications

	2020	2021	2022
Events	252	282	483
Number of participants	12,595	13,783	30,375

Long-term consumption of multiple medications

55% of people over 70 permanently take three or more medications.

	none	one to two	three	four	five or more	three or more (in total)
Men	51 %	24%	8%	6%	11%	25 %
Women	41 %	35 %	9%	6%	9%	24%
18–29	66 %	30 %	2%	1%	1%	4 %
30-49	59%	31 %	5%	2%	3%	10%
50-69	37%	31 %	12%	8%	12%	32 %
70+	22 %	23%	16%	14%	25%	55 %
Total	46%	29%	9%	6%	10%	25%

CPE = continuing professional education

Source: Federal Chamber of Pharmacists (BAK), Forsa Gesellschaft für Sozialforschung und statistische Analyse mbH (data collected in 2021)

Share of prescription drugs

74% of medicines taken permanently (three or more) are prescription-only.

		more than half	half	less than half	none*
Men	77 %	19%	2%	1%	_
Women	71 %	21 %	4%	3%	1 %
18–29	63 %	23 %	6%	6%	2 %
50-69	78%	18%	2%	1%	_
70+	75%	21%	2%	2%	_
Total	74%	20%	3%	2%	_

Polymedication due to multiple illnesses

Four out of five patients receive treatment for two or more illnesses.

	one illness	two illnesses	three illnesses	four or more illnesses*
Men	20%	36%	29%	15%
Women	17%	36%	31%	15%
18–29	32 %	37%	19%	10%
50-69	18%	36 %	30%	15%
70+	15%	35 %	33 %	16%
Total	19%	36 %	30 %	15%

Source: Forsa Gesellschaft für Sozialforschung und statistische Analyse mbH (data collected in 2021)

^{*}per cent missing to 100 per cent = "don't know"

ARMIN

The ARMIN (Medication Initiative Saxony-Thuringia) programme ran from 2014 to 2022. It was based on the ABDA/KBV concept titled "Zukunftskonzept Arzneimittelversorgung" (Future Strategy for the Supply of Medications). The programme was endorsed by the statutory health insurance (SHI) fund AOK PLUS as well as the Associations of SHI Physicians and the Pharmacists' Associations of both Saxony and Thuringia. The external evaluation of the programme was carried out by Heidelberg University Hospital (UKHD) in cooperation with the aQua Institute.

Findings and results from ARMIN

Factors facilitating the implementation

- » Intensive support from the federal level
- » Strong commitment for implementation among all partners
- » Agreement on and acceptance of responsibilities and processes in medication management between doctors and pharmacists
- » Adequate remuneration
- » Joint technical infrastructure for doctors and pharmacists to exchange medication plans from local software systems

Prescription of active ingredients

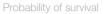
- » Savings due to increased rate of discount contracts
- » Savings due to direct changeover to generics upon patent expiry
- » Fewer changes of preparations for patients

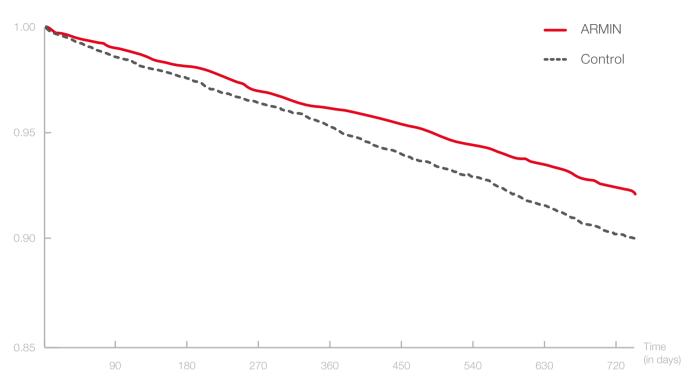
Medication management

- » Significantly fewer deaths among ARMIN patients compared to the control group (please note: the retrospective study design does not allow any conclusions to be drawn about causal relationships)
- » Increased utilisation of health services by ARMIN patients (e.g. contact with doctors and pharmacies, earlier and more frequent hospitalisations)
- » Improved adherence
- » Cost/benefit ratio assessed as positive by patients, doctors and pharmacists in surveys

Source: ABDA - Federal Union of German Associations of Pharmacists, ARMIN final report

Significantly fewer deaths among ARMIN patients compared to the control group





Kaplan-Meier estimator on probability of survival

Death occurred in:

- » 9.3 % of ARMIN patients (N = 469/5,033)
- \sim 12.9 % of control patients (N = 1,300 / 10,039)

Hazard ration (HR) 0.84 (equivalent to a relative risk reduction of 16 %)

 \sim (95 % CI [0.76 – 0.94], P = 0.001)

Covariate-adjusted absolute risk reduction = 1.52 %

NNT = 66

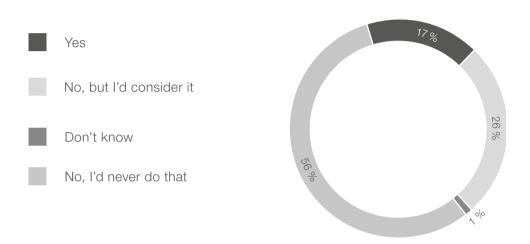
NNT = number needed to treat (in this case, it states the number of people who needed to be treated a period of 30 months in ARMIN medication management to prevent an event (death) from occurring)

Source: ABDA - Federal Union of German Associations of Pharmacists, graphic: Meid et al. Deutsches Ärzteblatt International 2023;120:253-60

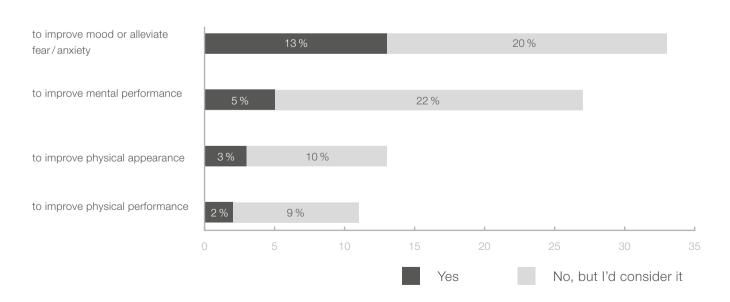
THE RISK OF PRESCRIPTION DRUG ABUSE

Around 4 to 5 per cent of medications prescribed in Germany are associated with potential for abuse or dependency, with an estimated 1.4 to 1.5 million people affected by these issues. Dependencies are most common with sleeping aids and sedatives. It is essential to differentiate between misuse and dependency for substances that can cause physical dependency. For substances that do not cause physical dependency, only misuse is possible. Of the entire range of products, 10 to 12 per cent of the packages dispensed for self-medication contain active substances with potential for abuse.

Experience of consumption of prescription-only without medical necessity*



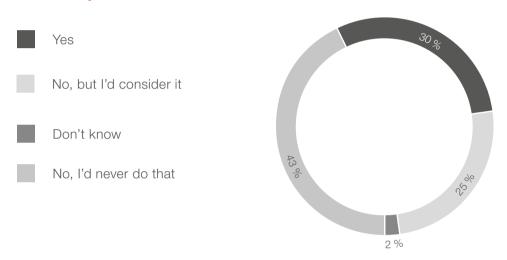
Willingness to consume prescription-only without medical necessity*



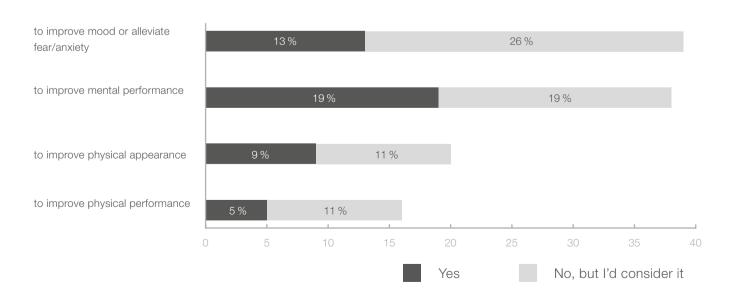
^{*} Forsa survey of 5,008 Germans aged 16 to 70 on behalf of ABDA. The data was collected between 15 December 2017 and 5 January 2018.

Source: Federal Chamber of Pharmacists, Deutsche Hauptstelle für Suchtfragen (DHS), Forsa Gesellschaft für Sozialforschung und statistische Analyse mbH

Experience of consumption of **non-**prescription drugs without medical necessity *



Willingness to consume non-prescription drugs without medical necessity*



^{*} Forsa survey of 5,008 Germans aged 16 to 70 on behalf of ABDA. The data was collected between 15 December 2017 and 5 January 2018.

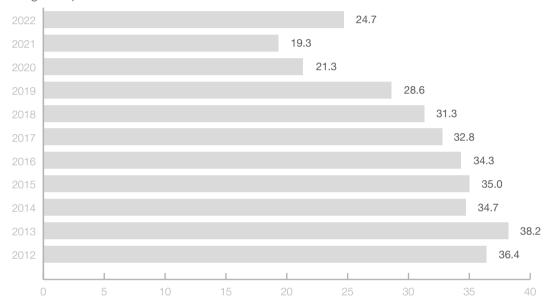
Source: Federal Chamber of Pharmacists, Deutsche Hauptstelle für Suchtfragen (DHS), Forsa Gesellschaft für Sozialforschung und statistische Analyse mbH

ANTIBIOTICS

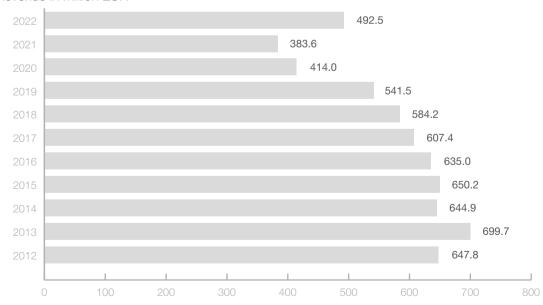
Antibiotics are essential for treating bacterial infections. However, incorrect or overly frequent use promotes the development of resistant strains of bacteria against which certain antibiotics become ineffective. Proper use of antibiotics includes, among other things, taking antibiotics only as prescribed by a doctor. Overall, the use of antibiotics in Germany has been falling since 2013. The unusually sharp declines in 2020 and 2021 were likely due to the general decline in infectious diseases as a result of the protective measures designed to limit transmission of COVID-19.

