

# THE SPANISH INFLUENZA PANDEMIC IN THE NORTHERN REGIONS OF THE KINGDOM OF HUNGARY IN 1918<sup>1</sup>

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SZEGHY-GAYER, Veronika. The Spanish Influenza Pandemic in the Northern Regions of the Kingdom of Hungary in 1918. *Historický časopis*, 2024, 72, 3, pp. 547-564, Bratislava.

The paper aims to summarize the impact of the Spanish influenza pandemic on the northern regions of the Kingdom of Hungary, today's Slovakia. The main aim of the study is to compare two types of accessible epidemic data, the statistics prepared by the Hungarian city or county administration and the civil death records in the period between September and December 1918. In the first part of the paper, the historical context of the second wave and the issue of the anti-epidemic measures are discussed, while the second part is dedicated to the analysis of the pandemic data related to different regions of present-day Slovakia. It is argued that the partial data published below might offer a representative case study on the course of the pandemic and the number of fatalities in this specific region of the former Austro-Hungarian Monarchy.

Keywords: Spanish influenza. Slovak territory. Civil records of deaths. Epidemic statistics. Social history.

DOI: <https://doi.org/10.31577/histcaso.2024.72.3.6>

## Introduction

The outbreak of the COVID-19 epidemic in 2019–2020 acted as an incentive for historical research on pandemics in general, including the present-day territory of the Slovak Republic. However, in the case of the Spanish influenza pandemic, one of the most severe pandemics that killed 50 million people worldwide,<sup>1</sup> only a few local research results concerning the history of the Slovak territory have been published.<sup>2</sup>

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1 The study was supported by the project VEGA 1/0397/21 *Epidemics and anti-epidemiological measures on the territory of Slovakia in the long 19th century*.

As for the number of victims, see recently SALFELLNER. *Španělská chřipka. Příběh pandemie z roku 1918*. Praha 2021, p. 153.

2 See for example SZEGHY-GAYER. Španielska chřipka neušetrila ani Bratislavu a Košice. In KOVÁR; ZAJAC and BENEDIKOVÁ, ed. *Epidémie v dejinách : Ludstvo v boji s neviditeľnými nepriateľmi*. Bratislava 2020, p. 232-237; On some localities from the territory of

The Spanish Flu, which according to some estimates may have killed approximately 10,000 people between 1918 and 1920 in this part of the former Habsburg Empire,<sup>3</sup> has not been addressed by Slovak medical history research either, and more recently researchers have tended to ignore this region, rather focusing on the Austrian part of the Austro-Hungarian Monarchy or the Czech territory of the former Czechoslovakia.<sup>4</sup> Similarly, Hungarian scholarship on the Spanish Influenza Pandemic has concentrated on the territory of post-1918 Hungary. Although research on the Spanish flu has received considerable attention in European historiography, especially since the publication of the Laura Spinney's<sup>5</sup> and Harald Salfellner's works,<sup>6</sup> modern-day Slovakia has remained an unexplored area in historical scholarship, as no basic research is available on the number of infections or deaths either, not to mention the social-historical and political-historical aspects of the epidemic.

In this study, I investigate the second wave of the Spanish influenza pandemic, which claimed the highest number of fatalities across the world and probably in the territory of present-day Slovakia as well. The first wave of the pandemic started in the spring of 1918 and resulted in fewer cases and deaths compared to the devastating second wave in the autumn of 1918. The third wave of the epidemic in the spring of 1919 claimed more lives than the first, but was milder than the second wave. By comparing hitherto unexplored sources for monitoring the severity of the pandemic in this region, I intend to focus on two types of accessible data. The main aim is to compare the statistics prepared by the Hungarian city or county administration with the civil death records in 1918.

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Southern Slovakia see: SIMON. *Az átmenet bizonytalansága. Az 1918/1919-es impérium-váltás Pozsonytól Kassáig*. Somorja; Budapest 2021, p. 21-25.

