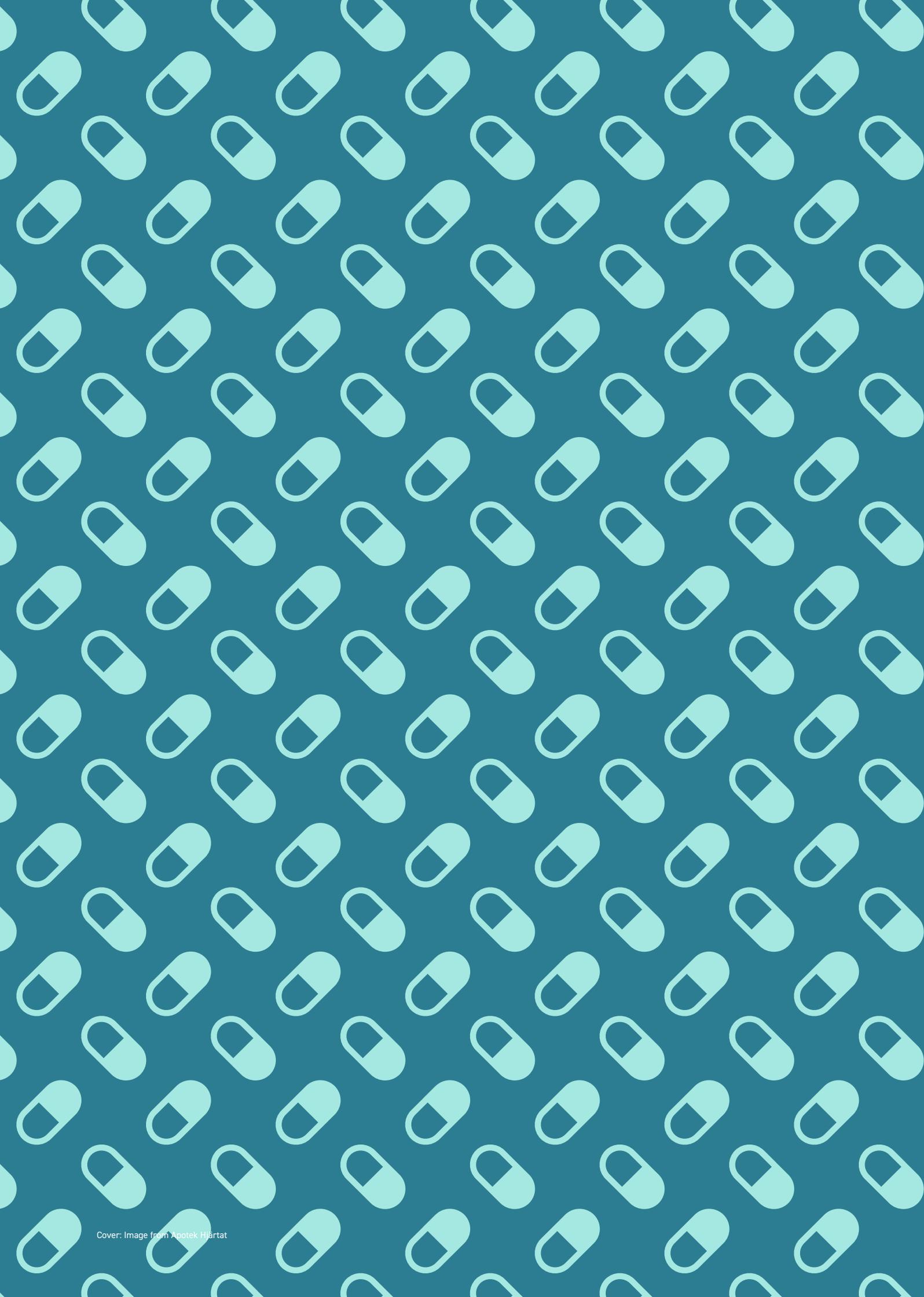


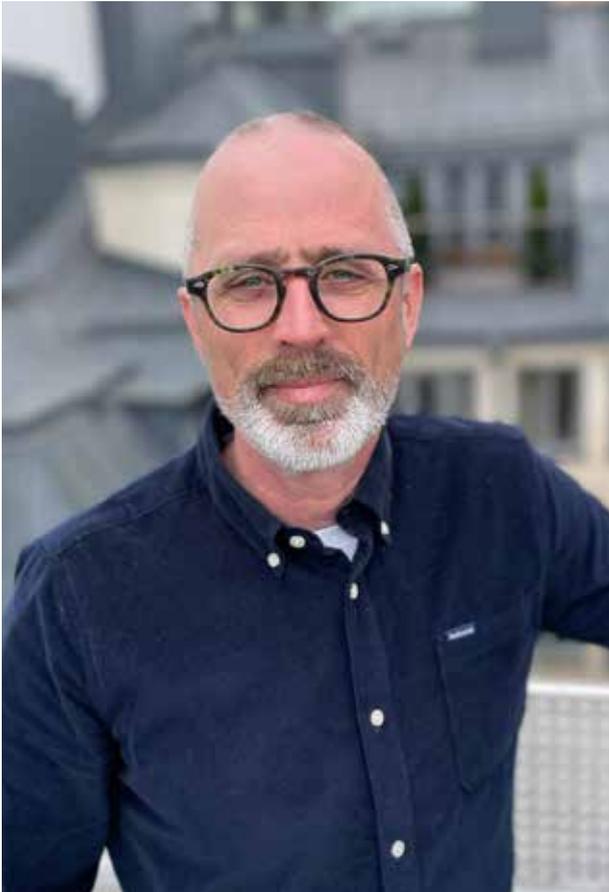


**Sveriges
Apoteksförening**

SECTOR REPORT 2022



PREFACE



2021 marked the second year that the COVID-19 pandemic held the world fast in its grip. But it was also the year when vaccines for COVID-19 became available to the general public, and a mass vaccination campaign got underway.

It was a year of tremendously hard work for Swedish pharmacies. Pressure on pharmacies was high at times, and the shift in channels from physical shops to e-commerce continued. Nearly every third pharmacy product was sold through the e-commerce channel in 2021. This has had a major impact on pharmacy companies. For the first time since the pharmacy market was re-regulated in 2009, we have seen the number of physical shops decrease. This has affected metropolitan areas and large towns the most, while, on the other hand, the number of pharmacies in rural municipalities and smaller towns has increased to some degree.

The pharmacy has played an important role during the pandemic. Despite periods of high absence due to sick leave, the pharmacy has managed to continue

providing the population with the medicines they need. The pharmacy has also supplied the population with personal protective equipment and rapid tests and through cooperation with providers also been available for vaccination.

Over the course of the year, we in the industry have worked closely with TLV in their governmental task of starting a pilot scheme with pharmaceutical services at the pharmacies.

This is something I am passionate about and that we in the industry have been seeking for a long time. There are many good examples from a number of other countries where assessments and research show that pharmaceutical services can play an important role in improving the use of medicine products. The first pilot programmes will get underway in spring of 2022.

I am also proud that in February 2021, despite being in the middle of the pandemic, we were able to launch Vålvald – the pharmacy’s guide to increased transparency. Pharmacy customers purchasing non-prescription medications can now also make choices based on how transparent the pharmaceutical companies are with respect to their sustainability work. What’s more, over the course of the year we have further developed Vålvald criteria so that the 2022 criteria also set requirements on responsible manufacturing of individual products.

This year’s annual report closes with the chapter “Tomorrow’s Pharmacy” which looks forward to see how the pharmacy market will look within a not too distant future. Even if we do not exactly know what developments lie ahead for the pharmacies, the market will in all likelihood function differently than it does today.

I recommend reading this year’s comprehensive annual report- if you want to find out even more, the association has even developed www.apotekswiki.se, where we have tried to compile industry data in a streamlined and easily accessible manner.

Johan Wallér
CEO, Sveriges Apoteksförning

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1. THE YEAR IN BRIEF

98%

of customers were satisfied with their most recent visit to a pharmacy

Very satisfied customers

- 98 percent of pharmacies' customers were satisfied with their most recent visit.
- 81.5 percent of them gave either of the two highest scores of "exceptionally good" or "very good".



E-commerce accounts for growth on the community pharmacy market even though the rate of growth is declining

- The pharmacy's e-commerce increased by nearly 20 percent in value over the year, while bricks-and-mortar pharmacies did not see any growth in total sales.
- The volume fraction was nearly 30 percent of all products sold via e-commerce in 2021.



140 million

visits were made in total in 2021

Pharmacies for everyone

- Every day, around 390,000 people visit a pharmacy, which equates to 140 million visits per year to one of the country's pharmacies.
- 88 million prescriptions were dispensed in 2021
- There were 1,411 community pharmacies in Sweden at the end of 2021. (52 percent more than before re-regulation)
- There are nine e-commerce pharmacies. Pharmacy customers nationwide buy pharmacy products through e-commerce. The proportion of elderly customers over age 70 has increased as a result of the pandemic.



More than 88 million prescriptions were dispensed in 2021.

THE SWEDISH PHARMACY MARKET IN 2021

The Swedish pharmacy market consists of five nationwide pharmacy chains, three purely e-commerce pharmacies and individually operated pharmacies. In total, there are 1,411 community pharmacies, 9 online pharmacies and 26 hospital pharmacies supplying inpatient care with medicines.













Image from Apoteksgruppen

2. THE SWEDISH MARKET

Very satisfied customers at pharmacies all across the country

High level of customer satisfaction

Generally speaking, pharmacy customers are very satisfied and have been for a long time. In total, 98 percent of customers are satisfied with their most recent pharmacy visit and 81.5 percent said it was “very good” or “exceptionally good” (score 4 and 5 on a scale of 1 to 5). Regardless of gender, age and place of residence, pharmacy customers are satisfied with their pharmacies.¹

Customer surveys held annually show that the main reasons for customers being so satisfied with their pharmacies are the pharmacies’ geographical location and the fact that the pharmacy has what they want. The most satisfied are the customers who make an active choice of pharmacy, in other words those who have obvious alternatives to choose from. Short waiting times and pleasant customer service by staff are also key factors. Customers feel that the pharmacy staff instill a sense of trust, and they receive good guidance and advice at the pharmacy.

Why customers visit pharmacies

Each day, approximately 390,000 people visit one of Sweden’s brick-and-mortar or online pharmacies. Pharmacies had a total of 140 million customer visits in 2021. A large share, just under 40 percent, of those that visit a pharmacy do so to collect their prescription medications. Sweden’s pharmacies dispensed approximately 88 million prescriptions in 2021, as well as multi dose-packed medicines to 225,000 customers. The remaining approximately 60 percent of those visiting pharmacies are customers purchasing OTC self-care medication and other retail goods. When customers visit a pharmacy it is usually for multiple purposes at the same time. Those picking up a prescription medication often take the opportunity to purchase OTC medication or other pharmacy products.



Image from Lloyds Apotek

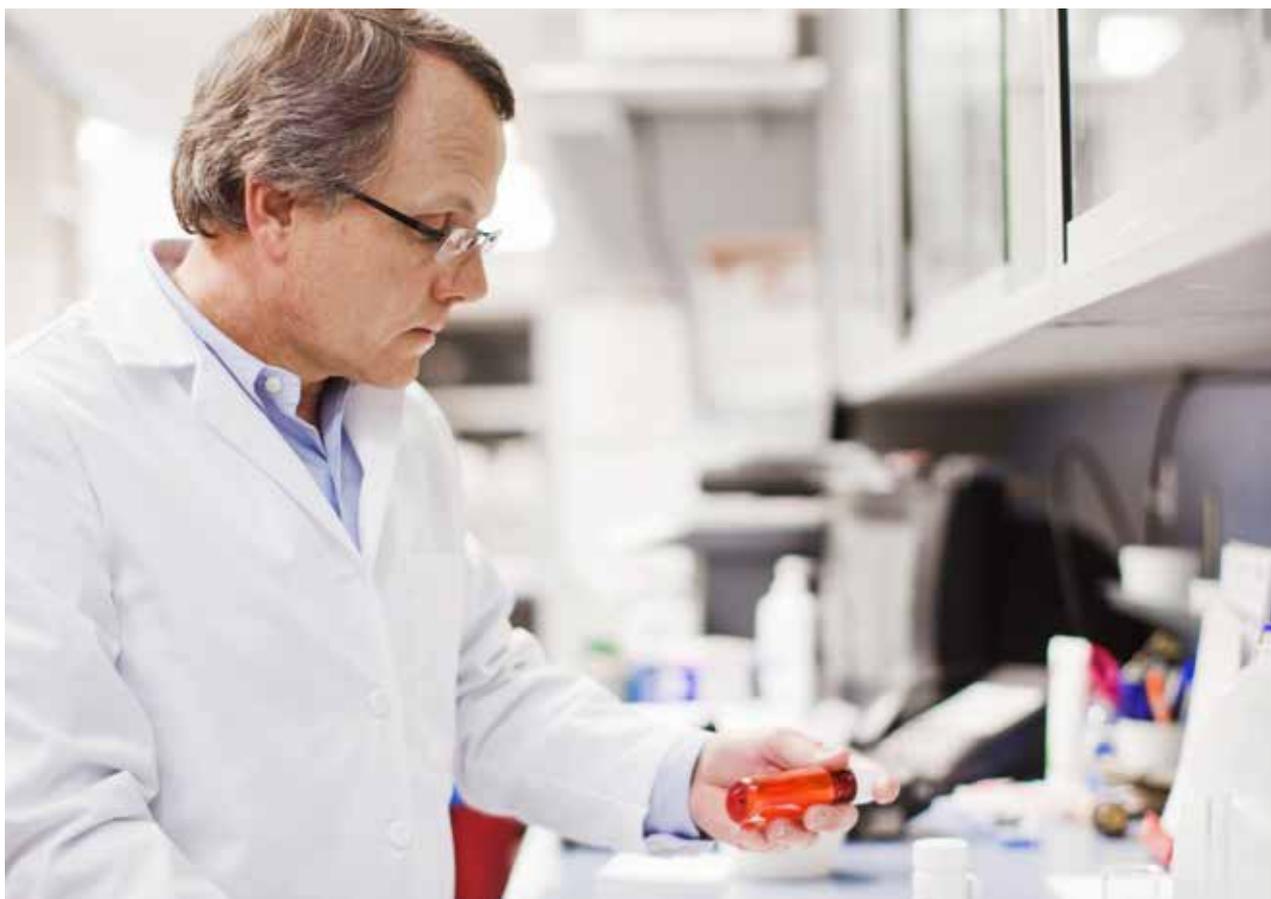
The various pharmacy companies

The Swedish pharmacy market consists of five nationwide pharmacy chains: Apoteket AB, Apotek Hjärtat, Kronans Apotek, Apoteksgruppen and Lloyds Apotek. Apoteksgruppen is run as both a pharmacy chain with wholly-owned pharmacies and using a franchise model with around 30 pharmacies with private ownership under the same brand. There are also three purely online pharmacies; Apotea, Meds and Apochem, and just over 40 independently run pharmacies. The independently run pharmacies are organised in the organisation SOAF, which in turn is a member of the Swedish Pharmacy Association. ApoEx is the only member of the Swedish Pharmacy Association completely focused on inpatient care.