Oral antibiotics

Packages dispensed in millions



Revenue in million EUR



Oral antibiotics dispensed in community pharmacies at the expense of SHI. Prescriptions from dentists are excluded from these figures.

Source: German Institute for Drug Use Evaluation (DAPI)

ANTIDIABETICS AND BLOOD SUGAR TEST STRIPS

There are currently an estimated 8.7 million people suffering from diabetes mellitus in Germany, around 95 % of whom have type 2 diabetes. The course and prognosis of diabetes depend decisively on the behaviour of the patients. Diabetics are supplied with medications at community pharmacies and can request ongoing consultation and monitoring. This includes not only the dispensing of medicines, but also the supply of blood glucose meters and the dispensing of the blood glucose test strips that are used with them. For this purpose, pharmacists' associations conclude supply contracts with health insurance funds at federal and state level.

Active substances primarily used to treat diabetes *

2022	Sales volume per 1,000 SHI- insured patients	Revenue per 1,000 SHI-insured patients
Oral antidiabetics	274	22,800 EUR
Insulins	142	17,900 EUR
Other subcutaneous** antidiabetics	33	8,200 EUR
All antidiabetics	449	48,800 EUR

Blood sugar test strips ***

	2020	2021	2022
Packages dispensed in millions	18.9	17.3	15.5
Quantities in millions	973	888	791
Revenue in million EUR (incl. VAT)	479.4	440.7	390.4

Source: German Institute for Drug Use Evaluation (DAPI), Deutscher Gesundheitsbericht Diabetes 2023

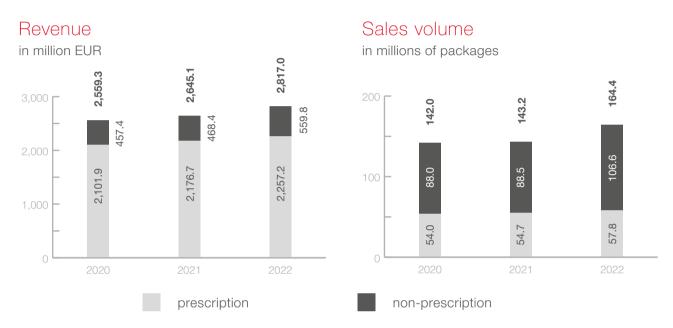
^{*} antidiabetics dispensed in community pharmacies at the expense of SHI.

^{**} for injection under the skin

^{***} blood sugar test strips dispensed in community pharmacies at the expense of SHI.

ANALGESICS

Painkillers are among the most frequently used medications, but they also harbour a considerable potential for abuse (doping, addiction, etc.). Prescription painkillers (including narcotics) account for the majority of sales (in euros), while their sales (in packages) are lower than for self-medication. In the case of OTC painkillers – often tablets or gels – the pharmacy is the only institution that can question and correct the patients' self-diagnoses. The use of painkillers over several days is usually not advisable and a visit to the doctor is recommended.



TOP 10 pharmaceutical ingredients by sales volume 2022

	prescription	in millions of packages
1	Metamizole	34.4
2	Tilidine + naloxone (narcotics)	6.7
3	Tramadol	2.7
4	Fentanyl (narcotic)	2.0
5	Hydromorphone (narcotic)	1.7
6	Sumatriptan	1.4
7	Oxycodone (narcotic)	1.3
8	Oxycodone + naloxone (narcotics)	1.2
9	Morphine (narcotic)	1.1
10	Tapentadol (narcotic)	1.0
	All others	4.3
	Total	57.8

non-prescription	in millions of packages	
lbuprofen	53.8	
Paracetamol	31.3	
Acetylsalicylic acid + paracetamol + caffeine	7.2	
Acetylsalicylic acid	4.2	
Acetylsalicylic acid + ascorbic acid	3.1	
Diclofenac	2.7	
Naratriptan	1.5	
lbuprofen + caffeine	1.3	
Paracetamol + caffeine	0.5	
Acetylsalicylic acid + paracetamol	0.3	
All others	0.7	
Total	106.6	

Dispensing of finished dosage forms in community pharmacies, turnover valued at pharmacy retail prices (incl. VAT)

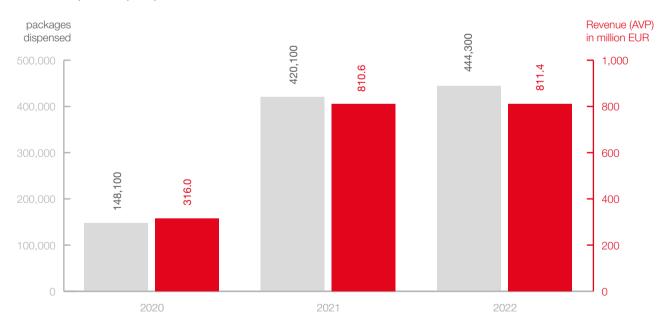
Source: Insight Health GmbH

PHARMACEUTICALS WITH SPECIAL REQUIREMENTS

Special requirements apply to certain drug groups. For example, narcotics require a special prescription and documentation to prevent misuse or adverse effects. The same applies to medications containing thalidomide (T prescription). Special requirements also apply to temperature-sensitive medications to maximise their shelf life. As a result of a change to the law, the approximately 14,000 patients with haemophilia nationwide have been supplied with the necessary medicines by community pharmacies since September 2020.

Sales volume	2020	2021	2022
Narcotics*	11.1 million	11.1 million	11.3 million
Narcotics (formulations)*	2.5 million	2.5 million	2.5 million
Medicines prescribed on T prescriptions	116,000	132,000	146,000
Blood products as per German Transfusion Act and haemophilia preparations	460,000	726,000	734,000
Refrigerated products (max. storage temperature of 8 °C)	19.6 million	19.5 million	19.3 million
Medications subject to cold chain requirements**	11.7 million	11.4 million	11.7 million

Haemophilia preparations



^{*} centrally active medications and substances that are heavily regulated and controlled by the state due to their potential for dependency, abuse and side effects.

Finished dosage forms (excluding COVID-19 vaccines) or narcotic formulations dispensed in community pharmacies at the expense of SHI. For refrigerated items and cold-chain pharmaceuticals, including consultation room supplies.

Finished dosage forms, sales volume in packages, formulations, sales volume in prescription lines

Source: German Institute for Drug Use Evaluation (DAPI)

^{**} must be stored between 2 °C and 8 °C without interruption during the entire delivery and storage chain (e.g. vaccines)

PHARMACEUTICALS FOR SERIOUS ILLNESSES

Among the innovative finished dosage forms, oncological medications (to treat cancer) and immunosuppressants (to combat the body's rejection reactions and treat inflammatory diseases) have played an important role in the recent past. The costs reflect the respective therapeutic benefits. In addition to finished dosage forms, individually produced special formulations (cytostatics) are also used in oncological therapy. There are also parenteral solutions for intravenous administration e.g. of monoclonal antibodies. The production of these special formulations is subject to special technical requirements, which are fulfilled by about 300 pharmacies nationwide with special cleanroom laboratories in accordance with § 35a of the Ordinance on the Operation of Pharmacies.

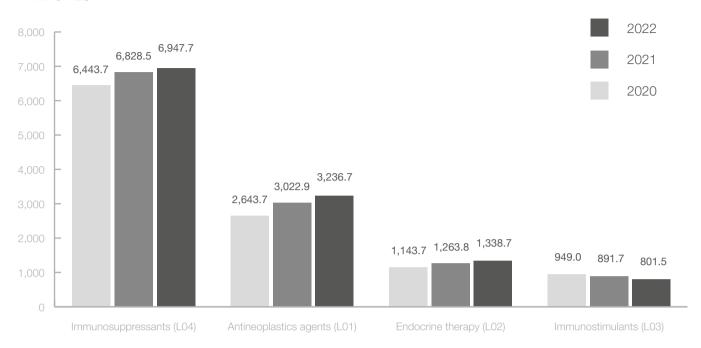
Cytostatics	Prescriptions million			Revenue million EUR		
	2020	2021	2022	2020	2021	2022
Cytostatic preparations	2.1	2.1	2.0	964	929	849
Parenteral solutions	1.7	1.7	1.7	3,952	4,246	4,497
including						
with monoclonal antibodies	1.2	1.3	1.3	3,759	4,053	4,295

Special formulations dispensed at the expense of SHI

Source: National Association of Statutory Health Insurance Funds

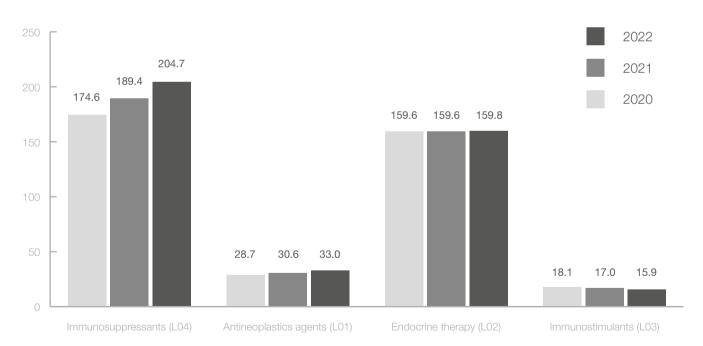
Revenue

in million EUR



Sales volume

in millions of DDD



DDD = defined daily dose

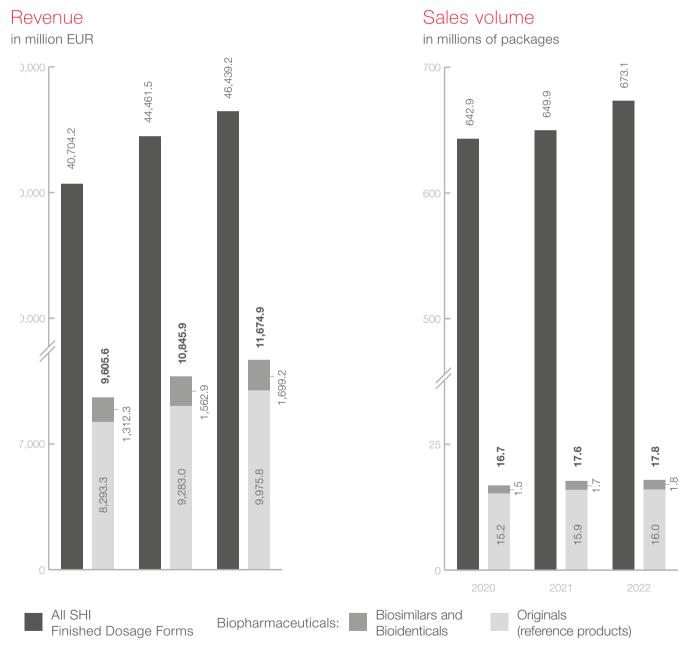
Pharmaceuticals dispensed at the expense of SHI

Note: Figures presented differently compared to last year's publication

Source: National Association of Statutory Health Insurance Funds

BIOPHARMACEUTICALS

Biopharmaceuticals, or biologicals, are medications produced in living cells using genetic engineering production processes for the treatment of serious diseases such as cancer or rheumatism. Their significance in the medical world continues to grow, as does their share of pharmaceutical costs. After patent protection expires, the often high-priced originals (reference products) can be replaced by low-priced biosimilars and bioidenticals, although – unlike generics in chemically synthesised finished dosage forms – they are only similar, rather than identical. In order to save millions in expenses for health insurance funds, the Law for Greater Security in the Supply of Medications (GSAV) has instructed the Federal Joint Committee (GBA) to decide by August 2023 on the possibilities for exchanging prescribed biologics in pharmacies.