- 3 These estimates are based on the local data (and comparing the number of the fatalities from the territory of the present-day Czech Republic: Harald Salfellner estimates the number of victims in the Czech Lands between 44,000 and 82,648 people. See SALFELLNER, *Španělská chřipka*, p. 155-156. The estimated number of Spanish influenza victims in the territory of post-WWI Hungary in 1918 was 53, 000: See GÉRA. A spanyolnátha emlékezete: A spanyolnátha, az első világháború lábjegyzete. In *Századok*, 2022, Vol. 156, no. 1, s. 100.
- 4 See TÓTH; KRATOCHVÍLOVÁ; DRÁBEK; NOVOTNÝ; HELLEROVÁ; ČERVENÝ and TÓTHOVÁ. On the Issue of the Spanish Flu in the First Czechoslovak Republic. In *Canadian Journal of Health History*, 2022, Vol. 39, no. 2, p. 397-418.
- 5 SPINNEY. *Pale Rider. The Spanish Flu of 1918 and How It Changed the World*. New York 2017.
- 6 SALFELLNER, *Španělská chřipka*. Furthermore, the remarkable case studies that have been prepared include that on Upper Silesia. See WEHOWSKI. Verblassen des Staatsgedankens“ und „Totengesang“: Gesundheitskrise und Spanische Grippe in Oberschlesien. In *Totalitarismus und Demokratie*, 2022, Vol. 19, p. 257-278; BEHRISCH and WEHOWSKI. Zwischen Angst und Gleichgültigkeit. Emotionen während der Spanischen Grippe in Breslau und Dresden. In *VIRUS. Beiträge zur Sozialgeschichte der Medizin*, 2023, Vol. 22, p. 127-144.

In the case of the Hungary's official pandemic statistics, the chief medical officers or other healthcare professionals calculated the number of infections and fatalities based on their own estimates and on reports they received from the army, hospitals and schools or other public institutions. In general, these medical experts were in the leadership of the Epidemiological Committees that were established at the end of September 1918 at a city or county level. The pandemic data were published in the Hungarian official press organs of the city or county municipalities, as the newly created Czechoslovak administration had no staff, either professional or technical, to deal with the pandemic in the Slovak territory. Of course, it should be taken into consideration that the first Czechoslovak Republic was founded on the 28th of October 1918, so there could not have been earlier official Czechoslovak data regarding the epidemic in the Slovak territory. Later, *“the issue of ensuring the internal stability of the [new] state was therefore logically a much higher priority for the nascent new state administration than the ongoing pandemic”*.<sup>7</sup> As a consequence, in the contemporary Czechoslovak statistics, one can find very little official data in relation to the pandemic in the region under study, not to mention the fact that Czechoslovak statistics were not compiled retrospectively either.

As for the civil death records from 1918, this type of source has been used so far only to a limited extent in the research on the Spanish Flu in the present-day territory of Slovakia, since a significant part of these documents has only recently been taken over by the Slovak State Archives from the Registry Offices,<sup>8</sup> which determined the limits of this study too. According to the Hungarian Act XXXIII of 1894, which regulated the state registration, a physician (or other medical professional) was required to issue the certificate of death based on which deaths were registered.<sup>9</sup>

These sources in many cases could offer a deeper insight into how the Spanish influenza was registered by professional healthcare workers, while also allowing scholars to examine the age and gender of the pandemic victims, and very often the place of death (home of the deceased, a hospital, an epidemic barracks etc.) in more detail.

From a geographical point of view, the study aims to provide new insights into the Spanish influenza in Bratislava and Košice, the two largest cities of

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7 TÓTH; KRATOCHVÍLOVÁ; DRÁBEK; NOVOTNÝ; HELLEROVÁ; ČERVENÝ and TÓTHOVÁ, *On the Issue*, p. 399.

8 However, as far as the civil records of death in Levice are concerned, these were processed on the basis of the Hungarian weekly Bars, in which the data of the registry office were published.

9 1894. évi XXXIII. Törvénycikk az állami anyakönyvekről.. Available on: <https://net.jogtar.hu/ezer-ev-torveny?docid=89400033.TV&searchUrl=/ezer-ev-torvenyei%3Fpagenum%3D34>

contemporary Upper Hungary, where both official statistics and the contemporary press, as well as the civil records of death, are investigated. Similarly, I analyse partial statistical data and epidemiological reports related to Liptov, Turiec, Spiš, and Zemplín County, as well as the cities of Nitra, Levice, and Prešov. Among others, I also rely on the previous research results from Banská Štiavnica, Detva, and Turzovka and the findings of Attila Simon on the Spanish flu victims from the territory of Southern Slovakia (from the city of Komárno and the Gemer-Malohont County).<sup>10</sup> Although the paper does not provide evidence from all regions that became part of Slovakia – information is noticeably missing for example from the cities of Žilina, Trenčín or Banská Bystrica –, I would like to argue that the partial data published below might offer a representative case study of the course of the pandemic and the number of fatalities in this specific region of the former Austro-Hungarian Monarchy.

