

ANTI-EPIDEMIC MEASURES OF THE HUNGARIAN GOVERNMENT IN REACTION TO THE CHOLERA WAVE OF 1872/73¹

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The article analyzes the Hungarian anti-epidemic measures as a response to the cholera epidemics in 1872/73. The Ministry of Internal Affairs and county authorities responded to the initial threat by issuing recommendations on how to deal with it. Instructions also appeared in manuals and the periodical press. Official documents were primarily devoted to describing the symptoms of cholera and clearly diagnosing the first cases in order to prevent the outbreak of the epidemic. The regulations often described ways to avoid the disease, how to treat the sick and primarily how to prevent further spreading. Some documents were devoted to the method of burial or handling of the remains of dead bodies. The article also aims to analyze the method of monitoring the epidemic at the county level. In the regions, each case was initially registered separately. The authenticity should have been confirmed by the county doctor. After the outbreak of cholera, the municipalities were to prepare and send weekly updated numbers of the infected, deceased, treated and recovered patients. Based on these statistics, anti-epidemiological measures were applied by shipping medications and supporting medical personnel.

Keywords: Cholera epidemic. 1872/73. Anti-epidemic measures. Health policies. Kingdom of Hungary. Zvolen County.

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Introduction

We can look at the cholera epidemics in the past as a laboratory of several levels of social, economic and political life. From demographic characteristics and through the analysis of the economic and political consequences, epidemics can be evaluated in the context of the history of healthcare and everyday life. In foreign historiographies, a frequent research topic is the perception of the state's

1 The article was supported by a grant from the Ministry of Education of the Slovak Republic, VEGA no. 1/0397/21 *Epidémie a protiepidemiologické opatrenia na území Slovenska v dlhom 19. storočí* [Epidemics and anti-epidemiological measures in the territory of Slovakia in the long 19th century].

reactions to the consequences of epidemics and the parallel creation of health policies, the goal of which aim to mitigate the results of fatal diseases.² They had devastating consequences for the country on several levels. For example, in economic terms, they caused a decrease in the productive tax-paying population. In the end, the consequences of the epidemics also posed a security problem because the negative demographic results caused the country to lose the potential military recruits.

In the text, I focus on the analysis of state regulations at the time of the fifth cholera epidemic on the territory of today's Slovakia which affected the country in 1872 and 1873. In the context of the Hungarian Kingdom, we are talking about the sixth wave, since the southern part of the country was also affected by a wave of cholera in 1835/36 which did not appear on the territory of Slovakia.³ When using the terminology, it is necessary to distinguish when we are talking about an epidemic wave and when we are talking about epidemic cases. Therefore, in historical sources, or even in historiography, we could also find other years in which cholera appeared in Hungary but did not always break out in the form of an epidemic. When talking about the wave from 1872/73, we are referring to the so-called fourth cholera pandemic, which occurred from 1863 to 1875.⁴ In Hungary, the wave caused a significant drop in the population.⁵ The number of deceased individuals doubled compared to the period before the epidemic. In 1873, 874,055 people died in the Kingdom of Hungary, while the average for the previous non-epidemic years (1869 and 1870) was about half of that (435,000). The crude mortality rate in the given year was also extremely high, reaching 65.1 ‰, while in the western part of the monarchy it was only 39 ‰. The European statistics show that in 1873, Hungary was the most affected country, with a crude death rate from cholera of 14.2 ‰.⁶ Approximately 450,000 inhabitants were infected with cholera, and 190,000 died.⁷ However, these values

2 For example, see: CARTWRIGHT and BIDISS. *Disease and History*. New York 1991; PORTER. *Health, civilization and the state: a history of public health from ancient to modern time*. London 1999; HARRISON. *Disease and the Modern World: 1500 to the present day*. Cambridge 2004; GILES-VERNICK; CRADDOCK and GUNN, eds. *Influenza and public health: learning from past pandemics*. London 2010.

3 MÁDAI. Hat nagy kolerajárvány és a halandóság Magyarország dél-dunántúli régiójában a XIX. században. In *Demográfia*, 1990, vol. 33, no. 1-2, pp. 67-68.

4 SNOWDEN. *Epidemics and Society*. New Haven; London 2019, p. 192.

5 See: KELETI. *Magyarország Népesedési Mozgalma 1864-73-ban és a cholera*. Budapest 1875, p. 44.

6 MÁDAI. *Az Utolsó nagy kolerajárvány demográfiai képe Európában és az egyesült államokban (1872 – 1873)*. Budapest 1983, pp. 9, 16-18, 23-24.

7 Compared to the previous wave in 1866, during which 154,000 were infected and almost 70,000 died, the impact of the last cholera wave was many times higher. GRÓSZ. *Az 1872/3 évben uralgott kolerajárvány keletkezése, terjedése és lefolyása*. Budapest 1874, p. 17.

were not only due to cholera since in 1873 the epidemic waves of smallpox and whooping cough swept the Kingdom.⁸

The wave of cholera hit Hungary in two phases. From August 1872 to the end of the year and after a short break the epidemic began to spread intensively in the spring of 1873. The wave reached a “peak” in the summer months from July to September, after which it kept gradually decreasing until the end of the year. The last cases were identified in January 1874.⁹ Due to the long duration of cholera, its gradual arrival and two evident phases between which there was a break of several months, the state was able to react to the danger of the epidemic. Even before the authorities were preparing for the arrival of the new wave, in 1871 a regulation of the mandatory reporting of all infectious diseases entered into force. This information was to be provided by the appointed doctors directly to the Hungarian Statistical Office, which evaluated them so that authorities could prepare further responses.¹⁰

The state subsequently followed up this measure with several anti-cholera regulations. These were updated documents of the older health policies, which had been created during the first cholera wave in 1831.¹¹ Within Hungary, the competencies of creating anti-cholera regulations did not fall under the jurisdiction of the Prime Minister but belonged to the Ministry of Internal Affairs.¹² Historical studies have indicated that the cholera wave of 1872/73 was the last medieval type of epidemic.¹³ This assessment is based on two basic premises. One is the enormously destructive power of the epidemic, which caused a fundamental demographic crisis and the other is the negative attitude of the residents towards the measures being introduced. For instance, there was persistent mistrust towards doctors and authorities in general. People often simply refused to take medication. This practice was common in the previous waves of cholera but the behavior of the primarily rural population did not seem to have become more rational over the intervening decades.¹⁴

8 MERCER. Smallpox and Epidemiological-Demographic Change in Europe: The Role of Vaccination. In *Population Studies*, 1985, vol. 39, no. 2, p. 304; WESTON. Whooping Cough: A brief history to the 19th Century. In *Canadian Bulletin of Medical History*, 2012, vol. 29, no. 2, p. 341.

9 GRÓSZ, *Az 1872/3 évben*, pp. 15-16.

10 MÁDAL, *Az Utolsó nagy*, p. 13.

11 SVOBODNÝ. The Health of the Population and Health Policy in 19th-century Bohemia: The Case of Asiatic Cholera (1830s – 1900s). In *European Health and Social Welfare Policies*. Ed. Laudria Abreu. Brno 2004, pp. 203-205.

12 FRISNYÁK. A kolera térbeli terjedése és a közlekedés (1872 – 1914). In *Közlekedés és technikartörténeti szemle*, 2018, no. 1, p. 45.

13 FRISNYÁK, A kolera térbeli, p. 43. Cited by: FÓNAGY, Zoltán. Kolerajárványok a 19. századi Pest-Budán. In *Népszabadság*, 16. september 2002, p. 28.

14 LOSONCZY. Az 1848-as honvédsereg eü. szolgálatának küzdelme a kolerajárvány ellen.

Much has been written about the topic of the anti-cholera measures from the beginning of the 1870s in the Central European historiography. Much has been devoted to contemporary reflections about the epidemic wave. In addition to demographic characteristics, historians have examined contemporary documents on the subject of cholera.¹⁵ Several researchers have addressed the current historiographical discourse. One of them is László Somogyi who placed a selected group of ministerial regulations in the context of ethnographic research, reflecting the population's reactions during the epidemic.¹⁶ In the Kingdom of Hungary one can also find other academic writings about the measures that took place in today's Croatia and Romania. They are analyzed from a longer time frame.¹⁷

In the text I focused on the analysis of ministerial regulations reflecting cholera issued in the first half of the 1870s. According to these documents, adequate regional authorities were coordinated and the conclusions from the documents were supposed to be followed by all citizens. My goal is to analyze them and identify the content genesis of the regulations emerging before and after the cholera wave of 1872/73. In the context of the provisions, I will also reflect on the anti-epidemiological county tools. Using the example of the Zvolen Region, which was one of the most affected Upper Hungarian regions,¹⁸ I will present the policy of the county management. I will also describe the established authorities who were dedicated to creating and applying their own measures against the epidemic. I will analyze the practice of registering the already infected after the official announcement of the outbreak of the epidemic, which should have been implemented according to the regulations of the ministerial authorities. I will place this evidence in the context of the recording of the cholera victims in church registers.

In *Katonaorvosi Szemle*, 1953, reprint. pp. 3-4. Available at: <https://mek.oszk.hu/05100/05112/pdf/Losonczy_kolera.pdf>

- 15 CHYZER. *Népszerű oktatás a choléráról*. Budapest 1874; GRÓSZ, *Az 1872/3 évben*. In addition to them, one can also find a number of journalistic articles aimed at the professionals, especially doctors. A choleras betegek kezeléséről. In *Orvosi hestilap.*, 3. 9. 1871, no. 36, pp. 600-601.
- 16 SOMOGYI. Az 1872 – 1873 évi kolerajárvány orvosság kultúrtörténeti vonatkozásai. In *Környezettörténet, természeti, katasztrófák, járványok*, 2015, vol. 22, no. 3, pp. 363-371.
- 17 PULZIJEVIC. Managing the Epidemics in 19th Century Dalmatia: From Fatherly Monarch to Scientific Grounds. In *Historical Social Research Supplement*, 2021, vol. 33 pp. 79-99; TRĂUȘAN-MATU and BUDA. Cholera, Quarantines and Social Modernization at the Danube Border of the Ottoman Empire: The Romanian Experience between 1830 and 1859. In *Social History of Medicine*, 2023, vol. 36, no. 1, pp. 24-41.
- 18 MÁDAI, *Az Utolsó nagy*, p. 32.