Note: Figures presented differently compared to last year's publication

Finished dosage forms dispensed in community pharmacies at the expense of SHI

Source: German Institute for Drug Use Evaluation (DAPI)

Savings resulting from use of biosimilars

2020

1127.7 million EUR of savings

2021

1526.8 million EUR of savings

2022

1701.3 million EUR of savings

TOF	P 10 Biopharmaceutical Drug Groups in 2022	ATC Code	Revenue in million EUR
1	Immunosuppressants	L04	4,878.9
2	Diabetes treatments (esp. insulin)	A10	1,901.7
3	Ophthalmologicals (for use on eyes)	S01	812.1
4	Antihemorrhagics	B02	708.4
5	Immunostimulants	L03	626.6
6	Other alimentary tract and metabolism products	A16	452.1
7	Other dermatological preparations	D11	420.0
8	Drugs for treatment of bone diseases	M05	341.9
9	Drugs for obstructive airway diseases (e.g. asthma, COPD)	R03	301.3
10	Antianemic preparations	B03	253.2
	All others		978.7

Total 11,674.9

Percentage of biopharmaceuticals with rebate contracts*	2020	2021	2022
Biopharmaceuticals	62.3 %	61.4%	60.7 %
Originals (reference products)	59.9%	58.5 %	56.9 %
Biosimilars and Bioidenticals	86.7 %	94.1 %	94.4%

^{*} relative to sales volume

Finished dosage forms dispensed in community pharmacies at the expense of SHI

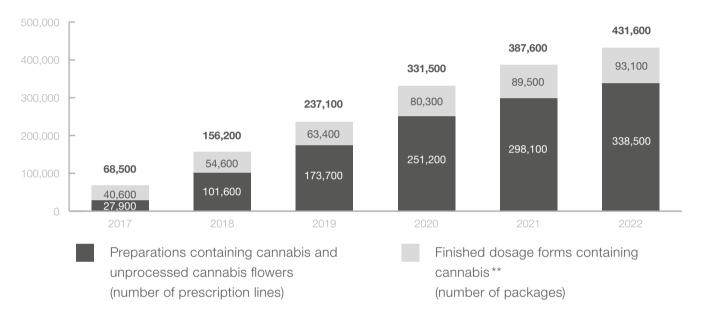
Source: Pro Generika e.V., German Institute for Drug Use Evaluation (DAPI)

MEDICAL CANNABIS

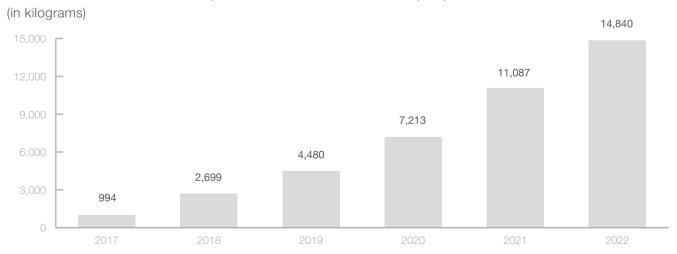
Since 10 March 2017, doctors have been permitted within the bounds of their therapeutic freedom to prescribe medical cannabis in individual cases. Any pharmacy can produce and dispense appropriate magistral preparations. Cannabis can be prescribed in various forms, for example as flowers or as dronabinol, the isolated form of the main active agent in the plant, more commonly known as "THC". Doctors decide on the dosage and method of consumption. Pharmacists provide their patients with corresponding instructions when dispensing the prescription drug. Once authorisation has been granted, health insurance funds cover the costs of the medication prescribed by doctors.

Cannabis prescriptions for SHI-insured patients*

Note: Quantities presented differently compared to last year's publication



Cannabis *** delivered to pharmacies for medicinal purposes



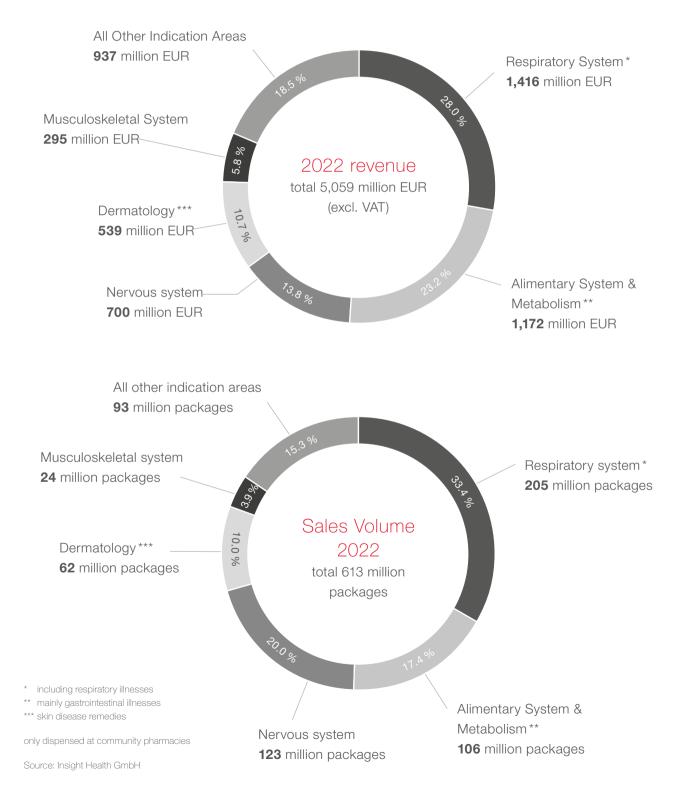
- * only cannabis dispensed in community pharmacies
- ** including Epidyolex®

Source: German Institute for Drug Use Evaluation (DAPI), Federal Institute for Drugs and Medical Devices (BfArM)

^{***} cannabis flower and extracts

OTC DRUGS: LEADING INDICATION AREAS

OTC (over the counter) preparations are non-prescription, pharmacy-only, unrestricted medications that are primarily sold in the area of self-medication. Consultation at the pharmacy is particularly important as it allows patients' self-diagnoses to be questioned. The demand for these products can fluctuate massively throughout the year, for example during cold or hay fever season.



NON-PRESCRIPTION PHARMACEUTICALS: SPECIAL SCHOOLS OF THERAPY

Herbal, homeopathic and anthroposophic medicinal products are some of the special schools of therapy covered by the German Medicinal Products Act (AMG). These non-prescription medications are in high demand at pharmacies.

Revenue development

in million EUR (excl. VAT)

	2020	2021	2022
Herbal medicines	845	822	1,003
Homeopathic medicines	321	305	300
Anthroposophic medicines	85	87	96

Sales volume development

in millions of packages

	2020	2021	2022
Herbal medicines	80	75	94
Homeopathic medicines	27	25	24
Anthroposophic medicines	8	8	9

only products dispensed at community pharmacies

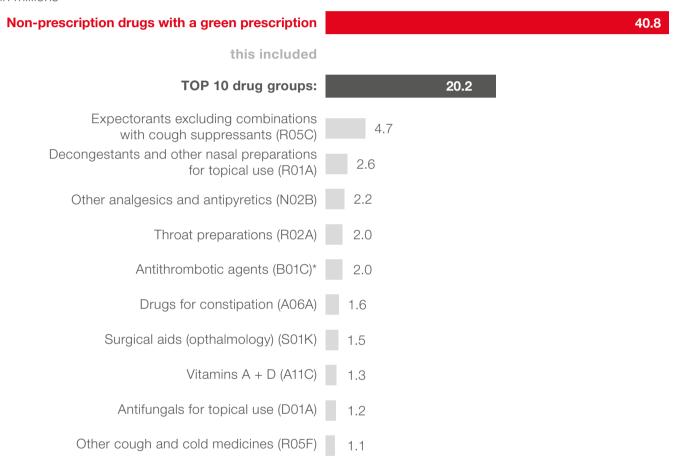
Source: Insight Health GmbH

GREEN PRESCRIPTIONS

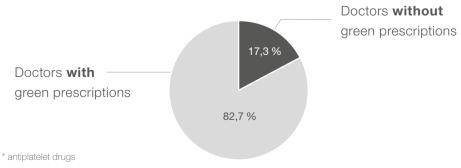
Doctors use green prescriptions to recommend non-prescription medications to their patients, which they then pay for themselves at the pharmacy. However, the form also contains the information that the green prescription can be submitted to many health insurance companies for reimbursement as a statutory benefit. In any case, the green prescription serves to remind patients of the name, active ingredient and dosage form of the medication.

