

Regulation of the apothecary activity in Bosnia and Herzegovina over the Austro-Hungarian period

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ABSTRACT

Aim To present the regulations governing the operation of pharmacies in Bosnia and Herzegovina over the Austro-Hungarian rule (1878-1918).

Methods Qualitative secondary data analysis was used.

Results The Austro-Hungarian government had found poor population's health, insufficient health facilities and qualified staff. For a long time, population was treated by old methods of medicine and pharmacy, and directed to folk doctors, healers and herbalists. As early as 1879, orders requesting mandatory possession of a university diploma to practice pharmacy and medicine, thus taking the initial steps to combat quackery. The production and dispensing of medicines became the exclusive competence of pharmacists. The Law on Pharmacies adopted in 1907 comprehensively regulated the apothecary activity. Pharmacy Gremium was founded, the first association of pharmacists with the task of protecting professional interests. All types of quackery were explicitly forbidden to pharmacy staff. Apothecary activity was regulated as a craft, not as a health activity. During this period, pharmacy became a regulated profession with educated and qualified personnel. The number of public pharmacies and qualified staff was growing. In 1878 only one graduated pharmacist was found, while in 1910 in 47 pharmacies there were 79 pharmacy staff. At the end of 1918, the masters of pharmacy were the owners of 48 pharmacies, in 38 cities.

Conclusion All enacted regulations contributed to the development and improvement of the apothecary activity over the observed period, and laid the foundations for the future development of the profession.

Key words: community pharmacies, history of pharmacy, legislation

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INTRODUCTION

Bosnia and Herzegovina (B&H) was under Austro-Hungarian rule from 1878 to 1918. After the Berlin congress, held in 1878, B&H fell under the Austro-Hungarian occupation, while the Sultan's sovereignty was formally retained and from the Austro-Hungarian annexation (1908) to the end of the First World War (1918) it was under the full sovereignty of the Austro-Hungary Monarchy (Monarchy). Over the Austro-Hungarian rule socio-political and social circumstances changed significantly, including health conditions in the country.

Little attention was paid to the population's health during the Ottoman rule, so the health and hygiene conditions of the population were very poor. The Austro-Hungarian government found a complete absence of public hygiene, epidemics and numerous chronic infectious diseases were a regular occurrence as a result of insufficient number of health facilities and qualified health personnel (1,2). The Turkish administration was deprived of an organized health service, everyone was allowed to practice medicine and prepare medications, with the inherited and empirically acquired knowledge (3). The people were mostly focused on folk doctors, self-taught healers, herbalists, and clergy of all denominations. The new government found only about five qualified doctors, but many Jewish doctors (hakims), Jewish and Muslim attars (traditional and herbal drug sellers), barbers, ranches, sorcerers, charms, who treated people and prepared medicines (3). Various medicines and spices were sold for expensive money (4), and the treatment at that time can be more or less expressed with "*verbis, herbis et lapidibus*" (5).

The Austro-Hungarian administration immediately approached the organization of the health service according to the canons that ruled in the Monarchy. This was not easy given the conservative habits of the population, the limited financial resources needed to modernize the health service and the lack of qualified educated staff (1). Among many settlers in B&H there were qualified doctors and pharmacists, who had taken treatment into their own hands. Since then, an increasing number of public pharmacies had started to open. Authorities sought to combat quackery and banned such work (3).

The people were treated for a long time according to the old methods of folk medicine and pharmacy, and the attar shops survived for a long time despite

the work bans. They can be said to have been a transition from folk pharmacotherapy to modern pharmacies, and as such were preferred by average residents (1). Therefore, pharmacy owners complained of poor turnover, so they had to deal with additional work in order to provide for normal life. Pharmacist Anton Kluczenko, the pharmacy owner in Livno, is an example of how pharmacy had struggled. He called himself a "photographer from Livno" because his pharmacy worked so poorly that he also practiced photographic craft, (3) the soda water production and the grocery store (6,7). Some other pharmacists were also engaged in additional jobs because accustoming of the people to be treated with medicines from pharmacies was slow (3). Pharmacy owners (in B&H cities) Eduard Rhein (Bihać), Stefan Variačić (Gradiška), Theodor Heydušek (Bugojno), Gyulla Keller (Bosanski Novi), Aleksander Sussmann (Derventa), Johann Stanislaus Niemczyk (Gračanica), Michael Hodža (Gradačac), Domenico de Mistura (Jajce), Waclaw Babinski (Konjic), Rudolf Karl Loebel (Maglaj), Wenzel Mikan (Mostar), Gavro Peciković and Simon Zaloscer (Tuzla), Moritz Kirtner (Županjac) also had the soda water production (6), Gustav Proche (Brčko) the liqueur factory and Karl Fürich (Foča) and Michael Finkelstein (Prnjavor) the grocery store (8). Despite all the difficulties, pharmacy in B&H began to develop over the Austro-Hungarian period. As this was the period when health conditions in B&H changed significantly and the modernization of medicine and pharmacy began, a research was conducted in order to explore and present the apothecary activity for the period from 1878 until 1918.