Protection against the epidemic through the lens of a comprehensive anti-cholera instruction

Cholera was a frequently discussed problem in the Hungarian administration since the beginning of the 1870s. In the summer of 1871, an instruction was drawn up that elaborated the procedures of lower and regional offices for more efficient and faster identification of cases of infection. This was to prevent the spread of cholera and prevent the outbreak of an epidemic.¹⁹ Therefore, on September 14, 1871 a comprehensive set of instructions on behavior during cholera was issued, entitled *Utasítás a járványos cholera tárgyában*. The beginning of the document declared that it had been created as a reaction to the spreading epidemic in Russia in Galicia.²⁰ In the fall of 1871, cholera was really widespread in the western provinces of tsarist Russia, in Kiev, and thus there was a real danger that the disease could also reach the territory of Hungary.²¹ Cholera reached Western Europe in several outbreaks but the continent was saved from the epidemic by a wave of freezing weather with heavy snowfall which caused cholera to “stop”.²² The developed measures did not have to be applied in the country but exactly a year later, the country had to follow them after the outbreak of the epidemic, the official start of which was set precisely on September 14, 1872.²³ The formulated rules from the environment of the Ministry of Internal Affairs were addressed both to the public as well as to the regional offices and representatives of municipalities. The responsibility for registering the infected and applying the first anti-epidemiological measures to prevent the massive spread of cholera was transferred to cities and villages.

The opening statements of the document were devoted to the detailed characteristics of the description of cholera and the signs of the epidemic. In addition to the known symptoms, the authorities emphasized that in the case of cholera, many sudden deaths occur very quickly after the symptoms appeared. The document’s authors also drew attention to the remarkable fact that at the time of the arrival of cholera, the retreat of other diseases was observed. However, this observation has no medical or epidemiological rationale. It could

19 *Magyar Ország Rendelletek Tára Ötödik folyam. Hivatalos Kiadás*. Pest 1871. Available at: <https://library.hungaricana.hu/hu/view/OGYK_RT_1871/?pg=0&layout=s>

20 State Archive in Banská Bystrica (SA BB), Collection (c.) Zvolen County, Deputy County Documents (ZC DD), box (b.), Number (No.) 414/299, *Utasítás a járványos cholera tárgyában*, 14. 9. 1871, § 1.

21 MÁDAI, Az Utolsó nagy, p. 12. Prince George of Oldenburg also died of cholera in St. Petersburg. Drobničky. In *Národný hlásnik*, 1871, vol. 4, no. 4, p. 123.

22 Drobničky. In *Národný hlásnik*, 1871, vol. 4, no. 10, p. 314.

23 SA BB, c. ZC DD, b. 21, No. 415/15, Letter from the Ministry of Internal Affairs (MIA), K. Zeyk (author), 4. 11. 1872.

have rather been based on the fact that at the time of the cholera outbreak, the death rate multiplied and deaths from other causes accounted for a significantly lower proportion.²⁴ Here it is necessary to realize that the different causes did not decrease, only the number of all deaths increased substantially and the numbers from cholera dominated. This hypothesis is also confirmed by the justification of the argument when the epidemic ended the frequency of other causes of death began to increase. The statistics of the frequency of causes of death which receded after the epidemic, showed a higher proportion of other causes, although their average number may not have changed during the epidemic.

The document described in more detail the symptoms of incipient cholera, which in addition to stomach problems (including belching and growling in the stomach) could manifest as insomnia, lethargy, fatigue, difficulty walking, and heaviness in the chest. These symptoms could last from 1 hour to 8 days, with the caveat that when diarrhea appeared, it was most likely to be followed in quick succession by its acute symptom of “*diarrhoea choleric*”. Diarrhea as a basic symptom was also described in more detail. According to medical characteristics, it resembled rice decoction and was sticky and light yellow. After its release the patient may have seemed relieved but other problems soon followed. The vomit also resembled a glutinous rice decoction after which the patient became acutely thirsty. The initial stages of cholera were manifested by pains in the feet and insteps and muscle spasms, especially in the legs, and a loss of urine. A characteristic symptom was a bluing and thickening of the skin after cooling packs were applied to the patient. The “*falling of the eyes*” and the bruising of the lips were commented on fatalistically, which, when combined with shallow breathing and a loss of voice, foretold the quick arrival of death. The medical characteristics of the Ministry of Internal Affairs stated that this acute condition can last from 3 hours to 2 days in patients. After this, a gradual recovery can occur, i.e. a stage in which the described symptoms subside, the color of the stool darkens, the excretory system starts working again and the patient recovers in 3 to 8 days. The second scenario is the deterioration of the condition which is accompanied by complete exhaustion, manifested by cold limbs, irregular breathing and a complete cessation of urination.²⁵ However, the medical characteristics distinguished the so-called dry cholera “*száras cholera (cholera sicca)*”, which did not manifest itself in stomach problems and only

24 SA BB, c. ZC DD, b. 21, No. 414/299, Utasítás a járványos cholera tárgyában, 14. 9. 1871, § 2.

25 The doctors were publishing their recommendations, as people who could not urinate were showing signs of impending death. Drinking various decoctions and teas was supposed to prevent this condition. Zdravotné záležitosti. Tekvičina v cholere. In *Obzor*, 1873, vol. 11, no. 28, pp. 222-223.

rarely caused death.²⁶ Therefore, the mortality of the reported cases of cholera was one of the basic recognition signals even for laymen. If the alleged cholera patients did not die, the situation was evaluated as less serious, since it was probably not the “*true Asiatic*” cholera.²⁷

The document was specifically devoted to prevention in the form of recommendations that residents should follow in order not to be infected by cholera. It was practically an expanded version of the recommendations given by the document *General instructions on how to behave during a cholera epidemic (Prostonárodné poučenie o držaní sa po čas epidemickej cholery)* issued on August 31, 1872. As foods that reduced the risk of diarrhea, poppy coffee (*makk-kavét*)²⁸ and chocolate were recommended and in regions where the consumption of wine was widespread, it was emphasized that the stomach was less irritated by the red one.²⁹ However, the instructions went deeper into the procedures for what to do if the symptoms of cholera appeared but the person in question had not yet been seen by a doctor. Then the patient should have been covered with a blanket and mustard extract should have been applied to his abdomen. If vomiting has not (yet) occurred, the infected person should have been given juniper broth or linden, elder or mint tea.³⁰ If severe vomiting has already occurred, the stomach could be cooled with ice or cold water. Administration of any medication was completely prohibited. The procedure during the patient’s recovery was also devoted to dietary recommendations. If their condition was already improving, feeding should be started very carefully. Only very moderate portions of food in the form of beef broth and mashed rice were to be served, and only at the end the food of animal and plant origin was to be served. Until regaining their health, the patient was to avoid any heavy work because in the case of overload, according to the ministerial guidelines, the disease could recur.³¹

26 SA BB, c. ZC DD, b. 21, No. 414/299, Utasítás a járványos cholera tárgyában, 14. 9. 1871, § 3-6.

27 Drobničky. In *Národný hlásnik*, 1871, vol. 4, no. 10, p. 313.

28 It was probably a decoction of poppy seeds, which was used in the form of (opium) tincture and as a medicine to relieve cholera stomach cramps. SOMOGYI, *Az 1872 – 1873 évi kolerajárvány*, p. 370.

29 The usefulness of red wine was also mentioned in the recommendations of other authors. SOMOGYI, *Az 1872 – 1873 évi kolerajárvány*, s. 368.

30 Juniper tea was also recommended as an effective medical aid in the onset of cholera in the economic newspaper *Obzor*: Čaj borievkový proti cholere. In *Obzor*, 1873, vol. 11, no. 2, p. 14. Other ethnographic sources stated that in the territory of today’s Slovakia, juniper berries were also used at the time of cholera, which were allegedly left to soak in alcohol which the patient was supposed to drink. SOMOGYI, *Az 1872 – 1873 évi kolerajárvány*, p. 365.

31 SA BB, c. ZC DD, b. 21, No. 414/299, Utasítás a járványos cholera tárgyában, 14. 9. 1871, § 9-11.

More detailed regulations can be found in the sections for supervising public health, which the office of the Ministry of Internal Affairs was responsible for. The document was primarily devoted to public spaces, of which the most risky ones were places where human and animal excrement were found or where hygiene was poor. According to the regulations, this waste should have been disposed of in such a way as to ensure that its residues did not enter the groundwater and thus did not contaminate drinking water sources. The systems of canals, waste pits and cesspools should have been checked and those that did not meet the conditions of effective protection should have not been used. The others were to be regularly disinfected and cleaned. The measures were also devoted to recommendations for private houses and dwellings, and accented points on the regular cleaning of bedrooms, ventilation and reducing the number of people sleeping in one room. State authorities should devote special care to public spaces with the highest concentration of people. Under specific supervision were railway stations and ports, hospitality houses, cafes, factories, and public toilets, which were to be regularly inspected and disinfected as prevention before the first cases of cholera were confirmed. If infected persons have already appeared in public spaces, not only the places that came into contact with their feces and vomit (including the waste system, i.e. pits or channels) should be disinfected, but also the floors must be completely cleaned. If the infected persons were also treated at a given place, the bed, walls and clothes of the patient were also to be cleaned. These cases were especially taken into consideration at the railway stations, where separate rooms were set aside to provide the first treatment for persons affected by cholera while using the public transportation.³² A doctor was supposed to come to see them at this place and only then should a decision be made about their transfer to a hospital or to a place where a space was reserved for the treatment of cholera patients.³³

The health policies were much more precise about the methods of disinfection for which a solution of sulfuric acid (zinc sulfate) was to be used. Its solution (1:20) was to be used to clean the toilets and the patients' clothes, which did not have to be degraded after applying the preparation. Sulfuric acid compounds were used to fumigate the premises where the infected persons were staying. A solution (1:40) of carbolic acid should be used to disinfect internal spaces (floors, beds, walls).³⁴ For less dirty clothes, lime or calcium hypochlorite could be used

32 A special official missive during the epidemic showed that the Ministry of Transport also took care of those infected with cholera while traveling by railway. FRISNYÁK, A kolera térbeli, p. 51.