In the study, I examine the consequences of the epidemic from a social, rather than a medical historical perspective. In the first part, I discuss the historical context of the second wave and the anti-epidemic measures, while in the second part of the analysis I compare the Hungarian pandemic statistics with the mortality data gained from the civil death records. In the paper, I also discuss the age and gender of the victims during the second wave of the pandemic. As far as terminology is concerned, in the study I write about the Slovak territory, as I investigate the present territory of Slovakia, or simply the counties or regions of northern Hungary. Slovakia, which in the pre-1918 historical context was also called Upper Land or Upper Hungary, belonged to the Kingdom of Hungary until 1918. Later, this territory was a geographical and administrative unit within the framework of the first Czechoslovak Republic. However, during the second wave of the Spanish influenza pandemic, so in the weeks between September and December 1918, most of the territory under investigation was still part of historic Hungary. The Czechoslovak military occupation of the region started in November 1918, when the pandemic was already slowing down. Except for a few localities and regions in the north-western part of Slovakia,<sup>11</sup> most of this territory came under Czechoslovak rule at the turn of 1918 and 1919. Košice was occupied on 29 December 1918, and Bratislava on 1 January 1919, which means that the city and county administrative boards fighting against the pandemic are understood as bodies of the still Hungarian public administration. In addition, for the sake of simplicity, I use the current Slovak official names of cities, regions and smaller localities in the text, although their Hungarian versions were officially used in 1918.

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10 SIMON, *Az átmenet bizonytalansága*, p. 24

11 For example, Žilina, where from 12th December the first central political body responsible for Slovakia, the Ministry in full charge of the administration of Slovakia was seated.

## The second wave of the world pandemic

Recent research has shown that the Spanish Influenza pandemic was one of the key issues facing the Hungarian public administration between September and December 1918 in the territory of historic Hungary, including its northern regions, which are today part of the Slovak Republic.<sup>12</sup> The first cases in Hungary were detected in soldiers and prisoners transported from the Italian battlefield to Budapest,<sup>13</sup> later in July 1918, the disease spread to both urban and rural areas of the country. This time, both the Bratislava and the Košice dailies reported on the new disease,<sup>14</sup> while the Nitra authorities informed about infected soldiers and the mild course of the illness.<sup>15</sup> The spread of the infection slowed down in mid-August and only sporadic cases occurred, for example, a larger number of infections were reported among the soldiers of the 15th Sub-Battalion in Trenčín in the last week of August.<sup>16</sup> Then, in mid-September 1918, the number of infections suddenly increased.

Budapest issued the first anti-epidemic measures on 30 September,<sup>17</sup> as a result of which Epidemiological Committees at the city or county level were established throughout the whole country. The following day, on 1 October, the Hungarian Ministry of the Interior informed the municipalities in a circular that contained instructions on how to protect themselves against the contagious illness known as the Spanish disease.<sup>18</sup> The authorities made it compulsory to report the infections and deaths caused by the new epidemic on the first day of October 1918. However, in order to avoid panic and mass hysteria, they were wary of exposing the population, disillusioned with the war and preoccupied with the political transformation brought about by the Aster Revolution of October 1918, to real data on the epidemic-related deaths caused by the epidemic. Therefore, in most cases, mainly in the largest cities, such as Bratislava, Košice, Prešov, or Nitra, news and information regarding Spanish influenza were mostly published on the last pages of local newspapers, amongst the smaller news. János Kersék, the main editor of *Bars* considered it “timely” to publish an article about the

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12 SIMON, *Az átmenet bizonytalansága*, p. 21-25. Recently see also SZEGHY-GAYER. The second wave of the Spanish influenza pandemic in selected regions and towns of Slovakia (1918). In *Človek a spoločnosť*, 2022, Vol. 25, no. 2, p. 1-14.