Prescriptions in 2022

in millions



Use of green prescriptions 2022

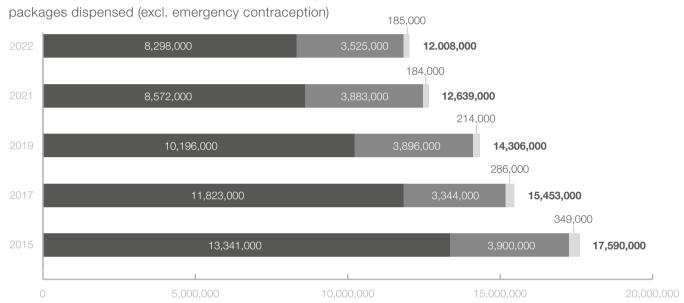


Source: Federal Association of the Pharmaceutical Industry (BPI), IQVIA Commercial GmbH & Co. OHG (IMS Diagnosis Monitor)

SUPPLY OF CONTRACEPTIVES

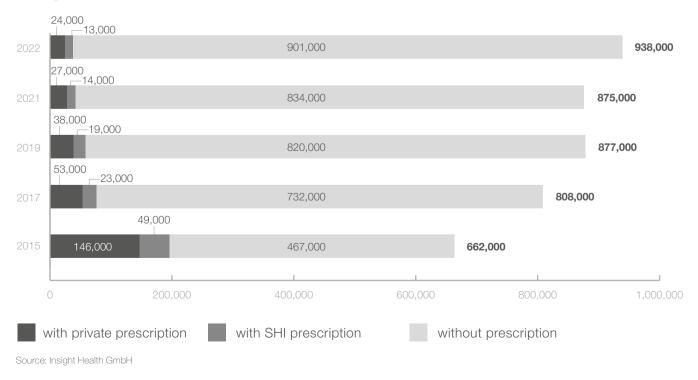
Emergency contraception (more commonly known as the "morning after pill") has been available without prescription at German pharmacies since 15 March 2015. Lawmakers wanted to give women easier access to this contraceptive, and sales figures (as self-medication) have increased as a result, while doctors' prescriptions have fallen sharply. As is the case with other contraceptives, women below the age of 22 are entitled to reimbursement of the cost from their SHI funds, as long as they are prescribed by a doctor with a pink prescription.

Sales of contraceptives in community pharmacies



Sales of emergency contraception in community pharmacies



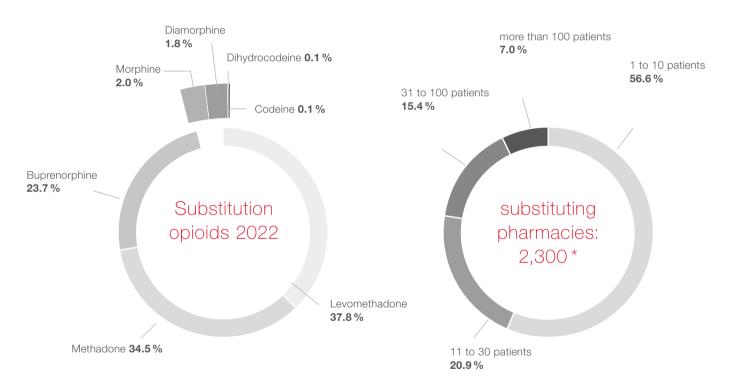


SUBSTITUTION TREATMENT

Medical substitution therapy is used to improve and stabilise the health of opioid addicts. The production and dispensing of replacement opioids, which are subject to special regulatory requirements, is carried out by approximately 2,300 public pharmacies. At the doctor's request, the prescribed narcotics can be given to the patients for immediate consumption in the pharmacy (supervised consumption). This is a voluntary pharmaceutical service.

Substitution treatment

	Number of listings in the Substitution Register in 2022
Patients	81,300
Doctors	2,496



Substitution treatment with statutory health insurance

	2020	2021	2022
Prescriptions in millions	2.27	2.19	3.03
Revenue in million EUR	90.0	95.2	103.4

^{*} German Pharmacists' Association (DAV) survey from 2018. The figure of 2,300 substituting pharmacies is an estimate.

Source: Federal Institute for Drugs and Medical Devices (BfArM), German Pharmacists' Association (DAV), National Association of Statutory Health Insurance Funds

SUPPLY OF MEDICAL AIDS AND BANDAGES

In addition to medical supply stores, pharmacies can also supply SHI-insured customers with medical aids. This usually requires the pharmacy to participate in a supply contract between the health insurance fund and the pharmacists' association. This requires a "prequalification": a bureaucratic procedure which confirms all necessary prerequisites for the supply in advance. Most of the 18,000 pharmacies have at least one product-group-specific prequalification. The supply of bandages is also a key area of responsibility for pharmacies.

SHI medical aid revenue* in community pharmacies 2022 Note: without billing at the expense of long-term care insurance providers	in million EUR
Application aids (e.g. needles for insulin pens)	280
Incontinence aids (e.g. incontinence pads)	116
Compression therapy aids (e.g. compression stockings)	90
Inhalation and breathing therapy devices (e.g. nebulisers)	48
Measuring devices for body conditions/functions (e.g. lancets and blood pressure monitors)	46
Suction devices (e.g. breast pumps)	22
Visual aids (e.g. eye patches)	18
Bandages	8
Stoma products	5
Orthoses/splints	4
other product groups	23
Total	660 million EUR (incl. VAT)

511
116
109
71
27
17
6
6
16
9 million EUR

^{*} including consultation room supplies according to the billed rate

Source: German Institute for Drug Use Evaluation (DAPI)

(incl. VAT)

VACCINES

Statutory health insurance (SHI) spends over two billion euros per year (incl. VAT) on vaccines. They are usually prescribed as consultation room supplies with a pink prescription. Flu waves and recommendations from the Standing Committee on Vaccination (STIKO) account for changes taking place seasonally or multiple times per year. While the increased administration of the high-dose influenza vaccine for patients over 60 had a major effect on revenue in 2021, the following year saw a significant increase in revenue from shingles vaccines.

* Tag	Sales volume in millions of vaccine doses		Revenue in million EUR (incl. VAT)		cl. VAT)	
Q	2020	2021	2022	2020	2021	2022
Varicella zoster (chickenpox, shingles)	2.6	2.7	4.6	231	318	679
Influenza (flu)	19.3	19.5	17.1	240	466	468
Pertussis (whooping cough)*	7.5	6.9	6.3	320	293	270
Pneumococcus	5.1	3.8	3.2	257	192	174
TBE (tick-borne encephalitis)	4.3	3.8	4.0	154	136	149
HPV (human papillomaviruses)	1.3	1.2	0.9	194	175	133
Measles**	2.8	2.3	2.1	162	141	129
Rotavirus	1.2	1.3	1.2	59	74	88
Meningococcus	0.9	0.9	0.9	42	48	47
Hepatitis	0.7	0.6	0.5	37	31	31
Other	1.0	0.9	0.8	14	11	13
Total	46.7	43.9	41.6	1,710	1,885	2,181

55.9 million

flu vaccine doses were supplied to doctors in 2020, 2021 and 2022.

The figures only include vaccine purchases from public pharmacies (including consultation room supplies). Dispensing carried out by pharmacies within the context of influenza vaccinations according to § 132e para. 1a SGB V (standard benefit) as well as COVID-19 vaccines are not included.

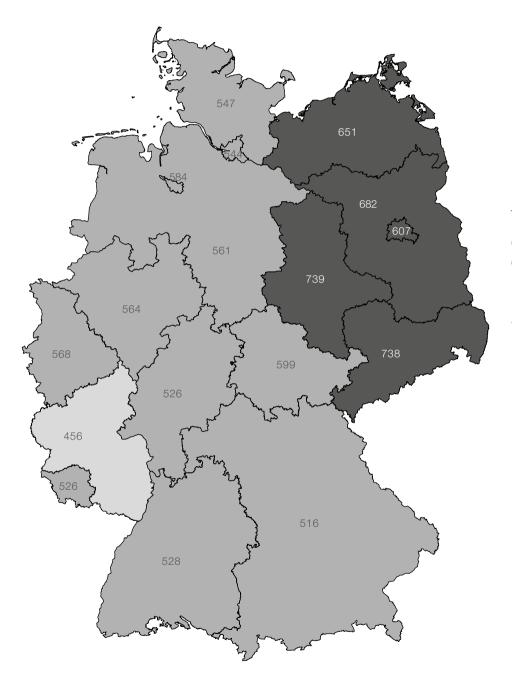
Source: German Institute for Drug Use Evaluation (DAPI)

^{*} incl. combination vaccines for diphtheria, tetanus, etc.

^{**} incl. combination vaccines for mumps, rubella, chickenpox

Vaccines are subject to regional and seasonal differences. The higher numbers in the "new" Federal States in the East are mainly due to greater influenza vaccination coverage. In the case of measles, Berlin and individual western German states are ahead of others. For tick-borne encephalitis (TBE), the higher vaccination rates in southern and eastern Germany can be explained by the prevalence of ticks there in summer.

Vaccine doses administered at the expense of SHI per 1,000 SHI-insured individuals in 2022



Total vaccine doses

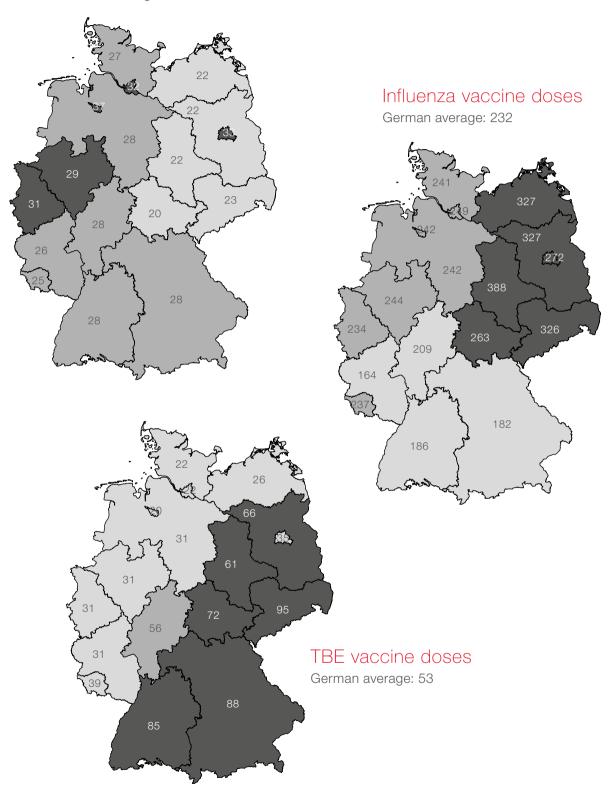
German average: 545

The figures only include vaccine purchases from public pharmacies (including consultation room supplies). Dispensing carried out by pharmacies within the context of influenza vaccinations according to § 132e para. 1a SGB V (standard benefit) as well as COVID-19 vaccines are not included.