33 SA BB, c. ZC DD, b. 21, No. 414/299, Utasítás a járványos cholera tárgyában, 14. 9. 1871, § 12.

34 Published recommendations in periodicals also informed the public about carbolic acid as an

to disinfect the water, which could also be treated by boiling. Less commonly, coal dust and wood vinegar were recommended for chemical cleaning of the cholera bacteria.³⁵

Persons infected with cholera were to be treated in special hospital rooms, that is, isolated from the patients hospitalized for other reasons. Trained health workers and doctors were to care for the sick; private practice could be administered only in places where the network of official or state doctors did not reach. Non-medical health workers were to be properly retrained and prepared to provide healthcare for the infected and offer adequate information about the state of the epidemic to higher state authorities.³⁶ The authorities noted that these non-state health workers risked their health and lives in voluntary service, therefore, in the questions of the amount of their salary, it was stated that they should be paid such a “*daily wage as it is necessary to pay*”. The state was willing to get doctors to all cities at any market price. Official doctors falling under the jurisdiction of the state were responsible directly to the Office of the Chief Regional Medical Officer based in Budapest regarding the application of measures and reporting of the epidemiological situation. The distribution of medications and disinfectants in the regions was to be ensured by pharmacies free of charge. The provision of disinfectants free of charge was an innovative step compared to the older regulations, by which the state tried to effectively intervene against the spread of cholera at the household level.³⁷ In places where pharmacists did not have their practice, medicine was to be kept in the municipal offices or in the house of the local priest.³⁸ However, the medicinal products were supposed to be under official supervision and protected from theft or other wasteful handling.³⁹

The regulations also specifically addressed the rules according to which the regional authorities were supposed to supervise the disposal of the remains of those who died of cholera. The bodies of the deceased represented a source of potential infection, and in addition, the mass dying caused confusing situations

excellent and affordable means of disinfecting households during cholera. Zdravotné záležitosti. Karbolová kyselina v ochrane proti cholere. In *Obzor*, 1873, vol. 11, no. 1, p. 7.

35 SA BB, c. ZC DD, b. 21, No. 414/299, Utasítás a járványos cholera tárgyában, 14. 9. 1871, § 13.

36 State authorities, in cooperation with municipalities, solved the shortage of doctors during the epidemic with crisis measures. For example, hastily retrained medical students were sent to a place near Budapest. MÁDAI, *Az Utolsó nagy*, p. 55.

37 SOMOGYI, *Az 1872 – 1873 évi kolerajárvány*, p. 363.

38 This solution was common practice in rural locations in crisis. According to the statistics of the time, there were more than 20,000 inhabitants for one pharmacist in the countryside. MÁDAI, *Az Utolsó nagy*, p. 55.

39 SA BB, c. ZC DD, b. 21, No. 414/299, Utasítás a járványos cholera tárgyában, 14. 9. 1871, § 14-18.

in the local society. Therefore, the first order that the state emphasized was to prevent an incorrect determination of death, especially live burials. The document ordered that burials should not take place earlier than the code stipulated, i.e., 48 hours after death; in each case an autopsy would be performed. However, this was very difficult to apply, especially in regions with a shortage of doctors. It was the same in the places with doctors available since they would not have the time and space to devote themselves to dissecting deceased persons, when the epidemic situation required their presence with the infected.

According to the analyzed document, after death, cholera victims should have been separated from the area where other infected people were treated or where their family members lived. Therefore, special rooms were created in hospitals where dead bodies were to be stored until they were examined by a doctor. After that, the bodies of the deceased were to be taken to morgues until they were buried at the end of the set period. The regulations also addressed the scenario in which cholera victims were found on the street without any information about the family or medical facilities they might have belonged to. In those cases, the bodies were to be taken directly to the morgue, where a medical examination was to be carried out. If smaller municipalities did not have their own mortuary or other public space in which it could be created ad hoc; the representatives of the local government should designate a house that could serve this purpose. A house at the end of the village could be chosen, preferably in a part where the winds did not blow into the residential areas. This was to prevent the spread of the infection by wind from this heavily infected area.⁴⁰

In the next part, the document focused on preventing the spread of the disease through the air. The source of polluted air was not only the exhalations of the sick but also the smell that spread from the putrid wounds of the infected. Medical theories of the time claimed that cholera was transmitted through microscopic “*fungi*” floating in the wind, which, when they settle in the human body, multiply rapidly and cause cholera.⁴¹ Emphasis was placed mainly on the ventilation of rooms, while these descriptions of the spread and its prevention documented that the medicine of the time considered cholera to be an airborne disease. The regulation also emphasized the washing of premises in which some patients or persons died of cholera. In this part, the individual points of the document were partially repeated with the already mentioned parts, while going into deeper details. Emphasis was placed, for example, on disinfecting crevices in the floor or night containers, i.e. potties – portable toilets that were used for immobile patients. The recommendations were specifically devoted to the areas in which

40 SA BB, c. ZC DD, b. 21, No. 414/299, Utasítás a járványos cholera tárgyában, 14. 9. 1871, § 19.

41 Zdravotné záležitosti. Pamok proti cholere. In *Obzor*, 1872, vol. 10, no. 36, p. 286.

patients with diarrhea were treated, where furniture, medical equipment and other objects should have been disinfected in addition to the above-mentioned items. Cleaning was to be done by washing with a straw brush, and the clothing was to be decontaminated with chlorine lime in a double-bottom box, where a disinfecting compound was placed in the lower part. The intensity of the disinfection was to be achieved by heating with a portable stove which increased the smoke of the substance.⁴²

At the end of the document, they repeated and emphasized some of the recommendations that were mentioned above. The most obvious accent was placed on the purity of drinking water sources, where further expansion of recommendations can be observed. According to them, the collection of the surface water was prohibited for drinking purposes, and also the yards of residential buildings where sewage was poured should have been regularly flushed with clean water. The use of medications and alleged medicinal preparations by uneducated health professionals was prohibited, and their distribution had to be reported to the authorities.⁴³ Any changes in the epidemic situation were to be subject to official supervision, that is, every case of cholera was to be reported to the Office of the Regional Medical Officer and the Ministry of Internal Affairs. Regional authorities were supposed to consistently monitor whether cholera cases broke out into an epidemic or remained isolated, or if at least 4 to 5 cases were identified “*in a short time*” in one residential building, or on a street consisting of family houses. If the number of cases increased so much that in a larger area the proportion of victims to cases of infection reached “*high values*” but were not specified in any way, then the authorities were obliged to declare an epidemic situation in the region. For these reasons, gatherings of people were prohibited, and army exercises and troop transfers, which were associated with soldiers sleeping in villages and cities, were to be canceled. This could only intensify the spread of cholera.⁴⁴ At the time of the declared epidemic situation, the regional authorities should have prohibited the organization of regular weekly markets and religious pilgrimages. Information on the state of the epidemic was to be

42 SA BB, c. ZC DD, b. 21, No. 414/299, Utasítás a járványos cholera tárgyában, 14. 9. 1871, § 20.

43 SA BB, c. ZC DD, b. 21, No. 414/299, Utasítás a járványos cholera tárgyában, 14. 9. 1871, § 21. Paradoxically, advertisements for unapproved drugs were commonly advertised in newspapers at the time of cholera. An example was the supposedly “*famous*” Cholera Tinctur of the Viennese Doctor Bastler. Zdravotné záležitosti. K ochrane proti cholere. In *Obzor*, 1873, vol. 11, no. 19, p. 150; Zdravotné záležitosti. Eššite k Bastlerovej tinkture. In *Obzor*, 1873, vol. 11, no. 21, p. 166.

44 This is proven by practically all cholera epidemics that were directly related to the movement of troops. FAZEKAS. Revolution. War, and Cholera in 1848–49: The Case of Hungary. In *Austrian History Yearbook*, 2024, pp. 1-18.

regularly monitored by sending a weekly report on the number of infected, dead, treated and recovered for each municipality to the appropriate county offices. The epidemic could only be officially ended by the announcement of the ministerial offices which evaluated its course throughout the country. That is, municipalities or counties could not revoke the measures based on the fact that the number of infected people would decrease or disappear completely.⁴⁵

The coming epidemic of 1872 as a reflection of state measures

Anti-epidemic regulations began to intensify in the country the following year when reports arrived in Hungary that cholera was advancing from Russia and had crossed the borders of Galicia.⁴⁶ At the beginning of August 1872, the first cases were also identified in the country, and after about two weeks, the disease was identified in 23 localities, in which 104 people out of 336 infected died. Therefore, measures were activated in the Hungarian counties, which were informed by the Deputy State Secretary of the Ministry of Internal Affairs, Gusztáv Groisch.⁴⁷

The first point of the regulation concerned the cleanliness of public and private spaces, from which excrement or other objects that potentially caused the spread of cholera or other stomach diseases were to be removed. The elimination of diseases symptomatically related to cholera was related to the ban on the sale of unripe fruit, spoiled fish or other stale food. Supervision over the marketplaces was to be carried out by municipal gendarmes who were given the competence to remove low-quality goods from sale. The authorities should also take care of the inspection and disinfection of public toilets, waste pits and canals in facilities with a higher concentration of people. These were, for example, factories, but special attention was paid to places where travelers were concentrated, which presented a higher risk of spreading the disease. That is why the ministerial order explicitly named the inspection of railway stations, hostels, inns, pubs, but also theaters, for example. Another part of the document addressed the potential outbreak of the epidemic in Hungary. In such case, each municipality was supposed to provide sufficiently large rooms in which health care for the sick would be provided. They were to be isolated from the non-infected part of the population and they were to be given professional healthcare and adequate

45 SA BB, c. ZC DD, b. 21, No. 414/299, Utasítás a járványos cholera tárgyában, 14. 9. 1871, § 22.

46 WILLOGHBY et al. *Retrospect of the Successive Epidemics of Cholera in Europe and America, from 1830 to 1890*. London 1891, pp. 67-68.

