

PHARMACEUTICAL
MANAGEMENT IN BESSARABIA
AT THE ONSET OF THE ZEMSTVO
REFORM (1871-1872)

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Summary

The article explores the initial stage in the formation of zemstvo medicine in Bessarabia, focusing on the year 1871 as a key reference point for the institutionalization of the regional healthcare system. The onset of the Zemstvo reform in Bessarabia represents a structural paradox in the history of public health, where the ambition of modernizing medical assistance collided with a deeply entrenched mercantile pharmaceutical tradition. This study—the first installment of an evolutionary research project—unveils the “year zero” (1871–1872) of this transition, based on a rigorous analysis of primary archival records. This study—part of a complex analysis of the nascent Zemstvo system—approaches the crucial yet overlooked subject of pharmaceutical infrastructure, the very foundation of medical treatment. For the first time in the historiography of medicine, this research deciphers and publishes an unpublished, exhaustive list of the entire pharmaceutical network of 1871. Beyond the dry statistics of the era, the research deciphers the socio-economic mechanisms that dictated the unequal distribution of pharmacies and the emergence of family-controlled monopolies in major urban centers like Bender or Khotyn. The narrative exposes a system where the professional boundary between medicine and commerce was dangerously blurred, leading to cases of professional intrusion that forced the state into an unexpectedly authoritarian regulatory role. By examining the tension between the Zemstvo's progressive ideals and the rigid reality of private “free pharmacies,” this article offers a unique insight into how the foundation of modern pharmaceutical management was laid. It invites the reader to discover a hidden chapter of institutional resistance and the administrative maneuvers that transformed the pharmacy from a mere “commercial shop” into a vital pillar of the public health system.

Keywords: Bessarabia; history of medicine, Zemstvo medicine, private pharmacies, 19th-century pharmaceuticals

Резюме

Фармацевтический менеджмент в Бессарабии в начале земской реформы (1871-1872)

Статья посвящена исследованию начального этапа становления земской медицины в Бессарабии с акцентом на 1871 год как ключевую точку институционализации региональной системы здравоохранения. Начало земской реформы в Бессарабии представляет собой структурный парадокс в истории общественного здравоохранения, где амбиции по модернизации медицинской помощи столкнулись с глубоко укоренившейся меркантильной фармацевтической традицией. Данное исследование

— первая часть эволюционного исследовательского проекта — раскрывает «нулевой год» (1871–1872) этого перехода, основываясь на строгом анализе первичных архивных документов. Данное исследование — часть комплексного анализа становления земской системы — рассматривает важнейшую тему фармацевтической инфраструктуры, фундаментального элемента, обеспечивавшего медикаментозную базу любого лечения. Впервые в историографии медицины данное исследование расшифровывает и публикует ранее неизвестный, исчерпывающий список всей аптечной сети 1871 года. Помимо сухой статистики той эпохи, исследование расшифровывает социально-экономические механизмы, продиктовавшие неравномерное распределение аптек и возникновение семейных монополий в крупных городских центрах, таких как Бендеры или Хотин. Нарратив обнажает систему, в которой профессиональная граница между медициной и коммерцией была опасно размыта, что приводило к случаям профессионального вторжения, вынудившим государство взять на себя неожиданно авторитарную регулирующую роль. Изучая напряжение между прогрессивными идеалами земства и жесткой реальностью частных «вольных аптек», эта статья предлагает уникальный взгляд на то, как закладывались основы современного фармацевтического менеджмента. Читателю предлагается открыть для себя скрытую главу институционального сопротивления и административных маневров, превративших аптеку из простой «торговой лавки» в жизненно важную опору системы общественного здравоохранения.

