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The Evolution of Swedish Pharmacies and Recent Reforms

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Organizing in Action Nets



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Introduction

Sweden is the only country in the western industrialized world where pharmacies are owned and operated by the government (Öberg, 2003). However, even in Sweden, government ownership of pharmacies is quite a new phenomenon. In the seventeenth century Swedish pharmacists were given the right to own and operate pharmacies in specific geographic areas, although under government regulation. Swedish pharmacies remained privately owned until 1971 when they were nationalized and the pharmacists became public employees, losing their status as self-employed entrepreneurs. Since 1971, only the Swedish government, or some juridical entity owned by the government, has been allowed to engage in retail trade in pharmaceuticals. The Swedish government has given this assignment to Apoteket AB (hereafter, Apoteket).

Beginning in 1971, Apoteket has had the exclusive right to operate pharmacies in Sweden. However, today this monopoly is under scrutiny: the question is not whether the market should be opened up, but rather how the breaking up of the monopoly should proceed. To look into this question, a Commission of Inquiry was appointed by the government in December 2006. The Commission is charged with the task of making fundamental changes to the pharmacy market in Sweden, specifically to increase the availability of drugs and to reduce drug prices. In spring 2008, the Commission will present its report. The expectation is that Sweden will have a deregulated or 'reregulated' pharmacy market in the near future, and, as a result, Apoteket will become only one of a number of players in a new market rather than the sole Swedish pharmaceutical provider.

In this report we briefly describe the history of pharmacies in Sweden and the recent reforms in the distribution and selling of pharmaceuticals. Historical events are important for understanding the current situation and provide a basis for studying 'the making of the modern pharmacy'.

The history of Swedish pharmacies

In 1552, King Gustav Vasa employed the first pharmacist, Master Lucas from Germany, and in 1575 the first pharmacy outside the royal castle was established. As long as the pharmacist fulfilled his obligations to the royal family he was also allowed to sell his products to the public. The main reason for opening the pharmaceutical market to the general public was to maintain the quality

of the ingredients in the products. By expanding the pharmaceutical market the risk of the ingredients becoming old and ineffective diminished. The first Swedish regulation about pharmaceuticals, also from 1575, was a direct regulation between the regulator (the monarch who issued the regulation) and the individual pharmacist. However, neither the competence of the pharmacist nor the price was regulated although it was stated that pharmaceuticals should be sold at a reasonable price (Öberg, 2003).

During the seventeenth century the first organized Swedish pharmacies were established, and regulations regarding prices were introduced. Pharmacists in Sweden had a monopoly in both production and distribution wherein each pharmacist had a personal charter and the exclusive right to sell drugs in a specific geographical area. The concept of reasonable prices also dates from this period since the government uniformly controlled drug prices throughout the entire country. In 1683, the first collective charter for all pharmacists in Sweden, authorized by the king, was issued. There was no change in some of these regulations until the beginning of the twentieth century.

In 1688, the Collegium Medicum, founded by Stockholm physicians to supervise and control the medical profession, made pharmacists subordinate to the physicians. While the physicians were excluded from producing and selling pharmaceuticals, they had the right to perform inspections at pharmacies. In 1688, formal educational requirements were also established by the national government (*Medicinalordningen*), replacing the system in which the king had decided if a pharmacy manager was qualified. Physicians also controlled the pharmacists' education since they had the right to conduct the oral examinations. During the eighteenth century, the education for pharmacists became more formalized with detailed content, but it was only in 1799 that their education became profession specific and sanctioned by the king. Their educational requirements, for example, included the study of chemistry, language (Latin) and the art of compounding medical drugs in a laboratory.

Producing pharmaceuticals

Beginning in the eighteenth century there had been a debate in Sweden about the monopoly on the production of pharmaceutical products by the pharmacists. Originally, almost every pharmaceutical product had a plant or animal source, but during the second half of the nineteenth century the chemical industry began manufacturing such products synthetically, thus challenging the pharmacies' monopoly on production. At the same time, the paint and chemist shops challenged the pharmacists' monopoly on sales. The result was the so-called 'war of pharmacy products' that began in the twentieth century. In 1903, the pharmacy association suggested that the production monopoly should be extended, and the Royal Medical Board supported this suggestion. However, after some years of intense debate, in 1913 the government abolished the monopoly on the sale

of non-pharmaceutical products, such as hygienic products and cosmetics, on wholesale trading and on the production of pharmaceuticals. Other companies could now produce such drugs, and thus the Swedish pharmaceutical industry began to develop with the founding of Astra in 1913, Leo in 1914 and Ferrosan in 1919. However, the pharmaceutical research industry only began after the Second World War.

Gradually, the new pharmaceutical industry took market share in production away from the pharmacists, greatly reducing their profits. In 1935, the pharmacies accounted for two-thirds of all pharmaceutical sales, but by the end of 1950s the pharmaceutical industry now accounted for two-thirds of all such sales (Öberg, 2003).