47 SA BB, c. ZC DD, b. 21, No. 415/15, Letter from MIA, G. Groisch, 12. 8. 1872. See more about G. Groisch's profile: SZINNEY. *Magyar írók élete és munkái III*. Budapest 1894. Available at: <<https://mek.oszk.hu/03600/03630/html/g07022.htm>>

medication. The municipalities were also obliged to inform the state authorities immediately, via telegraph, about every single case of cholera, which made the anti-cholera procedure even more centralized and systematized.⁴⁸

Despite the quick official response, cholera reached beyond the borders of Hungary, specifically to Bukovina. However, the authorities also observed other cases in the west of the country, specifically in the village of Bezi, in Győr County. Two infected cases were identified in it at the beginning of August, one of which ended in death. However, the authorities pointed out that these were not necessarily classic cases of cholera, also referred to as cholera asiatica in the sources, but the so-called “*European cholera (cholera nostra)*”. This variant is said to have occurred in Hungary, respectively in the Central European area, especially during warm periods of the year.⁴⁹ However, this is a form that has been described by medical science as a less contagious cholera with a milder course.⁵⁰ It is also possible that in the mentioned cases of European cholera, it could have been another disease that had similar symptoms, as cholera was often confused with dysentery and typhus.⁵¹ This hypothesis can be supported by the fact that there were only two cases of infected people. In addition to the mentioned forms of cholera, contemporary medical diagnostics also distinguished “*biliosa*” cholera which manifested itself in a more acute form of diarrhea and vomiting. Another form was cholera “*infantum*” which was described in the cases of small children but in the registers one can as well find the form “*cholerina*” which was referred to as the initial phase of cholera, which, however, did not have to break out into an epidemic. According to academic literature, it was a form of Asian and European cholera.⁵²

At the turn of August and September 1872, the first mentions of cholera cases in Hungary began to appear. The most intensively monitored places were the border areas and places frequented by foreigners.⁵³ Therefore, in places where cases of infection had already been confirmed, intensive monitoring began, and the numbers of infected, cured and deceased were updated every week. Although the authorities reported new cases mainly from rural locations, cholera did not spread in cities and more densely populated locations, so overall the situation

48 SA BB, c. ZC DD, b. 21, No. 415/15, Letter from MIA, G. Groisch, 12. 8. 1872.

49 SA BB, c. ZC DD, b. 21, No. 411/299, Letter from MIA, G. Groisch, 26. 8. 1872.

50 THOMAS. *Comprehensive Medical Dictionary*. Philadelphia 1864, p. 116.

51 GOLIAN. *Kapitoly z historickej demografie. Analýza cirkevných matrik a možnosti interpretácií*. Trnava 2024, p. 144.

52 DUNGLISON. *A Dictionary of Medical Science*. Philadelphia 1844, p. 156.

53 Such a case confirmed cholera in the town of Török Bécse, or Új Bécse (today Novi Bečej in Serbia), which was the center of grain trade. SA BB, c. ZC DD, b. 21, No. 415/15, Letter from MIA, K. Zeyk, 3. 9. 1872.

stabilized.⁵⁴ Because the cases appeared at the peak of summer, there was a risk that cholera could break out into an epidemic. Research into other cholera waves confirms that in Hungary but also in other regions cholera outbreaks peaked during the summer.⁵⁵ Dry and warm weather helped the spread of bacteria and the intensity of epidemics decreased when the climate cooled.⁵⁶ Even the authorities who were aware of the threat of an uncontrolled spread of the disease referred to warm weather itself as a risk.⁵⁷ Therefore, the instructions of the Minister of Internal Affairs, Gyula Szápary, emphasized that county officials were supposed to should strictly monitor the epidemic situation and the application of measures in the event of an outbreak. However, according to the ministry, they were supposed to be introduced sensitively so that tension in society would not escalate unnecessarily and that riots would not break out again.⁵⁸

The authorities then concentrated on drafting the returns so that they would be as understandable as possible to the people. This way, they tried to prevent the emergence of tension between the residents and the regional political authorities, who used to be criticized at the time of the announcement of the regulations; this turn caused the effect of the introduced policies to disappear. Therefore, at the end of August 1872, the Ministry prepared a summary of the basic measures, which was sent to the county centers in the language spoken by the local population.⁵⁹ A document titled *General instructions on how to behave during a cholera epidemic (Prostonárodné poučenie o držaní sa po čas epidemickej cholery)* was addressed to Slovak counties.⁶⁰

At the beginning of the document, the main symptoms of cholera were defined, among which diarrhea dominated. The order pointed out that this symptom was often underestimated in people, and thus a strong infection would very quickly erupt into an “explosion”, which in conjunction with other symptoms had catastrophic consequences for the population. In the introduction, the reasons for the enforcement of the regulations were also justified. The observance of rules was supposed to eliminate the spread of the epidemic, and thus protect the residents themselves. The entire document was divided into eight points in which

54 SA BB, c. ZC DD, b. 23, No. 421/92, Letter from MIA, G. Szápary, 8. 7. 1872.

55 MÁDAI, Hat nagy kolerajárvány, passim.

56 PHELPS et al. Cholera Epidemics of the Past Offer New Insights Into an Old Enemy. In *The Journal of Infectious Diseases*, 2018, vol. 217, no. 4, p. 643.

57 An example of this was the warm autumn (months of October and November) of 1872, which, according to the assessments of the time, were unusually warm and clear months with only one frosty day. Mimoriadna teplota novembrová. In *Obzor*, 1872, vol. 10, no. 34, p. 268.

58 SA BB, c. ZC DD, b. 23, No. 421/92, Letter from MIA, G. Szápary, August 1872.

59 SA BB, c. ZC DD, b. 21, No. 414/299, Letter from MIA, V. Tóth, 31. 8. 1872.

60 SA BB, c. ZC DD, b. 21, No. 414/299, Prostonárodné poučenie o držaní sa po čas epidemickej cholery, 31. 8. 1872.

detailed symptoms and forms of treatment or prevention were communicated to residents. In the first point, the authors of the regulations emphasized that any symptoms, and especially any case of diarrhea, should not be ignored and the person concerned should immediately seek medical help. The authorities emphasized that the patient had to accept every doctor's recommendation, without exception, so that he could personally contribute to eliminating the infection and stopping the epidemic.

In the second point, the document highlighted other symptoms that cholera could show. Skin rashes and cramps in the chest, in the abdominal cavity and in the calves were mentioned, and the most characteristic symptom after diarrhea was vomiting. The commission compiling the document emphasized that some people affected by cholera may lose their voice, either losing it completely or becoming hoarse. According to the document, those symptoms should have already been noticed by people around them, therefore, after the necessary reporting of the case to the authorities and waiting for the doctors, the relatives should have provided the patient with "first aid". The patient should have lied down in a warm bed and been served chamomile, honeydew, or mint tea. It was necessary to immediately warm the patient up with warm clothes made of flannel or warm wool. The regulation strictly warned people against the arbitrary administration of drugs that were not ordered to be taken by a doctor for a specific patient. The document issued a warning that after taking inadequate medication, the condition of the affected person can fundamentally deteriorate.⁶¹

Another part of the regulation was devoted to the importance of disinfection, which was to be applied to places with the greatest concentration of bacteria, i.e. to cesspools and toilets. The authorities ordered that a solution of iron sulfate and water be applied to those places daily. Iron sulfate, also known as green vitriol, had been used to disinfect water sources for centuries.⁶² At the time of the coming epidemics, the merger for the needs of the state was ensured by the mining office based in Smolník.⁶³ The ratio of the compound was approximately 30–35 grams

61 The panic caused by the epidemic created ideal conditions for the emergence of conspiracies in the field of treating the disease. In the periodical press during epidemics, or even more often in the time before the arrival, you can find many efficient "folk" recipes. Among the less objectionable were, for example, tea made from red spruce seeds, juniper tea, chewing horseradish or drinking sour milk. Zdravotné záležitosti. Smrekové semäno proti cholere. In *Obzor*, 1872, vol. 10, no. 32, p. 254; Zdravotné záležitosti. Čaj borievkový proti cholere. In *Obzor*, 1873, vol. 11, no. 2, p. 14; Zdravotné záležitosti. Chreň v cholere. In *Obzor*, 1872, vol. 10, no. 33, p. 262; Zdravotné záležitosti. Kyslé mlieko a cholera. In *Obzor*, 1873, vol. 11, no. 25, pp. 198-199.

62 NICOLA; MASTRIPPOLITO and MASIC. Iron Oxide-Based Pigments and Their Use in History. In *Iron Oxides*. Ed. Damian Faivre. Weinheim 2016, p. 547.

