



Sabīne Lauze

**Development of Pharmacy
Under the Influence
of Occupation Powers
in Latvia (1939–1960)**

Summary of the Doctoral Thesis
for obtaining a doctoral degree (*Ph.D.*)

Sector – other Medical and Health Sciences,
including Forensic Medicine
Sub-Sector – History of Medicine

Rīga, 2021



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Defence of the Doctoral Thesis will take place at the public session of the Promotion Council of “Other Medical and Health Sciences, including Forensic Medicine” on 3 September 2021 at 15.00 in Rīga Stradiņš University, 16 Dzirciema Street online via Zoom platform

The Doctoral Thesis is available in RSU Library and on RSU website:
<https://www.rsu.lv/en/dissertations>

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List of abbreviations

| | |
|--------|--|
| UTAG | <i>Umsiedlungs-Treuhand-Aktiengesellschaft</i> |
| LSSR | Latvian Soviet Socialist Republic |
| USSR | Union of Soviet Socialist Republics |
| LCP | Latvian Communist Party |
| CPD | Chief Pharmacy Directorate |
| LSDWP | Latvian Social Democratic Workers Party |
| LCP CC | Central Committee of the Latvian Communist Party |
| LRC | Latvian Red Cross |
| DP | Displaced Persons |
| UNNRA | United Nation Relief and Rehabilitation Administration |
| IRO | International Refugee Organisation |

Introduction

The World War II and its consequences is a topical issue of research and the subject of active discussions on a global scale. When the word combination World War II is typed in the search of the *Scopus* scientific publication database and mark its search in the headline, the findings show 5031 documents covering a variety of areas such as social sciences, medicine, art and humanities, business, economy and many others published between 1942 and 2019. The *Web of science* database show, by analogy, 8028 documents published between 1989 and 2019.

The impact of World War II on pharmacy as one of the health care sectors in Latvia has so far not been studied. The Latvian Pharmaceutical Law (10.04.1997.) defines pharmacy as research, development, production, standardisation, quality control and distribution of medicinal products. The impact of the World War II on the dynamics of the number of pharmacies in Latvia, pharmaceutical workers and the impact on the availability of medicines to the population, the studies and fragmentary statements do not provide full insights, so that the inclusion of previously unpublished, unused archive materials in the doctoral thesis is a novelty. The research issue raised is topical, since it is this period that reflects the industry's ability to adapt and perform work in fundamentally different and severe circumstances, which include both resource deficits and the transition from one political system to another. The variability, adaptation and development of this sector under the influence of two totalitarian regimes should be studied in the context of public health, as pharmacist have always been the closest part of the healthcare system to the public and the pharmacy was and is the most accessible health professional to the public.

The chronological boundaries of the research include the period from 1939 to 1960. The chronological boundaries of the doctoral thesis have been chosen on the basis of a recital to provide a description of the situation in pre-

war pharmacy and the effects of post-war conditions, but mainly focusing on events between 1940 and 1945. The year 1939 was chosen to briefly describe pharmacy in Latvia before the influence of the occupation powers. The events of the World War II do not yet take place directly in Latvia, but in connection the emigration of the Baltic Germans began, which significantly affected pharmacy. The events that took place in 1939 can be considered the prehistory of the occupation. For the individual events an insights are given until 1960, when the activities of Latvian pharmacist Hugo Skudiņš (1903–1976) in the Latvian Red Cross Organisation under exiled conditions in Germany were aimed at improving access to medicines for Latvian residents.

Aim of the Study

Aim of the study is to research and describe the development of pharmacy in Latvia as a health care sector between 1939 and 1960, paying particular attention to the impact of political economic developments caused by the occupation of the USSR and Nazi Germany, by highlighting as important indicators the changes in the number of pharmacies and pharmaceutical employees and accessibility to medicines to the population.

Study Objectives

Study objectives include identifying, collecting and investigating information available in published and unpublished sources of information and following:

- to describe pharmacy in Latvia before the beginning of World War II, by analysing the number of pharmacies and their employees, identifying processes that have had a significant impact on the industry (re-acquisition of pharmacy concessions, emigration of Baltic Germans), by addressing the practical aspects of local

manufacturing factories and pharmacies in the context of availability of medicines;

- to describe the forms of economic political action and consequences of the occupation of the USSR and Nazi Germany regarding pharmacy in Latvia, explaining the effects of the activities of the legislative, pharmaceutical supervisory authorities and the actions of those responsible, by analysing the dynamics of pharmacies and the number of persons working there;
- to identify pharmaceutical employees affected by totalitarian regime repressions;
- to describe pharmacy in Latvia after World War II, by analysing the number of pharmacies and the level of education employed therein, as well as the process of restoring pharmacy activities and accessibility of medicines for citizens;
- to describe the professional activities of pharmaceutical employees in exile outside Latvia and the relationship with Latvia following the second Soviet occupation.

The research structure contains four chapters formed on a chronology basis:

1. Pharmacy in Latvia shortly before the beginning of World War II (1937–1940)
2. Pharmacy in Latvia during the first occupation of the USSR (1940–1941)
3. Pharmacy in Latvia during Nazi German occupation (1941–1945)
4. Pharmacy in Latvia at the beginning of the secondary occupation of the USSR (1945–1951)

Novelty of the Thesis

Previous research and fragmentary evidence do not provide a complete overview of the impact of World War II on the dynamics of the number of pharmacies in Latvia, those employed in pharmacy and how it affected the availability of medicines to the population, therefore the inclusion of previously unpublished, unused archival material in the PhD thesis is its novelty. The PhD thesis summarizes information from the files of persons deported from Latvia on June 14, 1941, and as a result, provides an insight into the preparation of arrest warrants, charges, as well as the future fate of the deported pharmacists, assistants and interns. Scientific research of a similar content in the context of pharmacy in the Latvian language are not currently available, and in foreign literature such an approach is still in its early stages of development. Some similar studies on the impact of World War II on the field of pharmacy have been published in Polish, Danish, Norwegian and, to a lesser extent, in German, but an in-depth study of this period in the pharmaceutical context is hardly found in the international scientific databases. This suggests that, possibly, research on the effects of World War II on pharmacy at the European level are yet to follow. Therefore, the added value of this PhD thesis is the unprecedented actualization of the research direction of the history of pharmacy. From the point of view of usefulness, the study of historical events is closely related to the requirement to understand political activity and the causal interaction with different ethnic, social or occupational groups. Furthermore, one of the most important needs of history studies is the task of anticipating the future and seeing the interrelations. The accumulated knowledge of history has proven certain coincidences, therefore, finding relative similarity and repetition of various historical events and situations, it has been used by thinkers and philosophers in the past to forecast future events. The novelty of the thesis is to provide every interested person with the opportunity to get acquainted with the historical development of the pharmaceutical industry in significantly different circumstances, which can

be categorized as crisis conditions with scarcity of resources, repressions against people of different nationalities and classes and transition from one political system to another.

Materials and methods

Sources and literature used in the doctoral thesis contain unpublished sources (materials of the Latvian State History Archives and the Latvian State Archives), as well as published sources (press, academic and scientific publications, books), which include chronological boundaries of the subject.

The research uses a number of research methods – a historically genetic, historically comparable, historically systematic, as well as a statistical method. Following the design of the study, the doctoral thesis is to be classified as a qualitative, descriptive, retrospective research.

1. Pharmacy before the beginning of the World War II in Latvia (1937–1940)

As Latvia gained independence on November 18, 1918, the pharmaceutical sector further developed within the national state. Russia's Law on Medical Treatment, issued in 1905, was inherited from the Russian Empire. This Law had been modified countless times until June 27, 1939, when the Cabinet approved the Pharmaceutical Law of Latvia, which had been developed for several years. In 1919, the Pharmacy Board was founded for the regulation of the sector, the predecessor of the later Pharmacy Administration.

In 1922 there were 272 pharmacies in Latvia and there were 1176 employees in pharmacy, of which 420 were Latvians, 353 – Jews, 316 – Germans and 87 other nationalities. Baltic German pharmacists and their inherited traditions played an important role in practical pharmacy, despite the numerical predominance of Latvian pharmaceutical employees. A large number of longstanding pharmacies in Latvia, particularly in Riga, belonged to Baltic German chemists. Relations between Latvian and Baltic German pharmaceutical employees were strained at this time, which was further exacerbated by decisions taken during the authoritative regime of Kārlis Ulmanis (1877–1942), which supported of the “Latvianization” of different sectors of the economy. Among them were the amendments and additions to the treatment regulations approved on December 22, 1937, which provided for the re-registration of all Latvian pharmacies or the re-acquisition of a permit for further operation of the pharmacy.

In order to open a pharmacy in Latvia during the first freedom state, a concession or a permit had to be obtained. Between 1920 and 1937 (including), 379 private pharmacy opening permits were issued. Issuing concessions was often a matter of sharp discussions. To understand this multi-faceted and complex process, it is necessary to look back at events at the end of the 20's and

at the beginning of the 30's. Russian medical law allowed everyone to open the pharmacy. Thus, in 1928, for example, there were 409 pharmacies in Latvia and 73 of them owned persons without pharmaceutical education. The pharmacists were not satisfied with it. In 1929, when publicly discussing the provisions of the Law, the Explanatory Notes to Section 9 of the Pharmacy Administration read that the previously existing provision of the Russia's Law on Medical Treatment that a pharmacy may belong to everyone is inappropriate and unfair with regard to pharmacists in Latvia. The same article strongly states: "It should be pointed out that during the existence of Latvia no citizen other than a pharmacist has been granted an authorization to open a pharmacy and the order that the pharmacy owner must be pharmacist has been automatically implemented."

With regard to pharmacies, the amendments and additions to the treatment regulations issued in 1937 stated that permission for opening a pharmacy or acquiring an existing pharmacy could be granted by the Minister of the National Welfare to Latvian citizens, not less than 25 years of age, granted with a higher pharmaceutical diploma and registered with the Pharmacy Administration. The transitional regulations stipulated that owners of existing pharmacies who were not citizens of Latvia had to transfer their pharmacies to persons who had received a permit under the new rules within one year, or the pharmacy should be eliminated. Other owners of existing pharmacies had to re-obtain a permit under the new rules within 2 years or transfer their pharmacies to persons who had obtained the new concession.

In 1938, the Pharmacy Administration provided a formal explanation and the main reasons for drawing up the new amendments. It has been stressed once again that the current Russia's Law on Medical Treatment, which provides for the authorization of any person to open a pharmacy, has had such an effect on Latvian pharmaceutical field that in the real situation in Latvia many pharmacies have come into the hands of non-specialists and have only been used as a source

of profit. In the past, the purchase and sale of pharmacies did not require permission from the Minister of the National Welfare, so these transactions were uncontrolled. According to the report, many Latvian pharmacists were forced to work as salaried employees and to meet the demands of their employers, often non-specialists. The Pharmacy Administration report considers such a situation to be exceptional and unacceptable.

As a result, however, the re-registration of pharmacies directly affected pharmacy owners and their nationality. According to the lists of the Pharmacy Administration, many Baltic German pharmacists have not been granted a permit to purchase a pharmacy or to renew a concession. It was so obvious that Alfred Intelmann (1881–1949), president of the Baltic German Union of the People's, started defending Baltic German pharmacists publicly. In early 1939, he sent several letters to the Minister of the National Welfare, Jānis Volonts (1882–1943). In these letters there was expressed concern about not issuing the new concessions to Baltic German pharmacists. In one of them, there was mentioned the rejection of requests from already existing pharmacy owners for the new concession, as well as the requests of the owners to obtain parts of the pharmacy belonging to their co-owners, who are not pharmacists. Requests for full-fledged pharmacists to open a new pharmacy have been rejected. A. Intelmann has also admitted to mentioning that none of these cases explained the reason for the refusal, which has led him to think of nationality as the only motive for not granting a new concession. At the end of the letter, A. Intelmann asked not to justify the authorization of pharmacies with national ownership, but to assess the qualifications, knowledge and experience of every German citizen working in pharmacy objectively.

The presence of non-pharmacist pharmacy owners in the sector was only one of the reasons explaining the need for re-registration. The systematic failure to grant concessions to the Baltic German public indicated the real objective of

reducing the decisive influence of the Baltic German population in pharmaceuticals.

The re-registration of pharmacies as companies was not an isolated process that took place only in pharmaceuticals.

In the years of Ulmanis' authoritarian regime, the re-registration of businesses took place in many sectors of manufacturing and economy. For example, the Ministry of Finance in 1938, the issue of reducing and rationalizing the extensively growing industry was on the agenda.

The “Latvianization” of various sectors carried out during Ulmanis' authoritarian regime resulted in an increase in state ownership. So-called “national companies” were formed, often privately managed and owned by stock companies, but almost all their capital was state owned. The creation of such companies allegedly carried out a “Latvianization” of industries with Latvian staff and board members, but in fact ensured intervention by state authority, expansion of management and, at the same time, increasing public ownership. Similarly, it was with the JSC “Farmācija”, founded in October 1939, which represented the state's interests in pharmaceutical field and was with a broad operating profile. Finance Minister A. Valdmanis approved the statute of the chemically-pharmaceutical industry and trading stock company “Farmācija” on October 18. The purpose of the newly established company was to produce, recycle, bribe and sell a variety of medicines and hygiene, cosmetics and dietary food products, and to support the government's intentions in setting the prices of medicines. It is mentioned that for its purposes, a public limited liability company has the right to set up its own factories, laboratories, warehouses, dealerships, pharmacies, representative offices, as well as to issue bonuses and awards to the best product developers of its company, scientific research. A month later, an order was issued that, in future, the pharmaceutical company will also be able to grant pharmacy concessions.

The abovementioned shows that in the last year of Ulmanis' reign, in pharmaceutical sector of Latvia the first signs of vertical integration and efforts in establishing the first chain pharmacies could be observed. It also appears that JSC "Farmācija" had planned to open a number of pharmacies, creating its own network of pharmacies, which would be state pharmacies in the administrative sense. The further development of this purpose was interrupted by World War II. The official closing date for the re-registration of pharmacies was 23 December 1939, so it was 2 years long. But pharmacies continued to renew concessions until June 17, 1940. The new concessions were not granted to individual Baltic Germans pharmacies, but they continued to operate. According to the amendments to these owners, pharmacies should have been sold by December 1939 to someone who, at the discretion of the Minister of Public Welfare and the head of the Pharmacy Administration, would have to grant the new concession, most likely to some Latvian pharmacist. However, this process could not happen either, because after the official speech of Adolf Hitler (1889–1945) on October 6, 1939, the emigration of the Baltic Germans from Latvia began.