Ключевые слова: Бессарабия; история медицины, земская медицина, частные аптеки, фармацевтика XIX века

Rezumat

Managementul farmaceutic în Basarabia la debutul reformei zemstvei (1871-1872)

Articolul abordează etapa incipientă de formare a medicinei de zemstvă în Basarabia, cu accent pe anul 1871, considerat un moment de referință în procesul de instituționalizare a sistemului sanitar regional. Debutul reformei zemstvei în Basarabia reprezintă un paradox structural în istoria sănătății publice, unde ambiția de modernizare a asistenței medicale s-a ciocnit de o tradiție farmaceutică mercantilă profund înrădăcinată. Acest studiu — prima parte a unui proiect de cercetare evolutiv — dezvăluie „anul zero” (1871–1872) al acestei tranziții, bazându-se pe o analiză riguroasă a documentelor primare de

arhivă. Acest studiu — parte a unei analize complexe a constituirii sistemului de zemstvă — abordează subiectul crucial al infrastructurii farmaceutice, elementul fundamental care asigură baza medicamentosă a oricărui tratament. Pentru prima dată în istoriografia medicinei, cercetarea de față descifrează și publică o listă inedită și exhaustivă a întregii rețele farmaceutice de la 1871. Dincolo de statisticile seci ale epocii, cercetarea descifrează mecanismele socio-economice care au dictat distribuția inegală a farmaciilor și apariția monopolurilor controlate de familii în centre urbane importante precum Bender sau Hotin. Narativul expune un sistem în care granița profesională dintre medicină și comerț era periculos de ambiguă, ducând la cazuri de intruziune profesională care au forțat statul să adopte un rol de reglementare neașteptat de autoritar. Examinând tensiunea dintre idealurile progresiste ale zemstvei și realitatea rigidă a „farmaciilor libere” private, acest articol oferă o perspectivă unică asupra modului în care a fost pusă temelia managementului farmaceutic modern. Cititorul este invitat să descopere un capitol ascuns al rezistenței instituționale și manevrele administrative care au transformat farmacia dintr-o simplă „dugheană comercială” într-un pilon vital al sistemului de sănătate publică. Articolul invită la o lectură aprofundată, propunând o perspectivă concentrată asupra unui sistem aflat în formare, unde modernizarea și vulnerabilitățile coexistă într-un mod încă insuficient explorat.

Cuvinte-cheie: Basarabia, istoria medicinei, medicina de zemstvă, farmacii private, farmaceutică secolul XIX

Introduction

The history of the formation of the public healthcare system in the Bessarabian region during the second half of the nineteenth century is a subject of significant interest for historical and medical research. This period is characterized by the crystallization of the regional sanitary infrastructure, a process that encompassed hospitals, medical districts, pharmaceutical institutions, and the initial elements of sanitary and epidemiological supervision. The Zemstvo reform of 1864 provided the necessary impetus for modernization; however, the success of this progressive system depended directly on the pillar that ensured the material basis of treatment: the pharmaceutical network.

This article initiates an extensive evolutionary study, focusing in this first stage on the “year zero” of systematic medical reporting –1871. In the following sections, we will present excerpts taken directly from contemporary documents, namely the official medical reports, which configure the pharmaceutical landscape at the onset of Zemstvo medicine with undeniable clarity. The analysis of these unpublished sources allows for a meticulous examination of the starting point, identifying the characteristics of a network situated at the boundary between public service and private commercial interests. Departing from the conventions of classical historiography,

this study places primary sources at the forefront, offering an authentic perspective on the situation that Zemstvo medicine inherited in this regard. Only through such a documentary approach can we remain objective in evaluating progress and in providing a fair assessment of Bessarabian sanitary management in its historical dynamics.

Aim of the Study

The aim of this study is to examine the formation of the medical infrastructure and the organization of pharmaceutical activity in Bessarabia in the early 1870s, in order to highlight the achievements and the structural obstacles encountered during the initial stage of implementing the Zemstvo medical system.

Materials and Methods

The research is based on an unpublished documentary corpus extracted from the National Archives of the Republic of Moldova (NARM), specifically focusing on the annual reports of the Medical Department of the Bessarabian Regional Administration from 1871–1872. These primary sources, previously underutilized in their entirety, provide raw statistical and narrative data regarding the pharmaceutical network, financial flows, and medical personnel management.