63 Zdravotné záležitosti. Chreň v cholere. In *Obzor*, 1872, vol. 10, no. 33, p. 262.

of sulfate per 0.4 liters of water. In the document, emphasis was placed especially on places with sick people, in the sense that after each use of the toilet, the toilet, or the place of execution needed to be disinfected immediately. Other parts of the regulation which emphasized the cleanliness of public spaces, were also in this intention. The authorities presented that compliance with the hygiene rules was the most effective weapon against the spread of the disease, and they tried to convey this idea to the population as the most important message. Therefore, the regulation also touched on the disinfection of clothes, duvets and living spaces, which were to be kept clean and ventilated several times a day as a precaution. The ventilation of the dwellings was supposed to take place by opening all the windows in the room and the householder was supposed to start a sufficiently large fire using juniper wood, which was supposed to sufficiently smoke out the space, and ensure that the air in the room was thoroughly purified.⁶⁴ This was especially recommended in the areas where an infected person was being treated. The document emphasized that polluted air, especially in overcrowded rooms where many people sleep together, was a source of further infection and the spread of the epidemic.

Prevention was also supposed to affect the way of eating in which moderation was emphasized. However, the regulations highlighted that if the residents had been eating moderately and healthily until then, they did not have to restrict themselves. But state policies specifically warned against foods that could cause stomach problems manifested by vomiting and diarrhea, which could lead to false suspicions of cholera cases. Such foods were supposed to be generally low-nutrition and fatty foods that cause diarrhea, namely unripe fruit, spoiled meat, sausages, fish, mushrooms of all kinds, unbaked and uncooled bread or unfermented beer.⁶⁵ Unhealthy eating habits were also specifically mentioned in the document. The authorities issued a specific warning against overeating in the evening, after which people were not supposed to go to bed immediately. The regulations also warned against drinking water from sources that are close to canals, drains or cesspools, where cholera or other infections from those sources could get into the drinking water. In the case of water sources whose purity was questionable (primarily in large cities) the recommendations in newspapers emphasized the need to boil the water.⁶⁶

64 The use of pine smoke was also used during plague epidemics and later during cholera. HOPPÁL and TÖRŐ. A népi gyógyítás Magyarországon. In *Orvostörténeti Közlemények*. Eds. József Antall, Géza Buzinkay. Budapest 1975, no. Supplementum 7-8, p. 35.

65 More specific foods also appeared as risky foods in other sources, or were specially adapted to conditions; for example, there was a warning against the use of boiled pumpkin, which was problematic since it caused bloating. Zdravotné záležitosti. Podozrivé jedlá v čas cholery. In *Obzor*, 1873, vol. 11, no. 23, p. 182.

66 Zdravotné záležitosti. Čistá pitná voda proti cholere. In *Obzor*, 1872, vol. 10, no. 34, p. 270.

People were to be especially protected against any cold, so they were ordered to wear dry and warm clothes to protect themselves from catching cold in the abdominal cavity and urinary tract. Sufficient sleep was also supposed to ensure higher immunity, which was recommended to everyone whose work circumstances allowed for it. The final point of the regulations, which directly claimed “*a calm mind*” as the best way to prevent any disease, was also related to mental state. Achieving this goal was defined by precise steps, which were: “*avoid anger and anger; unnecessary fear and shyness*”. The prescribed recommendations underscored the goal, which, according to the authorities’ argument, was to achieve the most effective elimination of cholera. The document directly stated that “*the destructive effectiveness of cholera can be expected with certainty*”, while the state’s effort was to save as many lives as possible during the epidemic.⁶⁷

The reaction of state authorities to the beginning of the epidemiological wave

Despite the positive news about the retreat of cholera, at the end of the summer of 1872, the epidemic situation in the country worsened. Increasing cases outside the borders of Hungary activated the authorities, whose goal was to intensify the protection of the country and reduce the mobility of persons potentially spreading the disease. This approach was identifiable in the preventive measures regarding the pilgrimage of Jewish believers to Nový Sącz (*Új Sandeiz*) and the spa town of Krynica (*Krynica*), where they were supposed to celebrate the New Year holidays at the beginning of October. The Austrian Ministry of Internal Affairs warned that the movement of Jews would affect not only Galicia, but also Hungary and Russia, which increased the risk of cholera spreading throughout the region. The authorities emphasized that due to the high concentration of people from different parts, unsuitable accommodation and hygienic conditions are too much of a risk for the subsequent spread of the epidemic. Therefore, they called on the appropriate authorities, that is, the Hungarian Ministry of Internal Affairs, to take steps to prevent pilgrims from arriving in Galicia. It was recommended to avoid the movement of people at the borders and, if necessary, “*all legal options should be used to prevent the epidemic from spreading*”.⁶⁸

The ministerial measures ordered municipalities to update the number of new cases, and the number of cured and deceased persons from cholera every week (once every 8 days) after the discovery of the first case.⁶⁹ Thanks to this record,

67 SA BB, c. ZC DD, b. 21, No. 414/299, Prostonárodné poučenie o držaní sa po čas epidemickej cholery, 31. 8. 1872.

68 SA BB, c. ZC DD, b. 21, No. 415/15, Letter from MIA, K. Zeyk, 24. 9. 1872.

69 SA BB, c. ZC DD, b. 21, No. 414/299, Utasítás a járványos cholera tárgyában, 14. 9. 1871,

there are county reports on changes in the monitored numbers. Based on them, it is possible to identify that in October cholera spread mainly in the capital of Hungary and in the east of the country in Maros (Mureş) County.⁷⁰ However, the cases did not grow at an exponential rate until then, as they were only in the tens, in the east of the country where there were a total of 115 infected as of October 24, of which 32 died.⁷¹ In the following weeks, the situation worsened significantly. In the capital, the documents only talked about Buda, 266 people were already infected, while the vast majority of them were added in the last monitored week (October 24 – November 3). Of these, 61 people died, but given the recent increase in the identified cases of the disease, morbidity has probably increased substantially. In Maros County, approximately 30 cases appeared in the last week. Still, cholera had been confirmed in other neighboring regions (Bereg and Ungvár), but also in other parts of Hungary (Békes, Győr, Somogy). From the locations in today's territory of Slovakia, in the initial phase of the epidemic, until the end of October, the city of Košice and the Nitra County were affected.⁷² The report confirmed that cholera was confirmed in 11 Hungarian counties at the beginning of November, in which 445 cases were identified. Of them, 121 died, while the number of victims was not final, as 194 infected were still being treated. The document reminded us of the obligations stipulated in the regulation of September 14, 1871, that every new case was to be reported without delay by telegraph.⁷³

The epidemiological situation in the autumn of 1872 gradually worsened, the crisis months were October and November due to the above-average temperatures which facilitated the spread of the epidemic.⁷⁴ Cholera affected almost the entire country, though western Slovak counties avoided it, but it spread among Slovaks in Bekescsaba in a significantly decreasing manner.⁷⁵ The Ministry of Internal Affairs responded to the unfavorable circumstances with a series of other measures. These were primarily concerned with preventing the spread of cholera in places with the greatest fluctuation of migrating people, especially the regulations affecting the capital. In the decree of November 7, 1872, addressed to the county office, special attention was directed to travelers and the disinfection of the premises in which they were present. The document was particularly devoted

§ 22.

70 Maros County was the first Hungarian locality to be affected by cholera. Workers from Galicia brought cholera to the region. GRÓSZ, *Az 1872/3 évben*, pp. 4, 25.

71 SA BB, c. ZC DD, b. 21, No. 415/15, Letter from MIA, V. Tóth, 26. 10. 1872.

72 GRÓSZ, *Az 1872/3 évben*, pp. 4-5.

73 SA BB, c. ZC DD, b. 21, No. 415/15, Letter from MIA, V. Tóth, 4. 11. 1872.

74 MÁDAI, *Az Utolsó*, pp. 36-38; Zdravotné záležitosti. Chreň v cholere. In *Obzor*, 1872, vol. 10, no. 33, p. 262.

75 Zdravotné záležitosti. K ochrane proti cholere. In *Obzor*, 1872, vol. 10, no. 31, p. 246.

to accommodation facilities, which were to be supervised by adequate municipal authorities in the regions.⁷⁶ They were supposed to check that the lessors of accommodation facilities would regularly paint the walls with lime in the rooms where guests slept or dwelled. A mandatory disinfection of social facilities was also emphasized. According to the document, the authorities had experience that landlords used cheap (too diluted) products for formal disinfection, which weakened the effectiveness.⁷⁷ The last point of the order reiterated the immediate reporting of the first case of cholera in the region.⁷⁸

Evidence of the epidemic in the example of the Zvolen County

The practice of recording the epidemic at the regional level can be observed in the county administration, whose communication took place under the competence of the Deputy County Head, lower county officers and representatives of municipalities. An example from Zvolen County, in which the first cases appeared at the end of the summer of 1872, can serve as a case study. The course of cases was monitored at the level of municipalities, from which data were sent to the County District Offices. These reports began to appear in the office of the Deputy County Head Béla Grünwald, from the end of August 1872. County officials began to send information about new cases of the infected, or subsequently reported how the health status of patients who had been treated for a long time was developing. In several reports, it is possible to find opinions in which representatives of local governments declared that anti-cholera measures are being observed in municipalities and the orders of the Ministry are being fulfilled.⁷⁹ Using this example, one can identify the differences between the existence of the first confirmed cases of cholera and the official outbreak of the epidemic, which was dated to November 26, 1872.⁸⁰

76 In the later period, passengers' luggage was also subjected to inspections. It turned out that people who caught cholera when traveling often kept their symptoms a secret out of fear of ending up in a cholera hospital and not being allowed to go home. For the symptoms not to be seen, they hid clothes soiled by excrement or vomit in their luggage, so the luggage of suspected persons was subjected to inspection. FRISNYÁK, A kolera térbeli, p. 54.