Shortly before the Baltic Germans' emigration from Latvia in September 1939, 519 pharmacies operated in Latvia, 76 of them in Riga, but also in other regions: Vidzeme (excluding Riga) 148, Kurzeme 92, Zemgale 94 and Latgale 109. The Baltic German governments owned 99 pharmacies, 24 of them in Riga. Some of these, often historical pharmacies, ceased to exist just over the end of 1939, as a result of the Baltic German exodus.

The agreement on the outward migration of German nationality citizens between Latvia and Germany was signed October 30, 1939. The treaty stipulated that the official departure would be concluded on December 15, 1939 and consisted of 23 clauses. Based on the agreement the emigration of Baltic Germans was planned as one-off event, as a result of which all the Baltic Germans would leave Latvia for non-returning. However, not all Baltic Germans

emigrated before the end of 1939, a small part of it was emigrating in 1941. In 1939, 48 838 people left Latvia in total. In 1941, a further 10 900 persons emigrated from Latvia, among them also Latvians.

On January 20, 1940, the Pharmacists' Society of Latvia requested from the Pharmacy Administration information about the emigrated professionals. A list of these people showed that the industry had been left by 306 employees at the end of 1939. An analysis of the educational level of the emigrated professionals shows that 5 masters of pharmacy, 83 pharmacists, 144 pharmacist assistants and 74 pharmacy trainees left Latvia. Shortly after the emigration, the operation was temporarily suspended in 85 Baltic Germans' pharmacies, of which 23 were located in Riga, while in the other regions of Latvia: Vidzeme (excluding Riga) 20, Kurzeme 21, Zemgale 14 and Latgale 7 pharmacies.

Most of those emigrated in 1939 were Baltic Germans, numerically – 273 pharmacy professionals. Among them were 5 pharmacy masters, 70 pharmacists, 124 pharmacist assistants and 74 pharmacy trainees. The pharmacy masters were Paul Bernhard (1869–?), Ernest Bushman (1867–?), Theodor Wasmus (1876–1960), Gustav Eduard Alexander Weiss (1874–1945), and Alfred Zimmel (1887–?). Besides the Baltic Germans, also 18 Latvians emigrated to Germany, 7 pharmacists and 11 pharmacist assistants. Additionally, 7 Polish, 4 Russian, 2 Estonian, 1 Swedish and 1 English professional emigrated.

In spring 1941, when Latvia had lost its political independence, another 49 pharmacy employees left Latvia, again 5 masters, 14 pharmacists and 30 pharmacist assistants. Emigrated masters were Wilhelm Günther (1904–?), Eduard Hahn (1861–?), Woldemar Thomson (1883–?), and two Latvians – Vilma Liedeskrastiņš (1903–?) and Alise Kupcis (1906–1946).

The Additional Protocol to the Agreement between Latvia and Germany stated that emigrating Baltic Germans were not allowed to export pharmacy laboratories, equipment of the chemically pharmaceutical companies, items and

devices, as well as medical treatments when leaving. Baltic German pharmacists were allowed to sell their pharmacies to the new owners, if it was possible to manage this in such a short time. The Pharmaceutical Administration's report of 12 June 1940 stated that, the former owners themselves could only sell 9 pharmacies directly. In seven cases the purchasers were private persons, but in two cases city governments. The pharmacies purchased directly were Buhards' pharmacy or the pharmacy of Kaļķu street (Die Kalkstraßen-Apotheke) in Riga (founded in 1655), Foks' Pharmacy in Riga or Priekšpilsētas Pharmacy (Die Vorstadt-Apotheke) (founded in 1725), Lāča Pharmacy in Riga, homeopathic pharmacy Skorpions in Riga (founded in 1912), the first homeopathic pharmacy A. Jungers in Riga (founded in 1833), Trapene Pharmacy in Valka county, Zvaigžņu Pharmacy in Valmiera, Ērgļa Pharmacy in Limbaži and Ērgļa Pharmacy in Gostiņi. The price of a pharmacy was within the limits from 6000 lats to 75 000 lats. The most expensive one was Foks' Pharmacy in Riga, which was bought from Fridrich Treivert (Friedrich Treuwerth) (1874–1952) and Udo Valbe (Udo Walbe) (1903–?) by pharmacist Arnolds Krēsliņš (1892–1958). Comparatively the cheapest one was Ērgļa Pharmacy in the province of Latvia, which was bought by the Gostiņi town municipality.

Those owners of the pharmacies, which could not sell their pharmacies, had to pass them to the management of a special Fiduciary Exit Stock Company UTAG (*Umsiedlungs-Treuhand-Aktiengesellschaft*). UTAG sorted the substantive legal issues of the residents of German nationality and one of the most important tasks was the evaluation and taking over of the Baltic German's real estate. Pharmacy owners left their pharmacies with all their equipment and medicines on the way out, and they were gradually sold to new owners, using the mediation of UTAG.

A total of 48 pharmacies were purchased through a stock company UTAG. In Riga, 13 pharmacies were purchased, while in the other regions of

Latvia: Vidzeme – 9, Kurzeme – 14, Zemgale – 8, and Latgale – only 4 pharmacies. The lowest price was 400 lats, which was paid for Nīkrāce Pharmacy in the countryside of Latvia. The highest price, 42 000 lats, was paid by the chief of the Pharmacy Board himself, Nikolajs Rūtenbergs (1902–1971), for Nikolajs Pharmacy in Riga. By the mediation of UTAG, pharmacies for the total amount of 399 750 lats were sold. In Riga Latvian pharmacists became owners of such recognized pharmacies as Gulbja Pharmacy or Garnizona Pharmacy (Die Garnisonsapotheke) (founded in 1674), Millers' Pharmacy or Klīversala Pharmacy (Die Kliverholm-Apotheke) (founded in 1809), Buhards' Pharmacy together with laboratory, Āgenskalns Pharmacy (founded in 1822) and others. The interest about the acquisition of Baltic Germans pharmacies from UTAG was great and most often, several pharmacists wanted to buy a pharmacy. Then, a decision was made by the Pharmacy Administration with the consent of the Minister of the National Welfare.

As a result of the emigration of Baltic Germans in Latvia, the number of pharmacies decreased. In the notification of the Pharmacy Board from June 12, 1940, 23 liquidated Baltic Germans pharmacies were listed, of which 6 were located in Riga. Among them was one of the oldest pharmacies of Riga called Herbert Bush (1886–?) Pharmacy, also known as Mazā or Ziloņa Pharmacy (Die Kleine Apotheke or Elefanten-Apotheke) (founded in 1570), which during the period from 1814 until 1836 was owned by the famous Latvian scientist pharmacist Dāvids Hieronīms Grindelis (David Hieronymus Grindel) (1776–1836). Other historical pharmacies of Riga were also closed, for example, Lauvas Pharmacy or Kēniņa Pharmacy (Die Königliche Apotheke) (founded in 1691, officially closed in 1941), Zaļā Pharmacy (Die Grüne Apotheke) (founded in 1710), as well as one homeopathic pharmacy, Zvaigznes Pharmacy (founded in 1923).

After the Baltic German's emigration, the lack of pharmaceutical staff in the country had become a serious issue. According to the information of the Pharmacy Administration, in 1939 the pharmaceutical personnel in Latvia comprised 2068 employees, of which 649 were of Jewish origin. The emigrated 306 Baltic German professionals were a great loss, as pharmacists with higher education were not in sufficient numbers for the entire duration of the independency. For the first time, the Pharmacists' Society of Latvia warned about the seriousness of the situation on November 14, 1939. In a letter to the Pharmacy Administration, the Society recommends that more pharmaceutical students be admitted to the Pharmaceutical Division of the University of Latvia and that Section 121 of the Pharmaceutical Law, issued in 1939, be corrected. It stipulated that only pharmaceutical students with 1.5 years of pharmacy practice can take exams for pharmacist assistants. The Pharmacists' Society insisted that instead of pharmaceutical students, the exams for pharmacist assistants should be allowed to be conducted by pharmacy trainees, and students should be allowed to study unimpeded. Later, in 1940, as a result of several amendments to the regulatory enactments, the examinations of assistants of pharmacists were allowed to be conducted by pharmaceutical students with 1.5 years of pharmacy practice, as well as pharmacy trainees with at least 3 years' practice in pharmacies. But it didn't save the industry from a lack of permanent employees.

The Baltic Germans emigration allowed many Latvian pharmacists to become owners of pharmacies, but this period was not longer than a year. The Baltic German exodus was the prelude to World War II in Latvia.

With the outbreak of World War II in September 1939 and the German blockade of the sea, both the supply of resources for local pharmaceutical production and the purchase of finished drugs became the most pressing problems. The Pharmacy Administration and the Ministry of the National

Welfare understood that there was a great deal of difficulty in providing Latvian residents with medicinal products.

Until then, pharmaceutical chemical production in Latvia had achieved good indicators. Local factories were most often small chemically-pharmaceutical laboratories. Their rapid development started after 1933, thanks to the decision of the Board of Health, which provided for the subsequent authorization of imports from abroad only for medicinal products which cannot be replaced by equivalent domestic preparations. According to data from the Pharmacy Administration, the 25 chemical-pharmaceutical laboratories, or production factories, were operating in 1939 until emigration of Baltic Germans. Among the most visible and most widely represented on the market were “Medfro”, “Pharmakon”, Corporation “Farmācija”, “P. Putniņš”, Corporation “Farmazans”, “Eikert, Maršal un Ko”, “F. Hoffmann-La Roche un Ko”, and Latvian Red Cross Laboratory. In 1939, 13 foreign agencies were operating in Latvia, which traded in medicines and chemicals, while 26 wholesalers were involved in the procurement of medicines, drugs and other healthcare products.

At the end of 1939 and early 1940, at the Pharmacy Administration's correspondence with drug wholesalers, warehouses, as well as with local producers a moderate panic was observed. In the fall of 1939, it was tasked with carrying out inventory at each of these companies to identify stockpiles of medicine. Each institution, with the exception of pharmacies, forwarded to the Pharmacy Administration lists of the names and quantities of medicinal products and active substances in stocks. On September 9, 1939, for example, the Latvian Red Cross reported that medical treatments in the warehouse would be sufficient for another 6 months, not including untouchable reserves for mobilization purposes. In an individual correspondence of the Latvian Red Cross, a part of the German, Danish, English and Norwegian firms continued to promise to deliver drug orders in small quantities, but at other prices.

In compiling all the information received, the Pharmacy Administration found that stocks of medicinal products for Latvian consumption are sufficient for not more than a year. There was immediate action and, on 15 September 1939, the Government Gazette published an order for all medical establishments, sickness funds, doctors and sanitary staff, calling for everyone to be frugal when treating patients. It was pointed out that doctors should not prescribe medicines irrationally, wasteful and taunted to choose local preparations better.

In the early 1940s, the Chemical Pharmaceuticals and Commerce Council of the JSC “Farmācija” discussed the purchase of medicines and acknowledged that there are increasing difficulties in importing medicines from abroad in the future.

In order to make good use of existing stocks of medicinal products and to clarify which products imported so far could be replaced by those produced themselves, the Council drew up a special commission tasked with setting up a list of special “war-time” medicines and paying particular attention to the cultivation and use of medical plants. The commission expressed the hope that medicinal plants cultivated in Latvia will be able to be changed to medicines, as such plants were one of the exported goods.

In January 1940, the same commission sent two of its representatives, the pharmacist Jānis Okše (1894–1961) and the chief of the Pharmacy Administration, Aleksandrs Dzirne (1907–2001) to Germany and Holland. As Dzirne later wrote: “These representatives were given a broad mandate to buy everything they needed and what else they could get. Money did not play a role.” Ordered medicine reached Latvia in April and May, a small part in early June shortly before the occupation of the USSR.

In addition to the large-scale procurement already mentioned, JSC “Farmācija” sought to purchase medicinal products later in all other foreign countries, wherever the market for medicinal products was available. As reported

by the company, trade was started with countries that had not previously been primary suppliers of medicinal products to Latvia, such as Russia, Greece, Finland. The Russian firm “Разноэкспорт” mostly imported technical morphine for further processing into Moscow.

In June 1940, medicines were reported in the press for austerity. The list of restricted medicines and medical supplies includes mercury, menthol, camphor, caffeine, fish oil, petroleum jelly and vegetable oils as well as cotton, gauze and lignin. Citizens were warned that if conditions were to deteriorate, they would have to use locally sourced fats instead of vaseline oil and vegetable oils, alcohol instead of petrol, gauze, cotton and linen products. On 12 July 1940, the Pharmacy Administration reported to the Pharmacy Administration reported to the members of the board of JSC “Farmācija” that the following stocks should be supplemented: disinfectants – phenol, cresol as well as anhydrous lanolin, bismuth salts and teobromine salts.

The hastily organised and extensive procurement of medicines had taken place in Latvia just in time and was considered to be a great achievement, but for the coming years of war the residents of Latvia had to take into consideration strict distribution of medicines and control of circulation.

2. Pharmacy in Latvia during the first occupation of the USSR (1940–1941)

With the establishment of the USSR power in Latvia, both state administration institutions and professional organizations were reorganized and the changes affected the management of the Health Department of the Latvian Ministry of National Welfare and the Pharmacy Administration as well as the Pharmacists' Society of Latvia.

According to the Constitution of the Latvian Soviet Socialist Republic (LSSR), the Health Department of the Latvian Ministry of National Welfare was substituted by the newly-founded People's Commissariat for Health Protection, which was provided with further supervision and governance of the pharmaceutical industry in Latvia in line with orders and instructions from Moscow.

On September 25, 1940 the Presidium of the Supreme Soviet of the LSSR approved the decision of the Council of People's Commissioners (PC) appointing the Latvian doctor Emīls Planders (1906–1983), as People's Commissar for Health Protection. However, he was somewhat eclipsed in terms of prominence and political activity by his deputy Mihails Jofe (1898– 1979), a doctor of Jewish ancestry. Mihails Jofe had been a member of the underground Latvian Communist Party (LCP) since 1936 and had served a number of short prison sentences for pro-communist activities. The new power structures were generally assembled in line with the principle of appointing Latvians to the Council of People's Commissars and to every Commissariat. The reason was to create the impression that Latvians are interested in Latvia's transformation into a part of the USSR. The percentage of ethnic Jews in state government structures was rather small; however, the domain of health and pharmacy was one of those few where Jews held high office.