Pharmacies on the community pharmacy market

Community pharmacies are bricks-and-mortar shops that consumers can visit in person. As of late 2021/early 2022, there were 1,411 community pharmacies. In addition, there are also pharmacies that only sell and provide advice about medicines online. There are three purely online operators, but

¹) Source: Kantar Sifo, Kundnöjdhet på apoteksmarknaden.



pharmacy chains also offer online sales to varying extents. There are nine online pharmacies in total.

Dose-dispensing pharmacies are a special form of pharmacy with a community pharmacy permit. Dose dispensing pharmacies repack medication into sachets according to the set of different medications that a particular patient needs to take at a particular time. This is called multi dose dispensing and is a service procured by regional authorities. The aim is to make it easier for people taking numerous medications simultaneously, in particular the elderly. Around 225,000 people have dose dispensed medicines. In 2021, there were three dose pharmacies run by three different operators; Apoteket AB, Svensk Dos and Apotekstjänst. Some dose packing dispensing of medication is also carried out for inpatient care. In addition, some pharmacies have developed a dosage service that can be bought by private individuals.

Pharmacies on the inpatient care market

There are 26 hospital pharmacies that supply inpatient care and some institutions with medication. Hospital pharmacies have decreased in number as a result of concentration into fewer units, in that

supply services are procured for one or more regions. Manufacturing pharmacies (extemporaneous pharmacies) produce individually adapted medication for both outpatients and inpatients. These include cytostatics, antibiotics and parenteral nutrition. Production also takes place for clinical trials. There are four manufacturing pharmacies in total. The following table lists all forms of pharmacies that were active at the end of 2021.

Different types of pharmacies in the Swedish market

Pharmacies by category	2020	2021
Community pharmacies (which consumers can visit in person)	1433	1411
Hospital pharmacies (in inpatient care)	34	26
Production pharmacies	4	4
Dose dispensing pharmacies	3	3
Online pharmacies ¹	9	9
Others ²	3	3
Total	1486	1456

1) Units with a pharmacy permit and a full range of prescription items that only operate by mail order or online, and that do not have bricks-and-mortar stores that consumers can visit.

2) Other relates to haemophilia-related activities.

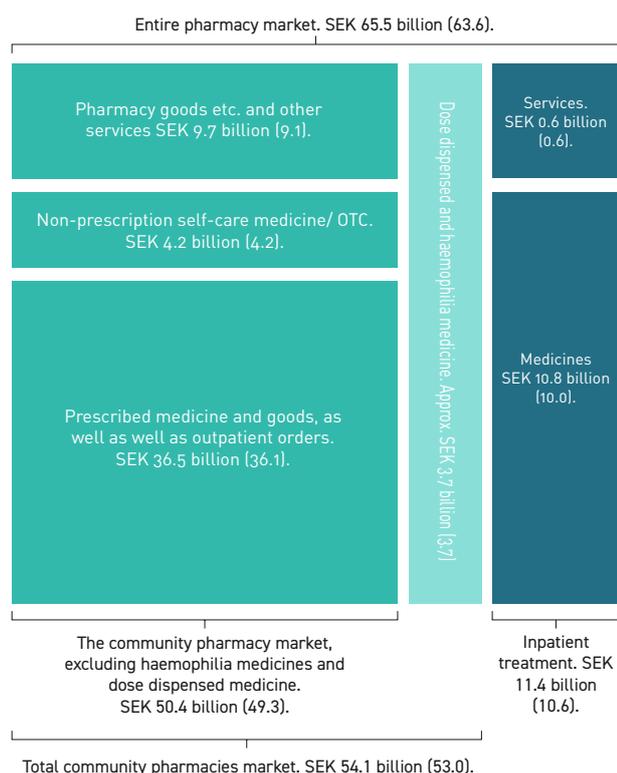
Source: SA Service AB and the EXPO registry.

3. ECONOMIC PERFORMANCE OF THE PHARMACY MARKET

The pharmacy market

The entire pharmacy market, including inpatient treatment, had a turn over of just over SEK 65 billion in 2021, which is an increase of SEK 1.9 billion, or 3 percent, compared with 2020. Sales on the overall community pharmacy market amounted to just over SEK 54 billion in 2021, which represents an increase of SEK 1.1 billion or 2.1 percent over prior year. Sales then also include haemophilia medication and dose dispensed medicines. The inpatient market, which mainly consists of supplying medication for hospital inpatients, had sales of over SEK 11 billion in 2021.

Chart showing the pharmacy market based on 2021 net sales



N.B.: All sales reflect price to consumer or end customer (pharmacy retail price) excluding VAT, except for medications for inpatient care, where the prices are net. The pharmacy instead receives compensation for the supply service. Some of those dispensed medications consist of full packs provided by those dispensing pharmacies. The chart aims to show different parts of the actual pharmacy market in 2021 (2020 in brackets), the amounts have been rounded.

Source: SA Service AB and the Swedish eHealth Agency, as well as own calculations.

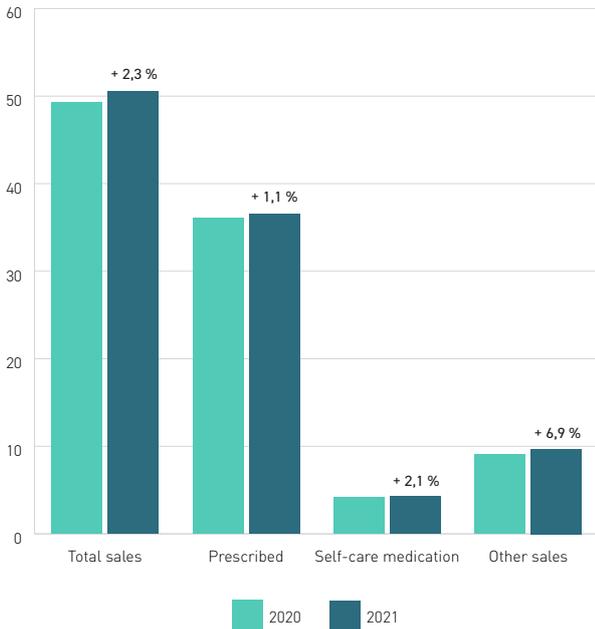
Community pharmacy market and performance by various segments

In 2021 net community pharmacy sales amounted to SEK 50.4 billion, which is an increase of 2.3 percent compared to 2020. These numbers include medication sales in the community pharmacy market and sale of pharmacy goods and services, while haemophilia and dose dispensed medicines are not included. The dominant segment is prescription medications, which accounts for approximately SEK 36.5 billion or 72.4 percent, while OTC medications account for just over SEK 4.2 billion or 8.4 percent and other pharmacy goods account for SEK 9.7 billion or 19.2 percent. Community pharmacies also face competition from other sales outlets such as grocery stores and petrol stations for sales of certain non-prescription medications, but these sales are not factored into the pharmacy market.

By volume, i.e. the number of units sold (usually packages), the community pharmacy market grew by a total of 2.6 percent in 2021.

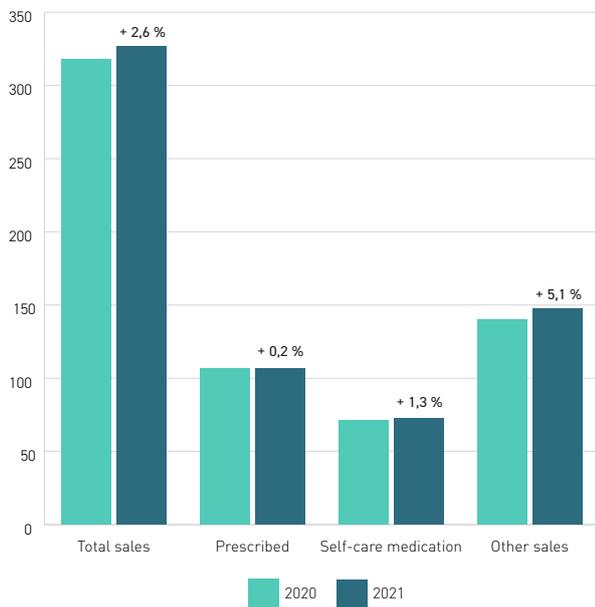
Volume thus increased somewhat more than sales in 2021, and it is furthermore different goods that have had good growth in both value and volume, while the growth for medications is weaker. Pharmacy online sales continue to grow, accounting for just over 21.3 percent of community pharmacy sales in January 2022, and measured in terms of volume (number of units) the percentage of online sales amounted to 32.5 percent in the same month.

Net sales in the community pharmacy market 2020-2021. SEK billion, current price



N.B.: The percentages refer to the development compared to the previous year.

Number of packages sold in the community pharmacy market 2020-2021. Millions of units



N.B.: The percentages refer to the development compared to the previous year.

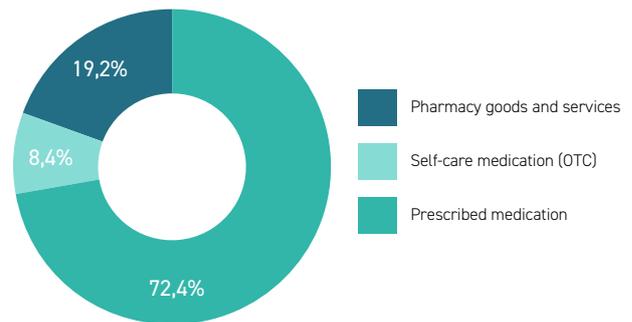
Prescribed medications

Of total sales in community pharmacies prescription medications make up the lion's share, or 72.4 percent. These medications account for just under one-third of the total number of units sold. Which medications are prescribed and to what extent is

determined entirely by healthcare prescribers, and this is therefore not something pharmacies can or should influence. In addition, both pharmacies' purchase prices and selling prices are set by the Dental and Pharmaceutical Benefits Agency (TLV) for those medications subsidised by the government. Pharmacy operations concerning prescribed medications therefore differ considerably from other sectors, in which unregulated pricing, own production capability and independent selection of product ranges and services are key elements.

Total sales of prescription medications, including so-called 'outpatient orders' totalled just over SEK 36,5 billion in 2021, which is an increase of 1.1 percent compared to 2020. The volume was nearly unchanged and increased by only 0.2 percent compared with prior year.

Sales (SEK) by segment, 2021



Source: SA Service AB

Non-prescription self-care medication

Non-prescription medication is part of the sales that pharmacies can to some extent influence. These medications correspond to 8.4 percent of sales and just over 22 percent of units sold. Pricing is unregulated for non-prescription medication, but there is stiff competition both between pharmacy chains and from strong growth in online sales. In addition there is competition from grocery stores, which also get to sell most non-prescription drugs.

Sales of self-care (OTC) medication at pharmacies in 2021 amounted to SEK 4.2 billion, which is an increase of 2.1 percent compared with 2020. The volume of self-care medications increased by 1.3% in 2021, which entails somewhat increased average prices for this segment, which in recent years showed falling prices.

The percentage of non-prescription medication

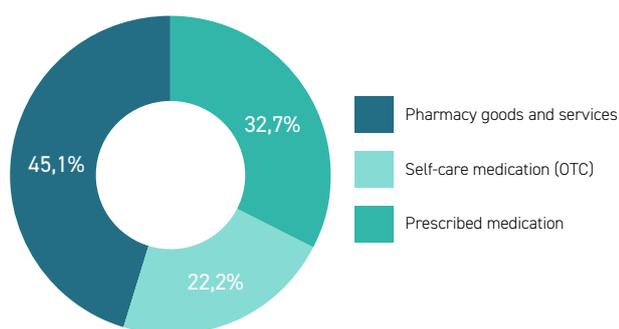
sold outside pharmacies amounted to just under 17 percent of total sales of non-prescription medications in 2021. Pharmacies thus increased their market share somewhat compared to the previous year. In order to face the competition from grocery stores, which primarily sell well-known brands, pharmacies have introduced more alternative self-care medications, such as different brands with the substances paracetamol and ibuprofen. This has added to the choice of cheaper alternatives for consumers and contributed to further pricing pressure.