Distributing pharmaceuticals

At the beginning of the twentieth century, a discussion arose concerning how to organize the distribution of pharmaceuticals in Sweden. Three main alternatives were proposed: an open market system with no government involvement, a system of personal charters, or a nationalized system under government ownership.

The main argument in favor of the government owned pharmacy system was that economic constraints should not constitute a restriction (Öberg, 2003). It was argued that a publicly owned system would guarantee there would be pharmacies that could meet the public's demand for pharmaceuticals, even in the more remotely populated areas in the countryside. However, if such pharmacies were not allowed to sell non-prescription articles, the change to a publicly owned system would result in poorer consumer service. Another objection to a nationalized system was that it would be difficult to establish effective economic controls on the billing system. After almost twenty years of debate on the pros and cons of nationalization, in 1919 the government decided to retain the system of personal charters.

Prices and profit

At the same time as the debate on nationalizing the pharmacies, there was a second debate on the problems with pharmaceutical prices and the profitability of small pharmacies. Since the seventeenth century, prices of pharmaceuticals had been – and still are – centrally and uniformly determined by the Swedish government. While this nationalized price system led to differences between the profitability margins of rural and urban pharmacies, there was no discussion of differentiating prices. The assumption was, in an equitable system, it was every man's right to have access to pharmaceuticals, at the same price, whether a person lived in an urban or a rural area (Öberg, 2003). Only a nationalized system of price setting could guarantee fixed prices and equal access to pharmaceuticals. However, there were criticisms of the system. Some auditors criticized the price

system for its lack of transparency and for the large difference between the cost and the sales price of the products (Öberg, 2003). To address these criticisms, in 1925 the government introduced a new pricing system and published a new edition of the Swedish Pharmacopoeia.

Later the government introduced profit regulation because the pharmacies still differed greatly in their profit possibilities. Therefore, a progressive internal fee system was established in 1936, and the government has controlled the prices of pharmaceuticals ever since. The fee system covered certain common goals for the pharmacies: for example, employee pensions and support of less profitable pharmacies. A fee committee calculated the allowable profit for each pharmacy. In total, the government now controlled drug prices, the establishment of new pharmacies, the quality controls on pharmaceuticals and the profit allowed. Thus, although the pharmacies were still privately owned, the government closely regulated the pharmaceutical market.

The nationalization of the pharmacy system

The years between 1945 and 1970 were characterized by a strong expansion of pharmacies in Sweden. Most of these new pharmacies were in urban areas with good consumer potential although some new pharmacies were in rural areas despite the declining rural population (Öberg, 2003).

In 1971, after the 1969 decision to nationalize the pharmacies through negotiation between the government and the association for pharmacy owners (The Swedish Academy of Pharmacies), the pharmacy system was nationalized with the establishment of the National Corporation of Swedish Pharmacies (Apoteksbolaget AB). (In 1998, the name was changed to Apoteket AB). Pharmacy owners ceased being private entrepreneurs and became public employees. Since nationalization, Apoteket, which is 100% government owned, has had an exclusive monopoly on the retail sale of prescription drugs.

There were several reasons for nationalizing the pharmacy system in Sweden. One reason was the new system gave the government more independence in the regulation of pharmaceutical sales since it did not have to consider the effects of its actions on the profitability of private pharmacies (Öberg, 2003). Another reason was the system was more cost-effective because of the one-channel distribution system adopted. The main reason, however, was that it was easier to locate pharmacies where, from the health care sector's point of view, there was a need. The number of pharmacies increased from 600 to 900 during the 1970s, and many of the new pharmacies were located next to primary care centers.

National expenditures on pharmaceuticals

Sweden has a long tradition of publicly financed health care. The first national health insurance legislation was introduced in 1891, although the financing of medications for outpatients was originally not a government responsibility. The first pharmaceutical benefit was introduced in 1955 when general and obligatory insurance, together with a law specifying the distribution of pharmaceuticals free of charge or with price reduction, was enacted.

The Swedish health care system is sometimes held up as a 'success' model because of its cost savings and high quality care. The cost of health care as a percentage of Swedish GDP has remained fairly constant in recent decades, but the absolute cost and cost per citizen has increased by more than 40% since the early 1990s (Krohwinkel-Karlsson & Sjögren, 2006). In 2005, the total cost of health care services (including elderly care) was approximately 240 billion Swedish crowns (SEK), equal to 9% of Swedish GNP (Statistics, The National Board of Health and Welfare 2006:4).

The 21 Swedish County Councils, which have the responsibility for financing and organizing health care services, operate most hospital and primary care centers. They also finance care units operated by private care providers. The County Councils' financial responsibilities include reimbursement for pharmaceuticals used in both inpatient and outpatient care. The pharmaceutical sales are divided into:

- Drugs sold to hospitals (through purchasing departments in the County Councils). The County Councils pay for all costs of medication for inpatient care.
- Drugs sold by prescription (the majority). Patients and third party payers make a co-payment. For prescription drugs for outpatient care, the County Councils receive a specific government grant.
- Drugs sold over the counter (OTC). The consumer pays for non-prescription drugs.