During the independence period, there was a Pharmacy Administration – an administrative institution directly subordinated to the Health Department of the Ministry of National Welfare. Its key responsibilities were to keep records on pharmacies, chemical and pharmaceutical enterprises, medication storage facilities and pharmaceutical personnel, to oversee the procurement and import of medications, to monitor drug advertising, and to ensure compliance with the laws, orders and regulations in the domain of pharmacy. Following the dissolution of the Pharmacy Administration on October 1, 1940, these duties were handed over to the Chief Pharmacy Directorate (CPD), structured in accordance with Soviet templates and entrusted with supervision over all pharmacies and pharmaceutical personnel in Latvia. The operation of the newly founded CPD entities was heavily complicated and bureaucratic; it employed a large number of employees, with a total of 63 people.

The Chief Pharmacy Directorate (CPD) organized the pharmaceutical industry in Latvia in accordance with the principles set by the Soviet government. From 1940 to summer of 1941, the Directorate was headed by two superiors in succession. On October 1, 1940, Mihails Karštets (born 1910), a pharmacy assistant of Jewish origin, was appointed as the director of the CPD. After the Bolsheviks came to power, he also assumed a number of other prominent positions. For instance, by order of the People's Commissar for Trade Jānis Pupurs (1901-1977), he was appointed as a trustee for the pharmacies and production of petroleum products, chemicals, drugs and pharmaceuticals. He was awarded the degree of a pharmacy assistant upon graduation from the University of Latvia in 1932, and until he became the superior of CPD, he headed Spāre pharmacy of the Talsu District.

M. Karštets retained his position as the superior of CPD for a little bit longer than six months. By order of Mihails Jofe, he was dismissed from the office of the CPD director in March 1941. The dismissal order listed a number

of reasons. It says that the operations of the CPD management had revealed neglect and a whole series of violations, which caused managerial and logistical problems with medications and other medicinal products; apart from that, no proper control over the operation of pharmacies had been established. The order pointed out the insufficiency of stocktaking efforts to control the amounts of medications and other materials in warehouses and pharmacies, also the instructions on various issues of work, reporting and records management were disregarded or fulfilled improperly, which misled the People's Commissariat for Health Protection. One of the faults was identified as a "mechanical" approach of the CPD to the appointment of officers. It is to be supposed that M. Karštets had no sufficient experience for this responsible position. In 1941, he was evacuated to Russia and settled in Moscow. Nothing is known about the further course of his life.

The next appointed superior of the CPD was the Jewish pharmacist Hackels Vasermanis (1909-1996). He had higher pharmaceutical education, having graduated from the Pharmacy Department of the University of Latvia in 1934. As CPD chief, he was in the position from March 12 to June 27. It is known that Hackel Vaserman evacuated to Russia during the change of occupation power. Upon leaving Latvia, he and his two Jewish colleagues also took valuable medications. Later, on July 2, 1941, an inventory report was drawn up in respect of this incident, which listed all the medication names, doses and amounts. The bulk of the removed medications consisted of narcotic substances, e.g., 9 kg of cocaine hydrochloride, 9.6 kg of pure codeine, 38 kg of codeine phosphate, 5.2 kg of morphine hydrochloride, about 3500 ampoules of morphine in different concentrations, 27 kg of pure theobromine. Apart from that, the trio had taken a supply of bandaging materials: 5 kg of lignin, 10 kg of absorbent cotton wool and 1000 packages of bandage gauze.

The three aforementioned individuals were later put in charge of supplying medications to the Red Army, which invites speculation regarding the possible further usage of the removed medications. After evacuation, Hackels Vasermanis was the pharmacy chief of the 1st Separate Latvian Regiment, 201st Latvian Riflemen Division. Vasermanis returned to Latvia in 1944, having been re-appointed as the head of CPD that same year. He pursued his further career in higher pharmaceutical education, having become the Dean of the Faculty of Pharmacy. Later, he moved from Latvia to Israel, where he died October 10, 1996.

Changes were also experienced by the Pharmacists' Society of Latvia, which was eliminated. A Labour Union of Pharmacists was created. All pharmaceutical personnel, with no exceptions, were forced to join the Labour Union. Within a short period of time, the Labour Union of Pharmacists incorporated about 3000 people into its ranks – from pharmacists, pharmacy assistants and pharmacy students to druggists, cosmeticians and other employees of pharmaceutical enterprises. Core responsibilities of the Labour Union included political education of the personnel, organization of their leisure time and provision of the Russian language courses. The Labour Union also held meetings for pharmacy managers to explain the duties and rights instituted by the new government. The union also published a news bulletin, which served as a means of propaganda, slandering the former system and emphasizing the positive aspects of the new Socialist setup: “The news bulletin covers and discusses the details of interior life of the Labour Union of Pharmacists, criticizes the petty-bourgeois trends displayed by some apothecaries through articles and caricatures and clearly sets the goals and objectives for pharmacists in a Socialist society.”

Separately from CPD, the Medically Sanitary Industry Directorate was established, also under the direct authority of the People's Commissariat for Health Protection. The Medically Sanitary Industry Directorate supervised the

following nationalized companies: chemically pharmaceutical factories and laboratories, dressing material factories, pharmacy cardboard factories, manufacturing factories of tools, hardware and optical accessories used in medicine and pharmacy, as well as the medical plant company owned by nationalized JSC “Farmācija”. Ernests Morics (1889–1955) was appointed chief of the Medically Sanitary Industry Directorate. He had obtained a pharmacist degree in Moscow in 1914. He was one of those rare pharmacists who had linked his career to both politics and practical work at the pharmacy. At the age of 15, in 1904 he had become a member of the Latvian Social Democratic Workers Party (LSDWP). One of the duties of the chief of the Medically Sanitary Directorate was to organize the supply of raw materials for production of pharmaceutical products and to control the distribution of the finished preparations to pharmacies.

Transfer of pharmacies, various pharmaceutical companies, hospitals and clinics to the jurisdiction of the government was a natural consequence of the establishment of Soviet rule within the territory of Latvia. For the first time, pharmacies were nationalized in Latvia in autumn 1940. The process was fast and rather smooth.

This was in contrast with what had happened in Soviet Russia – where pharmacies, pharmaceutical chemical laboratories and factories were nationalized in early 1918, shortly after the October Revolution. Back at the time, pharmacy practitioners with secondary pharmaceutical education actively assisted and ultimately succeeded in the conversion of private pharmacies into public facilities. The foundation of pharmacies nationalization in Soviet Russia was the ideologically shaped class struggle motive, that is, common workers resentment towards business owners. In Latvia, nationalization of pharmacies and other pharmaceutical enterprises was initiated by the new Soviet government.

Prior to the nationalization of pharmacies in Latvia, an inventory was first organized. The inventory was carried out in the presence of the former owner with the participation of one police officer and one person from the staff with medical or pharmaceutical education. Stocktaking lasted 3 days, working in shifts, giving for 5 to 6 hours for sleep. All goods, active substances were listed in the inventories with their name and number or volume. In order to carry out inventory throughout Latvia, more than 1000 members of Komsomol were involved, of which 480 participated in the inventory of pharmacies and other pharmaceutical companies in Riga. The lists of completed inventories had to be handed over by the Komsomol groups to the People's Commissar for Health Protection.

A month later, the nationalization of pharmacies began. On October 28, 1940, a decree of the Supreme Soviet of the Latvian SSR was issued, which decided to nationalize all private hospitals, outpatient clinics, pharmacies, pharmacy warehouses and chemically pharmaceutical factories in Latvia, in accordance with Article 6 of the Constitution of the Latvian SSR. The nationalization process of pharmacies was commenced on October 31, 1940. The Deputy People's Commissar for Health Protection M. Jofe stated that the goal of the Commissariat was to have private hospitals, pharmacies, pharmaceutical factories and wholesalers of drugs and medications nationalized within the shortest possible term, as instances of "speculation" had recently been detected in the sale of medications at multiple of pharmacies, as well as attempts to "hinder" the turnover of medications. These statements are surprisingly similar to dating back to the nationalization of pharmacies in Soviet Russia in 1918. In particular claiming, that the old bureaucratic system had diminished the role of pharmacists to that of mere passive executors, stripped of any chances to exercise initiative; nationalization was announced as a means of letting loose the true potential of pharmacists.

In the course of nationalization, enterprises were taken into government hands with all inventory and personnel. These actions also resulted in the staff of pharmaceutical companies becoming public-sector employees. Former pharmacy owners were left in their positions as pharmacy managers or shifted to basic staff. During that time, an active transfer of employees from one post to another or from one pharmacy to another took place. Often, former pharmacy owners left him in former pharmacies, but could also move to work at another pharmacy or even to another city. Following nationalization, the previous name of the pharmacy was replaced by numbering; however, this pharmacy numeration system was not implemented completely before the summer of 1941. As instructed by the respective order of the CPD to pharmacy managers, each pharmacy was to be assigned the name “CPD Pharmacy No. ...”. Cardboard signs with the new name were supposed to be posted at visible locations; all signs, plates, labels and prescription signatures with a pharmacy’s former name were to be removed from service immediately. With the loss of its name, pharmacies lost their identities. The nationalization of pharmacies and other pharmaceutical enterprises was completed by November 10. In total, 488 pharmacies and 14 drug and medication wholesalers were nationalized in Latvia in the autumn of 1940.

The nationalization of pharmacies and other pharmaceutical companies in Latvia occurred at a rapid pace, just like all other processes that the Soviet rule employed to take over the government, financial and media sectors. There is no direct evidence of any resistance on the part of pharmacists and pharmacy owners, or any public reaction to such alienation of property.

In the press reporting on the end of nationalization, were given clear message regarding to the former pharmacy owners that they had no choice but to get over it and accept the new system, otherwise they would have been left with no employment and subsistence. The business nationalization process took place during the first months of the occupation period. At the time, the general

population was in a state of major confusion and ignorance; different and controversial rumors were about, as was the “shopping fever”. For many residents of Latvia, the occupation of June 17 came as a surprise; there was an immense informational vacuum, and the public had no idea of what to expect from the Communist regime. Another popular concept was that the occupation would not last long.

The nationalization decree of 28 October 1940 also covered all pharmaceutical factories and wholesalers. Over the course of nationalization, the number of pharmaceutical companies declined as they were merged. Further across the country, pharmaceutical preparations were produced by four companies: the chemical pharmaceutical and industrial companies “Farmācija”, “Farmazans”, “Saga” and the chemically pharmaceutical laboratory “P. Putniņš”. For the instruments were responsible the medical tools and apparatus supply and distribution office “Medinstruments” and the workshop “Ortopēds”. The packaging materials were under the competence of the I Pharmacy Cardboard and Printing Factory.

Business nationalization was the first step intended to align the pharmacy industry of Latvia to that of the USSR. This entailed essential transformations, severely reshaping the structure of the industry and introducing centralized command. Pharmacy in Latvia would be adapted to the Soviet medication nomenclature and export/import mostly within the boundaries of the Soviet Union. This meant that autonomous procurement of medications faced heavy restrictions. Changes also affected the operation of pharmacies in practice, as great emphasis was put on mass production of extemporaneous medications. In Soviet Russia, this was a trend owing to the weak and underdeveloped pharmaceutical manufacturing industry.

In order to understand the prospects of Latvian pharmacies, one needs some insight into the traditions and development of pharmacy in Soviet Russia.

At the time, pharmaceutical manufacturing in the Soviet Union was segregated into two categories: major factories and regional factories. In 1940, there were ten major factories within the vast territory of Soviet Russia. Health-related problems that the population of Russia was facing were mostly associated with insufficient production and supply of disinfectants, insecticides, antiseptics, sulphanilamides and vitamins to consumers.

According to researchers of history of pharmacy, by 1939, much of the Soviet pharmaceutical manufacturing sites were not only poor but primitive. Common problems that prevented the pharmaceutical industry of Soviet Russia from delivering on production quotas required by the plan were irregular supply of raw materials, frequent blackouts at certain factories, outdated technical equipment, insufficiently clean water and the poor state of water supply systems, as well as employees' indifferent attitude to the work itself, to equipment and to finished products. Understanding the limited capacity of the Soviet Russian chemically pharmaceutical industry to supply the population with pharmaceutical products, obviously that efforts were made to resolve the situation with compounded preparations. During the first period of Latvia's independence, the population was well supplied with various pharmaceutical goods, both imported and locally produced. As a result, pharmacies compounded preparations according to prescription from doctors intended only for individual use.

Alongside of coordinating the practical activities, the CPD published various major plans in respect of Latvian pharmacies, mostly comparing them to the pharmacies in Moscow. Upon returning from a visit to Moscow, where M. Karštets had witnessed the operation of the most exemplary pharmacies, he reported on what reasonable methods of operation were employed by pharmacies in Soviet Russia. This allowed for a major increase in labour productivity; as an example, he mentioned that in Latvia, a pharmacy assistant was able to fill out

50 to 70 dosage forms within 8 working hours, whereas in Moscow, some 200 to 400 dosage forms per shift were considered normal. This type of propaganda was regularly read in the local press. However, the comparison was definitely out of place. As already mentioned, in Latvia mass preparation of extemporaneous medicine in pharmacies was unnecessary, as the pharmaceutical industry has achieved a good degree of development.

In early 1941, the CPD announced the transfer of Latvian pharmacies to the drug nomenclature of the Soviet Union. The Soviet drug nomenclature structured medications by chemical designations. The principal guideline of the nomenclature was that all medications and active substances it included were produced and consumed in the Soviet Union. The need for such nomenclature was substantiated by the consideration that many foreign patented medications imported in Latvia were similar in terms of pharmacological action, only differing in terms of patented names and thus only competing through advertising. An example that gives an idea of the available range of medications would be the “Medication and Product Nomenclature of Sections of the Central Pharmacy Storehouse”, issued by the CPD during the second Soviet occupation, in 1954. It contained a total of 5 sections. The section listing the final dosage forms, mostly tablets and ampoules, mentions 268 units. The strictly controlled substance list consisted of narcotic and potent substances, as well as antibiotics, which were extremely scarce at the time – a total of 70 units. Other sections contained listing of active pharmaceutical ingredients, medical herbs, tinctures, extracts and extemporaneous preparations.