The aim of this paper was to present the enacted regulations governing the operation of pharmacies over the Austro-Hungarian rule, by which the pharmacy became a regulated profession with qualified pharmacy staff providing a health service.

MATERIALS AND METHODS

Materials and study design

A retrospective and descriptive research was conducted at the Archives of the Republic of Srpska and the Museum of the Republic of Srpska during the period from November 2019 to August 2020 in order to present the regulations governing the operation of pharmacies in Bosnia and

Herzegovina over the Austro-Hungarian rule for the period from 1878 until 1918.

Methods

The method of the qualitative secondary data analysis was applied.

The material available in its original form from the Archives of the Republic of Srpska and the Museum of the Republic of Srpska, as well as the National and University Library of Bosnia and Herzegovina digital collections was used. Company registers, books (Administration Reports, Collections of Laws), address books and newspapers were used from these sources, as well as other sources, as books, published papers in the journals and the Internet. The most important enacted regulations that regulated the operation of pharmacies over the observed period were presented chronologically. Firstly, an Austro-Hungarian Government's order regulating the apothecary activity was presented as the first regulation enacted as early as in 1879, followed with an order on performing medical practice enacted in the same year. The latter was briefly presented as it defined duties of other medical staff regarding medicines preparation. The next regulation, the Law on Pharmacies from 1907 regulated the profession in a more comprehensive way. Secondly, a Pharmacy Gremium established by the Law on Pharmacies was presented as the first professional organization. Thirdly, some other regulations and prohibition orders pharmacies had to apply were also briefly presented, as the introduction of an adequate legislation was necessary to organize a good health service. Finally, the changes in the number of pharmacy staff and pharmacies were shown, as the regulated profession in the country might also be a factor which enabled the increase in professional staff through organized working conditions in a certain social environment.

RESULTS

Regulations governing apothecary activity

Apothecary activity was regulated as early as 1879 by the Order of the Provincial Government (Figure 1) as a pharmacy craft (9). The pharmacy owner or provisor could only be a person with a doctor's degree in chemistry or a master's degree in pharmacy obtained at an Austro-Hungarian university. All existing pharmacies that did

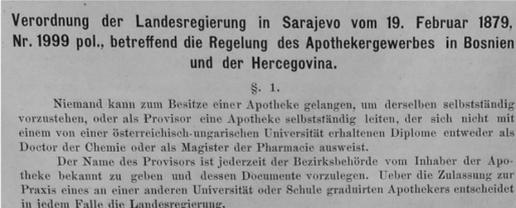


Figure 1. An Order regulating the apothecary activity in Bosnia and Herzegovina (Article 1, 1879) (9) (with permission of the Archives of the Republic of Srpska Banja Luka, Bosnia and Herzegovina)