Other pharmacy goods and services

Those goods in pharmacies that are not medications are referred to as other pharmacy goods. This segment also includes other services offered by pharmacies. Many of these services are currently provided free of charge for customers, so the impact on sales in this regard is negligible.

Sales of other pharmacy goods and other services totalled SEK 9.7 billion in 2021, an increase of 6.9 percent compared with 2020. Relative to the total community pharmacy sales, other goods and services accounted for just over 19 percent of sales in 2021. On the other hand, these other pharmacy goods account for 45 percent of the total number of units sold. The segment showed a growth in volume of 5.1 percent in 2021 and has thus grown in both volume as well as average price.

Volume (units) by segment, 2021

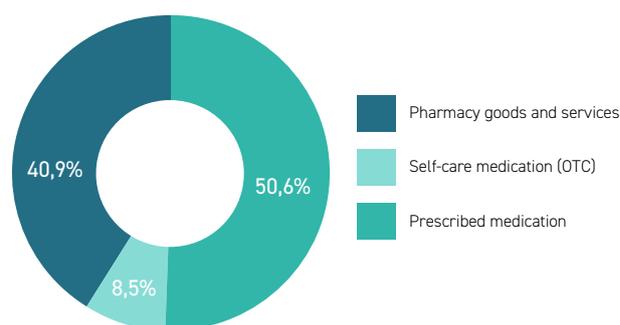


Source: SA Service AB.

There is a clear tendency for pharmacies trying to offset the low pharmacy margin for prescribed medications and the stiff competition on the self-care market with a good range of products and sales of other pharmacy goods. For many pharmacies, other pharmacy goods sold in the pharmacy feature

a special stamp of quality emphasising health and wellbeing. During both 2020 and 2021, other pharmacy goods accounted for the highest percentage of sales growth compared to self-care medications and prescribed items. The difference to other segments increased further in 2021. Other pharmacy goods continue to account for a significantly larger share of sales in the e-commerce channel and made up just under 41 percent in this channel in 2021.

Sales in e-commerce (SEK) by segment, 2021

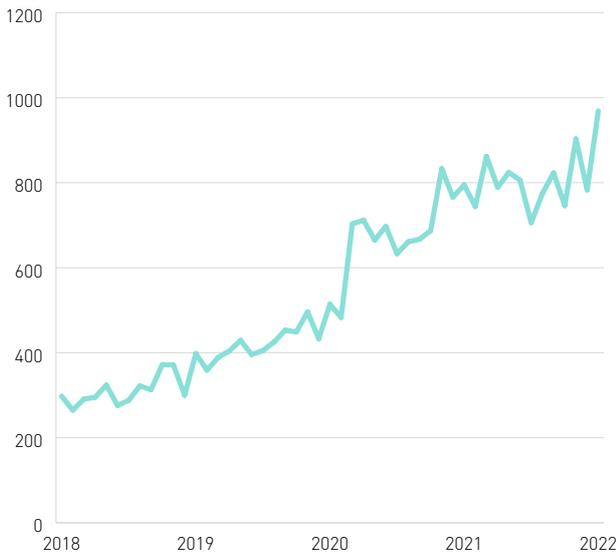


Source: SA Service AB.

The pandemic has accelerated the growth in e-commerce and a shift in channels

Since 2018, pharmacy e-commerce sales have increased from approximately SEK 300 million per month to approximately SEK 800 million per month in 2021 and sales further increased to SEK 970 million in January of 2022. For the mentioned month, this is equivalent to an increase of just under 220 percent compared with January 2018, see diagram below. The growth in value for the pharmacy sector's e-commerce amounted to 19 percent in 2021 compared to 2020. The corresponding figure for 2020 was 59 percent. The pandemic has accelerated this growth, but the rate of growth has decreased in 2021 compared with the prior year, and sales stabilised around SEK 800 million per month.

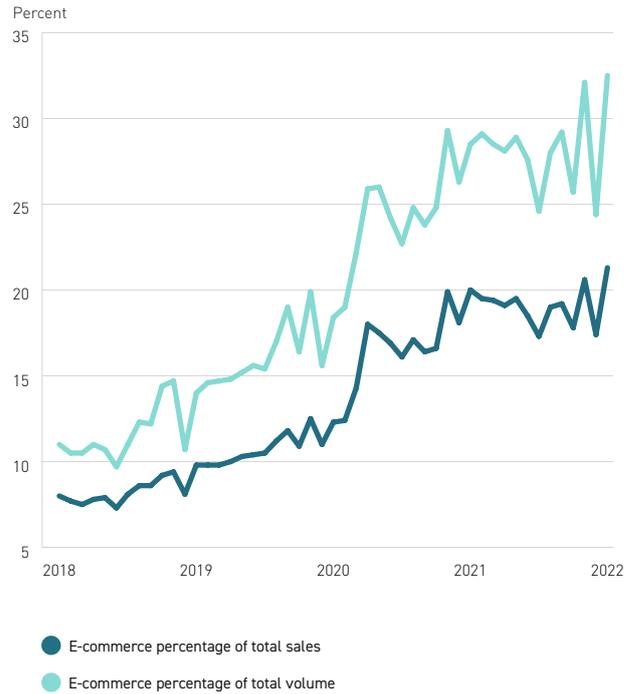
Total online pharmacy sales, excl. VAT Million SEK



Source SA Service AB.

The largest segment in terms of online sales is prescription medications, which account for half of the value. Other pharmacy goods account for just shy of 41 percent, while OTC medications make up just over eight percent. Measured instead by volume, i.e. the number of packages sold, sales of other pharmacy goods account for the predominant share, at just over 64 percent, and self-care medications at 23 percent. The percentage of pharmacy goods is therefore significantly higher in the online channel than in brick-and-mortar pharmacies. Online operations can offer a large and inexpensive range of pharmacy goods that are often related to health and hygiene. Pharmacies' combined online sales accounted for 21.3 percent of community pharmacy sales in January 2022, and measured by volume (number of units) online sales amounted to 32.5 percent in the same month. One year earlier, these figures were 20 percent and 28.5 percent, respectively. So it is not only sales and volumes in absolute figures that have increased strongly over the past year, but online sales are also increasing in relation to the growing overall market.

Online share of total sales and volume

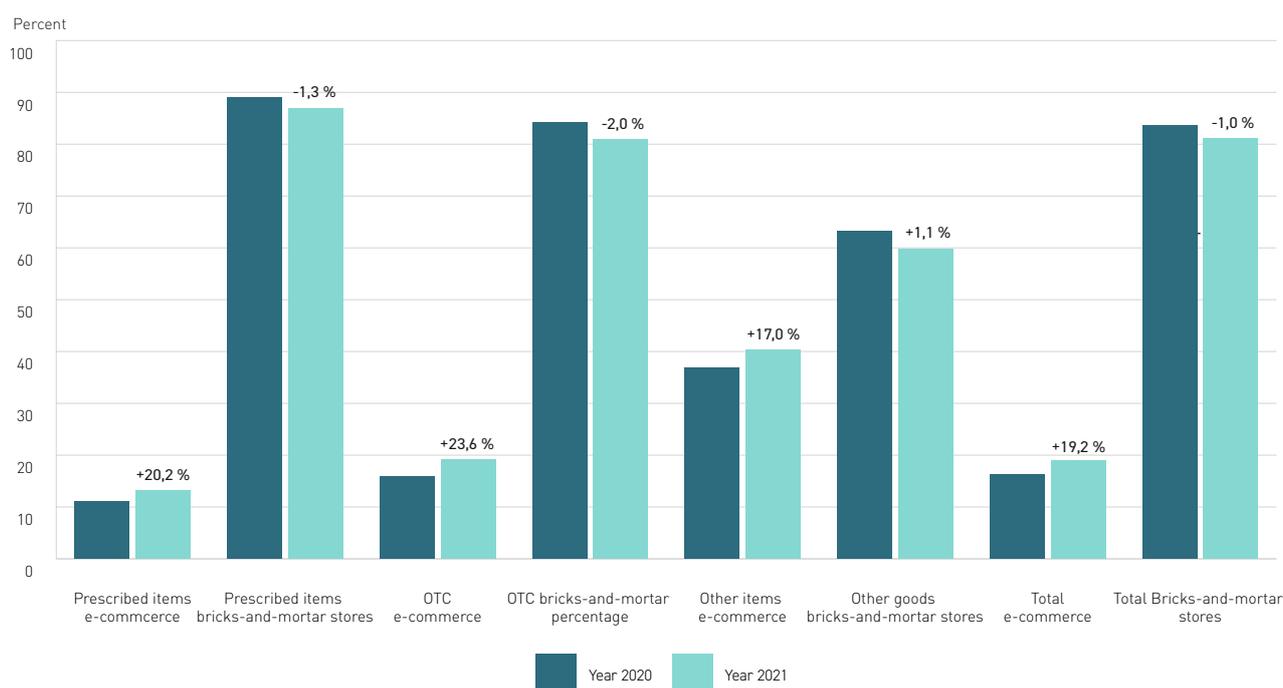


Source SA Service AB

This situation has resulted in a shift towards e-commerce which means that all growth in value now takes place in this channel, and this is also the case for all three segments, with the exception of other goods. The total growth was 19 percent in e-commerce while it was negative (-1 percent) in brick-and-mortar shops. The growth in online sales for prescription goods amounted to some 20 percent while non-prescription medication increased by just under 24 percent and other pharmacy goods by 17 percent. Conversely, the two segments involving medication saw no growth in the bricks-and-mortar channel, while other pharmacy goods increased by only one percent in 2021.

This shift in channels means that just over 40 percent of sales of other goods were made by e-commerce channels in 2021, compared to 37 percent in 2020. The e-commerce share for non-prescription medication amounted to 19 percent in 2021 (16 percent in 2020) while the corresponding figure for prescription goods was 13 percent (11 percent). This development has been accelerated by the pandemic and new customers have begun using e-commerce. The increase is particularly evident for customers over 70 years of age, which is also the age group that has been most affected by the restrictions.

Value percentages for e-commerce and bricks-and-mortar stores per segment 2020 and 2021 and growth compared to 2020.



N.B.: The percentage figure above the columns indicates growth over full year 2021 compared to equivalent period in 2020.
Source: SA Service AB

It should, however, be noted that even if the growth was 20 percent for prescription goods in e-commerce, the bricks-and-mortar channel is still fully dominant and accounts for 87 percent of sales in this segment. A similar picture emerges for non-prescription medication, with 81 percent of sales taking place in bricks-and-mortar shops. This illustrates that the bricks-and-mortar channel is still by far the biggest sales channel for medication, but that e-commerce is growing very quickly and contributes with increased accessibility, which supplements the bricks-and-mortar store network.

According to TLV's review of the pharmacy market's development in 2019, there is excellent geographic spread of online sales. Some 98 percent of the country's postal code areas received delivery of prescription medications during the period March to May 2019. Rural municipalities and smaller towns continue to show a higher percentage of online purchases than medium-sized towns. Commuting municipalities also seem to have a larger share of e-commerce compared to other communities.

Online sales thus also geographically supplement sales by community pharmacies. The sector has probably reached a level where the extent of e-commerce has led to a tipping point that will have an impact on the bricks-and-mortar store structure. In 2021 the

number of bricks-and-mortar pharmacies decreased by 22 compared to 2020, which is a break with the previous trend, as the number of pharmacies had been increasing year over year since the re-regulation.

Pharmacies' collective financial earnings remain weak

The financial earnings of the community pharmacy market as a whole are reported as operating margin in the table below, i.e. pharmacies' combined operating income (EBIT) in relation to pharmacies' combined net sales. Pharmacies' operating margin is estimated at 1.9 percent for 2021, which means a decrease compared to 2020. The operating margin over the last three years has been around a relatively low two percent.

Pharmacies' earnings opportunities are largely dependent on the size of the markup, which is determined by the government, and the development of parallel imports. The regulated markup for community pharmacies as a fraction of the total retail price has, according to the most recent follow-up from TLV, fallen from 16.2 percent in 2018 to 15.7 percent in 2020. Pharmacies' right to negotiate for parallel-imported medications results in a strengthening of the margin, as they can purchase these products



Image from Apoex

at a lower price than the purchase price set by TLV without needing to reduce the set selling price to an equivalent degree. The scope of parallel imports, on the other hand, increased in 2021 compared to prior year. The pricing of medications that are not subsidised by the government, OTC medications and other

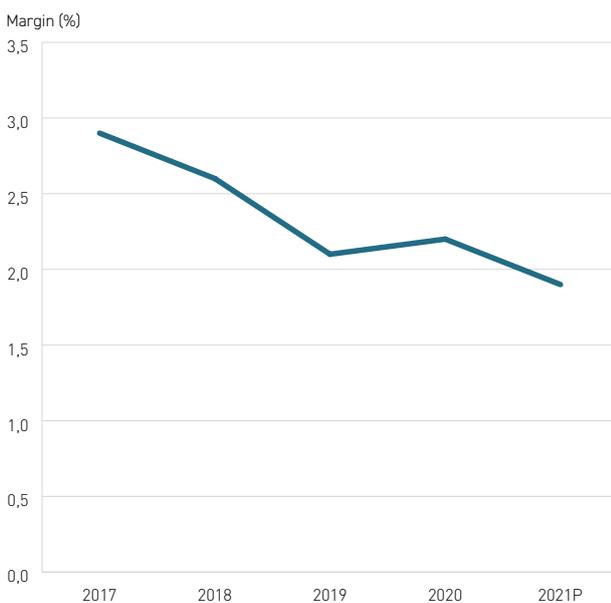
pharmacy goods is not subject to regulation, but margins in these segments are under pressure from stiff competition on pricing, particularly from the growth in e-commerce. Overall profitability for the community pharmacy is therefore low.