In press it has been announced that expensive imported medications were further going to be replaced with Soviet medications; for instance, the German patented anti-bacterial drug “Prontosil” was going to be replaced with its USSR-produced counterpart, the “Red Streptocide”. Pharmaceutical enterprises in Soviet Russia synthesized classical anti-bacterial medications of the

sulphanilamide group. The most widely-used ones were white and red streptocide, sulfidine or sulfapyridine, sulfazole or sulfamethylthiazole. However, drug substances of the sulphanilamide group were not effective against all infectious diseases; furthermore, the use of red streptocide carried side effects, it being a highly toxic compound. Chemical and pharmaceutical enterprises of Soviet Russia started producing penicillin for mass consumption after 1945.

Medications were not readily available to the population during the Soviet occupation, as there were restrictions imposed on the purchase thereof. In early 1941, the CPD sales director returned from a visit to Moscow, tasked with reconciling the range and amounts of medications that Latvia could receive from the Soviet Union. He reported that restrictions on the purchase of medications were required due to the “shopping fever”, thus safe guarding medications for “genuine emergency cases”, as the import of pharmaceuticals from abroad had ceased half a year earlier. The composition of the Soviet Union's patented preparations is said to be exactly the same as foreign ones, and information will soon be sent to doctors about the new preparations, which Latvia will receive and will soon be produced on the spot.

According to M. Karštets, as regards restrictions on the sale of medications, imported proprietary medicines in original packages should be dispensed only upon a doctor's prescription and in “normal” consumption amounts – just one original.

The availability of pharmaceutical goods to residents of Latvia was reduced not only by the Soviet policy on the introduction of the USSR medical nomenclature and by the changing of prices, but also by the practical functioning of CPD. One of the key responsibilities of this institution was to organize the supply of hospitals and pharmacies with medicinal products. Critical statements can be found about this task. The People's Commissariat of Public Control of the Latvian SSR, which initiated wide-ranged inspections at the CPD and at

wholesalers and retailers of medical products in early June 1941, in order to determine the state of supply of medications, and the financial state of these institutions. These inspections revealed that wholesalers were unable to deliver ordered products to a considerable number of hospitals and pharmacies. Within a period of two months, orders at pharmacies were delayed for longer than 10 days in 94 instances, whereas in 22 cases they were delayed for over 20 days, even though depots did have sufficient stock of the necessary medical and sanitary products. In certain instances, orders would not be fulfilled for over a month. Findings also stated that accounting and material record-keeping at the CPD were not properly organized; the inspection revealed records to be in a chaotic state; documents were not processed but simply piled up on open shelves instead. No repeated stocktaking of medical products was carried out as prices were increased or reduced. In his speech at a medical conference, Žanis Spure (1901–1943), Secretary of the Central Committee of the Latvian Communist Party (LCP CC) admitted: “the condition of pharmacies is chaotic”.

Restriction of the freedom of speech and press, pressure against dissent, arrests and alienation of property as described above were all components of the totalitarian government ideology of the Communist regime. The wave of repressions peaked on June 13 and 14, 1941, with mass deportations of the population to Siberia. Having gained access to the documentation of the Latvian War Ministry, the “Aizsargi” organization and a number of other institutions and organizations, as well as documents pertaining to the nationalization of enterprises and companies, and reports from secret agents and other sources, officers of the People’s Commissariat for State Security of the LSSR used these as grounds for registration of thousands of individuals who were supposed to be deported. The persons deported could be classified in persons sent administratively and in persons arrested. A member of the “Aizsargi” organization, a member of a corporation, a former homeowner or entrepreneur –

anyone could be labelled as a “socially hazardous element” or a “member of a counter-revolutionary organization”, as defined in Communist terminology.

The earliest data on those deported were published by the organization “People's Assistance” shortly after the establishment of the Nazi German occupation government in Latvia. Lists containing the names and occupations of the deported individuals were made. As of the beginning of 1942, according to the data presented by “People's Assistance”, 44 pharmacists were deported and 8 were arrested. Another publication of the “People's Assistance” of 1943 stated that repressions had afflicted 60 pharmacists and pharmacy assistants, of which 40 were men and 20 were women. Of those 45 deported, 9 deported from custody, 6 missing, but no one has been killed.

The most precise data in this case were provided by the chief of the Pharmacy Administration Aleksandrs Dzirne (1907–2001). In 1944, he published the names, surnames and destinations of his deported colleagues, naming 56 individuals in total – 38 men and 18 women. He mentioned that two pharmacist assistants Jānis Paserns (1888–?) and Herberts Friks (1889–1943) were taken to Russia but successfully returned, but four from pharmaceutical personnel were killed by military action: two pharmacist assistants Kārlis Grīntāls (1892–1941) and Aleksandrs Fīrants (1910–1941), pharmacist Jūlijs Vīstucis (1881–1941) and pharmacy trainee Pēteris Praškevičs (1912–1941). As Bolsheviks retreat, Pēteris Praškevičs fell in a fight as a partisan near the Murjāņi.

Dzintris Alks, an author of the book “Latvian medics into the mill of political repressions”, lists 72 persons who have been affected by repressions, of which 66 have been deported. Unlike A. Dzirne list, here are listed 7 Jewish nationality pharmaceutical employees who have been deported: pharmacist Jūdels Borde (1903–1962), pharmacist assistant Dora Gurviča (1897–1942), a pharmacy-working feldsher Alters-Ruvins Gurvičs (1884–?), pharmacist Sofija Litvinska (1892–1946), pharmacist assistant Īzaks Litvinskis (1884–1946),

pharmacist Ābrams Šacs (1887–1967), as well here as pharmacist is mentioned Solomons Šacs (1875–?), however, such a person is not found in the list of medical personnel of 1940 in Latvia among listed pharmacists or pharmacist's assistants. Perhaps he was the owner of the herbal store, Solomons Šacs (1875–?).

In compiling the information about the deported pharmaceutical professionals, the list of A. Dzirne is taken as a basis. The files of the deported residents of Latvia from The National Archives of Latvia were researched to compile the information and to gain perception into the making of arrests, accusations as well as the future fate of the deported pharmacists, assistants, and practitioners. As it is known from the summarized information 16 out of these 56 individuals, of which five were men, survived. Files on the deported individuals openly specify the reasons for their deportation to Siberia. Deportations were mostly due to the respective individuals being classified as enemies of the people or socially hazardous elements. Among pharmacy workers, these categories applied to socially active men, mostly members of the nationally oriented organization called “Aizsargi”, as well as members of other organizations, political parties, owners of pharmacies, enterprises, land or houses, and those who had been better-off financially. Female pharmacists or pharmacists' assistants were most often deported in connection with the arrest of her husband or relatives. Compared to the total number of deported persons, the number of persons employed in pharmacy is not high. Working in pharmacy was not the determining reason for deporting these professionals. The sources of information analyzed show that organized resistance to the Soviet rule during this period was a direct route to conviction and death. However, at that time, it seemed that people were unaware of the possible consequences, especially the youngsters. For example, historian Tāivaldis Vilciņš in his study “School Youth in National Fight. 1940–1941” describes the student resistance movement in

Latvia: “Even before the start of the school, a national battle group led by Gedimins Fronckēvičs, a 10th grade student, was established at Aglona High School. The group soon grew into a 14-member highly cohesive organization. G. Fronckēvičs drew up a plan how to blow up the building of the Communist Party's Aglona District Committee. [...] large quantities of explosives were collected.” Gedimins Fronckēvičs (1921–1941) was one of the three sons of Zigismunds Fronckēvičs, owner of the “Medfro” chemically pharmaceutical plant. On May 21, 1941, Gedimins Fronckēvičs was shot dead because of planned bombing. His death sentence spells out the circumstances which was given prominence: the son of a chemically pharmaceutical business owner with a “bad social background” and membership in the “Mazpulku” organization.

3. Pharmacy in Latvia during the occupation of Nazi Germany (1944–1945)

The Soviet occupation was replaced by the occupation regime of Nazi Germany in the summer of 1941. On July 17, 1941, occupied eastern territories were merged into a single administrative area and designated as Ostland. Latvia, Lithuania, Estonia and Belarus were included in the Ostland. The Chief Pharmacy Directorate (CPD) ceased its activities. Instead, the former Pharmacy Administration of Latvia was restored, which was directly subordinate to the Director-General of the Interior and supervised by “Leiter der Referates Arzneiwesen beim Generalkommissar in Riga” (Head of the Medicinal Products Division of the General Commissariat in Riga). Aleksandrs Dzirne was appointed as the fiduciary person of the Pharmacy Administration of Latvia. Immediately after the end of the military action in the territory of Latvia, the Pharmacy Administration made an urgent attempt to identify the state of pharmacies network. A. Dzirne tasked all pharmacy managers to immediately send the following information to the Pharmacy Administration: name of the pharmacy (including former CPD number); whether the pharmacy was in operation or was closed; name and degree of the manager; current staff composition of the pharmacy; whether remedies and dressing materials remained have remained intact or lost during war (specifying how) as well as estimate approximate value and quantities of the goods lost. The Pharmacy Administration took over the system created by CPD and therefore continued to operate as an economic-administrative body. In its report to pharmacy managers, the Pharmacy Administration also made clear that pharmacies remain state-owned and the only persons in charge are managers.

In order to protect wholesaler's stock of pharmaceutical goods from possible robbery, immediately after the end of active warfare, on July 1, 1941 guards were placed near and chiefs were appointed next day. As well from

July 1, all stock in the wholesales was seized. On August 13, the Pharmacy Administration regained full control over the pharmaceuticals available in wholesales. Consequently, the Chief of Pharmacy Administration was given full responsibility for the subsequent equitable and rational dispensing of medical products to the pharmacies and hospitals, with the greatest degree of austerity. Three pharmaceutical wholesalers were taken over from the CPD and renamed the Pharmacy Administration wholesales I, II and III.

A medicine wholesale in Liepāja had burned down with a significant number of remedy stocks because of the operations of the war. In its place the Pharmacy Administration wholesale IV was restored and to which pharmaceuticals were delivered from Riga, as well as collected from war affected pharmacies in Liepāja. All the stock accounting documentation was taken over in an unordered manner, nor this period passed without loss of material values as well. Medicinal products taken from Medicine and bandaging material taken by H. Washermanis from CPD I wholesale summed up about 500 000 RM of total loss. As well as during the days of the occupation shift, employees of wholesaler fleeing from Latvia had driven out two wholesale-owned cars with a total value of 13 549 lats (LVL). The Pharmacy Administration created centralized accounting at that time. According to A. Dzirne, during the Soviet occupation, the accounts of the CPD were only at the stage of establishment, since no evidence of regular accounting was available. The pharmacy managers had until then produced their accounting books by their own understanding and knowledge, so there was chaos in the accounting of materials during the Soviet era, and as it turned out, it had not been done centrally at all. On 16 August 1941, the chief accountant, assistant chief accountant, five senior accountants, six accountants, three assistant accountants, two senior accountants, and one cashier began their work.

When the Soviet authorities left Latvia, a pharmaceutical warehouse established in spring of 1941 in Riga, on Kungu Street 26 came under the control of the Pharmacy Administration. The creation of such a warehouse was most likely due to the introduction of the Soviet drug nomenclature and the belief that some medicines, active substances and herbals would no longer be in demand. A large portion of the pharmaceuticals were expired and had arrived there as a result of extensive inventories of the Soviet year. The contents of the warehouse were intended to be destroyed.

The warehouse contained a variety of raw materials, patented medicines, galenic preparations, dried medical plants, vaccines, sera, dressing materials, cosmetics, nursing care tools and a variety of wares. By the end of September 1941, the Pharmacy Administration teamed up its commodity managers for reviewing and sorting the goods of this warehouse. Goods that could still be used were selected, medical products of questionable quality were transferred to the analytical laboratory for quality tests, but a large proportion of the expired goods were decided for disposal.

Immediately after the shift of occupation powers, pharmacies continued to operate under the responsibility of the Pharmacy Administration, but chemically pharmaceutical companies did not. As A. Dzirne wrote: "During the reorganization of the government system left by the Bolsheviks, the chemically pharmaceutical industry, despite heavy struggles, has slipped out of the competence of the Pharmacy Administration and now is the subject to the Department of Industry."

In the second half of 1941, the activities of the Pharmacy Administration were focused on the urgent issues of the industry. It was important to identify the stocks of medicines and to make rational use of them, therefore, great attention was paid to the coordination of wholesalers and supply of goods to pharmacies.

A former CPD I medical wholesale basis at 6 Grecinieku Street had served many pharmacies, hospitals, outpatient clinics and medical centers in Riga and Riga during the Soviet occupation. This branch provided with pharmaceutical products and raw materials to 129 pharmacies in Riga and elsewhere in Latvia, chemically pharmaceutical companies, hospitals, outpatient clinics, photography workshops, as well as military units. Between July 1941 and May 1942, the wholesaler had purchased medical supplies from local manufacturers for 347 970 RM and from German companies for 100 000 RM. The former CPD II wholesale had suffered heavy losses during the war, the warehouse and the herbal store owned by it had burned down. The purchase of additional goods was made for 313 072 RM between July 1941 and June 1942. During the Soviet occupation, the III medical wholesaler was the so-called wholesale base of the Latgale district and accordingly operated on a territorial basis. Immediately after the shift of occupation powers due to lack of transport and disrupted postal traffic, the wholesaler lost all its customers because it was 100% attached to Latgale pharmacies. From this it can be concluded that Latgale pharmacies were temporarily poorly supplied with remedies. By the summer of 1942, the particular wholesaler had stabilized, serving 109 pharmacies and hospitals with a monthly turnover of 45 000 RM, however, delivered goods came from procurement made in independence period and in small quantities. The IV medical product wholesale base in Liepaja had burned down, but was successfully restored in 1942. There were 20 employees, and the stock of goods was only worth 8500 RM, and therefore the supply of medical products was minimal.