13 GÉRA. A spanyolnátha Budapesten. In *Budapesti Negyed*, 2009, Vol. 64, p. 215.

14 A spanyol betegség Kassán. In *Felsőmagyarország*, 6 July 1918, p. 3.

15 A spanyol betegség Nyitrán. In *Nyitrai Lapok*, 14 July 1918, p. 2.

16 Közegészségügyi értesítő f. évi augusztus 25-től szeptember 1-ig bejelentett fertőző betegségekről. Spanyol-influenza: Trencsén (15. honvédpótzászlóalj). In *Trencsén Vármegye Hivatalos Lapja*, no. 37, 5 September 1918, p. 165.

17 GÉRA, A spanyolnátha Budapesten, p. 216.

18 A spanyol betegségnek nevezett fertőző baj elleni védekezés. In *Beliügyi Közlöny*, 1 October 1918, p. 1363-1364.

epidemic on the front page of his weekly on 20 October at the earliest.<sup>19</sup> In Liptov County, on the contrary, the population was informed about the severity of the pandemic in the first week of October. In the autumn of 1918, the county administration here faced a particularly acute shortage of doctors.<sup>20</sup> Izidor Steier, the editor-in-chief of the official regional newspaper, *Liptó*, reported on the front page that the population was helpless against the epidemic. He also emphasized that the pandemic was “*taking its victims in a terrible way*”, especially in the villages, but the number of deaths was also high in the area of the county seat, Liptovský Mikuláš.<sup>21</sup>

The shortage of healthcare workers became a serious problem in other regions, including the Spiš County as well, where Lajos Neogrády, the county’s deputy lord lieutenant (*alispán*), turned to the Ministry of the Interior to allow military medical officers to return home during the time of the pandemic.<sup>22</sup> By the end of October, 7,304 cases had been reported in Spiš, of which 250 became fatal. Although the pandemic was slowly receding in the first half of November, until 5 November still more than 1,000 infections had been detected,<sup>23</sup> meaning that around 5% of the county’s population were suffering from the disease at that time.<sup>24</sup>

Until the end of September 1918, the disease had spread to every region of Northern Hungary. On 28 September, György Szmezsányi, the Government Officer of Bratislava and the chief of the Bratislava County, declared that although the numerical data on the infections and deaths had yet to be available,<sup>25</sup> there was an urgent need to take the first anti-epidemic measures. In October, the chief medical officer of Bratislava published his calculations. Based on the number of deaths observed in schools from the end of September, he concluded that between mid-September and the 1st of October, there could have been about 8,000 cases in a city inhabited at that time by 78,000 people. This means that during this period approximately 10,2% of the population became infected. The situation may have been similar in Košice, a city populated by 44 000, where

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19 KERSÉK, János. A spanyol járvány kapcsán. In *Bars*, 20 October 1918, p. 1.

20 A spanyol nátha terjedése megyénkben. In *Liptó*, 20 October 1918, p. 3.; Kórház az utcán. In *Liptó*, 27 October 1918, p. 3.

21 A járvány megyénkben. In *Liptó*, 1918. október 6., 1.

22 Intézkedések a spanyolláz elleni védekezés ügyében. In *Szepesi Hírnök*, 16 October 1918, p. 3.

23 Der Munizipalausschuß Des Zipser Komitates. In *Karpathen-Post*, 5 December 1918, p. 2-3

24 According to the Hungarian Census of 1910, the Spiš County was inhabited by 164 120 people.

25 SZEGHY-GAYER. The second wave of the Spanish influenza pandemic in selected regions and towns of Slovakia (1918). In *Človek a spoločnosť*, 2022, Vol. 25, p. 4.

experts estimated the number of cases at 2000 to 3000 at the end of September.<sup>26</sup> However, in the local opposition press organ, *Kassai Hírlap*, wrote of 10,000 infected people.<sup>27</sup> At the end of November 1918, there were still 40-50 infected cases per day in Košice.<sup>28</sup>

Outbreaks were also reported in other northern regions of Hungary. In the districts of Žabokreky nad Nitrou and Topoľčany, around 50 percent of the population was infected in mid-September,<sup>29</sup> while in the city of Nitra, the mayor, Tibor Thuróczy, also became infected.<sup>30</sup> Furthermore, there was a high percentage of infections among the population of Skalica as well (700 infections in a community of 5000 inhabitants).<sup>31</sup> Similarly, the city of Rožňava, inhabited by 6,500 people reported 1,000 infections.<sup>32</sup> All this means that, according to contemporary official reports, in some localities the rate of infected people ranged from 15 to 50%.