Pharmacies' combined operating profit for the past 5 years

Percent	2009	2017	2018	2019	2020	2021 ^P
Operating margin (EBIT)	4,6	2,9	2,6	2,1	2,2	1,9

N.B.: 2021 is a forecast. Excluding for dose dispensed medicines.
Source: Pharmacies' official annual reports, information directly from pharmacies and SA Service AB

Community pharmacy's total operating margin 2017-2021 (EBIT)



Source: Pharmacies' official annual reports, information directly from pharmacies and SA Service AB

The inpatient care market

Sales of medications on the inpatient care market totalled just over SEK 11 billion in 2021. Revenues mainly consist of sales of medications to hospitals for use in inpatient care. Sales of medications to some government institutions are also included in the inpatient market. To this should be added the value of the supply services that some operators provide to regions by procurement. The value of these services is estimated at just over SEK 600 million in 2021. There are currently four pharmacy operators supplying medications to hospitals following procurement in the form of production or supply services: Apoteket AB, ApoEx, Oriola and APL.

In recent years, we have seen mainly small regions opting to operate hospital pharmacies under their own management. In some cases, this has been due to these regions having structured the procurement, so that no companies submitted tenders. Some small regions have also decided to operate hospital pharmacies under their own management. Large regions usually procure these services from pharmacies, which are able to provide cost-effective solutions for health care as a result of large-scale production and a high level of quality.

4. PHARMACIES' ECONOMIC CONDITIONS

The government-regulated markup was increased in early 2022, but pharmacy costs to dispense prescriptions still exceed the compensation for this.



The government oversees pharmacy market Need for appropriate and effective rules

The pharmacy market is in part heavily controlled by laws and regulations. The Swedish Medical Products Agency (Läkemedelsverket) determines whether or not a medication will require a prescription, and whether non-prescription medications should be sold exclusively at pharmacies or if they can be sold at other retail outlets as well. TLV determines whether or not a prescription medication should be included in medical benefits and thus primarily subsidised by the government. The same authority determines what compensation the pharmacy shall receive for carrying out its social mandate of providing medicines and advice on medicines and making generic substitutions.

Many of the laws and rules that regulate the pharmacy market are necessary, because medicines are not just any goods and pharmacies not just any shops. But all regulations do entail costs while also moderating the pharmacies' freedom to operate. That rules drive costs is an insight that regulatory authorities should bear in mind when drafting regulations so that existing and new rules are appropriate and effective.

Increased trade margin - a welcome reinforcement

TLV considers the overall sales development and profitability. In other words, the sale of other goods and non-prescription medication is not only taken into account but is a requirement for pharmacies to achieve satisfactory profitability. This means that the current system is aimed at developing the product range and increase the sale of other products with a higher margin than prescription medication. However, this is a challenge as competition is tough and the growth in online sales is putting pressure on prices for both non-prescription medications and other goods.

Average prices for non-prescription medication have dropped over the past few years. Conversely, the pharmacy seeks to reduce costs for handling of prescription medications where this is possible without violating regulations.

For approximately 70 percent of pharmacies' sales (subsidised pharmaceuticals), TLV determines both the pharmacy purchase price (ATP) and the pharmacy sales price (AUP) for medicines. The difference between these is the pharmacy margin for prescription medications, which is also regulated by the government. The pharmacy margin consists of a fixed amount and a percentage supplement based on the purchase price, and according to TLV it should reimburse pharmacies for providing medications, dispensing prescriptions and associated customer advice, and managing generic substitutions of pharmaceuticals. This should also compensate for other costs, such as inventory, IT systems and handling unused medications that customers can return to a pharmacy.

According to TLV's established principles, the markup should also provide operators with a reasonable level of profitability for prescription sales and create sufficient scope for a profitable overall business, with the aim of ensuring higher availability. But prescription sales are neither profitable nor balanced; on the contrary, they are running at a loss. The Swedish Pharmacy Association has carried out calculations of the related costs and return resulting from the handling of subsidised prescription medicines. These show that the markup covered 89 percent in 2016 and 88 percent in 2017, including additional earnings from parallel imports. It is most likely that the cost coverage has decreased further since these calculations were made, as the regulated margin as a percentage decreased during the period 2018-2020, according to TLV.

TLV has, however, decided to increase the markup from early 2022 through an increased compensation for dispensing generic interchangeable medications. This increased compensation is estimated to increase pharmacy revenues by over SEK 80 million. TLV justifies the increase through increased fees from the Swedish eHealth Agency, in particular, which results in increased costs for the pharmacy that they have



Image from Apotek Hjärtat

no means of adjusting since medicines covered by benefits are subject to price regulation. This, together with increased competition and falling profitability, entails a risk that accessibility of pharmacy service may be diminished.

The Swedish Pharmacy Association welcomes this reinforcement of the margin and considers it to be self-evident that the pharmacies should be compensated for increased fees under public law that the pharmacies cannot avoid or compensate themselves for since these fees relate to the price-regulated area. The increased margin means compensation for the increased fees that have been both implemented and announced, and additionally provides a modest boost to the margin. The markup should deliver long-term and stable conditions for pharmacy operators, as investment decisions, among other considerations, are long-term. There is therefore cause for TLV to continue to track this development and be prepared for additional margin adjustments, as the current profitability and channel shift towards e-commerce presents major challenges for pharmacy actors when it comes to maintaining current service levels in brick-and-mortar pharmacies. Over the long term this could lead to a reduction in the availability of medications. If the government and TLV want to take responsibility for the provision of good medication advice and medication supply, then long-term sustainable financing of this sector needs to be in place.

Increased fees impact pharmacies

The Swedish Medical Products Agency has announced a significant increase in fees for the supervisory activity of community pharmacies of close to 60 percent compared to current fees, which is equivalent of nearly ten million kronor. The Swedish Pharmacy Association disputes both the amount of the proposed fee increase, as well as whether this increase will be met by a service in return in the form of increased oversight, or if there is any need to increase oversight to the extent and in the way the Medical Products Agency foresees. To further increase patient safety and boost efficiency in today's work, we see other possibilities, such as greater involvement of system oversight. As 97 percent of community pharmacies and several of the online pharmacies are part of one of the five nationwide pharmacy chains, this factor should be capitalised on through another type of supervision in dialogue with the chains' quality departments. The government has not yet made a decision as to whether new supervisory fees, but the agency's petition is currently being prepared in the Swedish Government Offices.

The Swedish eHealth Agency (EHM) has, as of 1 January 2022, increased the fee for each human prescription to SEK 2.70 and in 2021 also increased the fee for veterinary prescriptions, which totals approximately SEK 55 million annually. The fee is intended to cover EHM's costs for maintaining the required register, which pharmacies use when

dispensing prescription medication. The increase is caused by the development and introduction of the National Medication List (NLL), which replaces the two previous registries, the medication registry and prescription registry.

Parallel imports of medication – value percentage increased in 2021

The system for trade of medical products is founded on free movement of goods within the European Economic Area (EEA). This means that drug distributors exploit arbitrage opportunities by buying up medication in a country with lower sales prices and selling these in another country with higher prices. Parallel-imported medicines can be either original or generic. However, the medication must be approved both in Sweden and in the export country at the time of application.

When the market was re-regulated, the government emphasised the important role of parallel imports in keeping prices down, particularly the indirect savings effect via price-levelling mechanisms within the EEA. In terms of original medicines without a generic competitor, the government maintained that increased and more effective parallel imports could be achieved “...by offering pharmacy operators good incentives for trading with parallel imports.”

Parallel trade is the only way to exert pricing pressure on a medicine where the patent has not expired; this not only saves money for society but also serves to strengthen the margin for pharmacies when these can acquire medicines at prices below TLV's determined prices.



However, it is important to stress the high variability of parallel trading. An expired patent immediately removes conditions for Swedish pharmacies to parallel trade in that pharmaceutical product. A weakening of the Swedish krona can quickly undermine the added value that pharmacies derive from parallel imports. Similarly, TLV's reviews and its decision to cut the price of older medications may lead to conditions for parallel imports either being reduced or completely disappearing for these medications.

Both GBP and EUR have rallied against the Swedish krona in recent years, and parallel imports declined in 2019 and 2020. The krona has, however, recovered, and the value share of prescribed medicines increased to approximately 12 percent in 2021, while the value increased to SEK 4.4 billion. Added profits from parallel importation of medicines has been of major significance to the pharmacy's bottom line. Without these earnings, pharmacies would by all accounts not have been able to increase availability in the way that has been done.

Parallel imports, proportion of prescribed medications (left axis and SEK exchange rate trend against EUR and GBP (right axis).



Source: SA Service AB and Riksbanken (Central Bank)



Image from Apotek Hjärtat

The generics system - in need of change

The generic substitution of medicines saves substantial sums of money for society every year. But the current system is not optimal. It should be reviewed in order to reduce certain negative effects that it entails. The constant monthly substitutions of product of the period lead to risks in terms of patients taking the wrong medication, or completely abstaining from treatment. It also incurs significant costs for pharmacies having to keep current medications in stock, and leads to increased disposals of drugs. Pharmacists are now forced to spend a considerable amount of time explaining the system and why a customer is getting another medicine than what the doctor prescribed. The Swedish Pharmacy Association estimates that extra costs to pharmacies for substitution incurred through inventory- and handling costs amount approximately SEK 300 million yearly.

The Swedish Pharmacy Association believes that the substitution periods should be extended and that pharmacies should be allowed greater flexibility to dispense substitutable medications that are already in stock. Research indicates that ‘price collusion’ is occurring on the Swedish generics market. In the study it was observed that price collusion results in added costs for society on the order of SEK 50 to 200 million annually, and that longer substitution periods would, in principle, eliminate these added costs.² The association has therefore initiated empirical research to produce more supporting documentation about how the current system of generic substitutions can be developed to become more effective for all parties involved and to the benefit of both society and patient safety.

Distribution and right of return for pharmaceuticals

For the distribution of medicines from producers to pharmacies, there are two companies: Oriola and Tamro. The companies are not full-assortment wholesalers; instead the manufacturer chooses one of these distributors. In practice, pharmacies therefore have very little opportunity to choose or influence the terms these two distributors impose on them. Some pharmacy chains also have their own distribution solutions for non-prescription medicines, parallel-import medicine, and other pharmacy goods.

A new law came into force in 2018, which means that pharmacies now have the right to return medicines that have not been collected by customers. The purpose of the law was to increase access to medication by pharmacies keeping more products in stock. But as it stands, the law has failed to achieve its goal. For example, refrigerated items- which are increasing in scope and often include expensive medications -are excluded from the right of return, which means that the pharmacy has to bear the entire cost if the medication is not sold, or if a customer orders it and then fails to collect it. The Swedish Medical Products Agency proposed in a report that refrigerated- and frozen products should also be covered by the right of return, which in practice usually entails a credit. No changes have been made thus far, and the question is currently under review within Swedish Government Offices.

²⁾ Granlund D. and Rudholm N. (2018). Risks and costs of price collusion in the Swedish generics market.

5. PHARMACY PERSONNEL

The pharmacy's most important resource

Providing personalised advice on medications and helping with relief and recovery are at the core of pharmacy's business. To be able to provide advice on medicines in a pharmacy requires the right qualification for the task. The pharmacy sector is characterised by personnel with a high level of competency and great expertise. This is why employees are the pharmacy's most important resource.

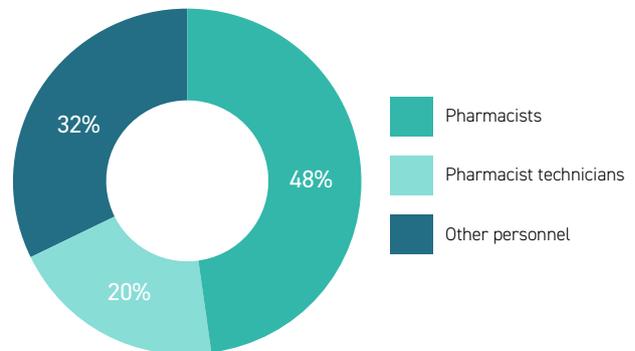
Swedish pharmacies lead the way in Europe when it comes to employees' level of education. A total of 48 percent of employees at community pharmacies are graduate pharmacists, while 20 percent are pharmacy technicians who received their training at polytechnic universities.