not meet this requirement had to be closed within three months of the publication of this Order. The concession for the opening of the pharmacy was given by the Provincial Government, applying the principle that one pharmacy is needed per 10,000 inhabitants. It was mostly received by pharmacists from the other parts of the Monarchy as there were no locals. Preparation and dispensing of medicines were allowed only to a master of pharmacy or a pharmacy assistant with a tyrocinial exam. Medicines were allowed to be prepared and dispensed only in accordance with the valid pharmacopoeia and the medicine tax. In order to determine the quality and availability of medicines, the inspection of pharmacies was conducted by the district doctor. In the same year, an Order on performing medical practice was issued (10). Only doctors, ranches, veterinarians, dentists and midwives with an appropriate diploma obtained in the Monarchy were allowed to practice medicine. Preparation and dispensing of medicines was the exclusive right of pharmacists, which the doctors and ranches could independently perform only with a special authorization. They received permission to run a home pharmacy from the Provincial Government only for a place without a public pharmacy within two miles of their residence place. Although this order did not directly concern the pharmacies themselves, it clearly defined the conditions for the preparation of medicines by other medical staff. The Austrian Pharmacopoeia was valid for all medical staff, starting with the 6th ed. from 1869, with an 1879 addendum (Figure 2) (11), the 7th ed. from 1890, the 8th ed. from 1906, also the last edition of "Pharmacopoeia Austriaca" in the Monarchy, and the appendices from 1910 and 1916 (12,13). With the Law on Pharmacies adopted in 1907, after almost thirty years, the apothecary activity was regulated more comprehensively and

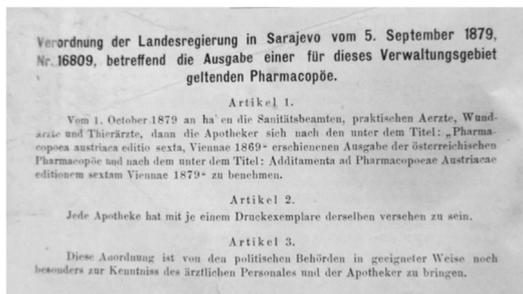


Figure 2. An Order determining the use of the Austrian Pharmacopoeia (The 6th Ed., 1879) (11) (with permission of the Archives of the Republic of Srpska, Banja Luka, Bosnia and Herzegovina)

the Pharmacy Gremium, a professional body of masters of pharmacy, was established (Figure 3) (14). The public pharmacy was considered as a craft company, and a concession given by the Provincial Government was needed for opening the pharmacy. The concession was personal and tied only to a specific place where the doctor performing practice had a permanent residence. When opening new pharmacies, attention had to be paid to the local need to enable the already existing pharmacies in that place or the surrounding area to survive.

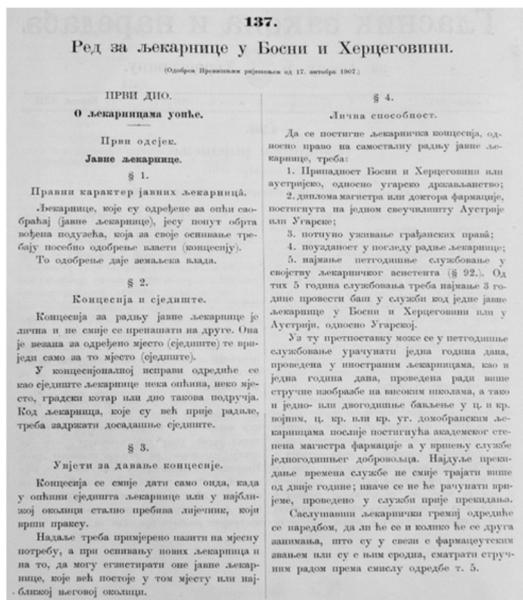


Figure 3. The Law on Pharmacies in Bosnia and Herzegovina (The first page, 1907) (14) (with permission of the Archives of the Republic of Srpska, Banja Luka, Bosnia and Herzegovina)

The concession could only be granted to Bosnian-Herzegovinian, Austrian or Hungarian citizens. Those interested had to prove their personal ability, which meant having a master's or doctoral degree in pharmacy from an Austrian or Hungarian university, full enjoyment of all civil rights,

reliability in working in a pharmacy and at least five years of work in a pharmacy as an assistant. The competition for opening a new pharmacy was published in the official newspaper "Sarajevski list" ("Sarajevo Gazette"). A new concession was required if the pharmacy was legally or by inheritance transferred to another living person. It was not required in the case when a pharmacy was inherited by concession's owner widow or children, or when the pharmacy heir was a pharmacist, until he acquired the condition for an independent pharmacy operation. For example, after the death of Josef Oltvány from Derventa city (B&H), the pharmacy owner became the widow Marie Oltvány (15), and after the death of Robert Brammer from Banja Luka city (B&H) the owners became widow Jozefina and minor sons (16). One of them continued to run his father's pharmacy as a pharmacist upon the same concession.