The methodology is pluridisciplinary, integrating the following methods:

1. Historical and documentary deciphering method: used for the transcription and analysis of unpublished archival sources, allowing for the reconstruction of the administrative context and professional hierarchies of the Great Reform era.
2. Statistical-mathematical method: applied to process quantitative data concerning the volume of prescriptions dispensed, financial transactions, and the calculation of accessibility indicators (pharmacy-to-inhabitant ratio).
3. Comparative analysis (urban vs. rural): an essential tool for highlighting structural disparities in the distribution of medical infrastructure and the gaps in medication consumption between the regional capital and the districts.
4. Analytic-synthetic method: used to corroborate individual reports from medical personnel with the decisions of the Medical Department, providing a nuanced perspective on the tensions between public interest and commercial profit.
5. Evolutionary approach: allowing for the interpretation of 1871 data as a “benchmark” to evaluate the subsequent progress of the Zemstvo system in the following decades.

Results

The analysis of the 1871 reports from the Medical Department of the Bessarabian Regional Administration reveals a network of 38 “free pharmacies,” whose activity was quantified by the volume of prescriptions dispensed and the financial flows generated. The raw data indicate a total volume of 118,447 prescriptions, with a financial turnover of 69,186.84 rubles across the entire region.

The distribution of these units exhibits a marked asymmetry between the administrative center and the rest of the territory. In the city of Chişinău, 9 pharmacies were active (23.6% of the total), processing 60.9% of the total prescription volume (72,190) and generating 61.5% of the regional turnover (42,601.24 rubles). In contrast, the remaining 29 pharmacies in the districts and settlements served a much larger demographic base but with a significantly reduced volume of activity.

Regarding individual economic indicators, it was found that the average expenditure on medicines per capita in Chişinău was 41 kopecks, while in the rest of the districts, this figure dropped drastically to approximately 2.5 - 6 kopecks. The deciphered documents also allow for the identification of a complex ownership structure, marked by the presence of foreign owners (Turkish subjects), pharmacist families controlling multiple units (e.g., the Bongardt or Gutskovsky families), and the involvement of individuals without pharmaceutical training (the case of Major Meerman or Prince Gagarin), where management was delegated to provisors or pharmacy assistants.

A major innovation of zemstvo medicine in combating epidemics was the administrative-medical division of Chişinău into 15 sectors, a measure implemented for the first time to enhance the efficiency of the city’s sanitary surveillance. [1, f. 38]

Pharmacy Infrastructure in the Bessarabian Region in the Early 1870s.

An essential component of the healthcare system in the Bessarabian Region during the second half of the nineteenth century was the network of so-called “free pharmacies,” private pharmaceutical establishments. According to the 1871 report of the Medical Department of the Bessarabian Regional Administration, 38 free pharmacies were operating in the region: 9 in Chişinău and 29 in district towns and smaller settlements. The distribution of pharmacies relative to population size was highly uneven. On average, one pharmacy served 29,265 inhabitants. However, the regional capital exhibited a much more favorable ratio: in Chişinău, one pharmacy served 11,576 residents, compared to 34,751 inhabitants per

pharmacy in the rest of the region. Consequently, access to medicines for rural populations remained significantly lower than for urban residents. Statistical records further highlight the urban–rural disparities. In 1871, the region’s pharmacies dispensed 103,096 prescriptions, totaling 69,184 rubles. Of these, 62,693 prescriptions worth 42,449 rubles were dispensed in Chişinău, while district towns and smaller settlements accounted for 40,403 prescriptions worth 26,735 rubles. [1, f.45-49]

Across the region, one prescription corresponded to eleven inhabitants on average, with annual expenditures of approximately six kopecks per person. In Chişinău, one prescription corresponded to roughly two inhabitants, with annual per capita spending of forty-one kopecks. Conversely, in rural areas, one prescription corresponded to 25 inhabitants, with average annual spending of only about two kopecks per person. Despite the relatively developed pharmacy network, the medical administration expressed serious concerns about the state of the establishments. Reports indicated that many pharmacies violated regulatory requirements, with poorly equipped and inconvenient premises, and some operated solely under the supervision of pharmacy assistants without certified pharmacists. Commercialization of the pharmacy sector was a particular concern. Many pharmacists owned multiple pharmacies, registering them under relatives’ names. For instance, in Bender, both existing pharmacies were effectively controlled by one family: one owned by the husband, the other by his wife. Such practices fostered local monopolization of the pharmaceutical market. [1, f.47]