During the pandemic in 2020-2021, pharmacy personnel acted professionally and took their social mission with the utmost seriousness. In many places it has been a challenge to manage to keep pharmacies open, as a pharmacy cannot remain open without a pharmacist onsite. With record-breaking numbers of sick and long quarantine periods, there has not always been an obvious way to manage this. Without the hard work of dedicated pharmacists, the pharmacy would not have been able to fulfil its societal mission, which it nonetheless managed to fulfil during the pandemic.



Image from Apothem

Competency distribution for employees in community pharmacies, year 2021



Source: SA Service AB

Pharmacists

'Pharmacist' is the collective name for licensed pharmacists who have completed a Master's degree (apotekare) or a Bachelor's degree (receptarie). The law states that there must always be at least one pharmacist at Swedish pharmacies.

Pharmacists are responsible for handling prescriptions at pharmacies and providing qualified advice on medicines. They perform an important monitoring role, ensuring that the prescribed medicine is actually the one to be dispensed. The pharmacist must contact the prescriber and point out if something doesn't seem right with the prescription. The pharmacist is also entitled to object to a generic substitution if this is justified. Pharmacies must also have a pharmacist who is responsible for quality and safety in relation to handling pharmaceuticals.

To become a registered pharmacist you need to complete a five-year course at university, offered at Uppsala, Gothenburg and Umeå (which also offers distance studies). To become a BSc-qualified pharmacist you need to complete a three-year higher education course, which is offered on site and remotely in Kalmar and Umeå, and on site in Uppsala and Gothenburg.

Pharmacy technicians

Pharmacy technicians are primarily responsible for pharmacies' self-care advice and non-prescription medications. Some technicians who are qualified to work with prescriptions also partly support the pharmacists in handling prescriptions. Technicians



Image from Lloyds Apotek

also work with other products and tasks at pharmacies. Both pharmacy technicians and pharmacists are able to determine when a customer should be referred to healthcare services, or when self-care is adequate. To work as a pharmacy technician, one must have gone through a special three-term polytechnic education arranged by a training coordinator financed by the Swedish National Agency for Higher Vocational Education and thereby using the teaching plan developed by the pharmacy sector in collaboration with the Unionen trade union. The site www.jobbapåapotek.se provides links to these training companies and the universities and colleges that offer pharmacy education.

Other pharmacy personnel

Other personnel working in pharmacies may include self-care advisors, i.e. staff who have training in self-care and provide relevant advice, and pharmacy assistants who work the cash register and manage stock, etc. Pharmacies are increasingly employing other specialists, such as skin care therapists and sometimes nurses.

Number of employees in the sector

In 2021, a total of approximately 12,300 individuals were working in pharmacy businesses in Sweden, of which just over 10,300 worked specifically at community pharmacies. Prior to reregulation, the number of employees at the then 930 community pharmacies corresponded to just over 6,200 full-time positions (full-time equivalents). In 2021 the corresponding figure was just over 8,200 full-time equivalents at 1,420 brick-and-mortar and e-commerce pharmacies.

Number of employees per pharmacy

The pharmacy sector has experienced considerable growth since re-regulation in 2009, and the number of employees in the sector has increased. However, the number of employees per pharmacy has seen a slight decline, which is due to pharmacies having increased in number while also becoming somewhat smaller in size but more efficient in their collective staffing and scheduling.

One natural effect of there being more pharmacies is that the number of dispensed prescriptions per pharmacy is lower. This affects staffing needs per pharmacy. It is possible to quantify the so-called dilution effect by examining the number of prescription items over the years. The number of prescription items (excluding dose dispensed) rose from 72.6 million in 2009 to approximately 88 million in 2021. This means that the total number of prescriptions dispensed per full-time equivalent (FTE) has declined by just under nine percent since 2009 – from 11,710 prescription items per FTE and year in 2009 to 10,680 prescription items per FTE and year in 2021.

Skills supply challenges

There is essentially no unemployment in the sector, and the salary trend in recent years has been good. This is due to strong growth in the sector and the fact that the number of pharmacies has significantly increased.

Employers report that the shortage of pharmacists remains high both with regard to recently graduated and more experienced pharmacists. In 2021, approximately 510 active pharmacists were either app-

roaching or had already reached retirement age; of these, approximately 370 were above 67 years of age. Furthermore, a significant number of employees are expected to retire in 2025 and later, by which time many prescriptionists, in particular, will be retiring.

The shortage of pharmacists is particularly great outside the large cities. There are already many examples of pharmacies that have been unable to open or forced to close due to the difficulty in recruiting pharmacists to smaller towns across Sweden. This has been particularly evident during the COVID-19 pandemic, when the numbers of sick periodically spiked and employees in at-risk groups often had difficulty working. Pharmacists are also in greater demand in other parts of the healthcare sector.

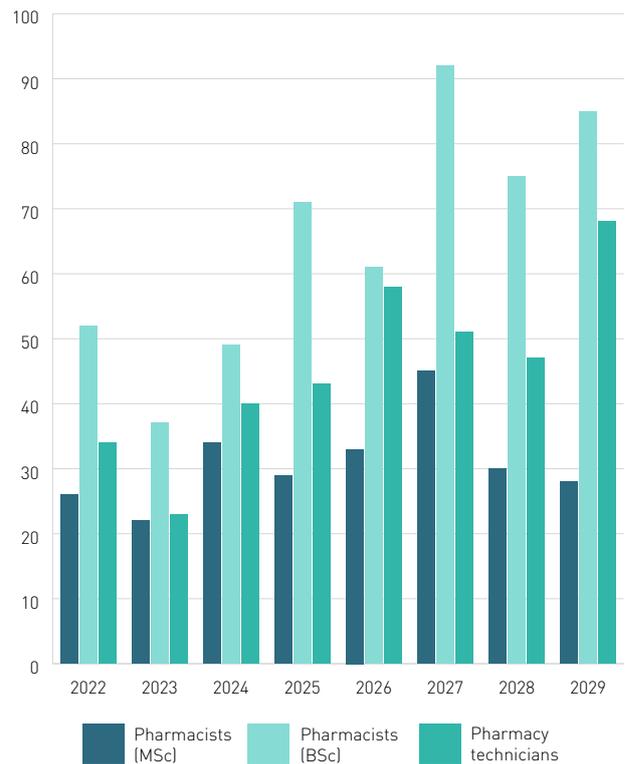
The sector is making a collective effort for there to be a greater number of available places in study programmes and for application volume to these pharmacy programmes to increase. The sector also collaborates with the Swedish Pharmacy Association and the Swedish Academy of Pharmaceutical Sciences on projects financed by the government to accelerate the process for immigrant pharmacists to become licensed in Sweden. There is still a large group of pharmacists with training and education outside the EU who wish to work in the pharmacy but who require Swedish credentials to be able to work in the pharmacy as a pharmacist. One challenge for the sector is increasing application volume to pharmacy education programmes and pharmacy jobs. A great majority of employees are women.

Number of pharmacists aged 65 or over working full- or part-time

Age	2020	2021
65–66 years	131	139
67 years or older	252	371
Total	383	510

Source: SA Service AB

Estimated number of people retiring for staff with various levels of educational background



Source: SA Service AB



Image from Apoteksgruppen

THE PHARMACIES' ASSIGNMENT

Pharmacies support the safe and correct use of medicines and are therefore a key element within the healthcare system. The state describes this in three core tasks aimed at ensuring that pharmacies provide access to medicines, provide advice and information on medicines, and inform and implement generic substitutions. The skills available today at the pharmacies are not being fully utilised. There are several situations where pharmacists can further facilitate and improve the use of medicines. In addition, our customers have high expectations of the pharmacies, which helps pharmacies see that they have a greater social mandate so that they can offer a greater range of goods and services.

6. OUR SOCIAL MANDATE

Pharmacies' social mission is to ensure the safe and correct use of medicines, this is formulated through three main tasks:

- Ensuring that the consumer has access to prescribed medicines and goods as soon as possible.
- Provide expert and individually tailored information and advice.
- Implement and provide information about generic substitutions.

Core pharmacy tasks

Core task 1 - Access to the supply of medicines and goods

All licensed pharmacies are required to provide all medicines and other products that are included in the benefit scheme when provided via prescription or ordered through the healthcare service. In Sweden a majority of all medicines are provided through the pharmacy channel. In many other countries, healthcare is responsible for a large proportion of the more unusual medications. Pharmacies are actively working with their stocks so that approximately 93

percent of all medicines requested will be immediately available for customer purchase, and most others can be delivered to their homes the next day. But some medicines cannot be ordered because they are no longer in stock at the manufacturer. To fulfil its mission, the pharmacy must then find other solutions, such as changing strength and pack size, finding another equivalent medication, or a medication in foreign packaging. An ever-increasing amount of medicines are dispensed via e-commerce and then delivered either within a few hours or a day.

Core Task 2 - Individually tailored information and advice

Correct use of medicines is critical for a medical treatment to provide the intended effect. The pharmacy therefore also has an important task to provide customised advice when dispensing and to make sure that the customer knows how to administer their medicines.

According to the WHO, compliance (using medication as intended) is estimated at 50% in the world's developed countries³ and in Sweden, the annual costs for care resulting from drug-related

³ https://www.who.int/chp/knowledge/publications/adherence_full_report.pdf

illness is believed to amount to between SEK 12 and 19 billion.⁴ Pharmacy initiatives are key to improving these numbers and preventing unnecessary suffering among patients.

Pharmacy staff play an important role in ensuring correct medicines treatment, both for prescription and non-prescription medicines. This means there is a significant difference between going to a pharmacy for advice and purchasing non-prescription medicines, and purchasing non-prescription medicines somewhere else where staff are not permitted to give advice.

Core Task 3 - Implement and provide information about generic substitutions

Society sets stringent requirements for the medicines that they finance through the benefits system. In order to keep costs for society down, pharmacies are obligated to make changes when there are equivalent medications at lower prices – so-called generic

drugs. Since 2009, there has been a special product of the period system that specifies which medication pharmacies should change to each month. Even if pharmacies save a lot of money for society through these changes, the design of the system has consequences for patient safety and increases handling costs for pharmacies. For pharmacies, the constant rotation of what goods must be kept in stock in the approximately 1,300 substitution groups means excessive administrative work and complicates inventory management. For the patient, the constant rotations can lead to the wrong medicines being used or that the medicines is not used at all, as various names and appearances can be confusing, particularly for elderly patients with numerous medications. This means extra time must be spent on advice.



Photo: Jeanette Hägglund, image from Apoteket AB

⁴) Gyllensten, H. Economic impact of drug-related morbidity in Sweden. Gothenburg University, 2014

Regulatory requirements on pharmacies

The following basic legal and regulatory requirements apply to pharmacies:

- All pharmacies must have a licence from the Swedish Medical Products Agency
- A pharmacist must be present when the pharmacy is open
- The premises must be suitable for pharmacy operations
- There must be a pharmacist responsible for reporting any irregularities to the Swedish Medical Products Agency
- Provide all medicines and other products that are included in the benefit scheme when provided via prescription or ordered through the healthcare service
- Be able to manage electronic prescriptions, have access to a high-cost database and report sales information directly to the eHealth Agency
- Have internal system to check compliance with regulatory requirements on pharmacies – self-monitoring programme
- Provide individual and producer-independent information and guidance on pharmaceuticals, the use of medicines and self-care
- Issue Schengen certificates, have the national pharmacy symbol at the pharmacy and offer instalment payment when paying for medicines covered by the benefits scheme
- Manage the medicines benefit scheme, including generic substitutions
- Secure data processing of personal data
- A functioning patient safety programme

General quality requirements on pharmacies:

- The requirements are high on all Swedish pharmacies, regardless of owner. Requirements on pharmacies are stipulated in laws, ordinances and regulations by the Swedish Medical Products Agency, the Dental and Pharmaceutical Benefits Agency and the National Board of Health and Welfare. The requirements are the same, regardless of who owns the pharmacy.
- The quality systems at individual pharmacies are regulated by the Swedish Medical Products Agency. At all pharmacies there is a quality responsible pharmacist, whose task is to ensure compliance with the regulations.
- By working preventively with clear routines and instructions, dividing responsibilities and skills development, the risk of incorrect dispensing and other irregularities is reduced. Follow-up through, for example, self-inspection, spot checks and sustainability controls are also part of the quality assurance work.
- Serious irregularities are reported to the Swedish Medical Products Agency and to the Health and Social Care Inspectorate (Inspektionen för vård och omsorg (IVO)), in accordance with Lex Maria.

7. AVAILABILITY OF MEDICINAL PRODUCTS

The Swedish pharmaceutical market is organised in such a way that manufacturers of medicines have a small number of large stocks in central locations in Sweden. Pharmacies have smaller stocks in as many locations as possible around the country. Every pharmacy adjusts its stocks of medicines to its unique customer base.

The Swedish system

In Sweden, a very high proportion of all medicines go through pharmacies and all pharmacies in Sweden must be able to dispense all medicines. This means that there is the same availability of medications across the country, but this also poses a challenge for pharmacies. There are medicines that are used by tens of thousands of people and those used only by single patients. It is the manufacturers of medicines who have the biggest stocks in a few central locations in Sweden, while pharmacies have smaller stocks in as many locations as possible. Each pharmacy adapts its stock to what kind of customers it has. The aim is that as many people as possible should get their medications directly at the pharmacy counter, and others should not have to wait longer than until 4 p.m. the next weekday. Deciding on the best balance between how much stock you should keep at the pharmacy and what products are non-stock items is a difficult decision for pharmacies. If a given pharmacy does not have a medication in stock there is a risk that the customer will choose to go to another pharmacy, but pharmacies also need to avoid keeping large stocks of medications that go unsold and must be destroyed.