### **Anti-epidemic measures in the autumn of 1918**

In the frame of the first anti-epidemic measures, the local and regional authorities ordered all schools to be closed for two weeks, as the Spanish flu was spreading to a great extent among students.<sup>33</sup> In Levice, for instance, about 30–40% of the students were infected at the end of September 1918.<sup>34</sup> These closures were later extended, so most of the educational institutions reopened only after the Czechoslovak military occupation of the Slovak territory. In addition, authorities sought to curb the presence of the masses in public places. As a result, in particular, cinemas, theatres and sports events were banned.<sup>35</sup> However, regulations regarding restaurants and cafes were less severe, as these played a key role in the public catering, they could therefore remain open, but had to carry out disinfection at certain intervals when customers were not allowed in. Factories

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26 A város parlamentjéből. In *Felsőmagyarország*, 27 September 1918, p. 3; See also A kassai T. házból. In *Kassai Hírlap*, 28 September 1918, p. 2.

27 Kassán is dühöng a spanyol nátha. In *Kassai Hírlap*, 21 September 1918, p. 2-3.

28 A detailed local statistic from Košice. See: Megnyitják a középiskolák felsőbb osztályait. In *Felsőmagyarország*, 28 November 1918, p. 3-4.

29 Egészségügy. In *Nyitra megye Szemle*, 4 September 1918, p. 3.

30 A polgármester beteg. In *Nyitra megyei Szemle*, 27 October 1918, p. 3.

31 A spanyol influenza járvány. In *Rozsnyói Híradó*, 6 October 1918, p. 2.

32 A spanyol láz a vidéken. In *Nyitra megyei Szemle*, 3 November 1918, p. 5.

33 See for example in Košice: Bezárták az összes kassai iskolákat. Pusztít a spanyol nátha. In *Kassai Hírlap*, 1 October 1918, p. 2.

34 A spanyol nátha. In *Bars*, 29 September 1918, p. 3.

35 In Košice they decided to close cinemas and theatres no later than 22 October. See A járványbizottság ülése. In *Kassai Hírlap*, 22 October 1918, p. 2.

were to be disinfected and aired between 12 noon and 2 a.m, the windows of streetcars were to be kept open, and residents were advised not to go for walks, nor to visit cemeteries, churches, and other sites of prayer in large numbers, – although these places were not closed.<sup>36</sup> However, many have criticized these measures, mainly because churches and synagogues were not compulsory closed during the hardest weeks of the pandemic.<sup>37</sup>

Local authorities attempted to inform the public about the symptoms of the disease and the necessary control measures by means of decrees and the daily press. Articles of this nature appeared from the end of September 1918, but mainly from mid-October, when the epidemic was still on the rise.<sup>38</sup> Based on decrees, the Ministry of the Interior also ordered pharmacies to stay open longer and supply medicines to those who needed them.<sup>39</sup> The Ministry of Defence ordered army surgeons to provide care to civilians.<sup>40</sup>

### The available statistics – Spanish influenza or pneumonia?

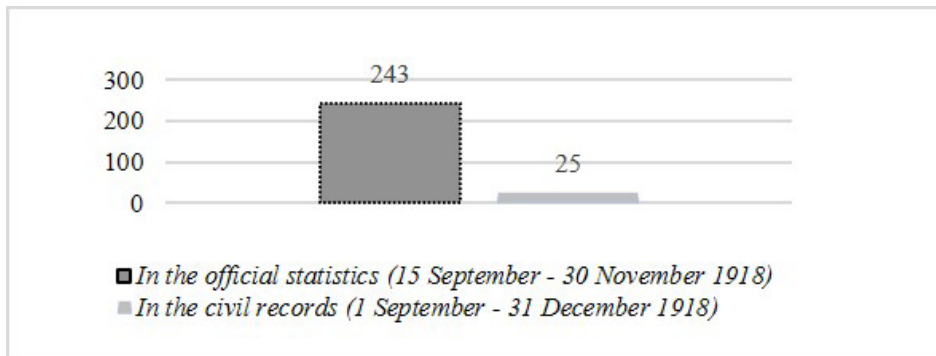
The detailed statistical number of mortalities began to be published in the regional and local press relatively late, in mid-October 1918. In his analysis, Ödön Mergl (1861–1926), the chief medical officer of Bratislava, pointed out that the number of those who died from pneumonia had increased by 50% compared to the previous year. He concluded that these people were therefore also victims of Spanish influenza.<sup>41</sup> Géza Nagy (1869–1922), Košice’s chief medical officer, addressed the same issue and argued that most of the deaths could be attributed to “*pneumonia caused by the Spanish disease*”.<sup>42</sup> According to this view, their