A notable case in the settlement of Căuşeni involved a barber who purchased a pharmacy and personally prepared medicines. In 1872, the manager of the Căuşeni pharmacy, pharmacist Bogolyubov, submitted a statement to the Medical Department, warning of the risks of transferring pharmacies to individuals without professional pharmaceutical training. [1, f.46]

To prevent such abuses, the regional medical administration required pharmacy owners to notify authorities in advance of any sale or lease of pharmacies, preventing the concentration of multiple establishments in one person’s hands. Temporarily, the opening of new pharmacies was restricted, as excessive numbers were deemed a threat to the financial viability of existing pharmacies. For example, the request of pharmacist Linko to open a new pharmacy in Bălţi was denied, despite local zemstvo support. [1, f.47]

The geographic distribution of pharmacies included both major district towns and smaller trading settle-

ments. Besides Chişinău, pharmacies operated in Bălţi, Soroca, Khotyn, Bender, and Bilhorod-Dnistrovskiy, as well as in trading settlements such as Făleşti, Sculeni, Rîşcani, Lipcani, Briceni, Secureni, Tatarbunary, and Tarutyne. Certain pharmacies also operated in regional hospitals and prison infirmaries. [1, f.45-49]

The pharmaceutical network of Bessarabia in 1871 includes notable cases of military involvement in pharmacy ownership or financing, indicating an intersection between military status and investment in civilian medical infrastructure; a representative example is Major Neiman in Akkerman, listed as a pharmacy owner while professional pharmaceutical work was carried out by the qualified pharmacist Kesner. In the same documentary context, the name “Kisindjer/Kissinger” appears in the register of pharmaceutical personnel, opening a line of inquiry into onomastic mobility and possible transregional biographical connections; however, this reference remains isolated and requires further verification in primary archival sources to confirm the individual’s precise status and role within the pharmaceutical system of the period. [1, f.45-49]

In conclusion, the Bessarabian pharmacy network in the early 1870s was a vital element of the region’s medical infrastructure. Despite organizational deficiencies and commercial pressures, pharmacies provided the majority of the population with access to medicines and played a crucial role in regional healthcare (Figura 4).

The Network of Free Pharmacies in the Bessarabian Region (1871)

Archival materials from the Medical Department of the Bessarabian Regional Administration allow for the reconstruction of the geographical distribution of pharmacies in the region in the early 1870s. In 1871, a total of 38 free pharmacies were operating in the region, a significant portion of which were located in the provincial capital, Chişinău. The remaining pharmacies were situated in district towns and smaller settlements, providing the population with access to medicines. [1, f.45-49]

Free pharmacies in the city of Chişinău:

1. Pharmacy of the Chişinău merchant Rabinovich, leased by the wife of the collegiate assessor Evdokia Bongardt, managed by provisor Yakov Bongardt. Number of prescriptions: 20,773; turnover: 10,200 rubles.
2. Pharmacy of the wife of a Turkish subject, Alexandra Pautynskaya, managed by provisor Pautynsky. Number of prescriptions: 630; turnover: 3,749 rubles 48 kopecks.
3. Pharmacy of the wife of provisor Rectius, managed by provisor Rectius. Number of prescriptions: 2,857; turnover: 2,872 rubles 70 kopecks.
4. Pharmacy of the Turkish subject Maximilian Pautynsky, leased and managed by provisor Weisbrod. Number of prescriptions: 6,802; turnover: 3,360 rubles 10 kopecks.
5. Pharmacy of provisor Egerman, managed by himself. Number of prescriptions: 2,189; turnover: 6,891 rubles 25 kopecks.
6. Pharmacy of provisor Yakov Bongardt, leased and managed by provisor Shapiro. Number of prescriptions: 11,694; turnover: 5,983 rubles 42 kopecks.
7. Pharmacy of provisor Goldberg, managed by himself. Number of prescriptions: 6,521; turnover: 2,673 rubles 42 kopecks.
8. Pharmacy of provisor Michelson, leased and managed by provisor Gibishsky. Number of prescriptions: 3,854; turnover: 3,607 rubles 56 kopecks.
9. Pharmacy of the heirs of Raupach, managed by provisor Zayanchkovsky. Number of prescriptions: 4,970; turnover: 3,294 rubles 49 kopecks.
10. Pharmacy of the heirs of Raupach, managed by provisor Zayanchkovsky. Number of prescriptions: 4,970; turnover: 3,294 rubles 49 kopecks.