The Pharmacy Administration also monitored the operation of pharmacies. In January 1942, there were 360 pharmacies in Latvia. In 1942, the Pharmacy Administration issued a series of regulations to pharmacy supervisors regarding the performance of settlements, as well as instructions for

daily situation management. A total of 4 brochures were issued in 1942. Those rules governed the economic activity of pharmacies in order to take place in the same way throughout the country. As part of the same rules, pharmacy managers were encouraged to comply with and immediately inform the Pharmacy Administration if a doctor particularly often prescribes narcotic preparations or ethyl alcohol. The Pharmacy Administration also praised the efforts of pharmacy managers because pharmacy audits carried out in many cases found pharmacies clean and tidy – despite the war conditions. On December 9, 1943, the Pharmacy Administration issued the last, 6 th instruction to stock pharmacies, the thickest in terms of volume. It outlined daily situations in Latvian pharmacies in the length of 28 points. For example, the Pharmacy Administration had received complaints of disciplinary violations. Unjustified and systematic absences of employees, including the arbitrary taking of medicines, substances or other medical products for their own use, without the notice of the pharmacy managers, are mentioned. Also, despite the instructions given by the pharmacy audits, there were still pharmacies that were in extremely poor condition, untidy and repairable. In some cases, pharmacy audits revealed that goods and medications were not systematically arranged, but scattered; dust was not cleaned; containers of substances and ointments stood unwashed; pasted with illegible labels. Due to the simultaneous process of reprivatization process of pharmacies at the time of issuing these guidelines, some other issues were also raised. For example, even after the privatization of pharmacies, it has been mentioned that the recruitment, dismissal or transfer of pharmaceutical personnel will remain within the competence of the Pharmacy Administration.

One of the crucial issues that had to be dealt with almost all years of the occupation of Nazi Germany was the reprivatization of pharmacies. The reprivatisation of pharmacies was not an isolated process, but part of the restoration of private ownership of real estate and companies throughout the

economy. It was a complicated, lasting task for precisely the reason that it included the essential political economic interests of the German occupation power.

On October 17, 1941, the German authorities' newspaper "Amtsblatt des Generalkommissars in Riga" contained an "Ordinance on the renewal of crafts, small industry and retail", which acknowledged that private activity and initiative were the foundation of a healthy and capable economy. A few days later, in reference to this order, a critical remark was published that, before further instructions were issued, any free and arbitrary conduct by individuals on property was strictly prohibited. Any privatisation of undertakings was possible only in 1942 and early 1943, the head of the Pharmacy Administration, Aleksandrs Dzirne, received several letters asking about the possibilities of privatising of the pharmacy or receiving compensations. Although it may be assumed that an ordinance on the renewal of renewal of crafts, small industry and retail would be also applicable to pharmacies, it was not the case. A. Dzirne had responded dismissively in all cases, explaining that no rules on privatising pharmacies or providing reimbursements have been issued for the time being. Delaying the process wasn't quite random. The German occupation authorities tried to find a "golden mean" in order to achieve their interests and at the same time give the impression that Latvian wishes were not left unnoticed. The process of re-privatising pharmacies started only after May 12, 1943, when the General Commissariat issued regulations on concessions for public pharmacies. Regulations stated that open-type pharmacy concessions are being re-granted and granted by the Commissioner-General. From now on, the concession was open to applicants from Aryan race whose spouse was also an Aryan, in case the applicant was married. The applicant had to possess civil honor, which meant a politically trusted person. The person must have been a certified pharmacist, must have planned to work at the particular privatised pharmacy, and there

should have been no evidence to conclude that the applicant was not suitable for running the pharmacy. When granting these new concessions, it was preferable to those pharmacy owners who had owned a pharmacy before nationalisation. Moreover, it was also taken into consideration whether the applicant had fought and in which army. Within the publication of these regulations was issued also a statement that all former pharmacy concession holders whose pharmacies have been nationalized and who wish to obtain a new concession on the basis of these regulations must submit personal requests to the Pharmacy Administration by 1 August 1943. The return of the first pharmacies to their former owners took place at a formal event at the Hall of the Great Guild on December 7, 1943. In the framework of this event, 84 Latvian pharmacies were re-privatised in the presence of owners. The process of pharmacy reprivatization continued until the spring of 1944. On March 1, 1944, the Pharmacy Administration of Latvia reported that the closing of the process of reprivatising pharmacies is expected soon, due to the re-privatising of around 220 pharmacies and the re-privatisation of the others were delayed due to technical or legal issues. On May 2, 1944, A. Dzirne published a review of reprivatised pharmacies listing 220 pharmacies and their owners. There were 32 pharmacies re-privatised in Riga, Vidzeme without Riga – 83, Kurzeme – 36, Zemgale – 43, and Latgale only 26 pharmacies.

The supply and consumption of medication was extremely complex and topical issue throughout the war. As mentioned above, during the Soviet occupation, medicines were not only imported, but some of the stocks were lost due to the war activities. The Pharmacy Administration developed a careful approach to the distribution of medicinal products, and A. Dzirne as chief of this institution was personally responsible for rational and frugal consumption of medicinal products. During the years of war, Latvian residents did not experience a total remedy deficiency because of already mentioned large-scale purchase of medicines which was made during the time of independent Latvia in the early

1940. In 1941, following the shift of occupation powers, additional purchase of medication was not conducted, citing the difficulty of transportation and unestablished arrangements of the settlement with the occupied Ostland. Therefore, starting in autumn 1941, wholesalers could supply only a minimum number or a minimum treating dose to pharmacy requests. For some difficult-to-access foreign medicines, accounting books were provided for both wholesalers and pharmacies. As for particularly large shortage of proprietary drugs were listed all Bayer products, such as pyramidone, fenacetin, mercury salts, bismuth salts, bromine salts, iodine salts, barbiturates, codeine and its salts, caffeine salts, calcium salts, all vitamins and hormone preparations, as well as all tropical herbs, essential oils, teobromine and its salts, arsenic, inorganic acids and rivanol. For each pharmacy, depending on consumption, monthly norms were also introduced for the receipt of raw materials needed for the preparation of extemporaneous medicines – ethyl alcohol, swine and bovine fat, sugar, glycerol, vegetable oil.

The supply of medical products resumed in 1942, meanwhile, German patented pharmaceuticals were imported only slightly in general. In the first half of 1942, the company “Pharm-Ost” G.m.b.h. was founded in Berlin, which had a monopoly on the supply of medicinal products to the occupied Eastern lands, including Latvia. This company delivered medicines from Germany to Riga, Tallinn, Vilnius and Minsk by railway. Thus, in 1942, delivered medications were at the value of approximately 250 000 RM, but in 1943 – of about 1.5 million RM. In 1942, the stocks of wholesalers were heavily depleted, as pharmacies had served customers for a total of about 9.1 million RM. In 1942 from stocks of medicinal products of Latvia, some part was also handed over for the German army needs, such as pure quinine bulk 507 kg, pure caffeine bulk 440 kg, pure codeine bulk 33 kg and morphine bulk 7 kg. In 1943, the supply of medicinal products from Germany was relatively regular and requested proprietary medicines, even if were not received immediately, were always

supplied with the next delivery. Later, from the end of 1943 and early 1944, the supply of medicines was once again in crisis, as Germany suffered from air raids and bombing. According to A. Dzirne, in February 1944, stockpiles of many proprietary drugs were once again depleted as the population increased their purchases.

Lack of medicines in everyday life caused frustration for both doctors and patients. Often doctors both in countryside of Latvia as well as in Riga prescribed medications without being interested in whether they are still available in pharmacies and in what quantities. In October 1941, the Department of Health had published a list of medicines intended for doctors, which will be dispensed by pharmacies only on prescription and should be used sparingly. The list included the following substances: acetone, glycerol, quinine and its salts, teobromine and its salts, bromine and its salts, caffeine and its salts, bismuth and its salts, lactic acid, phenol, citric acid, castor oil, flax oil, olive oil, lanolin. For the rest of the war years, the Pharmacy Administration, in cooperation with the Department of Health, thoroughly inspected prescriptions written by doctors and frequently sent warning letters indicating which substances were prescribed too often or in excessive quantities. It was pointed out that when prescribing medicines and dressing materials, the physician should remember and follow the basic principles of cost-effective treatment, which were as follows: (1) prescribing medicine should be as simple as possible; (2) avoid prescribing multiple products for one purpose; (3) over-prescribing and diversifying medicines should be eliminated; (4) to limit the prescription of narcotic drugs to the minimum and to try to replace them with other analgesics. In general, the treatment of the sick must Local chemically pharmaceutical plants played a crucial role in the availability of medicines in moment of crisis. However, they also encountered various difficulties due to the lack of raw materials imported from abroad. Company executives regularly sent information to the Pharmacy

Administration or made requests related to the production of preparations and the use of raw materials. For example, in May 1942 JSC “Farmācija” sent the Pharmacy Administration a list of pharmaceutical products that were previously manufactured but are currently producing less or not at all due to the lack of raw materials. A regular procedure during this time was to seek permission from the Head of the Pharmacy Administration to use a certain amount of the raw materials for the manufacture of drugs. From the active correspondence it can be concluded that the local companies were persistently and even enthusiastically trying to overcome the difficulties of the war.

The pharmaceutical sector, which has been suffering from a shortage of employees since the emigration of the Baltic Germans, has been indirectly but severely affected by the repressions of the population by the totalitarian regime of Nazi Germany. The greatest loss of labour was caused by the Jewish Holocaust in late 1941. Immediately afterwards, the number of pharmacy employees was critically small. Annual report of the number of pharmacies and staff on December 31, 1941 shows that there were 355 pharmacies in the country operating with only 917 employees. This means that every pharmacy in Latvia had an average of 2.6 employees.

The majority of health care employees of Jewish origin, including pharmacists, pharmacy assistants and trainees who decided to stay in Latvia, became victims of ghettos or concentration camps. According to data from the Pharmacy Administration, in the first half of 1941 there were 1741 people in the pharmaceutical personnel, of which 543 were Jewish. In later reports by the Pharmacy Administration, 543 is a figure cited as a loss of staff resources, denoting it as “exclusion of Jews” from the profession. Not only the Holocaust, but also the potential mobilization in the Legion threatened to cut the number of employees even more. On March 31, 1943, Chief of the Pharmacy Administration, A. Dzirne received a secret letter from the Director of the Social

Department of the General Commissariat of the Interior, Oskars Sīlis (1888–1950). He warned that similar to the first call, the conscription of the following of seven-year period men in the German army could soon be expected. O. Sīlis estimated this may affect men born between 1912 and 1918, some of whom are considered as undoubtedly highly skilled and irreplaceable. He pointed out that the Pharmacy Administration should draw up a list of irreplaceable employees as soon as possible, but to be successful, the list should not be too long and should only include staff without whom pharmacies could not operate without. A. Dzirne created a list of 52 persons, mostly consisting the pharmacy managers. He also compiled a similar list in 1944, including 29 persons.

The number of missing employees tried to increase by actively recruiting pharmacy trainees, organizing training courses and exams for pharmacist assistants, as well as by recruiting more students in the Pharmaceutical Division of the University of Latvia. During this time, students were not required to take entrance examinations and admissions ran campaign-like throughout the second half of 1941, resulting in a steady increase in the number of first-year students. In the fall of 1940, it was stipulated that the degree of assistant pharmacist could be obtained by pharmacy trainees registered with the Pharmacy Administration with 3-year experience and students from the Pharmaceutical Division with 1.5 years of pharmacy practice. Assistant pharmacist courses and exams were organized by the Pharmaceutical Division of the University of Latvia and were usually held 1–2 times a year. As part of the course, lectures and practical classes were taught and examined by academics from the Pharmaceutical Division, such as Jānis Maizīte (1883–1850), Eduards Svirlovskis (1874–1949), Kārlis Kazerovskis (1910–1987), Olga Grauze (1897–1952). The courses included lectures and practical classes on the following topics: botany, pharmacognosy, dosage forms, compounding, pharmaceutical chemistry, local medical herbs, accident first aid and pharmaceutical law. The number of pharmacy employees

was also increased by pharmacy trainees. High school graduates were invited to work as trainees. Trainees showed great interest in assistant pharmacists' courses and exams. The Pharmacy Administration often received requests from trainees who had not yet completed their traineeship to allow them to take their exams earlier. However, no one was allowed to take the exams before the given practice time. It is concluded that despite the catastrophic shortage of staff in the industry, quality of education and practice was kept at a high level.

Of particular note is the fact that, due to a shortage of pharmaceutical personnel, the Pharmacy Administration also sought to arrange and assist former pharmacy staff who had emigrated with the Baltic Germans in 1939 or 1941 to return to Latvia. Between 1942 and 1943, the Pharmacy Administration received several letters from pharmacists living and working in Germany asking them to return to Latvia. For example, in December 1941, Eduards Ostrovskis (1889–?), a pharmacist's assistant, sent a letter to A. Dzirne from Berlin. A. Dzirne had received similar letters from Dusseldorf, Breslau (nowadays Wrocław, Poland), Dresden, Bopfingen.

4. Pharmacy in Latvia during the initial period of the second Soviet occupation (1945–1960)

In the summer of 1944, the Red Army troops re-entered Latvia through Latgale. On October 13, 1944 Riga was conquered, but further development was stopped by the formation of the Kurzeme fortress known as the “Kurland Cauldron”. As a result of these circumstances, the district of Kurzeme ended up in forced isolation for several months and turned into a headquarters of refugees, Nazi Germany and the Latvian Legion troops. Several thousand Latvians went into exile to Germany, but a relatively small proportion to Sweden. Among them were pharmaceutical professionals who continued their activities abroad.

In the light of the events on the front, one of the last orders of the Pharmacy Administration was the order issued on April 5, 1944 entitled “General instructions to pharmacy managers on the precautions to be taken in the management of pharmacies and their responsibilities in the case of air attacks”. Order stated that pharmacies should be equipped with fire extinguishers, more water, spades, sand and axes. The documentation should not be left in the pharmacy overnight unless there was a fireproof room. If the pharmacy had already suffered an air attack, it was the duty of the pharmacy manager to rescue the goods as much as possible and to review and identify the loss together with other pharmacy employees. As a precaution, the Pharmacy Administration advised pharmacy managers not to keep all goods on the spot at the pharmacy, but to keep about a third of them in another safe place out of the pharmacy. The Pharmacy Administration ceased its activities in the autumn of 1944, very likely at the end of September. On October 10, 1944, Aleksandrs Dzirne, the head of the Pharmacy Administration, left Latvia for Germany. The next sequence of changes stood ahead in the operation of all pharmacies as the Red Army crossed the border of Latvia on July 16. As it approached the capital in the fall of 1944, part of the medical supplies was evacuated from Riga because there operated

three of four the state-owned medicine wholesalers. On September 1, 1944, Juris Krīgens (1898–1977), a representative of the Head of the Pharmacy Administration in Kurzeme, informed that recently large consignments of medicines were received from Riga, which were divided and distributed to various pharmacies in Kurzeme. He predicted that provided stock of medicines would be enough for several months, only due to war conditions there is lack of proprietary medicines, tropical herbals and dressing materials, meanwhile, the amount of disinfectants was satisfactory. He also pointed out that at that exact time part of Kurzeme pharmacy employees had already left for Germany, but no disturbances in pharmacy operation were observed. Many students and high school graduates have been accepted as replacements for staff emigrated.