The concession owner could exceptionally be allowed to operate a branch in a place with a temporary or occasional need for the medicines preparation and dispensing, like a seasonal pharmacy in the spas. Such a pharmacy, operated during the bathing season in Ilidža (Sarajevo, B&H), was run by Stefan Dobóczy from 1898 to 1904 (6,7,17,18, 19-21), and Heinrich Schlezinger from 1908 to 1914 (8, 22-26), both pharmacy owners in Sarajevo. Doctors and veterinarians had the right to keep a home pharmacy if there was no public pharmacy in their place of residence, only until the pharmacy was opened. The Provincial Hospital, the Central Penitentiary in Zenica city (B&H) and the Sickness Foundation of the State Railways (B&H) were allowed to operate their own institutional pharmacies. Pharmacists Max Teich, a provisor, and Karl Anderle, an assistant, worked at the Provincial Hospital's pharmacy from 1898 to 1918 (6-8, 17-29). Max Teich was one of the extraordinary members of the Provincial Health Council in the period 1900-1918 (7,8, 18-29). The Council gave an opinion in all important health matters, including those related to the public pharmacies (30).

Pharmacies were supervised by the Provincial Government through health authorities, and were inspected once a year. The pharmacy employed interns, with or without a tyrocinical exam, and assistants, with a university diploma. Women could practice pharmacy under the same condi-

tions as men, but the permission for an independent pharmacy operation had to be given by the Joint Ministry in Vienna, through the Provincial Government in Sarajevo. Pharmacy staff was not allowed to unfavourably comment the doctor and his prescription, and had the obligation to keep professional secret. The pharmacist and his staff were forbidden any kind of quackery.

Following the Law on Pharmacies, several implementing regulations were enacted. A detailed condition for operating the pharmacies, the necessary premises and equipment for medicines preparation and dispensing were prescribed by one (31). These premises included a dispensation room, laboratory, medicine storage room, attic for storing herbal drugs, medicine cellar and inspection room. The pharmacist was responsible for all medicines made or bought by him, and the manufacturer for the specialties, cosmetics and other products sold in the original package. In addition to the pharmacopoeia and tax, the pharmacy had to have all the valid orders, gremial circulars and instructions, and professional journals. The pharmacist was allowed to dispense medicines in emergencies when it was not possible to reach a doctor, which was not considered quackery.

Pharmacy Gremium

The Pharmacy Gremium, with a headquarters in Sarajevo (B&H), was established to represent professional interests and assist the Provincial Government in relation to pharmacies. It consisted of all public pharmacy owners and masters of pharmacy who worked in those pharmacies. The first session of the Gremium Assembly was held on January 29, 1908 (32). The governing body was the Board, consisted of a president, first and second deputy, treasurer, secretary and two councillors without a specific function. They all had to be pharmacy owners, with the exception of the secretary, who had to be a graduated assistant. The president, who had to be from Sarajevo, represented the Gremium in public and managed the guild treasury. The members, confirmed by the Provincial Government, performed all functions free of charge. The Gremium revenues, concession and membership fees, fines, gifts, interest, were used for administrative expenses, guild library and to help poor pharmacists and widows and children.

The Pharmacy Gremium presidents were Eduard Pleyel (in the period of 1910), Josef Patera (1911-1913), Stevo Romčević (1919), vacant (1914-1918). The first deputies were Josef Patera (1910), Eduard Pleyel (1911-1912) and Heinrich Schlesinger (1913-1914), all from Sarajevo. The second deputies were Martin Houška (1910-1911) from Mostar, Tomo Mirković from Banja Luka (1912-1913), Ján Halla from Visoko (1914), vacant (1916-1918). The treasurers were Heinrich Schlesinger (1910-1912) and Eduard Pleyel (1913-1918), secretary Eustah Widenhoffer (1910-1918) from Sarajevo and Gustav Proche from Brčko (1918). Councillors without a specific function were Gustav Proche (1910-1917) and Theodor Heydušek from Bugojno (1910-1914) (22-29).