The total number of prescriptions for Chisinau was 72,190, and the turnover was 42,601 rubles and 24 kopecks.

The statistical data deciphered from the 1871 report reveals a pharmaceutical system marked by severe geographic and economic asymmetry. From a public health management perspective, the ratio of 1:11,576 inhabitants per pharmacy in Chişinău, compared to 1:34,751 in the rest of the region, indicates a deliberate concentration of capital and resources in profitable urban centers. This enormous gap in medicinal consumption—41 kopecks in urban areas versus a negligible 2.5 kopecks in rural districts—is not merely an indicator of poverty but also evidence of the total absence of a functional distribution infrastructure. The rural population, despite being the demographic majority, was effectively excluded from the official medical circuit and remained dependent on empirical medicine, a phenomenon that underscored the critical necessity for the Zemstvo’s intervention to “socialize” access to healthcare.

Furthermore, the archival records expose a reality that was deeply concerning for the medical authorities of the era: the transformation of the pharmacy into a purely commercial commodity. Cases identified in Bender and Hotin, where families such as the Gutskovskys controlled the local network through relatives or intermediaries, demonstrate a clear trend toward monopolization. This profit-driven management style, characterized by the leasing of locations based on “advantageous spots” and the neglect of laboratory standards—often described as “inconvenient and poorly equipped” premises—in-

Table 1.

Distribution of the Pharmacies in the Bessarabian districts (1870).

District towns and settlement	Pharmacy and Management mode	Number of pre-scriptions	Turnover
Chişinău	Pharmacy in Hânceşti, Provisor Alexandrovich, managed by himself.	174	900 rubles
Orhei	Pharmacy of provisor Rimer, managed by himself.	3,355	2,186 rubles 42 kopecks
Orhei district	Pharmacy in the settlement of Teleneşti: of the widow of provisor Natterer, leased and temporarily managed (data missing).		
	Pharmacy in the settlement of Tuzora-Călăraşi: of provisor Yantsitsky, leased and managed by provisor Pinkinson.	2,754	1,731 rubles 71 kopecks
Bălţi	Pharmacy of provisor Podgoretsky, managed by himself.	4,876	3,204 rubles 67 kopecks
	Branch of the pharmacy of provisor Podgoretsky, under his management (overseen by pharmacy assistant Osinsky).	1,426	736 rubles 90 kopecks
Iaşi district	Pharmacy in the village of Făleşti: of provisor Podgoretsky, leased and managed by provisor Zabuzsky.	2,036	1,314 rubles 20 kopecks
	Pharmacy in the settlement of Sculeni: of provisor, collegiate assessor Hoffman, leased and managed by provisor Trachtenberg.	3,499	1,756 rubles 14 kopecks
	Pharmacy in the settlement of Rîşcani: of provisor Yantsitsky, managed by himself.	3,280	1,724 rubles 22 kopecks
Soroca	Pharmacy of the widow of provisor Izdebsky, leased and managed by provisor Freisinger.	3,339	2,346 rubles 95 kopecks
Soroca district	Pharmacy in the settlement of Vadul-Raşcov: of the widow of provisor Rachinsky, leased and managed by provisor Bolshevsky.	732	642 rubles 69 kopecks
	Pharmacy in the settlement of Otaci: of Ignatius Petrovsky, leased and managed by provisor Makhnitsky.	1,140	541 rubles 08 kopecks
Hotin	Pharmacy of provisor Onitskansky, managed by himself.	5,647	3,389 rubles 15 kopecks
	Pharmacy of the heirs of provisor Sepnitsky, leased and managed by pharmacy assistant Stemberg.	727	703 rubles 93 kopecks
Hotin district	Pharmacy in the settlement of Noua Suliţă: of provisor Roksikov, managed by himself.	675	933 rubles
	Pharmacy in the settlement of Lipcani: of provisor Roksikov, managed by pharmacy assistant Filippovsky.	453	1,180 rubles 21 kopecks
	Pharmacy in the settlement of Edineţ: of provisor Leventon, managed by himself.	74	934 rubles 52 kopecks
	Pharmacy in the settlement of Briceni: of provisor Podgaetsky, managed by himself.	182	909 rubles 49 kopecks
	Pharmacy in the settlement of Secureni: of provisor Grinevetsky, managed by himself.	801	625 rubles 57 kopecks
Bender	Pharmacy of provisor Gutskovsky, managed by himself.	4,705	2,142 rubles 53 kopecks
	Pharmacy of the wife of provisor Gutskovsky, officially belonging to the Odessa merchant Feldsher; managed by pharmacy assistant Bardak.	490	728 rubles 12 kopecks
Bender district	Pharmacy in the settlement of Căuşeni: of former provisor Kaufman, managed by provisor Bogolyubov.	117	505 rubles
	Pharmacy in the settlement of Tarutino (Manzyr): of Prince Gagarin, overseen by pharmacy assistant Kissinger.	134	155 rubles 03 kopecks
Akkerman	Pharmacy of provisor Zalevsky, managed by himself.	1,523	1,158 rubles 96 kopecks
	Pharmacy of Major Meerman, managed by provisor Kestner.	1,490	2,116 rubles 86 kopecks
	Pharmacy of the widow Vilchinskaya, managed by provisor Lapushinsky.	1,481	1,702 rubles 27 kopecks
Akkerman district	Pharmacy in the settlement of Tatarbunary: of provisor Kitsinsky, managed by himself.	1,083	1,781 rubles 07 kopecks
	Pharmacy in the settlement of Tarutyne: of provisor, collegiate assessor Hoffman, leased and managed by pharmacy assistant Gagin (data missing).		
TOTAL for the Bessarabian Region		118,447	69,186 rubles 84 kopecks