From July to October, a wave of about 150 000 refugees flooded Kurzeme. In September 1944, the health care situation was not yet critical, but as time went on, conditions became more and more complex. On December 11, it was reported that almost half a million people were settled in Kurzeme. Any civilian administration was in a state of confusion, with Liepaja as a conditional center, where most of the institutions were concentrated and the central refugee office of “People's Assistance” was located. Jānis Niedra (1908–1969) headed by the Evacuation Department of Kurzeme reported that a greater initiative should be taken by officials from municipalities at this time – the work of local governments should be restored. Problems with food supply and sanitary conditions had begun to emerge. According to J. Niedra, he has been granted the right not to release any employee from governmental or health care personnel from Latvia. However, it was found that many doctors do not disclose their profession, for example, 12 doctors lived incognito near Kuldīga. J. Niedra urged everyone to resume work in their specialty, as municipalities should provide access to treatment for the population, as well as ensure that refugees have baths, work should also be restored to midwives. He also noted that medicines had to

be collected from pharmacies left unmanaged. A study by historians Edvīns Evarts and Juris Pavlovičs on municipal conditions in the “Kurland Cauldron” stated that “the medical care of the population, like veterinary medicine, was generally very poorly organized and actually experienced a temporary collapse”. In major cities, some satisfying number of doctors was only in the beginning of May 1945, when there were 165 doctors and 48 dentists working in Kurzeme. But both doctors and residents were catastrophically short of medication. Although the Chief Pharmacy Directorate (CPD) resumed its operation in October 1944, it is unlikely that by the spring of 1945 the medical care and supply of medicines in the rest of Latvia was in a better condition than in Kurzeme.

During the early stages of the second occupation of the USSR, a reshaping of the pharmaceutical sector has been carried out once again and with lasting results. Although several proceedings had already been launched in 1940–1941, they had not been able to fully implemented due to the following German occupation. By the autumn of 1944, repetition of the same processes that had already become known to the citizens of Latvia during the first occupation of the USSR took place. The People’s Commissar for Health Protection of the Latvian SSR (1944–1946) renewed its activities, which later changed its name to the Ministry for Health Protection of the Latvian SSR (1946–1990). Chief Pharmacy Directorate (CPD) officially restored its operations immediately after the arrival of Red Army troops in Riga – October 1944. The CPD, as before, was under the direct supervision of the People’s Commissar for Health Protection and later under the Ministry of Health Protection. Hackels Vasermanis (1909-1996) returned to the position of CPD chief and performed these duties from 1944 to 1951, when he started to work in the Riga Medical Institute. In 1952, Olga Sevčuka was appointed CPD chief.

CPD's supervision included a number of other institutions: interdistrict offices, pharmacies, sanitary hygiene shops, pharmaceutical wholesalers or bulk

bases, as well as pharmacy points and pharmacy kiosks. There were four interdistrict offices in 1945: Riga District, Valmiera, Liepāja and Daugavpils. CPD also owned CPD I Wholesale at Krišjāņa Barona Street Nr. 63; CPD II Wholesale at Grēcinieku Street 6, Central Pharmacy Warehouse at Pērnavas Street Nr. 62. The main objective of CPD was to organize the supply of medicines, hygiene products and other pharmaceutical goods to pharmacies and other medical institutions. The tasks of the CPD included working in accordance with the laws and plans developed by the People's Commissar for Health Protection, but it had to carry out the operational planning, financial organisation and control management of the subordinate institutions individually. The structure of the CPD in 1945 was as follows: Secretariat; the Human Resources department; the Accounting department; the Plans-finance department; the Pharmacy Network department; the Sales department; department for the Coordination of Medical plant gathering (eliminated in 1948); the Administrative-economic department.

Orders issued by the chief of CPD provide an insight into the most important aspect of pharmacy in Latvia – the elimination of the post-war scourge, efforts to restore a sufficient number of pharmacies and personnel. For example, the Pharmacy Network department led by Ernests Morics, was tasked with developing a plan for the deployment of new pharmacies, pharmacy points, and pharmacy kiosks; drawing up lists of needed equipment, inventory and installations; to divide the remaining and unused equipment and inventory onto existing pharmacies; to conclude contracts for the ordering of furniture for pharmacies, pharmacy points and kiosks; to manage and supervise repairs of the pharmacies, pharmacy points and kiosks, provide all pharmacy managers with orders and demands issued by the CPD, as well as organize and manage the rationalization and modernization of the operation of existing pharmacies. The Human Resources department in cooperation with the Pharmacy Network

department was tasked to locate pharmacy managers and to take care of staffing at newly established pharmacies, pharmacy points and kiosks, as well as elaborate a plan for staff training and qualification raising. For the Sales department, the CPD chief tasked to supply newly established pharmacies, pharmacy points and kiosks with goods for consumption for approximately 3 months; as well as organize all production of equipment, items and goods for CPD requirements in the local industries; including drawing up projects for such a planning and contracting with industries; eventually taking care of distribution and supply by using CPD vehicles.

The CPD reports of 1945 included detailed information on both the number of pharmacies and employees, the qualification of staff, and the organization of supplies of goods for pharmacies and other institutions, and the process of the compounding and the quality of extemporaneous produce. These reports are a special testimony, as they provide an insight into the state of pharmacy of Latvia during the initial post-war years. The first report was drawn up by H. Vasermanis in April 1945, when Kurzeme was not yet part of the Latvian SSR. In describing the pharmacy system, he mentioned that between August 1944 and January 1, 1945, 152 pharmacies and 5 hospital pharmacies were resumed their activities. Nearly every pharmacy in the occupied part of Latvia had to be repaired, but 18 pharmacies had to completely renew their equipment and configuration. On 1 January 1945, 105 pharmacies had carried out repairs on their own by the employees of the pharmacy in cooperation with local governments, but in fact it was nothing more than setting windows. During this time there was very poor communication with pharmacies located in the periphery, both by telephone and by post. The mail was practically out of service, the letters were received with great delays, and usage road transport was also possible only occasionally because of a shortage of fuel. The railway was in a very bad condition, which also hindered the renovation of pharmacies.

During the year under review, CPD faced a number of significant difficulties in opening new pharmacies: lack of suitable facilities and equipment, as well as pharmaceutical accessories or instrumentation; nor were there sufficient supply vehicles and there was a severe shortage of staff. Describing the shortage of pharmaceutical employees, H. Vasermanis noted that the issue was very serious. While about 400 of the total staff employed in 1941 were with higher education, only 62 pharmacy employees with higher pharmaceutical education were left on 1 January 1945. According to H. Vasermanis, there were about 1000 employees with secondary pharmaceutical education in 1941, but on 1 January 1945, there were left only 235 persons. The number of pharmacy trainees at that time was 396 individuals and the number of other employees was 197 individuals. Thus, together, the GAP system employed 890 people over that period, of which 297 were with pharmaceutical education.

H. Vasermanis has provided an insight into the working conditions of pharmacies, saying there has been a serious shortage of medicines, active substances and other remedies. Caffeine, codeine, pyramidone, papaverin, pilocarpine, atropine, atropine, antipyretic, expectorant and endocrine preparations, as well as various tinctures, vegetable oils, fish oil, petroleum jelly and dressing materials have been particularly lacking. Any supply of goods to pharmacies has been disrupted by a lack of vehicles and fuel. He pointed out that goods from the Soviet Union had arrived, but occasionally and intermittently, refusals to transport goods by rail were often received because there was no warehouse space at the station points for the storage of goods or control of the quantities received. CPD employees were required to collect the goods themselves at the point of dispatch and deliver them to pharmacies with CPD transport. There was also a shortage of pharmacy glass – bottles and other glass containers, so the compounded medicines had often to be given in a container brought with the patient, and that hampered the work of compounding divisions.

Particular attention was paid to the extemporaneous formulations. According to H. Vasermanis that most lacking of the equipment were weights for compounding matters, distillation apparatus, sterilizers, etc. The quantity of extemporaneous formulations produced has been influenced by a number of factors: the majority of rural pharmacies were poorly equipped and compounding was not maintained at a high level; traditionally there were the complex formulations with 10-12 ingredients prescribed and the local doctors and residents were accustomed of that. In order to obtain an idea of the capacity of the pharmacy's compounding divisions and the the required number of employees, E. Morics and two doctors conducted a visit on September 18, 1945 to the CPD Pharmacy No. 4, Brīvības Street Nr. 42. The group's main task was to measure the speed at which compounded preparations were made and dispensed.

The protocol states that it takes 8 minutes and 12 seconds on average to make 1 formulation, which would be 52 prescriptions for a 7-hour workday. Receptionist-controller duties included accepting the dosage form to be compounded, calculating its price, recording the prescription in a journal, preparing a label, and it could be accomplished in about 1 minute and 34 seconds, thus processing 120 recipes for a 7-hour workday.

H. Vasermanis has mentioned the fact that manufacturing sector in 1945 has not switched to the production of finished medicines. It may have to be understood that local factories have not started to produce pharmaceuticals according to the USSR nomenclature or have not worked at all. He also pointed out the seemingly large surplus of goods at the beginning of 1946, mentioning that at the end of the previous year Latvia had a large delivery of goods. He also mentioned the sums, and another interesting nuance, that the large surplus of goods was due to the fact that the new Soviet preparations were in “low demand” in pharmacies, especially in the countryside. In addition, large residues (around

4000 tonnes) of various chemicals and preparations were identified in the country, which have been left over from former owners. This included a variety of unpopular German and foreign preparations. Objective comparisons of data show contradictions here. How could these surpluses of various chemicals and preparations may have arisen, if the population's supply of medicines was critical and the deficiency was very pronounced?

Instead, there would be a derogation for the publication entitled "Pharmacy Drug Reserves" compiled by E. Morics and published in 1946. It was a guide for doctors and pharmacists to evaluate their pharmacy stocks. The book contains many descriptions of various active substances, galenical preparations and herbals, some quite exotic, such as *Balsamum Canadense*; *Borneolum salicylicum*; *Bromipinum*; *Eumenol*; *Europenum*; *Herba Borriginis*; *Prominalum*; *Radix Ebuli*; *Radix Kava-Kava* etc. Apparently, the post-war pharmacy staff, given that there were only 62 persons with a higher pharmaceutical education at the beginning of 1945, found it rather difficult to navigate to the abandoned medicine range. The abovementioned edition came as the rescue. This, in turn, confirms that in pharmacies in Latvia were stored remedies that the pharmaceutical personnel were lacking knowledge of, meanwhile the physicians were not aware of such medicine existence at all. Consequently, there was not only a serious crisis in the operation of post-war pharmacies, but also in the level of professional knowledge of the remaining staff.

In the later years, the situation improved: the number of pharmacy and pharmacy workers increased, the qualifications of employees were raised. The network of pharmacies of Latvia became part of the entire Soviet Union network of pharmacies. Regular political education of the staff, introduction of the Stakhanovite movement and presence of a socialist competition in the work environment of pharmacies, as well as five-year plans were mandatory. But

despite these efforts, the difficulties that were already known persisted for many years, even after 1950, as they had their roots in 1939. The number of employees in the sector was still insufficient, and the number of pharmacies during the entire period of existence of the Latvian SSR never approached the figures achieved in the first independence period of Latvia. For example, in 1947 there were 296 pharmacies in Latvia, while in 1948 there were 304 pharmacies operating in the CPD network.

Immediately after the end of the war, the assortment of ready-to-use medicines available in pharmacies was extremely scanty, and pharmacies operated mostly in the service of extemporaneous compounding rather than dispensing finished dosage forms and consulting. According to H. Vasermanis, the main work of the pharmacies was the preparing the extemporaneous prescriptions, as the ratio of compounding to selling finished dosage forms was 5:3. As in 1941, the nomenclature of medical products of the USSR entered into force in the postwar years, which further determined the assortment of medicines, active pharmaceutical ingredients and other pharmacy goods available in pharmacies and made it similar throughout all network. The import of medicines from abroad was strictly prohibited.

As H. Vasermanis wrote in 1946: “In order to facilitate and accelerate the work of congested pharmacies, to reduce the waiting time of patients in pharmacies on ordered medicines and to provide patients with the highest possible accuracy of drug dosing, CPD is introducing finished dosage forms into circulation.” When receiving them from warehouses, pharmacy managers had to organize the dispense of finished dosage forms on prescriptions without waiting. These prescriptions had to be served not by the receptionist-controller, but by another employee, who should add the packaging a instruction for use. As well as a special information bulletin should be provided to the doctors so that they could prescribe these medications. It is difficult to determine the origin of

aforementioned finished dosage forms, but it is likely that those were tablets and ampoules from Russian SSR. On the one hand, the availability of medicines in pharmacies was the responsibility of the CPD, but on the other, there are several reports specifying the behavior of pharmacists in medicine dispensing. Whether the patient would receive the medicine he had prescribed, even if it was on the shelf in the pharmacy, could sometimes depend directly on the pharmacist! Reports of negligence and corruption by pharmacy employees in the postwar years aren't uncommon. For example, in 1946, Vasermanis pointed out that not all CPD employees acted in accordance with the principles of work: they sell medicines to those who can offer something in return, and not to those who have nothing to offer.

In 1951, the attitude of the pharmacy staff in dispensing medicines was reported in the order of the CPD chief. When analyzing complaints from residents, several cases of rude treatment by pharmacists were found, often unjustifiably rejecting prescriptions of medicines that should be ordered from the warehouses. There have been cases where goods have been priced higher, no cash has been returned at checkout, saying that they are no coins at the cash desk, the goods considered as deficit were sold only to personally known or other important persons. Showcases often did not include price tags. It was also argued that pharmacists should not engage in treatment process. Similarly, pharmacy staff had received reprimands of inadequate attention to correct and careful preparation of the extemporaneous medicine. As H. Vasermanis wrote: "In many pharmacies the powders are still being weighed carelessly or even scattered."