The cost of pharmaceuticals in Sweden in 2006 was SEK 31 billion, which was 15% of the total cost of Swedish health care for that year (SOU 2007:48 p. 99). This amount includes costs for pharmaceuticals for hospital patients (SEK 5.5 million), prescribed pharmaceuticals (SEK 23.2 million) and over-the-counter drugs (SEK 2.9 million). Approximately 80% of the pharmaceutical cost is paid through tax revenues and the other 20% is paid by the consumer. Thus, since 1955, Sweden has had a pharmaceutical benefit scheme with a consumer co-payment system.

However, in 1955, pharmaceuticals for the treatment of diseases were discounted and some pharmaceuticals were even free for the treatment of selected diseases. In 1981, health insurance was further regulated when a joint high cost protection scheme for pharmaceuticals, physician visits and medical services

for treatment of disease was introduced (Andersson, 2006). Today the Swedish pharmaceutical benefit scheme entails a subsidized reduction of the consumer's cost of drugs and medical items that applies to items included in the scheme prescribed by any authorized prescriber.

Co-payment is defined as the direct cost paid by a consumer who purchases prescription drugs that are included in the pharmaceutical benefit scheme (Andersson, 2006). Joint co-payment includes children 18 and under in the same family. Only an amount needed for 90 days' treatment can be dispensed at one time, and two-thirds of the treatment time must pass before the prescription can be renewed with reimbursement. Co-payment is constructed on a stepwise scale with an annual maximum fee of SEK 1800 during a twelve-month period.

In the following table, the changes in the high cost threshold and co-payment for prescribed pharmaceuticals for the years 1981-1999 are shown (after Andersson, 2006:26).

1981	Introduction of high cost threshold for pharmaceuticals based on the number of dispensing occasions
1991	Annual maximum co-payment of SEK 1500 for pharmaceuticals (replaced the previous high cost threshold)
1993	Introduction of reference based pricing Increased annual co-payment level to SEK 1600
1995	Change of co-payment structure: SEK 125 for one prescription and SEK 25 for each additional prescription dispensed on the same occasion. Increased annual co-payment level to SEK 1700
1997	New pharmaceutical benefit scheme - co-payment introduction for pharmaceuticals previously free of charge - decreased annual co-payment level to SEK 1300 - a stepwise scale for pharmaceutical co-payments. The consumer pays: 100% of the price, up to SEK 400 50% between SEK 400 and SEK 1200 25% between SEK 1200 and SEK 2800 10% between SEK 2800 and SEK 3800 - only the amount needed for 90 days' treatment can be dispensed at the same dispensing occasion
1999	Increased annual co-payment level to SEK 1800 Adjusted levels within the scale: 100% of the price up to SEK 900 50% between SEK 900 and SEK 1700 25% between SEK 1700 and SEK 3300 10% between SEK 3300 and SEK 4300

Recent reforms

In recent decades, several reforms have been implemented in the area of pharmaceuticals. Many of them - in different ways - aim at controlling the costs of pharmaceuticals (SOU 2000:86). The following table shows the reforms concerning prescribed pharmaceuticals for the years 1997-2007).

1997	Decision to transfer the financial responsibility for prescribed drugs from the government to the County Councils (decentralization of drug budgets). Obligation for the County Councils to have Pharmaceutical Committees.
2002	Introduction of mandatory generic substitution Mandatory workplace codes for drugs within the pharmaceutical benefit scheme The establishment of Pharmaceutical Benefits Board (LFN)
2005	Agreement on forms of cooperation between pharmaceutical companies and medical professionals in the public health care sector

In 1997, the government decided to transfer its budget responsibility for prescribed drugs to the County Councils. This reform was initiated in 1998 and was fully implemented by January 2005. Since then, the County Councils have been free to decide how and to what extent the responsibility for costs should be decentralized, for example, to hospitals or to hospital clinics.

Several government measures have been taken to influence which pharmaceuticals are prescribed by the medical practitioners who prescribe approximately 85% of all prescription drugs. By law, every County Council is required to have a Pharmaceutical Committee (SFS 1996:1157). Each Pharmaceutical Committee is tasked with providing recommendations to medical practitioners about which drug they should prescribe in order to ensure a rational pharmaceutical use. Therefore, the Pharmaceutical Committees issue lists of recommended drugs for treating common medical conditions. However, the Health Care and Work Act (SFS 1998:531) grants the medical professional the right to make 'free prescriptions', that is, the right to prescribe medicines not on the lists. Thus, the choice of pharmaceutical treatment for an individual patient is actually made by the treating medical practitioner.