Source: [1, f.47-49v]

dicates that profit margins took precedence over the obligation to ensure patient safety. Such mercantile logic eventually forced the Medical Department to introduce rigorous regulations regarding the mandatory prior notification of transactions, aiming to protect the integrity of the profession from purely speculative interests.

The crisis of professional competence was further exacerbated by the intrusion of non-specialists into the field. The case of the “Căușeni barber” and the involvement of owners from the nobility or the military, such as Prince Gagarin or Major Meerman, highlight a desperate shortage of qualified personnel. From a risk analysis perspective, the fact that a non-specialist could personally prepare medicines for an “illicit practice” represented a major threat to public health. The intervention by Provisor Bogolyubov in 1872 symbolizes the emergence of a “professional consciousness” in Bessarabia, creating the necessary pressure on the state to safeguard the professional title of the pharmacist and to strictly delineate the medical act from commercial trade.

Finally, the conflict of vision between state regulation and the local Zemstvo’s liberalism, exemplified by the refusal of Provisor Linko’s request for a new pharmacy in Bălți, remains a defining moment for the management of that era. While the local Zemstvo sought to expand the network to stimulate competition and lower prices, the state Medical Department opted for a *numerus clausus* policy. This quantitative limitation was a strategic market stabilization maneuver, based on the conviction that an excessive number of units would financially weaken existing pharmacies, leading to a further decline in service quality. Ultimately, this analytical evidence demonstrates that 1871 was «year zero» in the struggle for pharmaceutical safety, as the transition from a «pharmacy-as-a-shop» to a «pharmacy-as-a-medical institution» was an imposed process of authoritative regulation designed to correct the distortions of a market dominated by profit and lack of professionalism.