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- 36 See in Bratislava, the measures issued by György Szmrecsányi on 30 September 1918: Vorsichtsmatzregeln gegen die Spanische Grippe. Kundmachung. In *Pressburger Zeitung*, 9 October 1918, p. 6; See also the supplementary decree of György Szmrecsányi 22 October: A kávéházak, vendéglők és a spanyol nátha. In *Nyugatmagyarországi Híradó*, 25 October 1918, p. 3; In Košice see A járvány-bizottság ülése. In *Kassai Hírlap*, 22 October 1918, p. 2.
- 37 Rôzne správy. Španielska epidemia. In *Robotnícke Noviny*, 24 October 1918, p. 3.
- 38 See for example Most már „veszedelmes“ betegség a lenézett spanyol-nátha? In *Kassai Hírlap*, 17 October 1918, p. 2; Orvosi tapasztalatok a spanyol-járvány gyógyításai körül. In *Eperjesi Lapok*, 3rd November 1918, p. 4.
- 39 Archív mesta Košice (AMK), fund (f.) Úradný hlavný lekár mesta Košice 1827 – 1940, roky 1918 – 1920, Kassa szab. kir. város polgármesterétől, 9587/1918-tf. A tisztí főorvos jelentése az úgynevezett spanyol betegség állapotáról, 1918. szeptember 30.
- 40 Štátny archív v Košiciach (ŠA KE), f. Abovsko-Turňanská župa, Podžupan, box (b.) 718, number (n.) 8252/1918. Abauj-Torna vármegye alispánja a katonai parancsnokságnak, 1918. október 30. Tárgy: Járvány alkalmával katonai orvosok kirendelése.
- 41 A pozsonyi spanyol influenza-járvány. In *Nyugatmagyarországi Híradó*, 16 October 1918, p. 3.
- 42 Nyhe lefolyású járvány – e héten 18 halálessettel. In *Felsőmagyarország*, 20 October 1918, p. 4.; Csökken a spanyol járvány. In *Felsőmagyarország*, 13 October 1918, p. 5.



calculations concerning the number of infections and mortalities also included the death cases related to pneumonia. Later, the official county statistics of Košice, published in May 1919, reported 283 deaths caused by pneumonia in 1918, however, but added that most of them were “*Spanish patients*”.<sup>43</sup>

Similarly to Ödön Mergl and Géza Nagy, a teaching assistant of the Internal Medicine Clinic in Budapest József Rohrböck argued that “*the most dreaded complication of the Spanish disease is pneumonia*”.<sup>44</sup> As a result, epidemic reports from various parts of Hungary very often referred simply to “*epidemic pneumonia*” (*járványos tüdőgyulladás*)<sup>45</sup> as the cause of death. In fact, the contemporary medical community itself was divided not only on the identification of the disease, but also on the seriousness of the pandemic, which complicated the whole situation. For example, József Löwy, a renowned doctor from Košice, claimed that the Spanish flu did not differ from previous influenza pandemics as, in his opinion, people were just more afraid of the disease than before.<sup>46</sup> As a result, many contemporaries referred to the Spanish influenza as a “*fashionable illness*” not taking it seriously.<sup>47</sup>



**Chart 1** Number of deaths caused by the Spanish Influenza in Bratislava. Sources: Štátny archív v Bratislave, Štátne matriky úmrtia Bratislava – Staré mesto, zväzok 52, 1918.