In recent years the listing of recommended pharmaceuticals has become a more significant activity. In the beginning, the Pharmaceutical Committees, composed of physicians with specialist competence, prepared the lists of drugs as part of their ordinary work. Today, the lists, which are officially only recommendations, in practice are becoming more like regulations. Additionally, the task of making decisions about which drugs should be listed has become very important, with the pharmaceutical manufacturers eager to see their products on the lists.

In 2002, workplace codes that identify the prescribers' workplaces became mandatory for prescriptions of pharmaceuticals included in the benefit scheme in order to link costs of prescribed pharmaceuticals to the prescribing provider. The workplace codes are dependent on how the County Councils have individually decided how to delegate the responsibility of costs. However, these workplace

codes are not a system for reviewing prescription behavior at the level of the individual prescriber.

Another initiative to influence the prescription of pharmaceuticals is the Agreement on the Forms of Cooperation between the pharmaceutical companies and the medical professionals that took effect in 2005 (www.lif.se). The long history of cooperation between the pharmaceutical industry and the health care sector has been important to both parties as well as valuable for consumers in general. Recently this relationship has come under scrutiny both in the professional setting and in the public media, and allegations of bribery and corrupt behavior have been made. The content of the agreement can be summarized into three areas:

- Employment by pharmaceutical companies of medical professionals on a consulting basis or for remuneration on individual occasions.
- Dissemination of information, provision for training and coordination of medical conferences or similar, regardless whether the activity is coordinated by pharmaceuticals companies or others, where the pharmaceutical company is wholly or partly arranger or principle.
- Pharmaceutical companies' sponsorship of activities/conferences arranged by third parties (e.g. specialist associations) or by healthcare operations.

The Federation of Swedish County Councils and The Swedish Association of the Pharmaceutical Industry also want to establish and maintain an independent relationship with each other, characterized by complete trust on both sides that ensures that all parties use sound judgment, maintain their integrity and comply with applicable laws, collective bargaining agreements and rules of ethics. Furthermore, they want their relationship to be transparent and subject to public review.

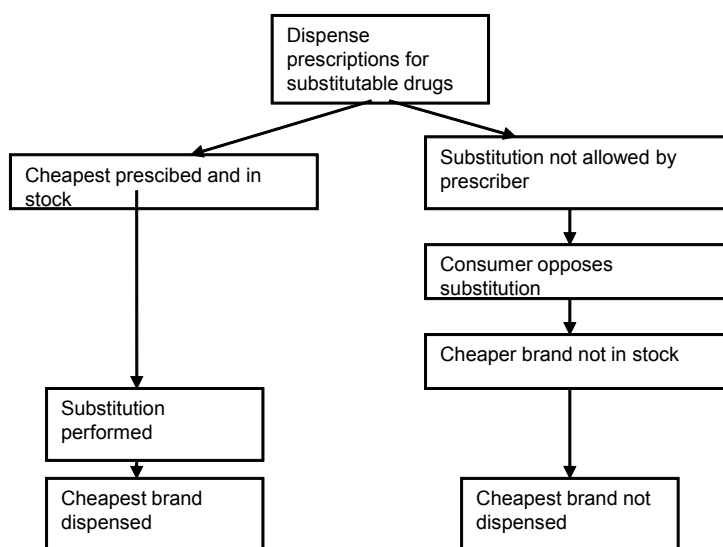
In addition, in recent years two major reforms influencing pharmaceutical costs have been enacted. In 2002, new rules governing the substitution of pharmaceuticals were introduced and a new reimbursement system also took effect. These reforms are explained next.

Mandatory generic substitution

In October 2002, generic substitution for prescribed medications was made mandatory in Sweden. This means that staff members at the pharmacies are obliged to substitute a prescribed pharmaceutical with the cheapest available equivalent copy containing the same active substance as the original brand name drug. In order to be substitutable, the pharmaceutical has to be approved as such by the Medical Products Agency (MPA). The aim of generic substitution is to reduce pharmaceutical costs directly by substituting a cheaper copy and indirectly by creating an incentive for pharmaceutical companies to compete with lower

prices. Products still under patent are also affected by the price competition.

The staff members at the pharmacy offer the consumer the cheapest available medically equivalent drug unless substitution is restricted. Prescribers can restrict substitution by marking ‘substitution is not allowed’ on the prescription form. Substitution can also be restricted, for example, because of differences in dosages. In such cases, the pharmacist decides which drug to provide. The consumer can oppose the substitution, but then the consumer has to pay the price difference between the prescribed drug and the cheapest drug. A schematic description of the process of generic substitution is below (after Andersson, 2006):



During the past decades, the cost of the pharmaceutical benefit has increased by an annual average of 5% (Statistics, The National Board of Health and Welfare 2006:4). But the years 2003 and 2004, after the latest reform of the public pharmaceutical benefit, were the first years of stagnant growth in pharmaceutical spending. Since October 2002, when generic substitution was introduced, to December 2005, the pharmaceutical prices in Sweden have decreased about 15% (Engström et al., 2006) because of the decrease in prices for off-patent drugs. Market prices for generic drugs have been reduced by approximately 40%, and the accumulated savings in the drug budget during this period has been almost SEK 7 billion. On average, 60% of the total possible saving was achieved (Andersson, 2006).