Prison Hospital Pharmacies in Bessarabia: Organization, Challenges, and Practice in 1871

Historical sources show that pharmaceutical services in prison institutions of Bessarabia in the 19th century had a complex and heterogeneous structure. Until 1864, pharmacies at prison castles were supplied with medicines from state pharmacies. This centralized system provided stable deliveries in bulk, funding was allocated through a separate budget line, and quality control was performed by the Medical Department. This model allowed prison hospitals to provide inmates with necessary

medicines, though the system still had bureaucratic limitations and constraints. [1, f.50]

In the early 1860s, administrative reforms were initiated. According to the decree of the Medical Department dated 19 April 1863, No. 3112, and the decision of the Bessarabian Prison Supervisory Committee, from 1864 onwards, medicines for prison hospitals were to be purchased from local free (private) pharmacies. On paper, this promised economic benefits: reduced costs for packaging and transportation from distant state warehouses, decreased risk of medicine spoilage, and faster delivery to inmates. [1, f.50]

In practice, the transition to the new system led to significant problems. Organizational confusion arose from the lack of clear procurement procedures, absence of uniform medicine prices, undefined delivery deadlines, and unclear responsibilities. Financial limitations included the reluctance of private pharmacies to provide medicines on credit and the lack of a separate budget for prison hospital purchases. Logistical difficulties were exacerbated by the uneven distribution of free pharmacies: in major cities (Chișinău, Akkerman, Bălți), suppliers were available, while in district centers (Orhei, Soroca, Khotin), the selection and availability of medicines were limited. Small towns often did not have pharmacies capable of supplying the prison hospital at all. [1, f.50-51]

Additionally, a major issue was the lack of qualified personnel: prison pharmacies were often managed by paramedics without pharmaceutical education, wardens who combined this role with other duties, or assistants whom private pharmacies did not train or advise. The economic incentives of private pharmacies were minimal: small order volumes, the risk of delayed payments, and a preference for private clients paying in cash discouraged cooperation. Bureaucratic hurdles further contributed to inactivity: each order required approval by the Supervisory Committee, passed through multiple instances, and involved complex, duplicative reporting. [1, 50 verso]

In fact, prison hospital pharmacies existed in seven cities of Bessarabia: Chișinău, Akkerman, Bălți, Orhei, Soroca, Khotin, and Bender. However, their actual operation depended heavily on local conditions. In Chișinău, the presence of numerous free pharmacies allowed the hospital to negotiate purchases, whereas in Orhei or Khotin, supplier options were limited, and in smaller district towns, pharmacies could remain non-functional for months, existing only on paper.

The consequences of inactive prison pharmacies were severe. Inmates faced medicine shortages, increasing the risk of epidemics and leading to

self-medication using folk remedies. Severe cases were sent to civilian hospitals, generating additional costs and escape risks. The Supervisory Committee received complaints but could not promptly resolve the issue. In response to economic arguments in the 1860s, a new strategy for inmate treatment was introduced: mildly ill prisoners were treated in their cells, while severe cases were admitted to prison hospitals. Medicines were purchased from local free pharmacies, allowing savings on packaging, transportation, and hospital maintenance. In Chişinău and Orhei, this system partially worked: hospitals were reserved for severe patients, and medicines were issued to inmates on-site, monitored by paramedics or wardens. Despite the apparent economic efficiency, significant risks remained: the quality of medicines was not always guaranteed by private pharmacies, pharmacy personnel lacked formal pharmaceutical education, access to pharmacies in district towns was limited, and treatment conditions in cells were inadequate. [1, f.50-51]

Thus, the pharmacy system at prison hospitals in Bessarabia in 1871 was more a formality than a functioning network. The 1860s reform, aimed at economizing and decentralizing, collided with the real limitations of provincial infrastructure and staffing. Nevertheless, the experience of these years highlighted key issues in supply management and laid the groundwork for subsequent improvements in the organization of prison healthcare.

The Strategic Role of Pharmacies in the Regional Healthcare System: A Functional Analysis

The analysis of primary archival materials from 1871–1872 demonstrates that the pharmaceutical network was a central pillar of the Bessarabian healthcare landscape, though its efficiency varied drastically across different institutional sectors.

In the civilian sphere, the pharmaceutical network assumed a hybrid, quasi-medical function. Due to the chronic shortage of physicians, residents of urban centers and trading settlements transformed pharmacies into *de facto* local centers for medical consultation. Pharmacists and their assistants often transcended their legal mandate, providing clinical advice and therapeutic recommendations directly to the public, thus acting as the most accessible entry point into the healthcare circuit.