Source: German Institute for Drug Use Evaluation (DAPI)

Measles vaccine doses*

German average: 25



*incl. combination vaccines for mumps, rubella, chickenpox

The figures only include vaccine purchases from public pharmacies (including consultation room supplies). Dispensing carried out by pharmacies within the context of influenza vaccinations according to § 132e para. 1a SGB V (standard benefit) as well as COVID-19 vaccines are not included.

Source: German Institute for Drug Use Evaluation (DAPI)

VACCINATIONS IN PHARMACIES

Since 2020, pharmacists have been allowed to administer vaccines under severe professional, spatial and organisational constraints. This initially took place as a pilot project, but has since been rolled out into regular supply. This applies to vaccinations against the flu virus (influenza) and the Coronavirus (SARS-CoV-2). Thousands of pharmacists have received professional training on this and several hundred thousand vaccines have been administered in pharmacies. Patients gladly seize the opportunity to utilise this low-threshold service and appear to be satisfied with it.

Pharmacists from regional chambers of pharmacists who have received training on vaccination

2020 2021		2022
706	3,996	8,462

COVID-19 vaccinations at community pharmacies

2021	2022			
4th qtr.	1st qtr.	2nd qtr.	3rd qtr.	4th qtr.
400	67,100	66,600	58,400	113,000

Influenza vaccinations at community pharmacies

Season	Pharmacies offering vaccinations	Vaccines administered
2021/2022*	400	5,600
2022/2023**	1,200	57,600

Experiences of surveyed patients in the pilot project for influenza vaccinations in pharmacies

20 % first flu vaccine ever

no vaccine without it being offered at the pharmacy

over 90 % willing to receive another flu vaccine at

the pharmacy

over 90 % willing to receive other vaccines at the pharmacy

Source: Federal Chamber of Pharmacists (BAK), Robert Koch Institute (RKI), German Pharmacists' Association (DAV)

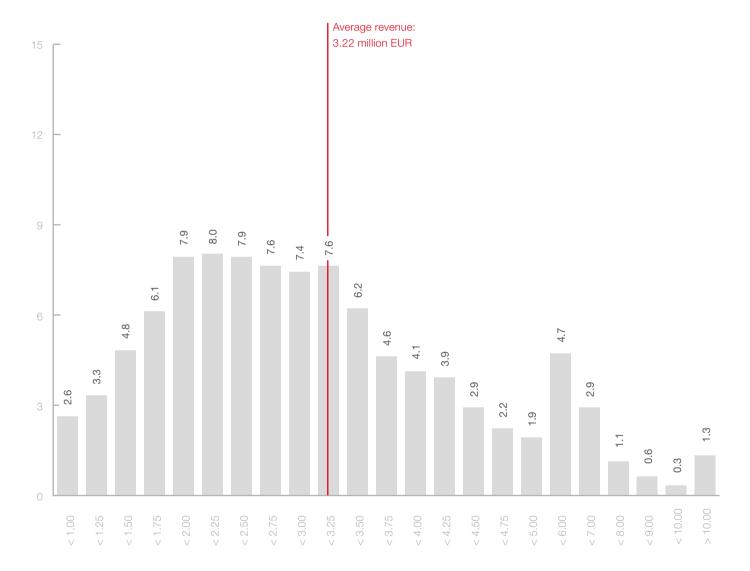
as part of pilot projects

^{**} July 2022 to March 2023

PHARMACIES BY REVENUE CATEGORY

The average net revenue of a pharmacy in Germany is 3.22 million euros per year (excl. VAT), but this figure varies greatly between individual pharmacies. Around 60 % of pharmacies fall short of the average revenue, while some large pharmacies greatly exceed it.

Percentage of pharmacies



Revenue in million EUR (excl. VAT)

Reporting year 2022

Source: Treuhand Hannover GmbH (Treuhand data panel)

OPERATING RESULTS OF THE AVERAGE PHARMACY

Four fifths of the average pharmacy's turnover (3.22 million euros per year) are spent on the cost of sales. Personnel and other costs must be deducted from the remaining gross profit. The earnings before taxes (EBT) dropped significantly in 2022 due to various extraordinary effects caused by COVID no longer existing. However, this amount cannot be equated to a gross salary, since pharmacy owners, as freelancers, not only have to pay taxes from it, but also have to make investments in the pharmacy and fund their own pensions in full.

	2020	2021	2022
Net revenue* in thousand EUR	2,776	3,079	3,225
- Cost of sales	2,152	2,366	2,530
= Gross profit	624	713	695
- Personnel costs	280	298	331
- Other tax-deductible costs	188	216	215
= Fiscal operating result (pre-tax)**	166	211	163
of which partial operating result for the SHI***	85	79	84
of which subsidies for the nighttime and emergency service	8	8	9
of which subsidies for the courier service	4	4	4

SHI = statutory health insurance

Source: Treuhand Hannover GmbH (Treuhand data panel)

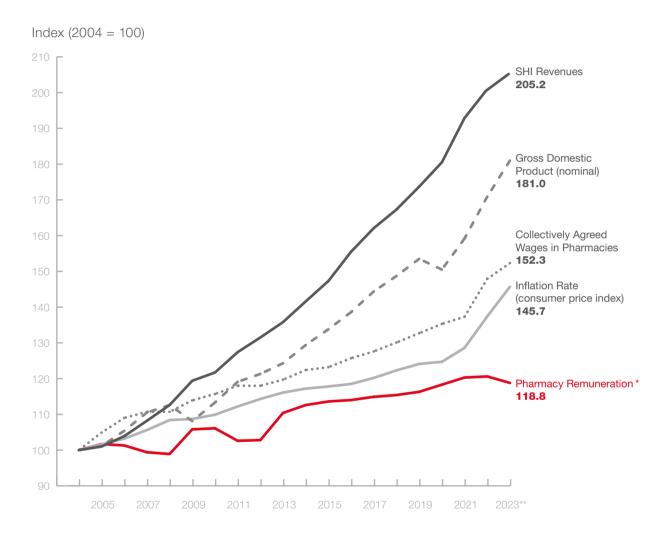
^{*} excl. turnover tax and SHI discounts

^{**} incl. subsidies for the nighttime and emergency service

^{***} cost allocation was carried out using the 50/50 revenue/sales method

DEVELOPMENT OF PHARMACY REMUNERATION

In 2004, the pharmacy fee was set at 8.10 euros per prescription drug. In 2013, it was increased for the first time in ten years to 8.35 euros. In addition, there is a mark-up of 3% of the pharmacy purchase price as well as a mark-up of 0.21 euros to fund nighttime and emergency services. For pharmaceuticals billed to statutory health insurance (SHI) funds, the pharmacy markdown, which is currently 2.00 euros (incl. VAT), lowers the effective pharmacy fee. Material costs (e.g. energy costs) and personnel costs (e.g. collectively agreed wages) have increased significantly more than remuneration.



AMPreisV = Drug Price Ordinance SGB = German Social Code (Sozialgesetzbuch)

Source: Federal Ministry of Health (BMG), Federal Statistical Office of Germany (DESTATIS), ADEXA, ABDA statistics

^{*} pharmacy remuneration per SHI finished dosage form package according to §1 AMPreisV in conjunction with §130 SGB V (3% surcharge on pharmacy purchase price plus 8.35 EUR fixed surcharge plus 0.21 EUR emergency service surcharge minus 2.00 EUR pharmacy discount). Excluding the emergency service surcharge, the index value for 2023 is 115.8

^{**} prognosis

PHARMACY FUTURE EXPECTATIONS

In addition to the retrospective view of the business results, future expectations are decisive in evaluating the overall situation of pharmacies. The industry climate has also clouded over in recent years due to unresolved regulatory issues. The Local Pharmacy Strengthening Act (VOASG), which was passed at the end of 2020, has brought about some important changes in the industry and thus undoubtedly affected the survey results in the subsequent years.

What pharmacy owners view as the most important health policy challenges of the next two to three years

Planning security (i.e. stable legal framework conditions such as the preservation of the Drug Price Ordinance)

Stable/improved business climate

Bureaucracy reduction

Recruitment of young talent

Introduction of medication management and other remunerated pharmaceutical services

Improved cooperation with doctors

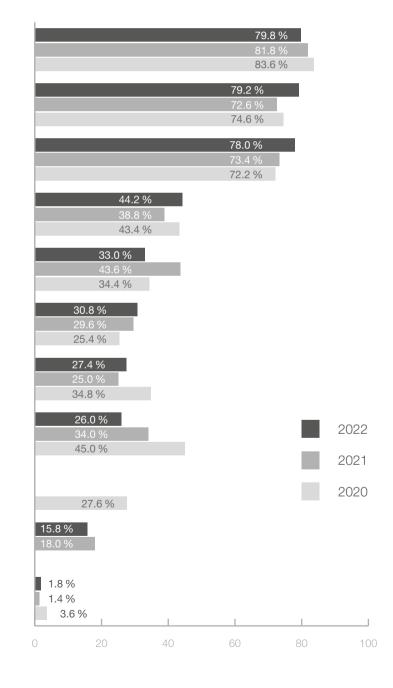
Improved cooperation with health insurance funds