Stocks at the drug manufacturer

The majority of all medicines available in Sweden is found in the inventory of the drug manufacturers.

The manufacturer holds its inventory at a distributor, which is also responsible for delivering the medicines to the pharmacy. The manufacturer's stock at the distributor is enough for three to four months' consumption on average. The stock is continuously replenished from the manufacturer's factories, which are often located outside of Sweden. There are no requirements on how much stock a manufacturer must have in Sweden, and how much is held in stock in Sweden for that particular drug can vary between drugs and over time. The advantage of having large stocks at a small number of distributors is that it is easy to distribute the drugs to pharmacies according to demand without any stocks remaining in the "wrong" place in the chain. The governmental Healthcare Preparedness Inquiry commission recommended in its interim report "A Reinforced Security of Supply" that there should be a requirement to maintain up to a 6-month supply of the most commonly used medicines.

Stocks at pharmacies

The country's 1,411 pharmacies keep some 7.5 million packages of prescription medicines in stock, distributed across almost 12,000 different drugs. The average pharmacy has around 5,000 packages in stock, distributed across some 2,300 different medicines. The major e-commerce pharmacies have even bigger stocks. The total stock out at pharmacies is equivalent to the volume sold in Sweden per month. Only a small number of medicines are sold



Image from Meds



Photo: Jeanette Häggglund, image from Apoteket AB

in such large quantities that they are sold several times a week in a given pharmacy and stocks can then cover several weeks. Many of the less commonly sold medications are also in stock so that the pharmacy will be able to provide good service to its customers. For such a medication, which might not be sold more often than every two or three months, there is only a limited number of packages in stock. This means that on average a pharmacy's stock will last for about a month, but if the manufacturer stops delivering individual products may run out at some pharmacies quite quickly, while at other pharmacies they may still be available for several months.

Direct dispensing rate

Pharmacies try to strike a reasonable balance between what to keep in stock and what should be non-stock goods. In order to know how many customers receive their medicines directly from a pharmacy, questionnaires have been conducted at pharmacies on two occasions. This is referred to as the immediate dispensing rate and was measured by the Swedish Pharmacy Association in 2015 and by TLV in 2019. In the most recent survey, 92.6 percent of the requested prescriptions were dispensed directly. This was a decrease from 94.9 percent in 2015. The majority of this reduction was due to the strong increase in the number of drugs that could not be ordered from the drug manufacturer – from 0.8 percent of all prescriptions to 1.9 percent of all prescriptions.

The pharmacy also measures what is known as service level which is the percentage of medications

that can be dispensed directly of all medications that a pharmacy dispenses. The immediate dispensing rate also includes those instances when a customer for some reason chooses not to order the drug, e.g. by instead going to another pharmacy, and is therefore somewhat lower than the service level. Recent years have seen a continual increase in service level, reaching 95.7% last year, which is the same level as the years before. Service level does not appear to be affected by the pandemic at all.

Service level, annual averages



Source: SA Service AB

Availability not just about stock levels

To pick up a medication at the pharmacy, it is also required to have a valid prescription. Customers are often lacking valid prescriptions when they come to the pharmacy. An academic paper showed that more than one-third of patients were lacking prescriptions in their list of medications⁵ and an estimate from the pharmacy is that one out of every ten prescriptions requested cannot be dispensed because there are no refills remaining on the prescription or the prescription has expired.

Another thing that affects a patient is the number of medications taken. Regardless of whether all medications are retrieved at the same time or if different medications are picked up at different times,

if you have many medicines the risk increases that one of them at some point will be out of stock at the pharmaceutical company or rarely requested at a given pharmacy.

This means many people are sometimes affected by the fact that their medications cannot be dispensed by the pharmacy without pre-ordering.

The pharmacy can also help customers with services providing a reminder when it is time to pick up medications, or by offering home delivery when something is not in stock at the pharmacy on a given visit.

In the end, it is the fact that the customer has their medication when they need to take it that is important, not whether it is in stock at the pharmacy.



Photo: Hanna Olsson, image from Kronans Apotek

⁵) <https://www.diva-portal.org/smash/get/diva2:1543688/FULLTEXT01.pdf>

8. ACCESS TO PHARMACIES

Today

1 411
pharmacies

which is

52% more

when the market was
re-regulated in 2009

Number of pharmacies

The pharmacy market was re-regulated in 2009 and the number of community pharmacies then increased every year through 2020. At the end of December 2021, Sweden had 1,411 community pharmacies, which meant an increase of approximately 480

pharmacies or 52 percent compared with 2009.

There are thus substantially more pharmacies today and a significant level of e-commerce. This trend broke in 2021, however, as the number of pharmacies fell, with 22 fewer compared to 2020. One reason for this is increasing e-commerce, which now accounts for nearly 20 percent of total sales in terms of value. Despite the significant increase in the number of pharmacies, the Swedish pharmacy density is still among the lowest in Europe.

Pharmacy opening hours

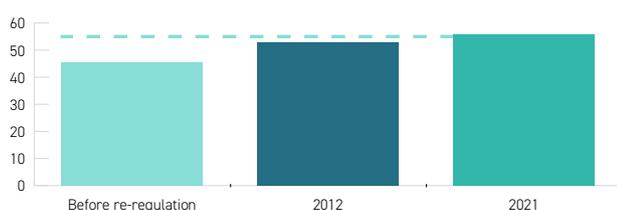
An accessibility factor at least equally important as number of pharmacies is their hours of business. Since 2009, pharmacies' opening hours have increased dramatically – from 45.3 hours a week to 55.6 hours a week on average in 2021, thus an increase of 23 percent. The number of pharmacies open on Sundays has risen from 154 to 559, which corresponds to an increase of about 260 per cent. Many pharmacies in the country today are open almost 100 hours a week, practically every day of the year.

Number of bricks-and-mortar community pharmacies per operator

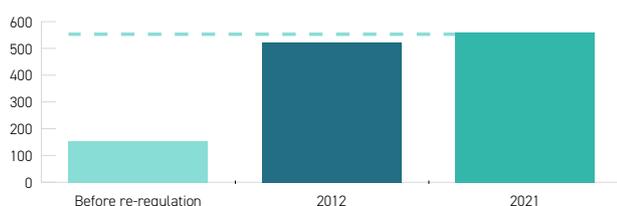
Pharmacy operator	Before re-regulation	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Apoteket AB	929	345	365	375	372	370	372	388	394	394	397	402	391
Apotek Hjärtat ICA ¹		30	42	48	58	67	391	385	386	388	390	391	390
Kronans Apotek ²		189	209	219	300	305	309	323	325	326	323	324	318
Apoteksgruppen		150	155	158	163	165	169	177	185	188	193	197	193
LloydsApotek ³		50	81	77	79	83	80	79	78	78	78	77	75
Apotek Hjärtat ¹		256	270	277	306	307	-	-	-	-	-	-	-
Medstop ⁴		63	64	65	-	-	-	-	-	-	-	-	-
Vårdapoteket ⁵		24	24	27	-	-	-	-	-	-	-	-	-
Other operators		15	32	28	25	30	37	39	43	47	45	42	44
Total	929	1122	1242	1274	1303	1327	1358	1391	1411	1421	1426	1433	1411

1) ICA Gruppen's acquisition of Apotek Hjärtat was carried out in early 2015, and the joint pharmacy name is Apotek Hjärtat. 2) Formerly known as Kronans Droghandel. 3) Formerly known as DocMorris. 4) Medstop was acquired in 2013 by Kronans Apotek. 5) Vårdapoteket was acquired in 2013 by Apotek Hjärtat. Note: The time of measurement is the end of December for each year. Source: SA Service AB and the dispensaries registry, EXPO

Opening hours per pharmacy and week



Number of pharmacies open on Sundays



Source: SA Service AB and the EXPO dispensaries registry



Image from Apotea

Pharmacies per county and pharmacy density

All counties now have more pharmacies since re-regulation in 2009. Most new openings have occurred where the demand for pharmacies has been the greatest, which has increased availability and reduced waiting times at pharmacies. The largest percentage increase in the number of pharmacies has taken place in Uppsala and Stockholm county as well as Blekinge and Skåne. However, in these counties pharmacy density was initially the lowest in the country, measured as the number of pharmacies per inhabitant. The smallest increase has taken place in the counties of Norrbotten, Jämtland, Dalarna, and Västerbotten. In

these counties, however, the number of pharmacies per inhabitant was initially among the highest in the country. The establishment of new pharmacies thus has a clear and natural link to pharmacy density in relation to the number of inhabitants.

Number of community pharmacies and change per county

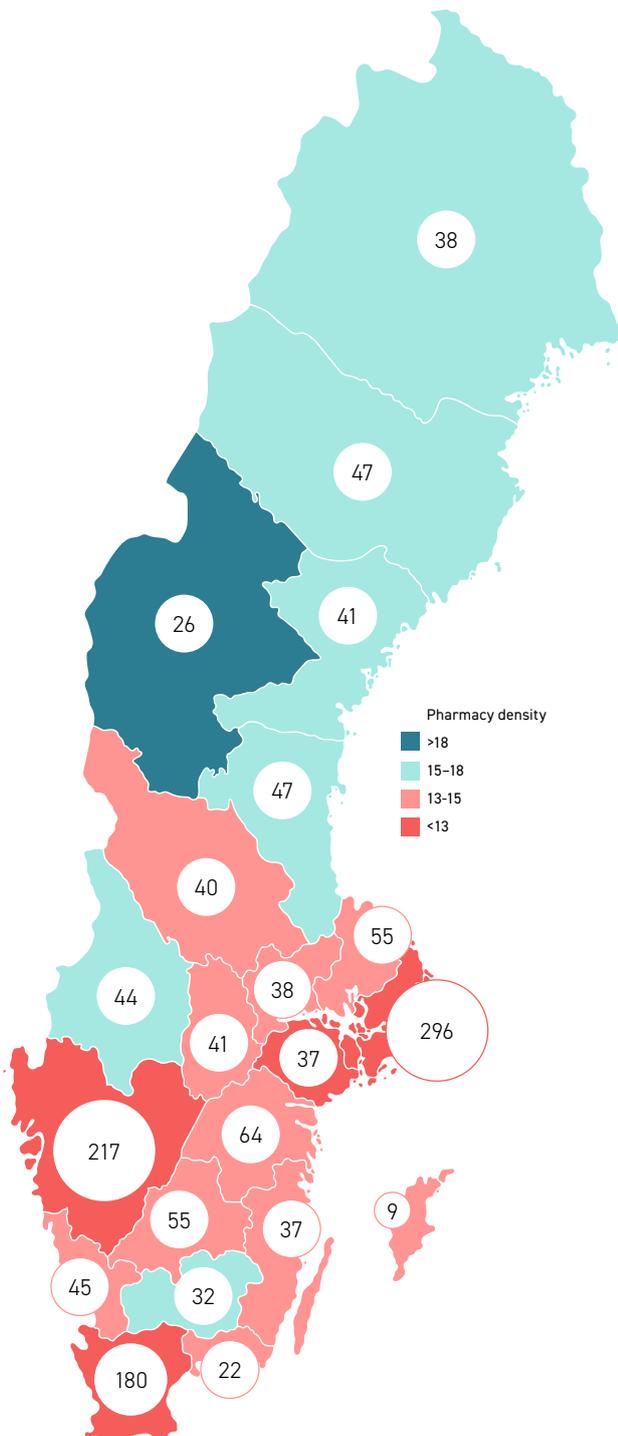
County	Before re-regulation	2021	Change number	Change, percent
Uppsala	28	55	+27	+96%
Stockholm	159	296	+137	+86%
Blekinge	12	22	+10	+83%
Skåne	103	180	+77	+75%
Halland	29	45	+16	+55%
Södermanland	24	37	+13	+54%
Västra Götaland	142	217	+75	+53%
Jönköping	36	55	+19	+53%
Kronoberg	21	32	+11	+52%
Västmanland	25	38	+13	+52%
Nationwide	929	1411	+482	+52%
Gävleborg	34	47	+13	+38%
Örebro	30	41	+11	+37%
Östergötland	47	64	+17	+36%
Värmland	34	44	+10	+29%
Gotland	7	9	+2	+29%
Kalmar	29	37	+8	+28%
Västernorrland	33	41	+8	+24%
Västerbotten	41	47	+6	+15%
Dalarna	35	40	+5	+14%
Jämtland	23	26	+3	+13%
Norrbotten	37	38	+1	+3%

Note: The time of measurement is the end of December for each year.
Source: SA Service AB and the EXPO dispensaries registry

The next figure shows pharmacy density per county measured as the number of pharmacies per 100,000 inhabitants. The figure illustrates pharmacy density in 2021, where counties with the highest pharmacy density are coloured in blue/green, and counties with the lowest pharmacy density are coloured in red/light red. It shows that Jämtland and the other Norrland counties as well as Kronoberg and Värmland are the counties that have the highest pharmacy density, while Stockholm, Södermanland, Västra Götaland and Skåne have the lowest pharmacy density in relation to population. The circles indicate the number of pharmacies per county and the larger circles correspond to more pharmacies. Most pharmacies are of course located in the three metropolitan counties that also have the most inhabitants, but at the same time pharmacy density is lower in these counties. For Sweden as

a whole, the density of pharmacies increased over the period 2009–2021 from just under 10 to 13.5 pharmacies per 100,000 inhabitants. apotekstätheten lägre i dessa län. För Sverige som helhet har apotekstätheten 2009–2021 ökat från knappt 10 till 13,5 apotek per 100 000 invånare.