In stark contrast, the role of pharmacies within the prison system unveiled the limitations of early administrative decentralization. The 1864 reform, which mandated that prison hospitals procure medicines from local “free pharmacies” instead of centralized state warehouses, created a logistical deadlock. In the districts, these pharmacies failed

to perform their vital role, as private owners often refused to supply inmates on credit or lacked the necessary medicinal stock. Consequently, in the prison environment, the “pharmacy” often existed merely as an administrative formality on paper, forcing inmates toward self-medication and highlighting a severe breakdown in the supply chain of essential medical services.

This duality reflects a system where pharmacies were pivotal but structurally fragile. While the urban civilian network flourished as a commercial-medical hybrid, the institutional sector—particularly the prison pharmacies—suffered from a lack of professional expertise and a failed procurement model. These structural malfunctions eventually acted as a catalyst for institutional change, forcing the Medical Department to abandon its role as a passive observer and adopt a rigorous regulatory persona. Ultimately, the Bessarabian pharmacy of 1871 was the essential medicinal base upon which the modernization of the regional therapeutic system was constructed, despite the stark disparities between its civilian and institutional functions.

Conclusions

The analytical capitalization of the unpublished medical reports from 1871–1872 allows for a multi-dimensional reconstruction of the pharmaceutical landscape in Bessarabia at the dawn of the Zemstvo era. Based on the documentary evidence, the following conclusions are formulated:

Structural Asymmetry and the Accessibility Gap.

The Bessarabian pharmaceutical network in 1871 was characterized by a profound urban-centric imbalance. The statistical evidence (a ratio of 1:11,576 inhabitants per pharmacy in Chişinău versus 1:34,751 in the districts) demonstrates that pharmaceutical assistance was dictated by commercial profit potential rather than social necessity. This resulted in a marginalized rural population, largely excluded from scientific treatment and dependent on empirical practices.

The Failure of Early Externalization (The Prison Pharmacy Model).

The 1864 reform, which shifted prison drug supplies from state warehouses to private “free pharmacies,” proved to be a systemic failure in the provincial districts. The conflict between the mercantile logic of private owners (refusal to supply on credit) and the state’s public health obligations led to a medical vacuum within the penitentiary system, highlighting the risks of decentralizing essential services without a solid regulatory framework and stable funding.

The Pharmacy as a Primary Care Center.

In a context defined by a chronic shortage of physicians, the pharmacy performed a hybrid, quasi-medical role. It functioned as a *de facto* local center for medical consultation, where the population sought primary care. This social role transformed the pharmacist from a simple vendor into a pivotal, albeit often unregulated, actor in the regional healthcare system.

Transition to Professionalization and State Regulation.

The 1871–1872 period marks the definitive emergence of a “professional consciousness.” Cases of intrusion by non-specialists and the emergence of family monopolies acted as catalysts for the Medical Department to transition from a passive observer to an authoritative regulator. The imposition of mandatory transaction reporting and the *numerus clausus* policy represented the first systematic steps toward transforming the «pharmacy-as-a-shop» into a professional medical institution.

In summary, 1871 represents the “*year zero*” of modern pharmaceutical management in Bessarabia. This research provides the essential benchmark for understanding the structural challenges inherited by the Zemstvo, laying the groundwork for the subsequent phases of our evolutionary study on the modernization of public health in the region.

Declarations

Abbreviations

Not applicable.

Ethics approval and consent to participate

Ethics approval was obtained from the relevant institutional review board, and informed consent was obtained from all participants involved in the study.

Consent for publication

This article represents the first publication in a series of scholarly works devoted to the history of medicine in the Republic of Moldova, conducted within the framework of the research project entitled “*Foundations of Modern Public Health: Institutional Reforms and Pharmaceutical Networks in Bessarabia Under the Zemstvo (1870–1875)*”. Informed consent for the publication of this article was obtained from the Author.

Availability of data and materials

The datasets generated and analyzed during the current study are available within the article. More information could be found at *Arhiva Națională a Moldovei* (National Archives of Moldova).

Competing interests

The authors declare that they have no competing interests.

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Authors’ contributions

Diana Ețco/DE drafted and developed the manuscript, also revised, verified, coordinated, and supervised the work. After proofreading the text Author approved the final manuscript.

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