For generic substitution to work efficiently there must be a market where pharmaceutical companies can quickly change their prices and react to competitors (Engström et al., 2006). To enhance the competition between companies, The Pharmaceutical Benefit Board has simplified the process for price decisions for substitutable drugs. In this process, the pharmaceutical manufacturers apply to

The Pharmaceutical Benefit Board if they want to reduce or raise the price of a drug that is subject to generic competition. They then make their bid not knowing what offers other companies have made. The majority of the purchases will be made from the lowest bidder, thus creating robust price competition (Engström et al., 2006).

Pharmaceutical Benefit Board - LFN

In October 2002, a new pharmaceutical reimbursement system took effect, and at the same time the government appointed the Pharmaceutical Benefit Board (in Swedish, *Läkemedelsförmånsnämnden*: LFN) to decide if a medicine should be reimbursed (for a description and analysis of the work of the LFN, see Sjögren, 2006). Previously, almost all prescription drugs deemed safe for use in Sweden by the Medical Products Agency (MPA) were automatically approved for reimbursement. Under the new system, evaluation and approval of marketing authorization was separated from the approval of subsidy.

One reason for the change was that the cost for reimbursed drugs had increased rapidly during the 1990s. A second reason was that Sweden had enjoyed a very generous reimbursement system where all prescription drugs with a fixed sales price were automatically approved for reimbursement. The new law and the new agency were supposed to lead to a more rational and cost-effective public use of medicines.

The official task of the LFN is to make decisions about which prescription pharmaceuticals to include in the public pharmaceutical benefit (SFS 2002:160). The charge to the LFN is to take a broad societal perspective when evaluating the characteristics of drugs and not to focus only on the costs to the national health care system. The LFN is thus required to consider both medical and economic characteristics of pharmaceuticals. The broad scope of this responsibility is reflected in the composition of the LFN Board whose members include medical specialists, health economists, County Council senior civil servants and consumer activists (Sjögren, 2006).

Before the LFN makes its evaluation of a pharmaceutical, the product must be approved for use by the Medical Product Agency (MPA) or the European Medicines Agency (EMA). These agencies evaluate whether a drug is safe and also specify the medical condition(s) the drug should be used to treat. Once the MPA or the EMA has authorized a pharmaceutical in Sweden, it can be prescribed to consumers by medical practitioners. For the pharmaceutical to be available with subsidy, an application for subsidy must be submitted to the LFN for consideration. Thus, the use of a newly approved product is not subsidized until the LFN approves the subsidy application.

The pharmaceutical industry is the formal counterpart in the LFN's decision process. When applying for reimbursement, the pharmaceutical companies suggest a price for a product. This price is taken into account in the cost-

effectiveness analysis. However, the LFN does not negotiate prices, as the market for pharmaceuticals is already much regulated. The LFN states its position on prices as follows:

We want to allow the market to work as freely as possible by letting the companies set the price and then decide whether or not we as taxpayers and patients are willing to buy that particular drug. (LFN, 2007).

If the LFN denies the subsidy application for a drug, the drug can still be prescribed but the consumer must bear the cost. The LFN is responsible for decisions about subsidy, but has no budgetary responsibility for pharmaceutical spending since the LFN should *not* take budget restrictions under consideration when evaluating and deciding whether a pharmaceutical fulfils the criteria for subsidy. If LFN approves a subsidy for a drug, the budgetary and operational responsibility for the use of the product lies with the County Councils.

The decisions on pricing and reimbursement are made by the expert board at the LFN. A prescription pharmaceutical will be subsidized if the cost for using the pharmaceutical is reasonable from a medical, humanitarian and socio-economic perspective (SFS 2002: 160). What constitutes reasonable use is not specified, but in a bill submitted by the government to the Parliament, it is stated that the LFN's work should be guided by three principles, as listed below (The New Pharmaceutical Benefits Bill 2001/02:63, p. 43):

1. equal human value; all people have an equal right to life and health
2. need solidarity; those with greatest need should have the right of priority
3. cost-effectiveness; benefit of treatment must be reasonable in relation to cost of treatment

The LFN's decisions are not recommendations but rather are requirements. When the LFN denies a pharmaceutical subsidy, the drug is so coded in the product database of Apoteket. And, as Apoteket holds a monopoly on pharmaceutical distribution, consumers cannot obtain the drug unless they pay for it themselves, even if the prescription states otherwise.