Number of pharmacies and pharmacy density per 100,000 inhabitants



Source: SA Service AB and SCB

Good distribution throughout the country

To gain another perspective of the distribution of pharmacies across the country, we used the 2017 Classification of Swedish Municipalities as defined by the Swedish Association of Local Authorities and Regions, and analysed conditions and development in 2021. The table (next page) shows that most pharmacies, or nearly 40 percent, are located in medium-sized towns and municipalities near medium-sized towns, followed by large cities and municipalities near large cities (33 percent) and smaller towns/urban areas and rural municipalities (just under 29 percent). bricks-and-mortar pharmacies are thus well distributed across the country and throughout various municipal groups. The table also shows that the reduction of pharmacies in 2021 took place in metropolitan areas and medium-sized towns, while conversely this number increased somewhat for smaller towns/urban areas and rural municipalities compared to 2020. The closure of pharmacies in 2021 has thus not impacted the more sparsely populated municipalities at all.

Pharmacies in sparsely populated areas

In some parts of the country, it is difficult to run profitable pharmacy operation. Therefore, special support is available for pharmacies in sparsely populated areas under certain conditions to reduce their risk in case of a decline in the population base. Provided that the state's regulated margin on prescription medications does not continue to be eroded, there is no direct cause for concern that pharmacy operations in sparsely populated areas are by definition unprofitable or more at threat than before, see above. Often many of these pharmacies are in an area where they have a position of local monopoly and a sufficient customer base. The profitability problems that the pharmacies have experienced relate mainly to establishment in metropolitan areas, where competition between players is fierce. One development that plays a major role with regard to availability in sparsely populated areas and for rural inhabitants is the establishment of online pharmacies. According to an analysis by TLV, smaller towns have a higher proportion of e-commerce, and lower pharmacy density means higher e-commerce. E-commerce can therefore be seen as a complement to community pharmacies in sparsely populated areas.

Number and proportion of community pharmacies by municipal group 2021 and change compared to 2020

Main group	Municipal group	Number 2021	Number per main group	Percent	Number 2020	Change Number
A. Large cities and municipalities near large cities	A1. Large cities	243	468	33,2%	251	-14
	A2. Commuting municipalities near large cities	225			231	
B. Medium-sized towns and municipalities near medium-sized towns	B3. Medium-sized town	345	540	38,3%	355	-11
	B4. Commuting municipalities near medium-sized towns	107			107	
	B5. Commuting municipalities with a low commuting rate near medium-sized towns	88			89	
C. Smaller towns/urban centres and rural municipalities	C6. Smaller town/urban centre	196	403	28,6%	194	3
	C7. Commuting municipality near smaller town/urban centre	86			86	
	C8. Rural municipality	87			87	
	C9. Rural municipality with tourism	34			33	
Totalt		1411	1411	100%	1433	-22

Note: The municipal group classification is based on the Swedish Association of Local Authorities and Regions (SALAR) definition from 2017.
Source: SA Service AB, SCB and the EXPO dispensaries registry.

Swedish pharmacy density from a European perspective

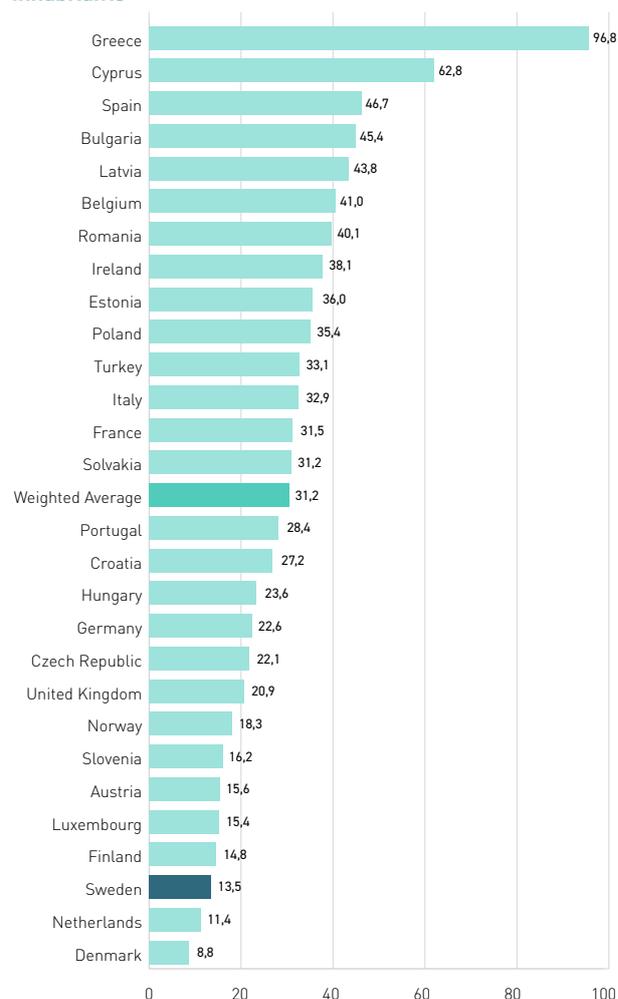
Sweden was the country after Denmark with the lowest pharmacy density in Europe, under ten community pharmacies per 100,000 inhabitants. Pharmacy density increased after re-regulation, and by the end of 2021 there were 13.5 pharmacies per 100,000 inhabitants.

From a European perspective, however, pharmacy density in Sweden remains low, and statistics show that Sweden is still one of the three countries with the lowest pharmacy density after Denmark and the Netherlands (see diagram below). Average pharmacy density for European countries is just under 31 pharmacies per 100,000 inhabitants. Swedish residents therefore have about 45 percent as many pharmacies in relation to the population in European countries on average. A contributing factor is the fact that the Swedish population has increased relatively sharply in recent years. The establishment of new pharmacies in Sweden in recent years is completely offset by the increasing number of Swedes.

Swedish consumer access to pharmacies is, however, better than what these figures indicate, since Sweden has the most developed e-commerce in the pharmacy sector of any European country. In most countries in Europe it is not even allowed for the pharmacy to sell prescription medication by e-commerce. In Sweden sales in terms of value in the e-commerce channel comprise 13 percent of the total sales of prescription medicines and nearly 20 percent of sales of OTC medicines. Furthermore, an assortment of OTC products are sold in other retail settings,

which is not the case in many European countries.

Number of pharmacies and pharmacy density per 100,000 inhabitants



Source: PGEU och Eurostat. Data reflects 2020/21

9. PHARMACEUTICALS AND THE ENVIRONMENT

Välvald - the pharmacy guide for increased transparency

2021 saw the launch of Välvald, the pharmacy sector guide to the pharmaceutical companies are more transparent about their sustainability work. A total of eleven companies with around 300 non-prescription medical products were marked with the Välvald logo on the shelves of all pharmacies nationwide and online.

Välvald was jointly developed by the pharmacy sector because pharmacies identified an increasing need to be able to respond to customer questions regarding sustainability and the environmental impact of pharmaceuticals. The guide does not guarantee that a given company is more transparent than another or that a specific medicine is produced more sustainably than another, since pharmaceutical companies currently do not disclose such information. But some pharmaceutical companies make a greater effort than others in terms of sustainability and greater transparency, and pharmacies want to reward this. In 2021 two requirements were set for a pharmaceutical company to be included in the guide. The company must be covered by an externally audited sustainability report and be a member of the organisation The Pharmaceutical Supply Chain Initiative (PSCI), which promote transparency and common sustainability requirements for pharmaceutical manufactures. Products containing diclofenac are excluded from Välvald.

Intensive steps were undertaken over the year to sharpen these criteria. Välvalds aim is to help contribute to sustainable production of medicinal products. The aim is to be able to set stringent requirements over the long term as to how individual products are produced and to develop Välvald into a sustainability label. Customers' conscious choices allow the pharmacy to show that transparency and sustainability issues are a competitive advantages, even for medicines. Immediately after Välvald's first year, we see a high level of interest from several pharmaceutical companies in wanting to be covered by the guide and to meet the set criteria.

Leading up to 2022, the criteria were developed and now include requirements that the pharmaceutical company answer questions regarding

individual products. The companies need to guarantee that the non-prescription medicines included in Välvald have been manufactured with respect for human rights, workers' rights, the environment, and without corruption. These criteria will continue to be developed, where possible in line with other sustainability initiatives. For example, proposals made by the National Agency for Public Procurement for procurement of medications and application of these throughout the regions. The Swedish Medical Products Agency, the Dental and Pharmaceutical Benefits Agency, and the Swedish eHealth Agency share a common regulatory mission of developing criteria for the emission of medicinal products into the environment within the framework of a pilot programme involving environmental bonuses within the medical benefits system (product of the period) over the years 2024 to 2027.



Responsible use of medicines with potential for environmental harm

Medicines include active substances that can sometimes be difficult to decompose and harmful when they are released into the natural environment. Today's purification plants are not designed to remove all these various substances and as a result they reach the environment. Pharmaceuticals often provide such a major medical benefit that they should be used regardless. Pharmacists are the most well-suited to communicate how and when these medications should be used to achieve maximum benefit with the lowest possible environmental impact. For example, this pertains to the correct use of prescription



Photo: Jeanette Hägglund, image from Apoteket AB

antibiotics, as well as non-prescription analgesics that are sold as self-care.

One example of a medicine that the water treatment plants are currently unable to remove is diclofenac, which also has a negative impact on the environment. The Swedish Medical Products Agency classifies diclofenac in gel form as non-prescription, which means that this can be sold in both pharmacies and other retail settings without advising. On this basis, the pharmacy has had an industry agreement since 2018 that all Swedish pharmacies are to inform their customers that diclofenac has a negative effect on the environment and should be used with caution. In early 2022 the Swedish Medical Agency reported on its government commission regarding the possibility of factoring potential for environmental harm into the assessment of where a medication can be sold. The commission's final report *Potential for environmental harm in non-prescription medications*⁶, the Medical Products Agency recommends that potential for environmental harm should be considered in decisions on where medications can be sold. Our hope is that going forward, diclofenac can only be sold in pharmacies in conjunction with advising.

Unused medicines

Unused medications must be correctly disposed of and incinerated in specially approved facilities. In

order for this treatment to take place as safely as possible, the public is asked to hand in their unused medicines to pharmacies. By law, all Swedish community pharmacies must accept unused medicines returned by the public. All Swedish pharmacies collected a total of approximately 1,400 tons of surplus medication in 2021. Compared with other countries, this is a very high level. This is shown in a forthcoming report from OECD "Management of pharmaceutical household waste, OECD publishing 2022 Paris".

Pharmacies spend both time and money on accepting unused medicines. Pharmacies are not fully reimbursed for this work. On the contrary, the costs for pharmacies for accepting unused medicines increase every year and now amount to more than SEK 20 million. Furthermore, quite a number of incidents linked to the return of medication also take place. Often, needles and other hazardous waste are returned to pharmacies even though they are supposed to be returned to the municipalities' recycling centres. Municipalities do not always live up to their responsibilities in practice, but instead most municipalities refer to pharmacies being responsible for collection. For this reason, pharmacies hope to see municipal responsibility clarified.

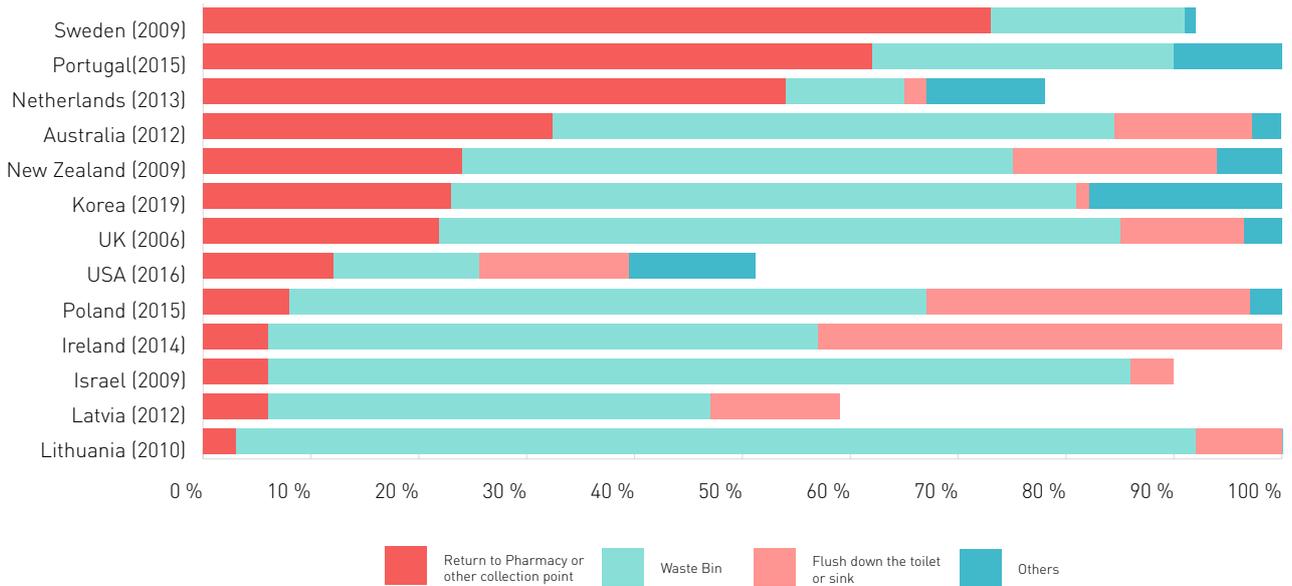
The amount of unused medication should also be reduced and there are several ways of achieving this. The pharmaceutical industry should, for example, provide more small packages of medication for patients who are going to start taking a new medication or a new strength. The period product system should be reviewed, with longer substitution periods. Today many people are finding that they have large amounts of old medicines sitting at home that is either not used or being used incorrectly.