More freedom in the care of patients

Combating the COVID-19 pandemic with vaccines and therapeutics

Combating pandemics by creating a crisis-proof healthcare system

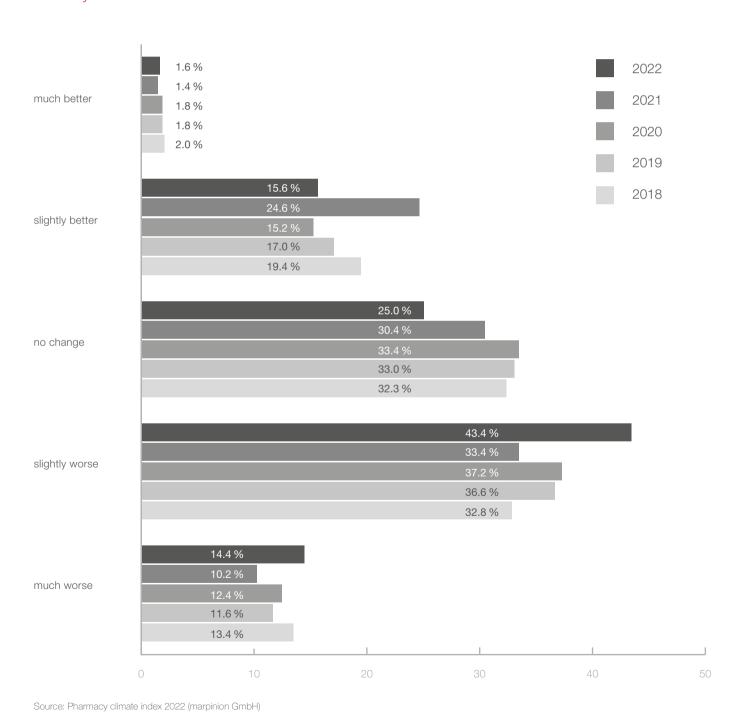
Other



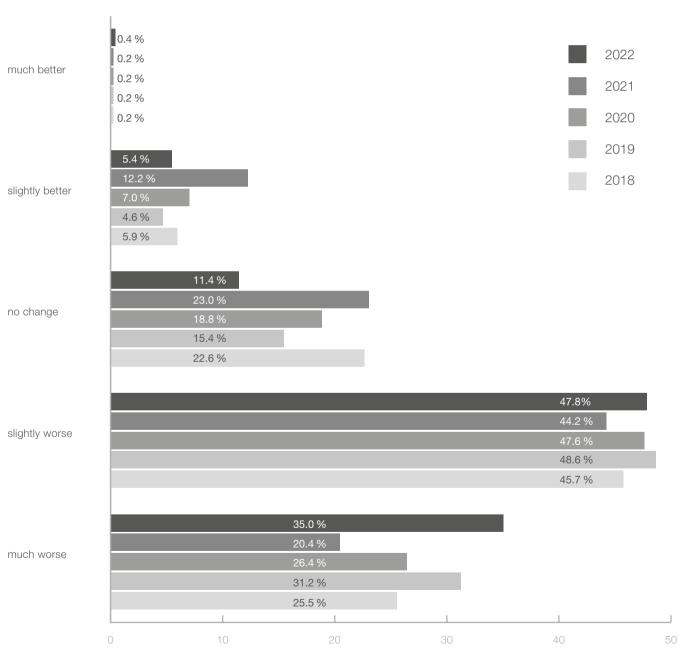
Source: Pharmacy climate index 2022 (marpinion GmbH)

Despite the relatively stable average business results of pharmacies, the outlook of pharmacy owners has become gradually worse in recent years. This is partly due to pharmacy remuneration developing below the inflation rate for a prolonged period. The worsened outlook applies both to expectations for their own businesses as well as for the industry as a whole. One major reason for this is the lack of planning security. Along with the general negative political situation, the Ukraine war and its consequences caused a drastic drop in morale in 2022.

Economic expectations of owners for their own business in the next two to three years



Economic expectations of owners for the pharmacy industry in the next two to three years



Source: Pharmacy climate index 2022 (marpinion GmbH)

PHARMACY OPERATION AND INVESTMENT

In order to operate a public pharmacy, numerous conditions must be fulfilled. These are listed in the German Pharmacies Act (ApoG) and the Ordinance on the Operation of Pharmacies (ApBetrO). They require extensive investment. The minimum requirements in terms of quality management, patient friendliness and suitability for everyday use are far exceeded by many pharmacies, but that requires extensive investment.

Operating licence

- » licensed pharmacists
- » personal management
- » sole responsibility

Business premises

- » at least 110 square metres of floor space
- » office, laboratory, storage, nighttime service room

Pharmaceuticals

- » prescription and pharmacy-only medications as special goods
- » finished dosage forms, formulations and narcotics
- » stock for at least one week with average demand

Quality management

- » pharmaceutical personnel including PTAs, pharmaceutical engineers, pharmacists
- » mandatory QM system for processes in the pharmacy
- » guidelines of the Federal Chamber of Pharmacists and certification (chamber certificate, TÜV etc.) as guidance

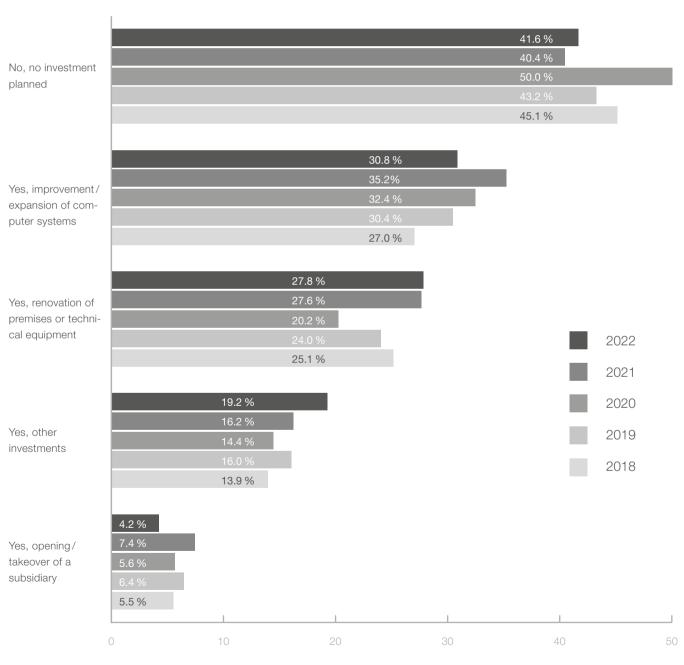
Standby duty

- » proper supply of medicines to the population
- » obligation to be permanently on duty with a scheduled exemption from the chambers of pharmacists
- » posting of information about the nearest pharmacy on duty at every pharmacy

PTA = pharmaceutical technical assistant QMS = quality management system

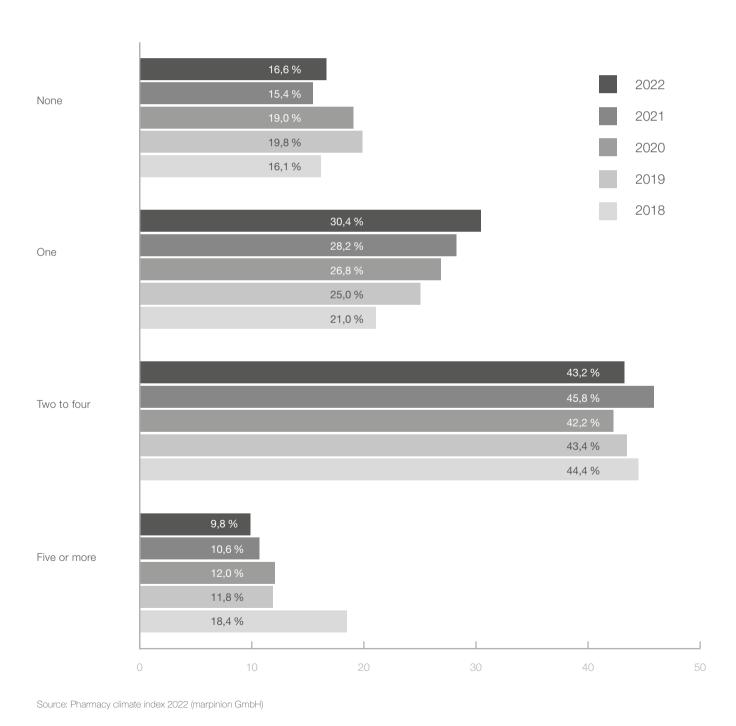
Source: ABDA – Federal Union of German Associations of Pharmacists

Planned investments at pharmacies in the next two to three years



Source: Pharmacy climate index 2022 (marpinion GmbH)

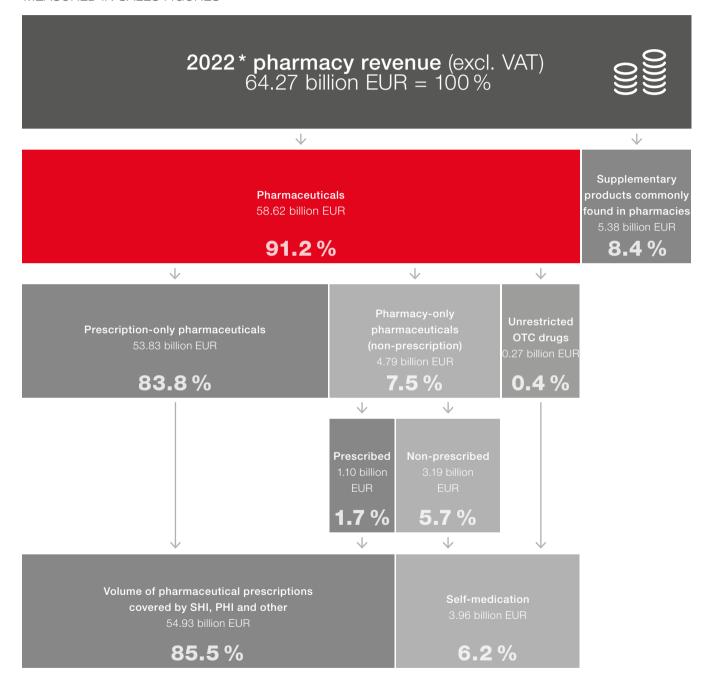
Owners' estimates of how many interested parties could be expected in the event of them selling their pharmacy



REVENUE STRUCTURE AND DISPENSED PACKAGES

91% of the revenue of pharmacies comes from the dispensing of medications, with the rest attributable to the supplementary products commonly found in pharmacies. Around 84% of revenue comes from prescription medications prescribed by doctors.

MEASURED IN SALES FIGURES



Note:

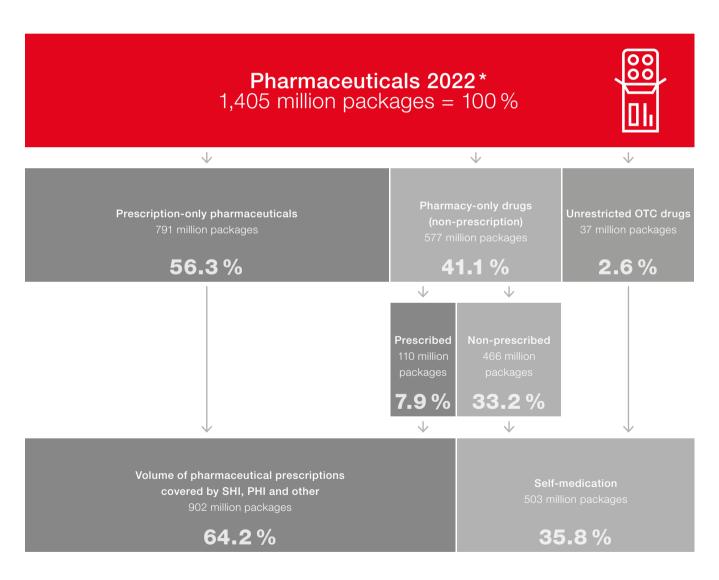
Special services provided in the context of the COVID-19 pandemic and billed to the Federal Office for Social Security (BAS) are not included here. This includes the supply of COVID-19 vaccines and medications, the issuing of certificates and citizen testing. The total volume of these special benefits is estimated at 600 million EUR.