Apoteket AB

Today Apoteket is the fourth largest pharmacy chain in Europe despite operating only within Sweden. It employs 10,600 people, has 90 million consumer visits annually and dispenses 64 million prescriptions annually (Apoteket AB Annual Report, 2006). Apoteket's operating earnings in 2006 were SEK 600 million and the return on equity was calculated at 15.8%. In its 2006 Annual Report, the Apoteket CEO states that this return was made possible mostly by change processes that increased productivity by 6% over the previous year.

Apoteket AB operates in three markets:

- Prescription only medicines (POMs)
- Non-prescription medicines (NPMs) and other health products
- Drug-related services to health care and care services

The sale of POMs accounts for 70% of Apoteket's sales. As the prices of prescription medicines are determined by The Pharmaceutical Benefit Board (LFN), Apoteket has a limited scope for improving its financial performance. Apoteket operates 982 pharmacies/shops (1/ 10,000 inhabitants): 875 public pharmacies, 77 hospital pharmacies and 30 small shops that sell non-prescription drugs. Apoteket also has 826 local representatives in Sweden, such as local supermarkets in rural areas. The opening times of the pharmacies are of major concern, not least from the EU perspective. The Swedish regulations from the year 1688 required pharmacies to be open 24 hours a day, but this requirement, under criticism, was partly redrawn at the end of the 1940s. Today Apoteket has a nationwide distribution network of pharmacies, but only a few pharmacies are open 24 hours a day. Typically, opening hours are 10 to 18 Monday to Friday and 10 to 14 on Saturday.

In order to increase convenience for its consumers, Apoteket has also established new contact channels such as the website at www.apoteket.se. The consumer can also call the Consumer Center to order pharmaceuticals and to ask questions 24 hours a day. During 2006, Apoteket also introduced home deliveries of drugs. By placing an order on the Internet or by phone, consumers can have their drugs (both POMs and NPMs) mailed directly to their homes. According to the Apoteket AB Annual Report, 2006, consumer use of this service is gradually increasing.

Beside the web-based services, Apoteket has introduced a system of e-prescriptions where the prescriptions are sent electronically from the medical practitioners (also dentists) to the pharmacy. The total number of e-prescriptions has increased from 20% of all prescriptions in 2003 to 60% of all prescriptions in 2006. Apoteket also offers the consumers the service of storing their prescriptions and personal drug history electronically.

Apoteket has two business areas: private consumers and contract consumers. Private consumers are citizens served by the local pharmacies and by the local representatives. Contract consumers are care providers of different kinds (i.e., County Councils, municipalities and private companies). For example, Apoteket operates hospital pharmacies that provide the hospitals with drugs and also provides various services to the hospitals (e.g., statistics on the optimal use of drugs by consumers).

Today, Apoteket also offers patients leaving the hospitals information on drugs and access to drugs from home. Patients can also receive help by using ApoDos (multi-dose packed drugs). According to Apoteket AB, this service results in safer medication and in savings for providers of medical treatment. In 2006,

164,000 patients used multi-dose packed drugs. Apoteket AB also manufactures drugs that are individually adapted as well as drugs that are not produced by the pharmaceutical industry. At 33 hospital pharmacies, drugs are also prepared on site (mainly cytostatic agents for chemotherapy).

Employees

Apoteket has almost 11,000 employees of whom one-tenth are temporary workers. The largest personnel categories are pharmacists (or pharmaceutical specialists) with five years of university education and prescriptionists, with three years of university education. In 2006, the total number of Apoteket pharmacists was 1,127, which included 833 women (74%), and the total number of prescriptionists was 712, which included 524 women (74%) (SCB Statistics, 2006). Other categories of staff at pharmacies are pharmacy assistants and pharmacy technicians.

In Sweden the National Board of Health and Welfare controls the registration of pharmacists and prescriptionists. Since 1999, both pharmacists and prescriptionists are required to be registered in order to practice their professions. Although relatively few professions are regulated by legislation through authorization and/or protection of title, health care professionals are generally regulated.

The pharmacy technician, after a short and general pharmaceutical course that includes practice, is allowed to serve consumers with prescriptions but needs a pharmacist's signature in order to hand the drugs to the consumers. In the 1980s and the 1990s, when there were too few pharmacists, many technicians were offered further education. Counting their previous education as a one-year university education, with one additional year at university level the technicians could earn the same status as a prescriptionist.

The position of pharmacy assistant is relatively new, having been created in order to cope with a shortage of pharmacists and pharmacy technicians. There is no formal education requirement for this position, but the pharmacy assistant receives brief, in-house training at a pharmacy. The pharmacy assistant supports consumers with self-care products and works with stock-in-trade activities.

Apoteket offers their employees in-service training where new treatments and drugs are presented by a pharmacist. The company also has a central support unit, The Pharmacy Academy, which coordinates skills development. Among other things, Apoteket has courses for its employees in selling, communication and core pharmaceutical skills. According to its website, Apoteket states that an employee can choose between various careers, such as leadership or expertise in self-care. Apoteket also has a network for young employees (under 35 years old) in order to develop and renew the company personnel base.