The pharmacy companies working with sustainability issues

Pharmacy companies are taking numerous approaches to sustainability issues, and most companies consider environment and sustainability important issues that also reflect company values. Several companies are on the leading edge, and there are numerous examples worth mentioning. Sweden is generally ahead when it comes to accountability for sustainability and environmental concerns within the pharmacy sector. In the report "Best Practice Paper

⁶ <https://www.lakemedelsverket.se/4b116c/globalassets/dokument/regeringsuppdrag/rappport-ru-miljoskadlighet-receptfria-lakemedel-s2021-01905-delvis.pdf>

OECD Management of pharmaceutical household waste



OECD (2022, forthcoming) Management of pharmaceutical household waste, OECD Publishing, Paris

on Green and Sustainable Pharmacy in Europe”⁷ compiled by the Pharmaceutical Group of the European Union (PGEU), it appears clear that Sweden is far ahead of other countries.

Transportation, packaging and pack material has a direct negative environmental impact and are therefore obvious areas of focus for the pharmacy. As e-commerce grows, these investments become all the more important. The companies both collaborate with- and set requirements on their suppliers so that the entire chain becomes more climate friendly. Almost all pharmacy companies have undertaken targeted and active initiative to reduce their carbon footprint. A few examples from Swedish pharmacy companies follow.

Over the course of the year one company set scientifically anchored climate targets in line with the Paris Accord, which are approved as Science Based Targets. Through subcontractor agreements, several companies are also setting requirements on fossil-free transportation. And increased usage of electricity. Some opt for carbon offsets for transportation that nonetheless contributes to emissions. Through an activate and targeted initiative, one of the companies managed to reduce its carbon dioxide emissions from goods transports by 23 percent in the course of one year. And completely fossil-free in metropolitan areas. One company only allows transporters with vehicles meeting Euro 6 emissions standards into the company’s warehouse area. Over the year, several companies have chosen to chart their climate footprint in

order to take a more goal-oriented approach to work, increase knowledge and reduce their footprint.

The pharmacy companies are also working actively with other sustainability issues. Several companies are collaborating with external researchers in various areas to reduce their carbon footprint. This entails, for example, participation in the project POPFREE, led by the research institute RISE and bringing together players from various industries and parts of the value chain to phase out PFAS. Another pharmacy company is collaborating with the recycling app Bower with the objective of getting more people to recycle their plastic packaging. Packaging from all products under the company’s own trademark can be returned. Pharmacy companies are also working with investments in launching several packages made from bio-based materials manufactured in Sweden to shorten transport routes. One company has decided, for example, to no longer accept products in plastic trays into the company’s stocks. One e-commerce pharmacy also has one of Sweden’s largest solar cell arrays on its roof. Several companies are also hold special recycling campaigns and award extra loyalty points to customers who return unused medications.

⁷ <https://www.pgeu.eu/wp-content/uploads/2019/11/PGEU-Best-Practice-Paper-on-Green-and-Sustainable-Pharmacy-in-Europe.pdf>

10. TOMORROW'S PHARMACY

Recent years have seen a major development on the pharmacy market, both in Sweden and in several other countries around the world. Much of what we see happening has already existed on a smaller scale, or in only certain countries, but has undergone accelerated development under the pandemic. In Sweden we have primarily seen strong growth in e-commerce, while Europe in general has seen a development where the pharmacy has more closely integrated with other parts of the medical system by shifting certain elements of care to the pharmacy. Vaccination is the most obvious example, which is currently offered in-pharmacy by pharmacists in many countries - but not in Sweden. This year, a pilot programme is starting in Sweden with pharmaceutical services, something that already exists in our Nordic neighbouring countries and elsewhere. Current trends in development shall continue and tomorrow's pharmacy will look different from today. Here we take a look forward to see how the pharmacy market will look within a not too distant future.

Medicines directly to home

Patients with ongoing medical treatment do not always need to visit a pharmacy to pick up their medicines. Many medicines will be delivered directly to the patient's home. There are a number of different solutions where medicines are delivered according to need without the patient having to order, and where the medication is personalised, such as through split-dose packaging.

Customers continue to go to the pharmacy to receive help with new medicines and more urgently needed medicines, but activity at the pharmacy is primarily focused on services, advising and care, rather than on sales of medication.

Digitisation - not just e-commerce

To make it easier for patients to keep track of their prescriptions, medications and how they are to be used, there are several digital services available. The most basic of these remind the patient when it is time to order new medicine and the most advanced help adjust the treatment through collaboration with the responsible doctor. Advising is more digital,

with personalised information in text and images, with immediate paths of contact with specialised pharmacists and others with relevant expertise. Behind the scenes there are many tools that help the pharmacists ensure safe and secure dispensation of medicines, where automated analyses of the pharmaceutical treatment as a whole support decisions and advising provided. Many of these tools block prescription errors and suspected over-prescription before they even reach the pharmacy.

Digitisation also means that there is more information on the environmental impact of a given medicine, enabling the patient to make well-balanced decisions regarding what medicines to use.

New ways of improving use of medicines

Since fewer customers visit the pharmacy to pick up their medicines, focus has been placed on services to improve use of medicines. The most common service is support and planning as to how and when medicine deliveries are to take place, when it is time for follow-up, and support when treatments are newly instated or modified. The National Medication List makes it easier for pharmacists in the pharmacy to make changes to the prescription such as extending treatment while awaiting the patient's next medical appointment, removing duplicates, and pausing or deleting prescriptions to medications that are not to be used.

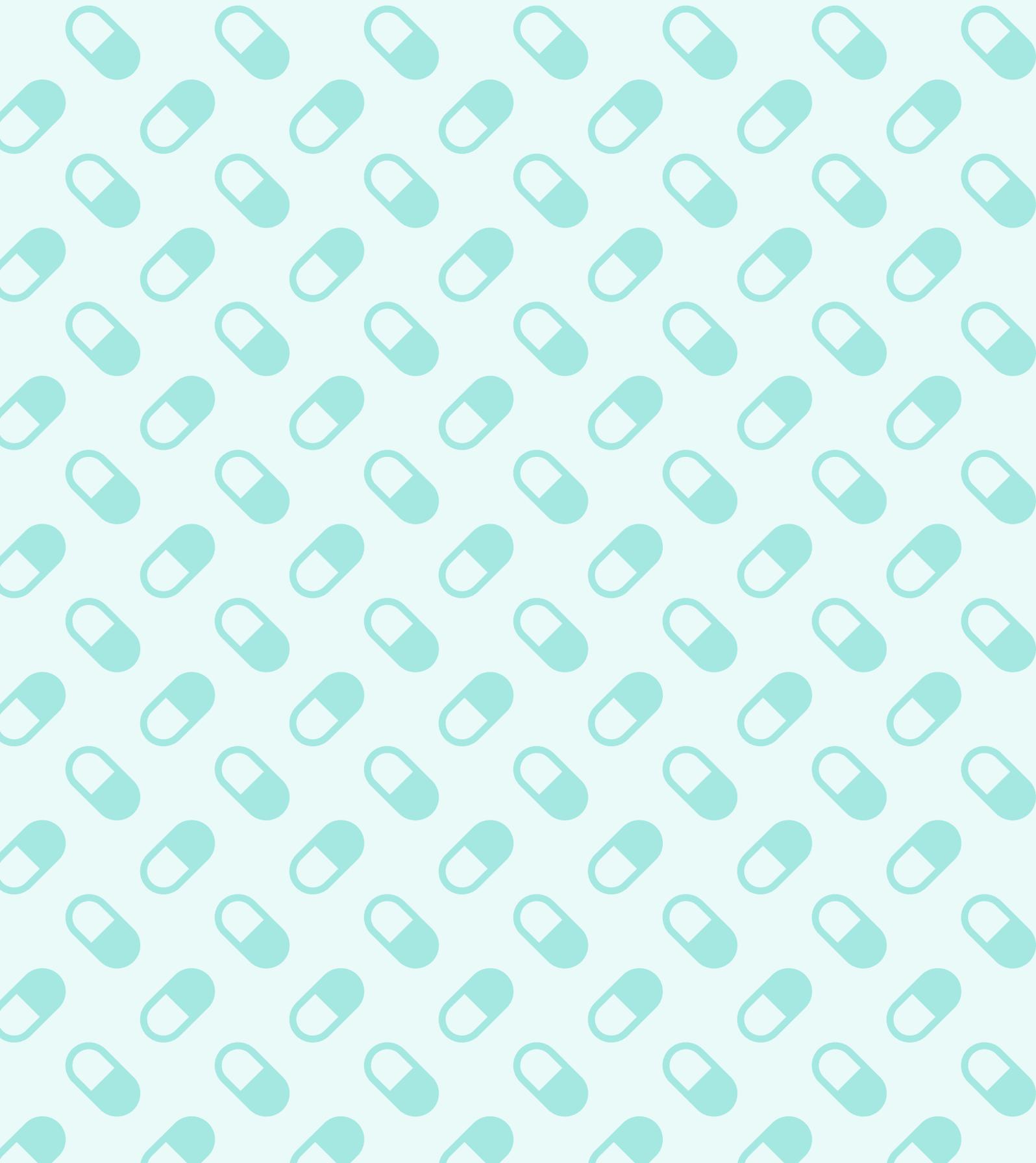
Patients, doctors and pharmacists thereby have a more accurate picture of what medications a patient is actually using. But above all, the pharmacy offers individually tailored advice that not only ensures proper handling, but also serves to increase the patient's compliance, motivation, and knowledge.

Care at the pharmacy

Pharmacy self-care has been expanded to include more items that currently require a visit in a traditional care structure. Basic complaints are assessed at the pharmacy and subsidised medication can be purchased without needing to see a doctor. Certain current prescription medications are sold in the pharmacy after a pharmacist has ensured that it is safe for the patient to use. Collaboration with care providers means that all pharmacies have several

different partners - digital care providers, specialized clinics, and health centres -which makes it easy for patients to receive prompt care at the correct level of care. Getting vaccinated at the pharmacy is an obvious example, and something that is highly appre-

ciated as it provides good accessibility for all groups in society. The pharmacy is seen as the natural first instance for many care-related issues but also for preventative healthcare and wellness.



11. ABOUT THE SWEDISH PHARMACY ASSOCIATION

The Swedish Pharmacy Association represents the companies that conduct pharmacy operations. Through our members, we represent essentially all pharmacies in Sweden. The association is an industry organisation, not an employers' organisation. Our mission is to strive for stable and predictable conditions for pharmacies, where the most is made of the pharmacy sector's benefits to customers and the community.

The Swedish Pharmacy Association also has a wholly-owned service company, SA Service AB, which works on behalf of its customers. The service company works, among other things, with legal and other advice in the pharmacy field, company-oriented projects and certain advertising and marketing issues the industry has in common. SA Service also provides sales statistics as well as up-to-date information and external monitoring of the pharmacy market and prepares material regarding the pharmacy sector.

At the end of 2021, the Swedish Pharmacy Association had 10 members who jointly operated close to 100 percent of the country's 1,411 community pharmacies and 9 mail-order or internet pharmacies as well as 34 hospital pharmacies.

One of the members of the association is the Swedish Independent Pharmacy Operators' Association (Sveriges Oberoende Apoteksaktörers Förening, SOAF), which organises 44 independent pharmacy entrepreneurs.

This means that we represent almost all pharmacies in Sweden – from the country's largest chains to small individually run pharmacies.

As an industry association, it is important to participate in the debate and show pharmacies' benefits and potential for society. One of our most important tasks, therefore, is to be the sector's voice in the outside world and help to increase knowledge of the sector and its issues.

The Swedish Pharmacy Association is a natural consultation body. We represent the industry vis-à-vis politicians and decision makers, authorities and the Swedish Government Offices as well as other trade associations. Particularly important issues in the sector's relations with the surrounding world are promoting high quality, good patient safety, good economic conditions, high-quality pharmaceutical training programmes and a high level of competency within the sector.



Björn Falkenhall (Senior Economist), Fredrik Boström (Senior Pharmacist), Lisa Stern Ödmark (Senior Strategist) and CEO Johan Wallér.

SA SERVICE AB/SWEDSH PHARMACY
REGERINGSGATAN 60, 111 56 STOCKHOLM
INFO@SVERIGESAPOTEKSFORENING.SE | 070-239 16 06

Sveriges
Apoteksforening

WWW.SVERIGESAPOTEKSFORENING.SE
WWW.JOBBAPAPOTEK.SE
WWW.APOTEKSWIKI.SE