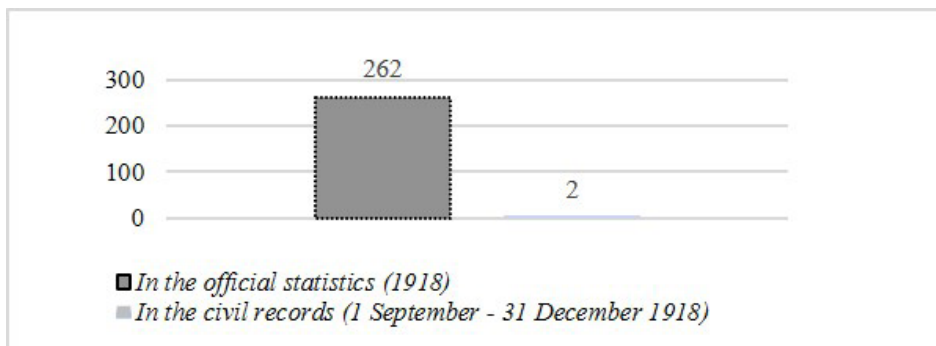
43 Kassa város 1918. évi népmozgalma. In *Úradné Noviny župy Abauj-Turňanskej a mesta Košíc*, Vol. 19, No. 6-7, May 8, 1919, p. 76

44 ROHRBÖCK. A tüdőgyulladásról. In *Jó Egészség*, 1th November 1918, p. 163.

45 Orvosi tapasztalatok a spanyol járvány gyógyítása körül. In *Pesti Hírlap*, 25 October 1918, p. 11.

46 LÖWY, József. Az influenzáról. In *Felsőmagyarország*, 30 October 1918, p. 3.

47 MOLNÁR. *Kassától Košicéig*. II. Kassa, 1942, p. 59.



**Chart 2** Number of deaths caused by the Spanish Influenza in Košice. Sources: Štátny archive v Košiciach, Štátne matriky Košice, 1918.

This polarization of opinions about the Spanish flu is also reflected in the diversity and contradictions of the data that have been preserved in different sources. Charts 1 and 2 show the number of deaths estimated by the chief medical officers in comparison with the number of fatalities that were registered in the civil death records of the two major cities of daily Slovakia, Bratislava and Košice. The civil registry data here show that Spanish influenza was listed as the cause of death only in very few cases, even though the official statistics reported hundreds of deaths related to the pandemic. This contradiction can also be tracked in data from other regions of present-day Slovakia. As for Zemplín County, in Trebišov only 2 victims of Spanish influenza and 17 deaths from pneumonia were recorded,<sup>48</sup> while in Sečovce 16 people died from pneumonia and there were no victims of Spanish influenza in the civil records.<sup>49</sup>

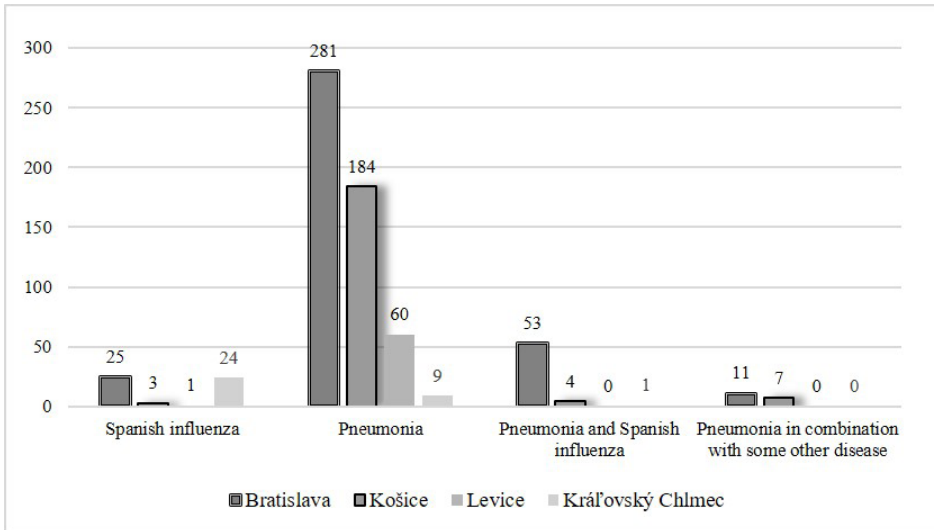
On the contrary, in the locality of Veľké Kapušany, located even further east in the historical region of Užhorod, 19 persons died of Spanish influenza, and only 2 victims of pneumonia were registered,<sup>50</sup> while in Kráľovský Chlmec (in the Zemplín region) twice as many people died from the “*Spanish epidemic*” than from pneumonia between September and December 1918.<sup>51</sup> The striking difference between the two types of data suggests that most deaths related to the epidemic were recorded as pneumonia, which is in accordance with several doctors’ analyses cited above.