The supply of finished dosage forms to pharmacies in Latvia improved as new local chemically pharmaceutical plants were renewed and established. In the past that recognizable company "Medfro" was merged with another company "Farmazans", creating the Riga's 6th pharmaceutical factory. JSC "Farmācija" was titled as the Riga's 3rd pharmaceutical factory. The Penicillin Plant,

established in Riga in 1945, was the first experimental penicillin factory in the entire USSR. Despite the progress in certain chemical sectors, the availability of medicines at pharmacies in Latvia continued to be a painful issue. Three pharmacy managers have reported about medicines in Latvian pharmacies and their circulation in the USSR. Their report was published in “Экономическая Газета”, No. 42 on September 13, 1962. It was later republished in a local newspaper. The report pointed out that there are many very efficient medicines arriving in pharmacies, both well-known and brand new, so the assortment of medicines is expanding. However, the following highlights the problems related to the availability of medicines. The authors then posed the question: “Why is there still a shortage of medicines in a country where the pharmaceutical industry is ranked as high level?” Answering their own question, it is said that the reason for this is old-fashioned planning methods and incorrect distribution of medicines. For example, remedies classified as deficit in Latvia, were more than needed in other Soviet republics. It is stated that the CPD regularly exchanges of medicines with other republics of the USSR, so during the period of one-year CPD sells and buys medicines of 300 000 rubles. As an example was given the situation, when the CPD claimed 200 000 bottles of “Urodan” in 1961, but instead received 55 000 from Glavmedsnabsbits (Главный медикаментный снабжения сбыт). The following year, it repeated. On such occasions, the CPD usually contacted pharmacies of other republics, eventually buying the additional “Urodan” from Belarus, Tajikistan and Uzbekistan. The authors stressed out that it is absurd that “Urodan” was sold only on prescription, because it was produced in Riga! Due to outdated norms, often produced medicines have to be sold, but later they are needed again by themselves. The authors have also pointed out the activities of the Latvian chemically pharmaceutical plants: “The Riga's 3rd pharmaceutical factory produces bulk powders of analgin, nembuthal and furacillin and transport those to Kharkov, Leningrad and Tallinn where tablets

are made. Later again, every pharmacy in Latvia processing the tablets to powders, transfer liquids from bottles and ampoules in order to compound prescription drugs. Hundreds of pharmacists do all of this.” The report also mentions the short shelf-life of many preparations as major deficiencies, the unrealized quantities had to be written down afterwards. All of the above, though published in the periodical press, nevertheless sufficiently indicates the reasons that may have influenced the availability of medicines in pharmacies of Latvia. It also confirms that the availability of medicines was largely determined by decisions of the Russian Ministry of Health Protection and other USSR governing bodies, setting norms for each of the USSR republics. The impression is that the same profile institutions did not work as united system, there was nearly no information exchange and feedback between them. The chemically pharmaceutical industry seemed to be living its own life, meanwhile CPD lived its own trying to overcome the failures of medication supply. There was a minor link between pharmaceutical production and pharmacies, as evidenced by the example of “Urodan”.

Examining the information provided in the CPD report of 1945, it can be concluded that an enormous number of pharmaceutical professionals went into exile in the fall of 1944. The last available data on pharmaceutical personnel provided by A. Dzirne in 1943 show that there operated 382 pharmacies in Latvia with 1103 employees, of which 766 had higher or secondary pharmaceutical education and the rest were trainees. In turn H. Vasermanis wrote that on January 1, 1945, there were 188 pharmacies on the CPD system, employing 890 persons and 297 of them were with pharmaceutical education. So out of 766 people with pharmaceutical education, 469 had left the industry. This is corroborated by data from other sources: A. Dzirne, in oral presentation at a meeting of Latvian pharmacists in Eslingen, West Germany, in 1948, said that about 500 pharmaceutical professionals were identified in exile, including

140 pharmacists, 215 pharmacist assistants, about 100 trainees and students. Most pharmacists went to Germany as refugees, but there were also those who emigrated to Sweden, Denmark, England and Austria. Latvian pharmacists who emigrated in 1944 were scattered all over Germany. During this time, they were often assigned to inappropriate job as everyone tried to find an occupation to get food cards and accommodation. Those who spoke German began to look for employment in pharmacies and pharmaceutical laboratories, but they often found job options only in places threatened by air attacks. A. Dzirme reported that he had identified 25–30 colleagues in Dresden. He and his family were lucky enough to survive the extremely devastating bombing of Dresden on 13 February 1945, so they later moved to the village of Fronhofen, near Ravensburg.

In the spring of 1945, Germany was divided, West Germany was formed with American, English and French occupation zones, and East Germany was under the jurisdiction by the USSR. During this time, the gathering center for Latvian pharmacists became Esslingen am Neckar in the USA occupation zone. There was a Latvian DP (Displaced Persons) refugee camp. Many well-known persons from the field of pharmacy resided in exile in West Germany: Professor of the Department of Pharmacy, University of Latvia Eduards Zariņš (1876–1947), Mag. pharm. Roberts Jākobsons (1902–1994), Mag. pharm. Kārlis Kazerovskis (1910–1987), Mag. pharm. Arnolds Krēsliņš (1892–1958), pharmacist Voldemārs Cerbulis (1891–1985), Mag. pharm. Jānis Okše (1894–1961), Mag. pharm. Augusts Maizīte (1894–1966), Mag. pharm. Pēteris Svārpstiņš (1886–1963), Mag. pharm. Juris Krīgens (1898–1977), Mag. pharm. Nikolajs Rūtenbergs (1902–1971), Mag. pharm. Milda Brēmane (1912–?) and others. Most of the abovementioned were those who actively undertook the organisation of meetings of Latvian pharmacists and tried improve the situation in exile. For example, in 1946, A. Krēsliņš managed to open a pharmacy in the

Latvian DP camp with the support of the director of the organization UNNRA (United Nations Relief and Rehabilitation Administration).

In total, 2 pharmacist meetings were held in Eslingen between 1946 and 1949: the first on 9 September 1946, the second on 18 April 1948; the third was scheduled for May 29, 1948, but did not occur. The situation of the pharmacists in exile was discussed at these meetings; of opportunities for occupation in the profession; of collegial cooperation with Lithuanian and Estonian pharmacists; It was reported that not all professionals found employment in their profession, only some had been able to find work in IROs (International Refugee Organization) pharmacies, ambulance or warehouses. Later, the IRO, in cooperation with the World Health Organization, organized the emigration of medical staff to places where they could work in their profession. The situation was similar with Latvian pharmacists – most of them emigrated to the United States in 1950. The first to emigrate in the summer of 1949 were K. Kazerovskis and A. Krēsliņš. Only a small number of professionals remained in Germany, while others emigrated and settled in Australia, Canada, Brazil, South Africa and Sweden. The first who left, later evaluated by American pharmacies as “medicine shops”, because there in pharmacies medicines were rarely compounded according to prescriptions, pharmacy shelves were full of finished dosage forms and the pharmacist's main task was to sell them, as well as counting tablets. Most of emigrated persons with higher pharmaceutical education found job in pharmacy or related industries, often pharmacists worked as chemical analysts, some found employment in hospital pharmacies, became lecturers, or worked in administrative institutions of United States.

As Latvian pharmacists dispersed around the world, the idea of a joint merger no longer received a response. Thus, the Association of Latvian Pharmacists in Exile, founded in 1948 in Eslingen, existed for only a short time without significant progress in its activities.

In the summer of 1945, the former members of the board of the Latvian Red Cross (LRC) in West Germany resumed the activities under exile conditions. The direct responsibilities of LRC included medical care and procurement of medicines. Already in 1946, at a meeting of Latvian pharmacists in Eslingen, it was discussed that the task of P. Svārpstiņš and A. Maizīte would be to find out information about the operation of the medical department of LRC in Heidelberg. The initiative of these pharmacists was to engage in the operation of LRC's medical warehouse, as it became known about the irregularities in the storage and distribution of medicines in the Heidelberg warehouse. Apparently, this initiative did not go unnoticed, as the annual activity reports of LRC informed that the main drug supply warehouse was originally located in Eslingen, but in 1953 it was moved to Stuttgart. In addition, from 1954 onwards, large stocks of medicines were located in the LRC ambulance warehouse in Ulm on the Danube. In relation to the operation of LRC, news about the activities of a dedicated pharmacist and doctor Hugo Skudiņš (1903–1976) appears in Ulm. His name deserves special attention; as stated in the 1954 report: “The LRC dispensary under the leadership of the doctor Hugo Skudiņš, who is not only a doctor but also a pharmacist, it has been a great blessing for these compatriots.”

In 1954, Skudiņš took over the management of the LRC Medical Care Division in the German city of Ulm on the Danube. Under his leadership, the Ulm dispensary from a simple point of assistance was grown into a major point of the purveyance and shipment of medicines of the LRC. He was also very busy as a doctor – the number of visits to the Ulm dispensary per month ranged from 193 to 252 and mostly he had to assist the patients with cardiovascular diseases, nerve inflammations, indigestion, ear, neck, nose and respiratory diseases, and urinary tract diseases. However, the most invaluable was his contribution in sending medicines for several years to the patients to Latvia, Siberia and elsewhere in West Germany. Gradually, more and more residents of Latvia got

informed about the opportunities to get assistance from the LRC in exile and therefore letters with requests for medication were sent to Germany. The letters first came to Stuttgart, where the Principal Office of the LRC examined the requests for medication. Then the information was transferred to pharmacist Hugo Skudins in Ulm. Thanks to his professionalism and experience, he determined diagnoses and made a proper shipment of medicaments on the basis of descriptions of disease symptoms. The most intensive shipments of medicines were delivered to Latvia and Siberia between 1954 and 1960.

At a time when medicines could still be sent freely to Latvia, the Swiss Red Cross and the Norwegian Red Cross provided great support to LRC in the supply of medicines from 1947 onwards. Besides that, contacts established with German pharmaceutical firms during the time of independence of Latvia were useful. Later, cooperation with the German Red Cross also strengthened. During Skudīņš time, good cooperation developed directly with the Swiss Red Cross that helped each year by donating medicaments. For example, in 1955, it donated to the LRC large quantities of medications, including penicillin and streptomycin preparations urgently needed, a lot of different galenic preparations and artificial vitamins.

In 1958, LRC received large donations in terms of money and medicines. All the years of functioning, the LRC mostly lacked the expensive and widely sought penicillin and streptomycin preparations, but in 1958, with the help of the theologian, Professor Kārlis Kundziņš (1883–1967) and the lawyer Rozālija Purgale (1904–1984) the problem was solved. The LRC received these preparations in large quantities from pharmaceutical companies of the US, which were ready to also support the LRC, when they found out that it supplied Latvians in the occupied Latvia and in exile in Siberia with medicine. This request was responded by such pharmaceutical companies of the US as Upjohn Company,

donating multivitamins and streptomycin, and Pfizer Corporation, sending to the Latvian Red Cross 86 boxes of medicines, weighing 2 tons.

During the period from April 1, 1956 to February 28, 1958, a total of 1450 parcels of medicine with 20 000 units of pharmaceuticals were dispatched. The largest amount of them – 1325 medicine parcels – with 18 715 units of pharmaceuticals were sent to occupied Latvia. 98 parcels containing 1005 units of pharmaceuticals were sent to Siberia. In turn, the least amount of medication was sent to Latvian refugees in West Germany – 27 parcels with 280 units. Meanwhile, between March 1, 1958 and April 30, 1959, 1048 parcels with 13 321 units were sent to Latvia and to the locations of Soviet deportees. From those 922 parcels with 12 420 units of pharmaceuticals have been dispatched to Latvia, 101 parcels containing 598 units were dispatched to Siberia, while 25 parcels with 303 units were sent to Latvians living in West Germany. Latvians living in West Germany, especially those who were in the vicinity of Stuttgart had the opportunity to get medicaments from the LRC warehouse directly. Therefore, the number of medicaments actually handed out to Latvians living in West Germany was higher throughout the reporting years.

Discussion

Pharmacy in Latvia shortly before the beginning of World War II (1937–1940)

The identified sources on the Latvian independence period show that pharmacy had strengthened and developed successfully during this period. Most of the pharmacies were owned by pharmacists who were private individuals. The pharmacist was mostly not only a health care professional, but also an entrepreneur. Shortly before the beginning of World War II, with the strengthening of the policy of the authoritarian regime of Kārlis Ulmanis (1877–1942), a strongly national position was observed in the organization of the pharmaceutical sector as well. During that period, new pharmacy licenses were deliberately not issued to the owners of pharmacies of the Baltic German minority.

Authoritarian regimes also emerged in the other Baltic states. In 1926, president Antanas Smetana (1874–1944) came to power in Lithuania, which determined Lithuania's becoming an authoritarian state. In Lithuania, the Baltic German minority was under-represented and the largest minority was Jews. In Lithuania, under the influence of the authoritarian regime, the state was interested in establishing and subsidizing municipal pharmacies. State and municipal pharmacies had privileges in the establishment regulations. Irrespective of the demographic situation and the distance between pharmacies, they could be opened in the places where the highest profits were expected.

Before World War II, Latvian pharmacy developed on the basis of national needs, but always following the example of the Western Europe. Imports of medicines and starting materials were organized from Germany, Denmark, the Netherlands, England. This suggests that without the events of World War II, the Latvian pharmaceutical industry would have continued development in the initial

direction. In 1939, the first signs of vertical integration and the formation of the first state pharmacy networks were observed in Latvian pharmacy. Vertical integration is a topical issue nowadays, since the restoration of Latvia's independence there have been both open discussions and struggles in the corridors of power to achieve the adoption of regulatory enactments favourable to pharmacists as owners of pharmacies. Unfortunately, it was unsuccessful, and within ten years since the last amendments to the Pharmaceutical Law, the number of private pharmacies has declined sharply.

The used unpublished information sources in the Latvian State Historical Archive contained an extensive range of documents on this period in the form of orders, reports and correspondence. However, when working in the archive, it was always necessary to take into consideration that the searched, specific information may not be in the fund, which was related to the industry. Thus, there is a possibility that a relevant document describing an event or details is in a fund not related to pharmaceutical industry and has not been found and used.