The work of pharmacists

The production of medical drugs at the pharmacies has declined over the years. There is little knowledge available about the nature of prescriptions before the 1940s, but in 1952 a survey of prescriptions was taken, including prescriptions from 1947 to 1952. In 1947, extempore (tailor-made) prescriptions were 36% of the total prescriptions, and five years later the number had declined to 31%. In 1975, the extempore prescriptions were 4% of the total (Claesson, 1989). Today only a small proportion of the medical drugs are compounded at the local pharmacies.

In recent decades, the services at the pharmacies have moved away from compounding and producing medicines towards providing information. Until the 1960s, the information about POMs provided by the pharmacy was extremely limited. Distribution of such information was seen as interfering with the physicians' responsibilities. In fact, at one time the pharmacist was not even allowed to give consumers information related to POMs. However, laws from the 1980s state that the consumer has the right to receive information about medical drugs, and today pharmacists give both written and oral information to consumers. Apoteket also offers consultation by appointment and health coaches. It also has a consumer club (Apoteket Plus) that offers theme evenings and mails newsletters. The Apoteket AB Annual Report, 2006, describes the important task of providing information as follows:

One of Apoteket's most important tasks is to provide producer-neutral advice and information relating to questions about drugs. Apoteket fulfils an important function by being independent and having no ties at all with the drug manufacturers.

The information Apoteket provides concerns prices, size of dosages and directions for the prescriptions. The pharmacist is also supposed to give the consumer information about the use of the prescribed drug and check that the dosage seems adequate for the consumer's illness or condition. The pharmacist should use her/his professional judgment in deciding how such information should be communicated and how the written prescription should be interpreted. Such decision-making by the pharmacist is not seen as a challenge to the autonomy of the physicians, but rather as a support (Malmstig, 2001). For example, in this supporting role, the pharmacist provides additional information to the consumer and strengthens the consumer's relationship with physician. Thus, the pharmacists have both a controlling role and a supporting role.

Since the end of the 1990s it has become even more obvious that the pharmacist's profession is very much connected to the health care sector, not only as an adviser to consumers and a dispenser of prescriptions but also as a participant in the task of controlling the escalating costs of prescription drugs. The mandatory generic substitution that took effect in 2002, requiring pharmacists to substitute less expensive 'generic alternatives', reaffirmed the authority of pharmacists.

Furthermore, the work of pharmacists is becoming more consumer-oriented. However, not all pharmacists are positive toward the increased focus on selling, particularly of such items as chewing gum and natural medicines, that they regard as inconsistent with their professional roles (Malmstig, 2001). There is a concern also that the consumer may lose confidence in pharmacists if they are too focused on selling. It is worth mentioning, however, that the managers in Malmstig's study were more positive towards selling than the pharmacists were.

Most managers at pharmacies are pharmaceutical specialists or prescriptionists and 82% of them are women. If the manager is not present at the pharmacy, another pharmacist must be in charge and take the pharmaceutical responsibility for the ongoing activities. For cases of neglect of professional duties, there is a report system for pharmacists similar to that used for physicians and nurses. A pharmacist can be reported to The Medical Responsibility Board (in Swedish, *Hälso- och sjukvårdens ansvarsnämnd*: HSAN). The initial disciplines are admonitions and warnings.

Other important management positions at the local pharmacy are the information and education manager and the stock-in-trade manager. The purchase of drugs, a responsibility of the stock-in-trade manager (often a technician) is very important from an economic perspective since purchasing is the main area where the local pharmacy can affect its own financial result. The persons responsible for information, education and stock-in-trade are thus as part of the management hierarchy in the pharmacy field.

Professional and hierarchical differences between staff members at pharmacies vary. At larger pharmacies the difference between the management and professional hierarchy may be quite distinct since the manager only performs management tasks and does not serve consumers at the counter. At some local pharmacies, staff members without pharmaceutical education wear coloured clothes (green or blue) while those with pharmaceutical educations wear white clothes. Yet there are also pharmacies where there is no such distinction between the different professional groups. Malmstig (2001) shows generally no large conflicts exist between the two hierarchies, and in cases where the professional status is considered important at a local pharmacy, the manager has approved this situation. Nevertheless, the work with POMs is seen as the most important task at the pharmacy and is the task that most distinguishes between the roles of the pharmacy employees.

In addition to the national laws that affect the pharmaceutical field (SFS 1982:763; SFS 1998:531) Apoteket has its own guidelines for various routines such as how the space should be designed, how the products should be displayed and how the quality and development work should be conducted. Despite these laws and guidelines, the local pharmacy is free to develop a certain individual character since the roles of the different professional groups at the pharmacy, for example, pharmacists and technicians, are not always clear. At some pharmacies the cleaning person is allowed to handle the stock of medical drugs in order

to give the technicians more time for the consumers. The technicians do not answer the telephone at some pharmacies because it is preferred that more educated pharmacists talk to the consumers. At larger pharmacies the employees often follow a specific plan for the various activities at the pharmacy: self-care, prescriptions and back-office desk (telephone, etc.). In short, there is typically more job specialization at the larger pharmacies than at the smaller pharmacies.