Mail-order revenue is not taken into account.

*preliminary

Source: Insight Health GmbH, ABDA statistics

MEASURED IN NUMBERS OF PACKAGES



Note:

Special services provided in the context of the COVID-19 pandemic and billed to the Federal Office for Social Security (BAS) are not included here. This includes the supply of COVID-19 vaccines and medications, the issuing of certificates and citizen testing.

Mail-order revenue is not taken into account.

*preliminary

Source: Insight Health GmbH, ABDA statistics

Revenue und sales volume

in billion EUR	2020	2021	2022*
Pharmacy revenue (excl. VAT)	56.80	59.98	64.27
Prescription-only pharmaceuticals	47.24	50.24	53.83
Pharmacy-only pharmaceuticals (non-prescription)	4.23	4.21	4.79
Prescribed	1.03	1.02	1.10
Non-prescribed	3.20	3.19	3.69
Unrestricted OTC drugs	0.29	0.26	0.27
Volume of pharmaceutical prescriptions covered by SHI, PHI and other	48.27	51.26	54.93
Self-medication	3.49	3.45	3.96
Supplementary products commonly found in pharmacies	5.03	5.27	5.38

in millions of packages	2020	2021	2022*
Pharmaceuticals	1,297	1,288	1,405
Prescription-only pharmaceuticals	750	756	791
Pharmacy-only pharmaceuticals (non-prescription)	507	498	577
Prescribed	100	97	110
Non-prescribed	407	401	466
Unrestricted OTC drugs	40	35	37
Volume of pharmaceutical prescriptions covered by SHI, PHI and other	850	853	902
Self-medication	447	436	503

Note:

Special services provided in the context of the COVID-19 pandemic and billed to the Federal Office for Social Security (BAS) are not included here. This includes the supply of COVID-19 vaccines and face masks, the issuing of certificates and citizen testing.

Mail-order revenue is not taken into account.

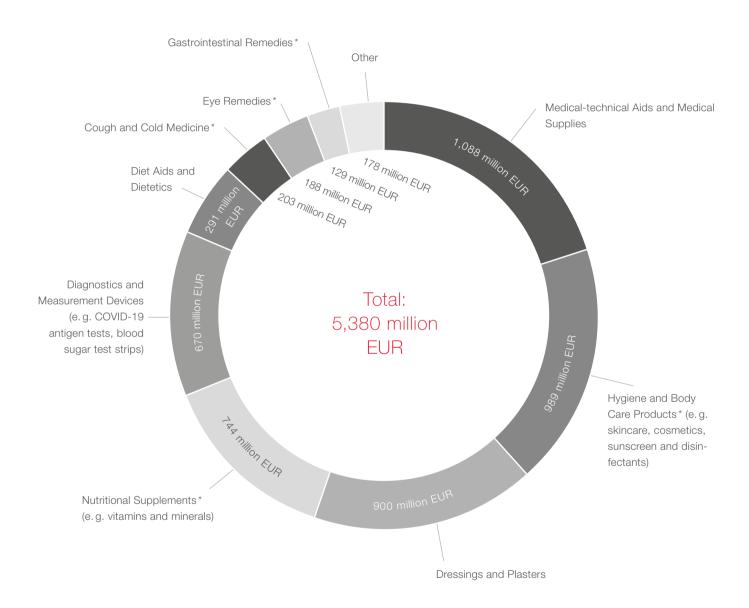
*preliminary

Source: Insight Health GmbH, ABDA statistics

SUPPLEMENTARY PRODUCTS COMMONLY FOUND IN PHARMACIES

The supplementary range includes all non-pharmaceutical products dispensed and sold in the pharmacy. These can include certain medical aids, blood sugar test strips, food supplements, vitamins and minerals as well as cosmetics and sunscreen. They account for 8.4% of total revenue.

2022 revenue (excl. VAT)



Source: Insight Health GmbH

^{*} unless classified as pharmaceuticals

SUSTAINABILITY

Sustainability is one of the most important causes for politics, society and the economy. Sustainability plays an especially important role in healthcare, as considering it can have an effect on people's health. The production, consumption and disposal of pharmaceuticals are just as much elements of a sustainable supply of medications as the resource-saving operation of pharmacies and their logistics centres. Pharmacy owners also find themselves discussing this issue with their customers again and again. Sustainability ultimately concerns us all.

Which aspects of the topics "sustainability, climate protection and resource conservation" are at the forefront of conversations with pharmacy customers?

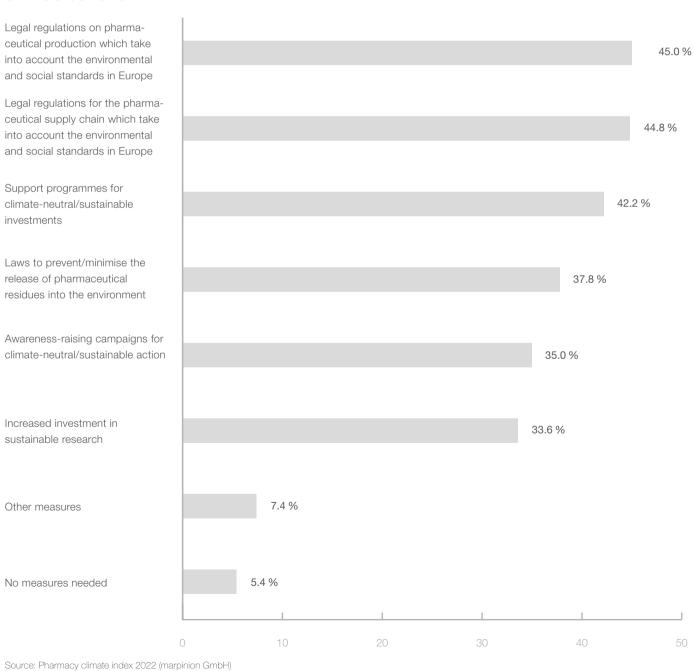
Avoiding waste in pharmacies	49.7 %
Sparing use of resources (energy, water, raw materials, etc.) in pharmacies	49.7 %
Environmentally friendly supply of medications	48.1 %
Effects of climate change on health	27.5%
Making (medication) packaging as sustainable as possible	27.1 %
Environmental and social standards in pharmaceutical production	13.3%
Other aspects	12.6%

Are pharmacy owners planning measures to make their pharmacy more sustainable in the next two to three years?

Yes, saving energy	51.6%
Yes, avoiding waste	38.0 %
Yes, (increased) use of electromobility	32.6%
Yes, use of renewable energy sources	19.2%
Yes, improved disposal management	11.8%
Yes, other measures	7.0%
No, no measures planned	25.2 %

Source: Pharmacy climate index 2022 (marpinion GmbH)

In the opinion of pharmacy owners, which political/legislative measures would be required to more firmly establish sustainability considerations in the supply of medications?



SUPPLYING REFUGEES FROM AND IN UKRAINE

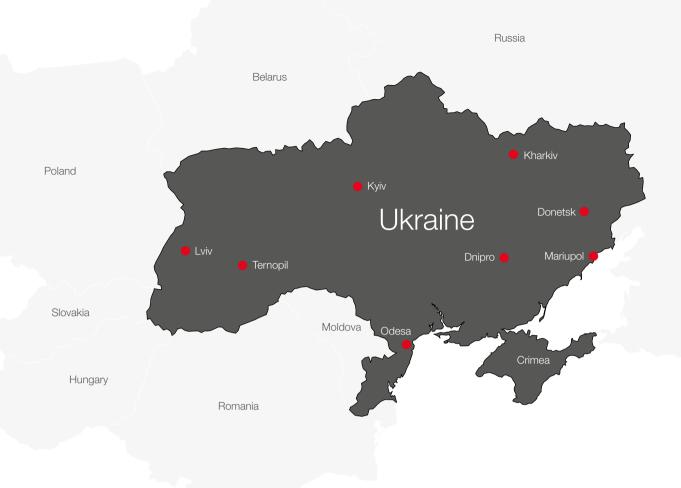
On 24 February 2022, Russia began its war on Ukraine. Since then, Germany has taken in over a million refugees from Ukraine, who also require healthcare. They were initially supplied in line with the Asylum-Seekers' Benefits Act (AsylbLG) but after a few months, hundreds of thousands of men, women and children were already recognised as members of statutory health insurance (SHI). Some Ukrainians tried to attain a pharmacist's licence by means of a technical language exam. Furthermore, pharmacists' aid organisations collected many donations in order to supply medicine to people still living under wartime conditions in Ukraine.

Ukrainian population in Germany by gender	December 2021	November 2022
female	90,055	663,334
male	48,148	371,914
Total	138,203	1,035,248

Ukrainian population in Germany by age group	December 2021	November 2022
under 18	16,627	326,163
18 to 60	95,099	576,887
60+	26,477	132,198
Total	138,203	1,035,248

Technical language exam for pharmacists from Ukraine (number of examination candidates)	2020	2021	2022
female	3	14	17
male	8	7	4
Total	11	21	21

Source: Federal Statistical Office of Germany (Destatis), Federal Chamber of Pharmacists (BAK)



Campaigns by pharmacists' aid organisations for Ukraine since the start of the war on 24 February 2022

Name	Towns/ Countries	Donations
Apotheker helfen e. V. Source: www.apotheker-helfen.de/europa/unsere-ukraine-hilfe-laeuft-weiter	Lviv, Kyiv, Poland (among others)	765,000 EUR
Apotheker ohne Grenzen e.V. Source: www.apotheker-ohne-grenzen.de/aog_news/ukrainenews	Lviv, Kyiv, Dnipro, Kharkiv, Romania, Poland (among others)	over 3 million EUR
Hilfswerk der Baden-Württembergischen Apothekerinnen und Apotheker e. V. Source: www.apotheker-hilfswerk.de/Ukraine	Ternopil, Mariupol, Kyiv, Lviv, Donetsk, Kharkiv (among others)	380,000 EUR

Source: pharmacists' aid organisations

TECHNICAL LANGUAGE EXAMS FOR FOREIGN PHARMACISTS

There is also labour migration in the area of pharmaceutical supply. Pharmacists who do not speak German natively and apply for pharmacists' licences in Germany must have knowledge of German colloquial and technical language. Based on the Common European Framework of Reference for Languages (CEFR), they must demonstrate technical language skills in a three-part examination. Almost all regional chambers of pharmacists have been commissioned by their state authority to conduct the specialist language examination.