Other regulations that applied to pharmacies

Some other regulations also applied to pharmacies in certain parts. Customs duties were paid on each imported commodity according to the tariff from the Law on General Customs Tariff with customs price list (33). The customs duty on all medicines from the tariff class "Chemical products, dyes, medicines and perfumes" was 24 forints, and for cosmetics 50 forints. All doctors and pharmacists were required to comply with regulations relating to prescribing and preparation of medicines at the expense of the state fund. Prescribing was limited to medicines needed to treat or alleviate the disease sufficiently, and to cheaper if more medicines were needed (34). Pharmacists who wanted to procure tax-free brandy for pharmaceutical or scientific purposes had to have a special permit (35). The sale and purchase of poisons were subject to licensing and control, and was given exclusively to pharmacists and drugstore owners (36).

The Provincial Government also issued orders banning certain products from use, for example Count Mattei's electro-homeopathic medicines (Figure 4) (37), all kinds of Brandt's Swiss pills (38), Dr. Schiffman's asthma powder (39). These bans provide an insight into the various products sold here, though perhaps not all in the pharmacies, but also the willingness of the authorities to ban harmful products. From 1896, the import of saccharin, all other similar artificial sweeteners and syrups containing saccharin or similar arti-

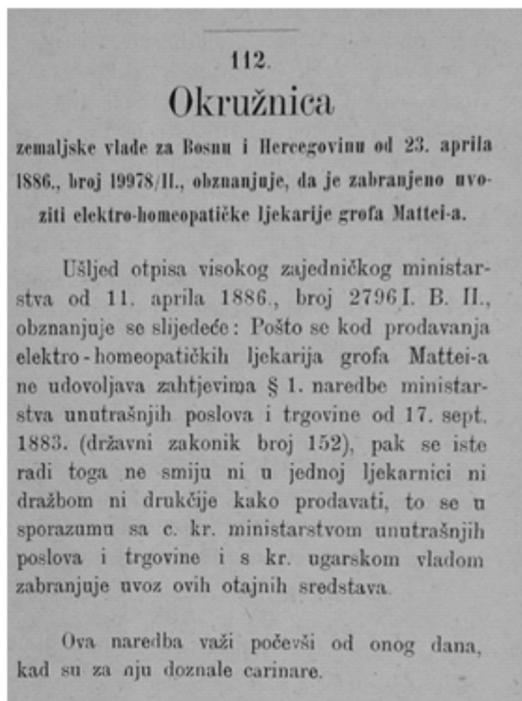


Figure 4. A Circular on the import and sale ban of the count's Mattei electro-homeopathic medicine, 1886 (37) (with permission of the Archives of the Republic of Srpska, Banja Luka, Bosnia and Herzegovina)

Official sweeteners was banned (40). Pharmacists and wholesalers of spice goods had to submit an application for import to the political area and register the shipment immediately upon receipt. The Law introducing a monopoly on artificial sweeteners (41) also applied to pharmacists. Diabetics were allowed to pick up saccharin at the pharmacy upon a doctor's certificate, at the same time withdrawing from the sugar supply (42). During the war period (1914-1918), orders banning the export of certain goods, including medicines for humans, animals, medical instruments, vaccines, serums, and the like were issued.

Changes in the number of pharmacy staff and pharmacies over this period

Only one graduate pharmacist was found in 1878 in B&H (30), and twenty years later there were forty masters of pharmacy who owned a pharmacy (6). At first, only one pharmacist worked in each pharmacy, but over time there were more staff, assistants and interns. Changes in the number of pharmacy staff and pharmacies were presented by Table 1, where an increase can be noticed (Table 1) (1,26,29,30,43). In 1910, the total pharmacies turnover was 706,589 crowns and the number of doctor's prescriptions was 43,576 (43). The population's he-

Table 1. Pharmacy staff and number of pharmacies in the period from 1905 to 1918

Pharmacy staff	Year			
	1905	1910	1914	1918
Owners	38	40	41	37
Tenants	NA	3	4	4
Provisors	5	3	2	7
Graduated assistants	9	12	NA	NA
Interns	13	11	NA	NA
1st year	NA	6	NA	NA
2nd year	NA	4	NA	NA
3rd year	NA	1	NA	NA
Total	65	69	71	NA
No. of pharmacies	44	47	47	48
No. of inhabitants per a pharmacy	NA	41.261	40.384	NA

NA, no information available

alth condition had significantly improved over time thanks to a well-organized network of health institutions and staff. In 1914, a total of 234 doctors, 141 midwives and 8 dentists worked in 17 hospitals (with 837 beds), 58 municipal dispensaries, and on average, there were 0.6 beds per inhabitant, 12,912 inhabitants per doctor and 16,222 per midwife. At the end of 1918, there were 48 operating pharmacies distributed in 38 cities. In a forty-year period 47 pharmacies were opened, and only a little over half of the urban settlements had a pharmacy (29). Women first appear in a report on pharmacy staff in 1909, one out of eight graduate assistants, and two out of six third year interns (44). The first modern European-style pharmacies were opened in Sarajevo, 1878, by Eduard Pleyel (3) and in Banja Luka, 1879, by Moritz Brammer (45).