77 This note may have pointed to different formulations in the state regulations and those published in the newspaper. A state document from September 14, 1871, recommended a 1:40 solution of carbolic acid for disinfecting premises, while a report was published in the economic newspaper *Obzor* stated that a ratio of 1:100 is sufficient for effective and cheap cleaning. SA BB, f. ZC DD, b. 21, No. 414/299, Utasítás a járványos cholera tárgyában, 14. 9. 1871, § 13; Zdravotné záležitosti. Karbolová kyselina v ochrane proti cholere. In *Obzor*, 1873, vol. 11, no. 1, p. 7.

78 SA BB, c. ZC DD, b. 21, No. 415/15, Letter from MIA, Szaly, 7. 11. 1872.

79 SA BB, c. ZC DD, b. 21, No. 415/15, Report for the district of Veľká Slatina, M. Ede, 28. 8. 1872.

80 GRÓSZ, *Az 1872/3 évben*, p. 5.

During November, the first reported cases of cholera began to appear. As the case from the village of Dubová shows, the Deputy County Office was informed through the office of an administrator from the relevant district located in Svätý Ondrej (today part of the village of Brusno). The finding of cholera was confirmed by the circuit doctor who examined the infected shepherd, Ján Habovčík. On November 20, 1872, the district office also declared that all measures against the spread of the epidemic had been applied in the village.⁸¹ However, the register of those buried in Dubová parish states that Ján had died the very next day after being informed about his infection. The cause of death, which was listed in the registry as typhus, is surprising. According to the registry records, the first case of cholera in the village was registered only on December 21, 1872, while three other people died of typhus shortly before that.⁸² It can therefore be assumed that, as in the case of Habovčík and probably also in other cases, the records of local priests did not correlate with the state agenda.⁸³

New cases of cholera were also reported to the county seat by the county doctor who monitored the situation in the region, diagnosed the infected and ordered treatment. His reports had the character of regular reports from a wider area. At the end of November 1872, doctor Fölg sent a report on the latest cases from the Svätý Ondrej district to the Deputy County Head. He sent it to the county seat in Banská Bystrica from Brezno, part of Rohozná. The list of six new cases also included persons from other locations (Staré Hory, Donovaly) who appeared in his district in connection to the performance of work, such as loggers, cart drivers or day laborers working in Brezno.⁸⁴ In the report, the doctor also states the approximate number of people hospitalized with cholera but does not mention their health status or their names.⁸⁵

At the turn of November and December, the correspondence with reports of new cases of cholera in Zvolen County significantly intensified. Initially, the letters were addressed to the office of the Deputy County Head. As a rule, they

81 SA BB, c. ZC DD, b. 21, No. 415/15, Report for the district of Svätý Ondrej, A. Jerumusz, 20. 11. 1872.

82 Matricula defunctorum 1856 – 1895 Dubová, p. 60. Available at: <<https://www.familysearch.org/ark:/61903/3:1:33S7-9R1T-B53?i=62&wc=9P3Y-RMH%3A107654301%2C109000801%2C128822602%2C128927601&cc=1554443>>

83 In total, 11 typhoid cases appeared from mid-November 1872 to mid-January 1873; only in two cases was the cause indicated as cholera, and in one as typhus/cholera. Matricula defunctorum 1856 – 1895 Dubová, pp. 60-61.

84 The first cases of cholera since November 21, 1872 appeared in the Brezno parish. It is noteworthy that the names mentioned in the report of the county Doctor Fölg are not found in the registers. Matricula copulatorum et defunctorum 1659 – 1904 Brezno, p. 150. Available at: <<https://www.familysearch.org/ark:/61903/3:1:33SQ-GTM7-97JT?i=662&wc=9P3B-SPK%3A107654301%2C114613201%2C114613202%2C128064001&cc=1554443>>

85 SA BB, c. ZC DD, b. 21, No. 415/15, Report from Dr. Fölg, M. Ede, 28. 11. 1872.

were addressed by representatives of municipalities, less often by Dr. Fölg or a surgeon working in the vicinity of Banská Bystrica. Those reports contained information about new cases from municipalities, respectively. They summarized the lists of towns and villages where cholera had already been identified.⁸⁶ This practice in the county was changed by a note from the Ministerial Secretary Karoly Zeyk who ordered that weekly summaries of the number of infected be drawn up in the county, as stated in the guideline of September 14, 1871. Zeyk's letter was a response to the telegram from the county office of November 30, which informed about the outbreak of an epidemic in the vicinity of Brezno – Rohozna, which was identified by Dr. Fölg.⁸⁷ The Ministry's regulation began to be implemented in the county immediately, and during December we encountered a number of reports drawn up regularly every 8 days. They were compiled, as a rule, by doctors,⁸⁸ surgeons,⁸⁹ and county district officials.⁹⁰ The change in the epidemic situation can be identified in the report of Dr. Fölg, who reported on January 3, 1873, that although new cases were still appearing, there was a favorable epidemiological situation in the county.⁹¹

Contemporary reports reveal that even in mid-January there were no stronger frosts in Hungary that would have eliminated the spread of the disease.⁹² The situation changed only in February when the first wave of cholera subsided after a series of frosts.⁹³ The country was generally affected by the infection to a low degree, and therefore the measures in the form of isolating the infected began to work more effectively. However, the situation gradually changed in the spring months, in which the number of cases increased very quickly. In July, registers showed that the epidemic broke out in several foci in the country.⁹⁴ At that time, the first cases also appeared in Zvolen County, and the County Anti-cholera Commission had to react. It met on July 12, and at the meeting, the Banská Bystrica city doctor gave a report on the growing number of cases that ended in death. As a result, an order was issued by the County Head A.

86 SA BB, c. ZC DD, b. 21, No. 415/15, Report from deputy county officer B. Szontágh, 27. 11. 1872; Report for the district of Svätý Ondrej, A. Jerumusz, 29. 11. 1872; Report for the village of Podbrezová, Moritz, 30. 11. 1872.

87 SA BB, c. ZC DD, b. 21, No. 416/37, Letter from MIA, K. Zeyk, 2. 12. 1872.

88 SA BB, c. ZC DD, b. 21, No. 416/37, Report from Dr. Fölg, 20. 12. 1872.

89 SA BB, c. ZC DD, b. 21, No. 416/37, Report for the village Ulmanka (today Uľanka), 19. 12. 1872.

90 SA BB, c. ZC DD, b. 21, No. 416/37, Reports from county officer Leustachovich, 17. 12. 1872 and 20. 12. 1872.

91 SA BB, c. ZC DD, b. 21, No. 415/15, Report from Dr. Fölg, 2. 1. 1873.

92 Pôvodné hniezdo cholery. In *Obzor*, 1873, vol. 11, no. 2, p. 11.

93 MÁDAI, Az Utolsó nagy, p. 12.

94 Zdravotné záležitosti. K ochrane proti cholere. In *Obzor*, 1873, vol. 11, no. 19, p. 150.

Radvanszký to the Deputy County Head, B. Grünwald, in which he called on him to immediately apply anti-cholera measures throughout the entire county. Those were to be introduced “*with the utmost effort and consistency*” in every village. Special emphasis should be placed on the disinfection of the premises where the infected were located. The representatives of the municipalities were also supposed to supervise the proper disposal and destruction of the clothes of the victims. The minutes of the commission’s meeting were signed by its chairman and city captain of Banská Bystrica, Lajos Chovan.⁹⁵

The evidence of the infection subsequently showed that in Zvolen County, cholera as an epidemic began to manifest itself at the end of summer and lasted until the end of autumn. According to the records of the county district from Svätý Ondrej, the first cases appeared on August 3 in the village of Nemecká, where the epidemic lasted until the beginning of October. For example, in the most remote parts of the region, in the mountain village of Hiadel’, the first case was registered only on November 8, and the epidemic lasted for about a month, until December 10. Based on the data for the county district, it is possible to identify the rate of fatal impacts on the number of inhabitants. The district consisted of a total of 13 villages with a population of 8,623. It should be emphasized that there was not a single town among the municipalities; the largest settlement was Valaská, which had 1,110 inhabitants. 91 people died in the entire district, i.e. the crude death rate from cholera was 10.6 ‰.⁹⁶

Looking at the results in more detail, however, the intensity of the epidemic differed significantly in individual villages. In several of them, also considering that 500 to 800 people lived in them, the authorities registered from 2 to 5 victims (Svätý Ondrej, Brusno, Lopej, Sihla). The number of fatal cases could be verified in the most intensively affected municipalities of Jasenie and Predajná. The county register stated that 26 people died in Jasenie, while 24 were identified in the register in Predajná; according to the official register, cholera claimed 13 victims, but in the register of the buried, only 22 were recorded.⁹⁷ These numbers demonstrate that even with such small samples, it is possible to identify clear differences between the records of state authorities and the church’s classification of causes of death.⁹⁸ In those villages, the value of the crude death rate from cholera also rose substantially, ranging from 25 to 30 ‰.

95 SA BB, c. ZC DD, b. 23, No. 421/92, Minutes of the Anti-Cholera Committee, L. Chovan, 12. 7. 1873.

96 SA BB, c. ZC DD, b. 23, No. 424/20, Report of people infected with cholera for the county district of Svätý Ondrej, A. Ruzsicska, 30. 12. 1873.