The interior design and furnishings of the pharmacies may also vary considerably. Some have old-fashioned furniture, others modern. All pharmacies, however, have an area for consumers and an area behind the counter for employees only. The area for consumers is sometimes divided into one area for prescription requests and one area for non-prescription products. Often the consumer may sit on a sofa and watch a video on health information while waiting. This video draws attention away from the consumer being served at the counter. There is an area behind the counter where an employee answers the telephone (e.g., questions from physicians or consumers) or attends to a prescription that will be picked up later (back-office desk).

Professional associations

By tradition in Sweden, the work of the pharmacist was controlled by physicians. However, the change from a private entrepreneurship system into a government owned monopoly in 1971 changed the pharmacy profession since the formal control performed by physicians diminished. In response to this change, the pharmaceutical profession expanded the professional associations that dated from the early nineteenth and twentieth centuries. First, the owners of pharmacies organized in The Swedish Academy of Pharmaceutical Science, and a few decades later, other pharmacists (employees) organized in The Swedish Pharmaceutical Association. There are other associations in the pharmaceutical field as well: the *Farmaciförbundet* that includes members from all professional groups at the pharmacies, and HTF that represents employees at Apoteket with either little or no pharmaceutical education.

The Swedish Academy of Pharmaceutical Science (*Apotekarsocieteten*) was established in the 1830s. In 1971, when Apoteket was established, the organization changed its activities from focus on the pharmacy owners and the pharmaceutical issues of interest to them to focus on pharmaceutical issues at large. Today the Academy is a non-profit organization with 6,000 members who are interested in pharmaceutical production, science, publishing and education. It is also concerned with developments in research and the promotion of high professional standards.

Membership in The Swedish Pharmaceutical Association (*Farmaceutförbund*), established in 1903, is open to anyone with a university degree with a pharmaceutical focus. The primary task of the association “is to safeguard the professional and occupational interests of the pharmaceutical profession” (www.farmaceutforbundet.se).

farmacevforbundet.se). Besides pursuing issues of importance related to the practice of the pharmaceutical profession, including employment conditions, the Association also works to ensure that “the provision of pharmaceuticals is suitable, of high quality and beneficial to the individual”. Today the Association, which is a non-profit organization with no political party affiliations, has 7,500 members, including almost 80% of Swedish pharmacists. The members of the Swedish Pharmaceutical Association are from different sectors: 67% work in retail pharmacy, 13% work in industry, around 4.5% work at hospitals, governmental agencies or municipalities, 0.5% are owner-managers and 15% are students. Pharmacists employed by hospitals and the County Councils play a significant role in the Pharmaceutical Committees. According to its website, The Swedish Pharmaceutical Association encourages a more competitive pharmaceutical market environment with many owners, distribution of drugs outside the current one-channel system and high pharmaceutical competence among pharmacy managers.

Reflection

In this report we have summarized the evolution of the Swedish pharmaceutical system, recent reforms and the current drug distribution structure with Apoteket, the 100% government owned entity, as the sole provider. The ongoing discussion on whether to continue this monopoly of pharmaceutical distribution should be considered in the context of related historical events in Sweden. For four hundred years, Swedish pharmacies were privately owned; the government monopoly on the ownership of pharmacies is less than forty years old. However, this discussion of how to organize the pharmacy market is not a new one in Sweden. One hundred years ago, there was a similar discussion although the circumstances then were reversed. At that time, after almost twenty years of discussion – with similar arguments – the decision was to retain privately owned pharmacies with a system of personal charters.

In today’s debate, different solutions are being promoted. Apoteket itself is “...arming itself for a ‘reregulated’ market” and “aims to become the world’s best pharmacy company” (Apoteket AB Annual Report, 2006:2). The main professional pharmaceutical association is also positive toward deregulation of the market, arguing for a deregulated market where their members can have the opportunity to be pharmacy owners. The government appointed Commission of Inquiry, charged with making recommendations for fundamental changes in the distribution of pharmaceuticals, will present its results in spring 2008. The Commission’s report is awaited with much curiosity and speculation. Will the Commission recommend a solution like the Norwegian model where three large chains operate most of the pharmacies? Or will they recommend something like the Finnish model of privately owned pharmacies with single ownership limited

to three pharmacies? Whatever the recommendations, it appears probable in the near future we will see a change of some sort in the Swedish pharmaceutical situation, at least for the sale of non-prescription medicines. Many problems, however, remain to be addressed and solved before we will see a new market situation for pharmaceuticals.

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