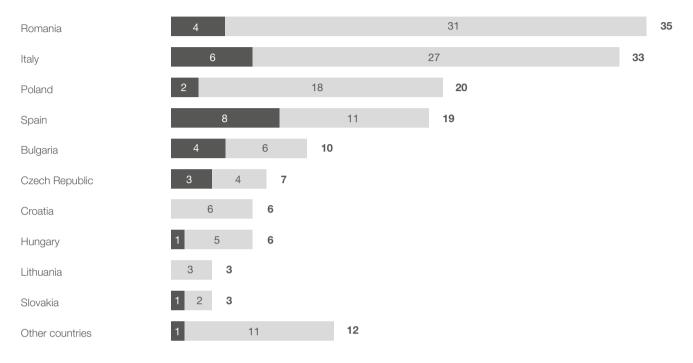
Number of exams and pass rate



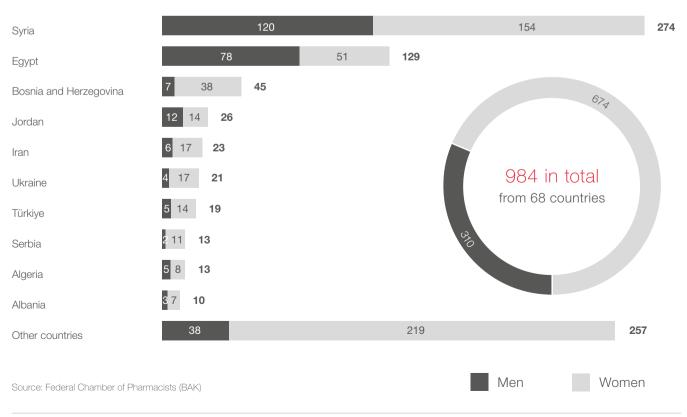
Source: Federal Chamber of Pharmacists (BAK)

Number of examination candidates, gender balance and countries of origin 2022

Other European countries (EU, EEA, Switzerland)



Third countries

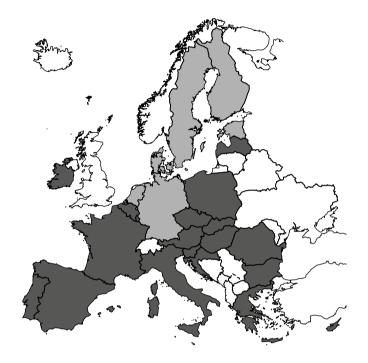


PHARMACY-RELATED LEGAL REGULATIONS IN EUROPE

The healthcare systems across the European Union are organised in different ways. Accordingly, the regulatory rules for the supply of medicines also differ from one member state to another. Only a minority of states allow mail-order sales of prescription medicines, and some allow third-party ownership of pharmacies (by non-pharmacists and corporations).

Mail-order ban for prescription drugs





Ban on third-party ownership







Source: Pharmaceutical Group of the European Union (PGEU), World Health Organisation (WHO)

Country	Rx mail order trade ban	Ban on third-party ownership
Belgium	✓	×
Bulgaria	✓	×
Denmark	×	✓
Germany	×	✓
Estonia	×	✓
Finland	×	✓
France	✓	✓
Greece	✓	×
Ireland	✓	×
Italy	✓	×
Croatia	✓	×
Latvia	✓	×
Lithuania	N/A	×
Luxembourg	✓	✓
Malta	×	×
Netherlands	×	×
Austria	✓	✓
Poland	✓	✓
Portugal	✓	×
Romania	✓	×
Sweden	×	×
Slovakia	✓	×
Slovenia	✓	✓
Spain	✓	✓
Czech Republic	✓	×
Hungary	✓	✓
Cyprus	✓	✓

Source: Pharmaceutical Group of the European Union (PGEU), World Health Organisation (WHO)

PHARMACY DENSITY ACROSS EUROPE

With 22 pharmacies per 100,000 inhabitants, Germany is in the bottom third of the European comparison table. On average, the 27 EU member states have 32 pharmacies per 100,000 inhabitants.

	Pharmacies per 100,000 N inhabitants	lumber of community pharmacies*
Greece	97	10,346
Cyprus	63	563
Lithuania	47	1,317
Spain	47	22,198
Malta	46	210
Bulgaria	45	3,143
Latvia	43	829
Belgium	41	4,747
Romania	40	7,697
Ireland	38	1,906
Estonia	36	475
Poland	35	13,395
Italy	33	19,669
EU average:	32	approx. 142,000
France**	31	20,318
Slovakia	31	1,706
Portugal	28	2,920
Croatia	27	1,096
Hungary	24	2,297
Czech Republic	22	2,369
Germany	22	18,068
Slovenia	17	350
Austria	16	1415
Luxembourg	16	98
Finland	15	822
Sweden	13	1,407
Netherlands	11	1,975
Denmark	9	524

^{*} last available year

Source: ABDA statistics, Pharmaceutical Group of the European Union (PGEU), national pharmacists' associations, European Commission (EC)

^{**} France métropolitaine (excl. overseas territories)

Development of pharmacy density in Germany and its neighbouring countries (pharmacies per 100,000 inhabitants)

Country	2004	2008	2012	2016	2020	2022
Belgium	50	49	45	43	41	N/A
France*	37	36	35	33	32	31
Poland	N/A	28	N/A	36	35	N/A
Germany	26	26	26	24	23	22
Czech Republic	22	23	24	24	22	N/A
Switzerland	23	22	22	21	21	21
Austria	14	15	15	16	16	16
Luxembourg	N/A	18	18	16	16	16
Netherlands	11	12	12	12	12	11
Denmark	6	6	6	7	9	9

Source: ABDA statistics, Pharmaceutical Group of the European Union (PGEU), national pharmacists' associations, European Commission (EC)

^{*} France métropolitaine (excl. overseas territories)

VALUE-ADDED TAX ON PHARMACEUTICALS

Value-added tax (VAT) on pharmaceuticals varies greatly between the various 27 EU member states. Germany has one of the highest VAT rates, exceeded only by Denmark and Belgium. In contrast, Malta, Ireland and Sweden have completely exempted some medications from VAT.

		Tax on pharma-	General VAT rate
		ceuticals in 2023	2023
Denmark		25.0	25.0
Bulgaria		20.0	20.0
Germany		19.0	19.0
Latvia		12.0	21.0
Finland		10.0	24.0
Italy		10.0	22.0
Czech Republic		10.0	21.0
Austria		10.0	20.0
Slovakia		10.0	20.0
Slovenia		9.5	22.0
Netherlands		9.0	21.0
Estonia		9.0	20.0
Romania		9.0	19.0
Poland		8.0	23.0
Greece		6.0	24.0
Portugal		6.0	23.0
Belgium		6.0	21.0
Hungary		5.0	27.0
Croatia		5.0	25.0
Lithuania	reimbursable pharmaceuticals;	5.0	21.0
	non-reimbursable pharmaceuticals;	21.0	
Cyprus		5.0	19.0
Spain		4.0	21.0
Luxembourg		3.0	16.0
France	reimbursable pharmaceuticals;	2.1	20.0
	non-reimbursable pharmaceuticals;	10.0	
Sweden	prescription-only drugs;	0.0	25.0
	non-reimbursable pharmaceuticals;	25.0	
Ireland	medications for oral use;	0.0	23.0
	medications for non-oral use;	23.0	
Malta		0.0	18.0

Source: European Commission (EC)

SUPPLY SHORTAGES IN EUROPE

Pharmaceutical supply shortages are an everyday problem for pharmacies all over Europe, not just in Germany. They affect certain countries to varying degrees, but there are similarities in terms of global supply chains and international dependencies. In spite of these issues, pharmacies try to serve their patients as well as possible.

Survey of 29 European pharmacists' associations in 2022

6.7 hours	Across Europe, pharmacy staff spend an average of 6.7 hours per week managing supply shortages.
84%	Cardiovascular drugs were most frequently affected by supply shortages (84%).
76 %	At the time of the survey, 76% of the pharmacists' associations reported that more than 200 medicines were affected by supply shortages in their countries.
76 %	Pharmacists mostly receive the relevant information on supply shortages from pharmaceutical authorities (76 %), wholesalers (66 %) and manufacturers (48 %).

Source: Pharmaceutical Group of the European Union (PGEU)

COMPARISON BY COUNTRY: VACCINATIONS IN PHARMACIES

Pharmacists are allowed to vaccinate against influenza in pharmacies in at least 27 countries worldwide, including France, the UK and the USA. The aim is to increase the vaccination rate and ensure basic healthcare in regions with weak health infrastructure. Since November 2022, German pharmacies have also been permitted to administer influenza vaccines. During the COVID-19 pandemic, several countries also successively included community pharmacies in their COVID-19 vaccination programmes, usually after prior qualification and provision of the appropriate equipment.

Countries where pharmacists are allowed to vaccinate against **influenza** (flu) in community pharmacies



Non-European countries with vaccination permits		
Argentina		
Australia		
Brazil		
Costa Rica		
Hong Kong, China		
Israel		
Canada		
Kenya		
Lebanon		
New Zealand		
Paraguay		
Philippines		
South Africa		



Note: In Switzerland, 21 of the 26 cantons have vaccination permits.

Source: Pharmaceutical Group of the European Union (PGEU), International Pharmaceutical Federation (FIP), ABDA

USA

Countries where pharmacists are allowed to vaccinate against **COVID-19** in community pharmacies



Vaccination permit

Australia	France	New Zealand	USA
Belgium	Ireland	Norway	United Kingdom
Denmark	Italy	Poland	
Germany	Luxembourg	Switzerland	

Source: ABDA – Federal Union of German Associations of Pharmacists

LEGAL INFORMATION

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