97 Matricula defunctorum 1863 – 1895 Predajná, pp. 136-137. Available at: <<https://www.familysearch.org/ark:/61903/3:1:33SQ-GR1Y-62Q?i=71&wc=9P3Y-Y4C%3A107654301%2C14613201%2C128352101%2C128416501&cc=1554443>>

98 Differences could be found not only in the number of victims, but also in the dates. For exam-

Statistical characteristics of cholera from the county district of Svätý Ondrej can be compared to the two largest seats in the then Zvolen County, which were the county seat, the city of Banská Bystrica, and the rural village of Detva. In Banská Bystrica, I analyzed a Catholic parish⁹⁹ in which 5,022 believers lived in 1873.¹⁰⁰ 21 of them died of cholera, i.e. the crude mortality rate for this cause was 4.2 ‰. In the parish of Detva, the situation was significantly different. With a population of 10,722 people, up to 409 victims died of cholera, and the crude rate therefore represented 38.2 ‰.¹⁰¹ The results of the intensity of cholera within one county, at the remoteness of several dozen kilometers, were extremely different. The findings could be interpreted one-dimensionally by assuming that anti-epidemiological measures were more effectively applied in the city than in the poorly educated and neglected countryside.¹⁰² However, this reasoning does not correlate with the results from the county district of Svätý Ondrej, where the crude mortality rate from cholera in the rural environment showed only low values. Sometimes the differences between nearby locations are difficult to interpret, which is also proven by other investigations.¹⁰³ A partial explanation can be provided by the hypothesis that the situation in Detva got out of control in 1873 and a spiral reaction of extremely fast spreading of the epidemic started. A similar scenario can be seen, for example, in the communities of the Slovaks in the southern Hungary (Dolná zem), where, according to published records, 20 victims died every day in the town of Sarvaš and a total of more than 800, and up to 60 people died every day in the town of Bekescsaba.¹⁰⁴

Anti-cholera methods after the epidemic

After the retreat of cholera, the approach of the state administration was evident in the attitude of the authorities, who were vigilant about the arrival of the

ple, in a branch of the Dubová parish, in the village of Ráztoka, the first case of cholera was allegedly discovered on September 10, 1873, but according to the records of burials, the first victim was buried three days earlier. *Matricula defunctorum 1856 – 1895 Dubová*, p. 64.

99 When analyzing the population in Banská Bystrica, it is not possible to use data from the evangelical register. The parish also included believers from the surrounding villages, so the research sample would not meet the conditions for the analysis of a compact unit in which the spread of the epidemic can be studied, and due to the inaccurate number of believers, it would not be possible to interpret the results correctly.

100 *Schematismus venerabilis cleri dioecesis Neosoliensis 1874*. Banská Bystrica, 1873, p. 27.

101 *Schematismus venerabilis*, p. 45.

102 Contemporary Hungarian doctors, e.g. Gábor Kátai and others drew attention to the fact that in the countryside the problem was primarily with the separation of infected persons from healthy ones, which intensified the spread of cholera. MÁDAI, *Az Utolsó nagy* p. 47.

103 For example, in the previous wave of cholera in 1866, 116 victims died in Banská Bystrica, while only 7 people died in Detva.

104 Dopisy. Zo Sarvaša. In *Obzor*, 1873, vol. 11, no. 23, p. 179.

next wave. At the beginning of February 1874, the Ministry of Internal Affairs addressed a decree to the county governments, stating that due to the threat of another cholera wave, the application of a new list of measures would be enacted. Updated anti-cholera regulations were binding for counties and municipalities. In their content, preventive steps were emphasized, while some were to be applied immediately, some after a certain time (especially after the climate warmed up in the spring months), and most were to be introduced after the confirmation of the first cases of people infected with cholera. The Minister of Internal Affairs, Gyulla Szapáry, warned in the document that the regional authorities should be particularly thorough in places where the epicenters of the disease arose in the past. In the accompanying letter, he emphasizes the importance of the presence of a doctor in every village. At that point, the document recommended municipalities that could not afford to pay for their doctor from their resources should join with other municipalities with whom they were to share the costs. After the outbreak of a possible epidemic, the municipalities were supposed to ensure that the trade in medicines and disinfectants, which happened in the past, was made impossible. For a more effective supervision of the application of anti-cholera policies, each municipality was supposed to create a special commission whose tasks were to explain state measures and “educate” residents on prevention issues.¹⁰⁵

The annex to the ministerial letter was an elaborated material according to which regional authorities and individuals should be guided in the prevention, or after the outbreak of cholera. The list of regulations was based on the document *Utasítás a járványos cholera tárgyában*, which was issued on September 14, 1871, and was given the same name. Compared to the other one, it was divided into several paragraphs, while specifying only some topics. Not to mention the progress in the medical characteristics of cholera, only some policies were changed; the aim was to prevent the spread of an already established epidemic. Right from the beginning, the narrative of the documentary was more general, it did not refer to the cholera spreading in Russia and Galicia, as was the case in the older version. Concerning the issue of disinfection of public spaces, it placed emphasis on preventive cleaning of streets, and it was explicitly devoted to the topic of removing animal excrement, which could contaminate human dwellings or sources of drinking water. An even stronger appeal was visible in the subject, and in the document, as it was literally “*forbidden*” to sleep in crowded rooms.¹⁰⁶

105 SA BB, c. ZC DD, b. 24, No. 426/25, Letter from MIA, G. Szapáry, 6. 2. 1874. The letter and the anti-cholera instructions was subsequently published as an attachment to decree no. 23 in the collection of regulations: *Magyarországi Rendeletek Tára. Nyolczadik Folyam 1874.* Budapest 1875, pp. 179-195.

106 SA BB, c. ZC DD, b. 24, No. Utasítás a járványos cholera tárgyában, 1874, § 12.

The massive spread of cholera in 1873 and the enormously high number of deaths also changed the regulations regarding the burial of victims, which according to the original standard could only take place 48 hours after death. A newer version of the edict still emphasized the prevention of burial alive, but also the reduction of contagion rates from the corpses of the dead. Therefore, the amended section on burial said that each victim was to be inspected without delay by a designated corpse inspector, who carried out mandatory disinfection of the remains, clothes and premises. The inspection should have been performed by a doctor, but if the situation did not allow it, this competence could be performed by a person who was adequately trained and knowledgeable about disinfection. If there were no doubts about death after the inspection, the victim was to be buried immediately.¹⁰⁷ However, the social practice visible in the church registers proves that already during the wave in 1873, cholera victims were buried even earlier than after 48 hours. For example, in the parish of Detva at the beginning of the cholera wave, burials took place two days after death, and after the outbreak of the most intense phase of the epidemic, all burials of the victims were carried out on the second day after death.¹⁰⁸

The document from 1874 also elaborated more deeply on the circumstances of caring for the remains of a cholera victim until their burial. According to the published text, morgues in the villages were to be established in a suitable family home. However, if the authorities failed to carry this out, a temporary wooden building was to be built for those needs. From the wording of this text, it can be assumed that the regulation from 1871 on the purchase of a suitable house at the end of the village situated downwind was difficult to apply, so the authorities created a more realistic measure.¹⁰⁹ Another wording of the document was directly related to the form of a burial, stipulating that the coffin with the deceased should be transported on a wagon, and it should not be carried by the survivors; if the circumstances allowed, the coffin should be sealed. This way, the authorities tried to eliminate the supposed contagion through air and vapors. The body of the deceased could not be exposed “*on the bier*” neither in the church nor in front of the church, and the body had to be buried to a depth of 1 fathom.¹¹⁰ It was also forbidden to hold a vigil during the funeral, to organize

107 SA BB, c. ZC DD, b. 24, No. Utasítás a járványos cholera tárgyában, 1874, § 19.

108 Matricula defunctorum 1863 – 1884 Detva, pp. 212-251. Available at: <<https://www.family-search.org/ark:/61903/3:1:33S7-9TMG-32M?i=324&wc=9PQM-W3N%3A107654301%2C130802401%2C163809302%2C163884601&cc=1554443>>

109 The regulation on the construction of a temporary wooden “morgue” at the cemetery was older. It is questionable why it disappeared from the list of instructions from September 11, 1871. Od Javoriny. In *Pešťbudínske vedomosti*, 1866, vol. 6, no. 74, (14. 9.), p. 3.

110 Approximately 1.8 meters.

prayers before the funeral, and organizing events or other gatherings was also not allowed.¹¹¹ The regulations still did not address the topic of mass graves or the creation of cholera cemeteries, which happened during epidemics.

Special attention was paid to the disinfection of the premises where the infected were treated or where cholera victims died. This part was also more detailed and refined. The document pointed out that the bedding and underwear should have been disinfected mainly with chloral limes since the other recommended cleaning products dye the fabrics red. Clothes and indoor spaces were not to be disinfected with carbolic acid, because it leaves an odor, sulfuric acid compounds were recommended instead.¹¹² The regulation stated that soiled clothes that could not be disinfected were to be burned at the expense of the municipality and under its supervision. The bedding straw was also to be burned, and in the rooms which had a clay floor, the clay was to be dug up to a depth of one foot after the cholera was over and replaced with new.¹¹³ Disinfection should have been carried out preventively, not waiting until the outbreak of cholera. It was necessary to identify the local epicenters of cholera from the past, that is, the specific houses in which the disease broke out and those should be disinfected first as a precaution. This is how risky households were characterized, in which there could be a higher risk of cholera occurrence, for example, due to a lower level of hygiene or because household members travelled and met more intensively with people outside the village. If cholera had already appeared in a house, it was necessary to disinfect that household immediately, before the epidemic spread further.¹¹⁴

The authorities warned against the concealment of cholera, for such households or individuals posed a risk to society.¹¹⁵ The document was specifically devoted to railway stations and inns, as there was a higher probability of the occurrence of cholera due to the mobility of the population. In them, the sanitary facilities should have been disinfected as a precaution, and the bed linen were also to be disinfected with adequate means before washing, just to be sure. This process was supposed to last until it was officially announced that the epidemic was over.¹¹⁶ Municipalities were to provide healthcare for the poor who had no one to take care of them; persons on the social periphery were to be under the constant supervision of doctors. The change also occurred in the fact that non-medical means, i.e. folk medicines, were not only prohibited but their dissemination was punishable. If someone ingested them and felt ill, they were supposed to see a