DISCUSSION

The Austro-Hungarian government took the first steps in settling the difficult circumstances of earlier times at the very beginning of its rule by organizing the health service according the laws governed the Monarchy itself (1). This included the enactment of the legislation for the regulation of the pharmacy and medicine practice on this territory. As early as in 1879, the orders stipulating the obligation of holding a university diploma to practice pharmacy as well as to practice medicine by other medical staff were enacted. This was a novelty because during the Turkish rule there was no such an obligation to have a formal education for preparation the medicines, and everyone was allowed to practice mostly the inherited and empirically acquired knowledge (3). These were the initial steps in combating quackery, and raising the quality of the health services and health education of the population. Preparation and dispensing

of medicines became the exclusive competence of pharmacists as formally educated health professionals, to which doctors and ranches were only exceptionally entitled by the approval of the Provincial Government (9,10). Such an approach can be considered as good and rational, and probably the only possible one when a very few graduated pharmacists were available at the time. This exception, however, enabled the medicines availability to the population by a qualified health personnel in places where there was no pharmacy. By these orders medicine and pharmacy practice were clearly separated, which was not the case during the Turkish rule (3). The introduction of the obligation to apply the medicine tax and pharmacopoeia was a major step forward, which guarantees the quality of the medicines and regulated prices. Prior to the Austro-Hungarian rule, the population was mostly treated by medicines and herbs prepared by self-taught healers, and there was a lot of quackery (1). The treatment procedures for various diseases, prescriptions were passed from generation to generation, and were later recorded by literate people (46). These medicine recipes or a kind of rulebooks were called “*ljekaruše*” by which the people were mostly treated with, or with the medical transcripts from other languages brought in the country (Arabic manuscripts) (47). There were some written documents regarding treatment and medicine preparations even then, providing the only possible quality and continuity level of the medicines use at that time. The introduction of the mandatory use of pharmacopoeia and medicines tax instantly raised medicines quality to the level similar to the other parts of the Monarchy (13), which could be provided only in the pharmacies by the graduated pharmacists. These first regulations were very valuable as they enabled graduated pharmacists to be the only quality, educated staff responsible for the medicine preparation, thus raising the quality of healthcare in the country and started to combat quackery.

Later the pharmacies were regulated in a more comprehensive way, and the Pharmacy Gremium was established. This is extremely important because

this was the first organized association of pharmacists with the task of representing professional interests, preserving and developing its community. Regulating the work of women in pharmacies was also a step forward, and in line with the modern practice at that time (48). Women were allowed to practice pharmacy, and until the end of this period, none owned a pharmacy. However, women graduate assistants and interns started to appear in the practice. All types of quackery were explicitly forbidden to pharmacy staff. During the entire period the operation of pharmacies was regulated as a craft, rather than health activity, as it was, for example, in Croatia (49). Apothecary became a regulated profession with educated and qualified personnel who provided a service to the population. Introduction of the necessary legislation by which the operation of pharmacies was regulated, enabled the arrival of a larger number of graduated pharmacists in the country, with the right and the obligations in the medicines production and dispensing they were entitled to by their education. The introduced legislation, among other things, contributed to the increase in the number of pharmacies and qualified pharmacy staff, thus providing the necessary base for the organization of good pharmacy service in towns and villages, and to the development and improvement of the profession, health and social conditions in the country during the Austro-Hungarian rule from 1878 to 1918.

In conclusion, all enacted regulations had significantly changed the apothecary activity in B&H during the period from 1878 to 1918. They contributed to the establishment, regulation and development of modern apothecary activity and professional service over the observed period, and, thus, created the foundations for future development of the profession.

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TRANSPARENCY DECLARATION

Conflicts of interest: None to declare.

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