Pharmacy in Latvia during the first occupation by the USSR (1940–1941)

The unpublished historical sources used for the development of the PhD thesis, which characterize the incorporation of Latvia into the USSR between 1940 and 1941 and after 1945, show that pharmaceutical industry underwent enforced adaptation to the practices of the USSR. The occupying power was focused on takeover of resources and strict control. The new power system was not a favourable environment for the further development of the Latvian pharmaceutical industry, as it prevented putting the national needs on the first place and categorically rejected the possibility to follow the example of the Western Europe.

It follows from the information obtained that in the period from 1940 to 1941, the newly established Chief Pharmacy Directorate (CPD) performed its duties unprofessionally. Examining the archive documents, the impression is that the lack of general organization and the chaotic operation of the CPD during this period is also observed in the preserved files of the CPD.

To compensate for the incompleteness of the materials in the archives about the events in the period from 1940–1941, periodical press publications were used. Publications in the press about the work of the CPD, on the one hand, reported how both heads of the CPD had visited Moscow's pharmacies and drawn inspiration from the organization of work in them. In reality, the CPD had great difficulties in ensuring communication with the Medical and Sanitary Administration about the circulation and distribution of medicines, control of the production flow, as evidenced by the complaints of the population in the press about the poor work of pharmacies. During the inspection of the CPD in early June 1941, it has been found that a significant proportion of hospital and pharmacy orders had not been fulfilled by wholesalers on time. A quote by Žanis Spure (1901–1943), the secretary of the Central Committees of the Latvian Communist Party, has been obtained from the periodical press publication stating that “the situation in pharmacies is chaotic”, confirming that the periodical press contains not only tendentious articles glorifying the regime.

There are some topics for which no information can be found. One such question is, how did the industry workers feel about the forced changes? The historian Māris Zvaigzne is one of the few who reviews the mood of factory workers in general in 1940–1941. He stated that the feelings of the workforce were contradictory: some believed in the new role and idea of raising a new life, yet could not help but notice the decline in living standards and problems of work organization. For some workers, the most important thing was to keep their jobs. With regard to the pharmaceutical industry, this question has not been answered.

In Latvia, the nationalization of pharmacies was not based on class struggle, as was the case in the Soviet Russia, where relations between pharmacy owners and employees were strained. There are separate propaganda calls for pharmacists in the periodical press, where it can be read between the lines that those dissatisfied with the regime are likely to be left unemployed.

The repressions of communist terror also affected pharmaceutical workers. In order to understand the motives for deportation of pharmacists and other workers of pharmacies, a large number of personal files of the deported has been examined. It was concluded that the deported pharmaceutical professionals were mainly socially active men, most often members of organizations of the Defenders, or members of other organizations, political parties, owners of pharmacies, companies, land and houses, financially secure persons. These were thus people, who were nationally oriented in their views, or high-earners, who hired employees for their companies.

Pharmacy in Latvia during the Nazi German occupation (1941–1945)

After the change of occupying powers, the former Pharmacy Administration was re-established in the summer of 1941. The documentation kept in the National Archives of Latvia for this period provides a broad and detailed insight into the events. This could be explained by several factors – the German occupation authorities did not interfere in the activities of the Pharmacy Administration, the head of the board Aleksandrs Dzirne (1907– 2001) returned to work. It must be admitted that without the range of scrupulous accounts and reports left by Aleksandrs Dzirne, it would not be possible to develop this PhD thesis. The author believes that A. Dzirne was aware of the complicated situation and did everything to document as much information as possible. Thus, today we can find complete sources of information on the number of pharmacies

and employees, the operation of pharmacies, factories and wholesalers, the efforts to stabilize the industry, the distribution of medicines and austerity measures.

The process of re-privatization of pharmacies reflected the most important political and economic interests of the German occupying powers. The decision to return the pharmacies to the former owners was delayed and no clear and obvious reason was found in the unpublished examined sources. A. Dzirne himself had mentioned in the periodicals that in 1941 the industry was too disorganized to start re-privatization. In the PhD thesis of the contemporary historian Reinis Kalniņš, this issue has been considered in general and it has been acknowledged that the return of private property was related to the events on the front line and the formation of the Latvian Legion. The re-privatisation of pharmacies was officially approved in the first half of 1943.

None of the occupying powers can be considered beneficial for the development of the Latvian pharmaceutical industry during World War II. The brutal repressions of Jews by the German powers continued to adversely affect the operation of pharmacies. In parallel, the Pharmacy Administration made every possible effort to ensure the smooth operation of pharmacies. As a result of the Holocaust, the industry lost around 543 persons. At the time of the mobilization in the Latvian Legion, A. Dzirne reported that the industry would need about 700 more employees. In the autumn of 1944, about 500 people left the pharmaceutical industry, including many professionals with higher pharmaceutical education.

Pharmacy in Latvia at the beginning of the second occupation by the USSR (1945–1960)

Unpublished sources for the post-war period contain extensive information in the form of accounts, reports and correspondence. Hackels

Vasermanis (1909–1996), appointed in 1941, continued to work as the head of the Chief Pharmacy Directorate (CPD). The Latvian State Historical Archive provides information on the operation of the CPD, the number of pharmacies and their employees. It clearly shows how the industry recovered from the devastation of the war. It is worth to mention the fact indicated in the historical statement of the 680th fund in the State Archives of Latvia that in 1966, after sorting the materials, 8413 files were selected for destruction for the period from 1944 to 1965, leaving 1666 files for permanent storage. Probably for this reason some events cannot be considered extensively enough.

Throughout the war, the supply and consumption of medicines was one of the most complicated issues to deal with. From 1939 to 1944, the Latvian pharmaceutical market existed due to careful consumption planning and austerity constraints. The last major procurement of medicines had taken place in the early 1940s. From 1942 to 1944, relatively small quantities of active ingredients and medicines were supplied from Germany.

Latvia was not the only country that was forced to carefully observe austerity measures concerning medicines during World War II. A similar study has been carried out on the situation in Norway during World War II. Norway was under the Nazi German occupation regime from 1940 to 1945. In Norway, infectious diseases broke out as a result of unsanitary conditions and food shortages, which lead to an increase in the use of medicines. Prescribed medications, vitamins, laxatives, sedatives and painkillers, as well as general tonics have been in high demand. Of the imported drugs, insulin and sulphanilamide preparations were in short supply. The example of Norway reflects tendencies extremely similar to Latvia, and most likely this was also the case in most of the countries, who experienced the consequences of the war.

In the post-war years, the production and distribution of finished medicines in the USSR was poorly developed. Some of these cases are reported in the periodical press by pharmacy managers.

The shortage of medicines was even more evident from the co-operation of the Latvian Red Cross (LRC) with the inhabitants of Latvia, organizing deliveries of medicines. The LRC workers in exile in West Germany up until 1960 were actively sending to Latvia both vitamins and hormone preparations, anti-inflammatory and anti-tuberculosis medicines, as well as antibacterial preparations. These deliveries showed that in the post-war years in the Soviet Latvia there were difficulties in providing consumers with finished pharmaceutical forms of various pharmacological groups. To compensate for the lack of finished pharmaceutical forms, the number of extemporaneous prescriptions increased in pharmacies, and medicinal herbs were also widely applied.

Some parallels on both the nationalization of pharmacies and the logistics of medicines can be found in the study of Polish professor Anita Magovska on the organization of the supply of pharmaceutical products in the Greater Poland Voivodeship from 1945 to 1998. The study claims that it is very difficult to reflect the period from 1951 to 1989, as it was characterized by the lack of logic and stability, as well as chaos in the supply of medicals, which resonated with the situation in Latvia in the post-war period.

Practical significance of the research

All the sources used in the PhD thesis confirmed how dramatic a transformation Latvian pharmacy underwent at the beginning of World War II. Although the pharmaceutical industry had not experienced a complete collapse during the war years, it was close to a catastrophe at the end of the war and in the first post-war years. At the end of World War II, when pharmaceutical industry

entered the USSR system, its heritage from the time of Latvia's independence was close to zero, as all the Baltic Germans and about 500 Latvian pharmaceutical workers, who jointly maintained Latvia's pharmaceutical traditions during the independence, emigrated. As a result, the USSR regime was able to introduce its own order in pharmaceutical industry in Latvia almost like in an empty space. From that point, pharmacies and pharmacy workers were part of the state-run economy with a pharmacist as a relatively passive performer of work responsibilities, who provided health care, but never again as an ambitious and entrepreneurial professional, as it was in the 1930s.

The author believes that during the long period of occupation by the USSR, the state-owned pharmacy system, which was protected from any competition until the collapse of the Soviet Union, did not allow the pharmacist to gain experience and knowledge as a pharmacist-entrepreneur at all. When Latvia's independence was restored in 1990, pharmacists had the opportunity to become owners of pharmacies. Now, when chain pharmacies account for 60% of the total number of pharmacies, it is concluded that Latvian pharmacists lack the accumulated heritage from previous generations and still lack influential representatives in political circles. Knowing how many chain pharmacies in Latvia nowadays are owned by foreign companies and that the number of pharmacies owned by pharmacists is decreasing with each year, it is concluded that pharmacists again are mostly forced to work in pharmacies owned by someone else, as it had also been the case throughout the occupation by the USSR. Only today is it not called nationalization, but globalization.

The application of the results obtained in the PhD thesis is to draw attention to the extent to which political decisions and various systems of political regimes have the power to change the conditions and directions of the development in health care systems. The PhD thesis reveals these interconnections by taking World War II as a timescale, but showing an example

that scientific research of a similar nature would be necessary for the period of Latvia's independence. In the methodology of historical research in the book of Alberts Varšlavāns "Ievads vēstures zinātnē" it is stated that from the point of view of usefulness, the study of historical events is closely related to the requirement to understand political activity and its causal interaction with different ethnic, social or occupational groups. Furthermore, one of the most important needs of history studies is the task of anticipating the future and seeing the interrelations. The accumulated knowledge of history has proved certain coincidences, therefore, finding relative similarity and repetition of various historical events and situations, it has been used by thinkers and philosophers in the past to forecast future events.

The practical application of the obtained PhD thesis results is to provide every interested person with the opportunity to get acquainted with the historical development of the field of pharmacy in significantly different circumstances, which can be categorized as crisis conditions with scarcity of resources, repressions against people of different nationalities and classes and transition from one political system to another.

Scientific research of a similar content in the context of pharmacy in the Latvian language are not currently available, and in foreign literature such an approach is still in its early stages of development. Some similar studies on the impact of World War II on the field of pharmacy have been published in Polish, Danish, Norwegian and, to a lesser extent, in German, but an in-depth study of this period in the pharmaceutical context is hardly found in the international scientific databases. When searching on the Internet in the languages of the countries concerned, mostly popular scientific articles, often anonymous, can be found, which cannot be considered a reliable source for scientific work. This suggests that, possibly, research on the effects of World War II on pharmacy at European level are yet to follow. Therefore, the added value of this PhD thesis is

the unprecedented actualization of the research direction of the history of pharmacy.

Conclusions

1. Before World War II, pharmacy in Latvia had developed on the basis of national needs, but following the example of the Western Europe and being closely related to the latest discoveries, imports of medicines and starting materials, as well as business contacts in Germany, Denmark, the Netherlands and England.
2. During the period of Latvia's independence, most pharmacies belonged to pharmacists who were private individuals, thus a pharmacist was not only a health care specialist, but also a businessman and a socially and politically active citizen.
3. The re-registration of pharmacies initiated within the framework of the authoritarian regime of Ulmanis was beneficial for Latvian pharmacists, which contributed to the division of the professional community, as competition between the Baltic Germans and Latvian pharmaceutical workers had existed for a long time.
4. The emigration of the Baltic Germans had a negative impact on the industry, as highly qualified professionals, who had been the creators of Latvian pharmaceutical traditions for several generations, emigrated.
5. Latvian pharmacists perceived emigration of the Baltic Germans as an opportunity, as a large number of well-known pharmacies with a long history were freed up and entered the market. Usually, several buyers at the same time applied for pharmacies in Riga.
6. The manifestations of the economic and political actions of both the USSR and the Nazi German occupying powers had a degrading effect on Latvian pharmacy on a longer-term basis.
7. The political regime approach of the USSR was the forced adaptation of Latvian pharmacy to the practice and standards of the USSR, this regime prevented putting the national needs on the first place and categorically

rejected the possibilities to continue following the example and practice of the Western Europe.

8. The work of the Chief Pharmacy Directorate (CPD) from 1940 to 1941 is considered to be unprofessional, there was poor communication with other structural bodies, which resulted in delays in timely delivery of medicines to pharmacies, and the lack of centralized accounting and material inventory by the wholesalers.
9. The German occupying power was not interested in full control over the pharmaceutical industry and, contrary to the Soviet approach, offered a more cooperative model.
10. The work of the renewed Pharmacy Administration from 1941 to 1944 is considered to be fruitful, as the industry was reorganized in a short time and the pharmaceutical market was stabilized due to forward planning, austerity and ability to cooperate with the German authorities, which ensured small imports of medicines.
11. Due to the repressions of both totalitarian regimes, the pharmaceutical industry had lost a large number of workers, which had negatively affected the operation of pharmacies, both immediately and in the longer term.
12. As a result of the Soviet repressions, according to the head of the Pharmacy Board, 56 persons, 38 men and 18 women were deported to Siberia.
13. As a result of the Jewish Holocaust, the industry lost a third of its workforce, more than 500 people.
14. After World War II, Latvian pharmacy was in a state of temporary collapse due to the loss of workforce, as another 500 Latvian pharmacists, mostly with higher education, including lecturers of the University of Latvia, emigrated.
15. The re-introduction of the USSR standards in Latvian pharmacy after 1944 passed with no resistance, difficulties were caused by measures to restore

and stabilize the industry, as the network of pharmacies and wholesalers and the supply of medicines had to be re-established.

16. In the post-war years, Latvia in the USSR lacked finished medicines of many pharmacological groups.
17. From 1954 to 1960, the supply of medicines to the inhabitants of Latvia was partly ensured by the organization of the Latvian Red Cross in exile, sending packages with medicines to the occupied Latvia and Siberia.
18. The emigrated pharmaceutical workers never returned to Latvia, most of them spent the rest of their lives in the United States, where they worked in positions close to pharmacy.

List of publications

Publications (scientific articles) on the research topic

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