111 SA BB, c. ZC DD, b. 24, No. Utasítás a járványos cholera tárgyában, 1874, § 19.

112 SA BB, c. ZC DD, b. 24, No. Utasítás a járványos cholera tárgyában, 1874, § 21.

113 Approximately 0.3 meters. SA BB, f. ZC DD, b. 24, No. Utasítás a járványos cholera tárgyában, 1874, § 22.

114 SA BB, c. ZC DD, b. 24, No. Utasítás a járványos cholera tárgyában, 1874, § 23.

115 SA BB, c. ZC DD, b. 24, No. Utasítás a járványos cholera tárgyában, 1874, § 24.

116 SA BB, c. ZC DD, b. 24, No. Utasítás a járványos cholera tárgyában, 1874, § 25.

doctor.¹¹⁷ Consistency in the regulation could also be seen in the fact that since the notice against the use of unripe fruit, old meat and fish, the state administration warned against their sale. Violation of this ban was a criminal offense for market sellers of low-quality goods.¹¹⁸ The document was specifically devoted to railway workers who fell ill while performing their work. For them, the state guaranteed medical care and hospital treatment, which was paid for by their employer.¹¹⁹ In the conclusion itself, it was stated that in case of non-compliance or neglect of the regulations, there is a risk of a financial penalty, but the amount was not specified.¹²⁰

After the epidemic of 1872/73, the question of measures did not remain only a domestic matter but was also addressed at the international level. For instance, a Cholera Congress was held at the beginning of July 1874 in Vienna. It should be emphasized that discussions and exchanges of mutual views on cholera had been taking place in Europe since the first cholera wave.¹²¹ Mutual discussions in the form of cholera congresses, which were part of the so-called sanitary conferences, had been occurring since the middle of the century, but they have never agreed on some common measures.¹²² The goal of the delegates gathered in Vienna was to define the rules for eliminating the fatal consequences of possible further cholera epidemics. The specific goals of the meeting were the exchange of experience on how to apply effective disinfection of public spaces and what tools are used to ensure clean, uncontaminated water for the public. The discussion on the creation of a reliable quarantine system, which was supposed to prevent the spread of cholera between individual countries, took on an international dimension.¹²³ The negotiations came to the conclusion that due to the intensive railway traffic and trade, an inland quarantine was not possible, but this did not apply to the ports where it was supposed to be observed.¹²⁴ An exception was also the river ports, which operators of the shipping trade on the lower reaches of the Danube lobbied for.¹²⁵

117 SA BB, c. ZC DD, b. 24, No. Utasítás a járványos cholera tárgyában, 1874, § 26.

118 SA BB, c. ZC DD, b. 24, No. Utasítás a járványos cholera tárgyában, 1874, § 27.

119 SA BB, c. ZC DD, b. 24, No. Utasítás a járványos cholera tárgyában, 1874, § 28.

120 SA BB, c. ZC DD, b. 24, No. Utasítás a járványos cholera tárgyában, 1874, § 30.

121 PORTER, *Health, civilization*, pp. 83-85.

122 CARTWRIGHT and BIDDISS, *Disease and History*, s. 38-40.

123 Zdravotné záležitosti. Medzinárodný cholerický kongres. In *Obzor*, 1874, vol. 12, no. 19, p. 150.

124 The measure was later modified so that the quarantine would be valid only in seaports that were in contact with the Asian region, i.e. in the Black (marked as Red in the article) and Caspian Seas. Zdravotné záležitosti. Ďalšie správy z cholerického kongresu. In *Obzor*, 1874, vol. 12, no. 21, p. 166.

125 ARDELEANU. Between Cholera and Ottoman Abuses: The European Commission of the Danube and the Quarantine Regime of the Maritime Danube (1856 – 1878). In *Historical Year-*

The Congress also dealt with medical issues and other tools in the field of anti-epidemiological measures. The meeting concluded, for example, that the remains of cholera victims are infectious, as are their clothes and bedding. The meeting also confirmed that cholera is an airborne disease, an incorrect finding given later medical analysis.¹²⁶ As it turned out, the anti-cholera tools adopted by the congress had already been applied in Hungary before the 1872/73 epidemic, which means that the country was among the better prepared for cholera, although the results of cholera mortality showed the exact opposite to be true. After six weeks of negotiations, the Congress reached practical conclusions. It created an international cholera committee, which was supposed to supervise the situation in individual countries and, in the event of an outbreak of an epidemic in other parts of the world, was supposed to help the home countries with the application of effective measures.¹²⁷ The delegates directed their non-European aid primarily to India, which was discussed as part of the British Empire. The situation in Far Asia directly affected European countries, as previous cholera waves came from this region.¹²⁸

Conclusion

In the analysis of the anti-cholera regulations and state policies from the first half of the 1870s, one can see the evident interest of the authorities in dealing with the epidemic with scientific tools and clearly defined steps. State regulations were undoubtedly based on the scientific and medical characteristics of the disease, which were primarily based on symptomatic treatment. This characteristic had been part of state regulations since the first wave of cholera in the early 1830s, which were defined by the scientific and health discourse of the time.¹²⁹ In the published documents of the Ministry of Internal Affairs, we do not find alternative methods of treatment, and on the contrary, the authorities strictly warned the municipality, doctors and the residents themselves against their use. Advice and recipes published in analyzed newspapers can be evaluated

book, 2022, vol. 19. pp. 59-62. PROMITZER. *Blocking the Roads or Sanitizing the Streets? Cholera and Quarantines in the Eastern Balkans (1831 – 1912)*, manuscript, p. 11. Available at: <https://www.academia.edu/4040962/Christian_Promitzer_Blocking_the_Roads_or_Sanitizing_the_Streets_Cholera_and_Quarantines_in_the_Eastern_Balkans_1831_1912>

126 Zdravotné záležitosti. Ďalšie správy o kongrese cholerickom. In *Obzor*, 1874, vol. 12, no. 20, p. 158.

127 Zdravotné záležitosti. Dokonanie cholerického kongrese vo Viedni. In *Obzor*, 1874, vol. 12, no. 23, pp. 182-183.

128 HUBER. The Unification of the Globe by Disease? The international Sanitary Conferences on Cholera, 1851 – 1894. In *The Historical Journal*, 2006, vol. 49, no. 2, p. 464.

129 LIŠKA. *Cholerová epidémia z roku 1831 a jej priebeh v Prešovskej eparchii*. Prešov 2012, pp. 18-21.

as a harmless alternative in the treatment of cholera.¹³⁰ These represent only a sample of the diversity of similar advice, but in no case did they go against the official regulations. The exception was advertisements for medicines from various producers, to which the state measures reacted critically, but the state did not interfere in any way with their advertising and sales until the beginning of 1874. State revenues also did not allow for alternative treatments that had been popular since the first wave of cholera in 1831 and remained widespread four decades later.¹³¹

The authors of the documents did not even slip into repeating alternative claims about cholera as a disease. Even during the fifth wave of cholera, a very widespread opinion that cholera was that the disease spread through soil. The representatives of this theory argued that the spread of cholera exhibited different intensities depending on how fertile the soil was in a given region.¹³² However, when carefully reading the arguments of this theory, even its representatives at the time of the wave of 1872/73 already contradicted and refuted each other's positions.¹³³ The erroneous opinion that cholera was an airborne disease, on the basis of which the entire spectrum of measures was formed, cannot be included in the category of alternative regulations. This opinion prevailed for another ten years, until the knowledge of John Snow and Robert Koch, who proved that cholera is a waterborne disease. Afterwards their findings began to be applied in practice.¹³⁴

The practical result of the post-cholera development was international coordination in the creation of anti-epidemic policies and especially in the attempt to apply effective quarantine. As it turned out, this step was not effectively fulfilled, but in the future, cholera was eliminated to such an extent that an epidemic of a similar scale to that of 1872/73 did not recur. The exception was the wave of 1892 and 1893, which in Hungary spread mainly in the eastern counties and in the capital, but it was more deadly in Western Europe.¹³⁵ Its

130 Here, as an example, we can cite the theory about the use of onions, which allegedly attracted cholera and thus prevented the spread of the epidemic. Zdravotné záležitosti. Cibula proti cholere. In *Obzor*, 1873, vol. 11, no. 12, p. 94.

131 At the time of the wave of 1872/73, a modification of extended hydrotherapy was popular, which recommended immersing the infected several times in cold water. SOMOGYI, Az 1872 – 1873 évi kolerajárvány, p. 368

132 FRISNYÁK, A kolera térbeli, p. 44.

133 GRÓSZ, *Az 1872/3 évben*, p. 31.

134 SNOW. *On the Mode of Communication of Cholera*. London 1855, pp. 23-97; KOCH. Sechster Bericht der deutschen Wissenschaftlichen Kommission zur Erforschung der Cholera. In *Deutsche Medizinische Wochenschrift*, 1884, vol. 10, pp. 191-192.

135 EVANS. *Death in Hamburg. Society and Politics in the Cholera Years*. New York; London 2005, pp. 256-264.

course in Hungary was also eliminated thanks to the Office of Public Health, which was established in 1874. It became the second European country ever to have such an office headed by a hygienist with international experience, József Fodor.¹³⁶ The question may remain why the modern measures issued before the epidemic did not work effectively in 1872 and 1873 and why Hungary became the most intensively affected European country. The answers probably lie in the character of the majority population, which lacked elementary education and a positive attitude towards authorities. A priori, it rejected official regulations, as did local elites in the form of local government representatives or priests. The majority of the population was also resistant to medical help; in cases of infection, they not only did not seek but also ignored the prescribed treatment. Especially in the countryside, instead of modern medical procedures, methods of folk healing were applied, which even in this period still consisted of a mixture of experience, magic and superstition.¹³⁷

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