48 ŠA KE, pracovisko Archív Trebišov, Štátne matriky úmrtia, Trebišov, zväzok 5, 1918.

49 ŠA KE, pracovisko Archív Trebišov, Štátne matriky úmrtia, Sečovce, zväzok 3, 1918.

50 ŠA KE, pracovisko Archív Trebišov, Štátne matriky úmrtia, Veľké Kapušany, zväzok 3, 1918.

51 ŠA KE, pracovisko Archív Trebišov, Štátne matriky úmrtia, Kráľovský Chlmec, 1918.



**Chart 3** The number of deaths caused by Spanish influenza or pneumonia in Bratislava, Košice, Levice and Kráľovský Chlmec between September and December 1918 in the civil records of death. Spanish Influenza in Hungarian indicated as *spanyol betegség, spanyol láz, spanyol nátha, spanyol kór* or simply *influenza*. Pneumonia in Hungarian indicated as *tüdőlob or tüdőgyulladás*. Sources: Štátny archív v Bratislave, Štátne matriky úmrtia Bratislava – Staré mesto, zväzok 52, 1918.; Štátny archív v Košiciach, Štátne matriky Košice, 1918.; Bars Közművelődési és Társadalmi Hetilap; Štátny archív v Košiciach, pracovisko Archív Trebišov, Štátne matriky úmrtia, Kráľovský Chlmec, 1918.

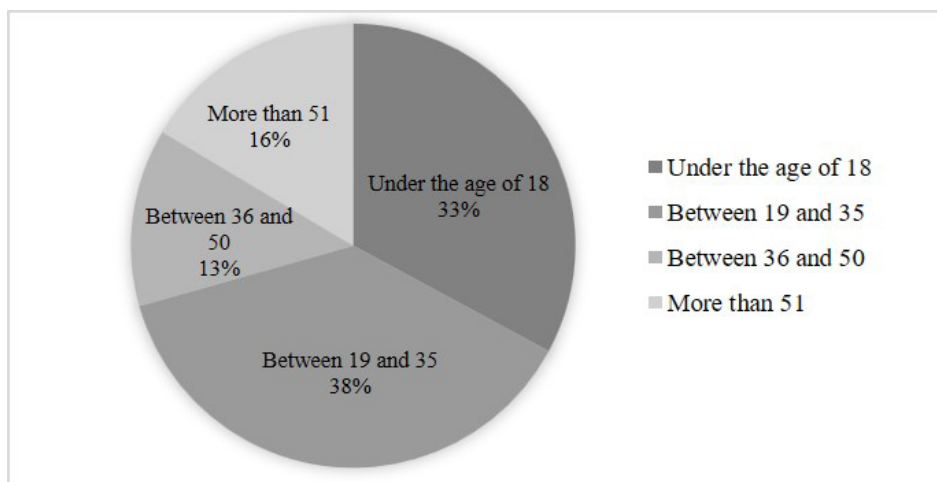
The differences in determining the cause of deaths led us to conclude that doctors diagnosed the disease in various ways. What is more, medical reports may register more than one cause of death. As Chart 3 shows, in the case of Bratislava, there were 54 fatalities attributed to pneumonia and Spanish influenza at the same time. Due to the unclear or incorrectly determined causes of the deaths, several obituaries published in the contemporary press listed the Spanish influenza as the main cause of death, even when pneumonia was registered in the deceased person's civil records.<sup>52</sup> As a consequence, it is now hardly possible to separate those who died of Spanish influenza and those who were victims of pneumonia.

### Victim age and gender

As contemporaries have also emphasized, the Spanish influenza pandemic typically killed the younger generation, which made the virus in 1918 rather unusual and horrifying for the contemporaries, and this can be confirmed also by the archival documents examined. The majority of those registered in the civil

<sup>52</sup> See for example cases from Košice: A spanyol nátha áldozatai. In *Felsőmagyarország*, 17 October 1918, s. 4; Halálózások. In *Felsőmagyarország*, 26 October 1918, p. 4. See also the case of Gyula Pátkay, in Levice. Gyász hír. In *Bars*, 19 January 1919, p. 3.

records of death as victims of pneumonia or Spanish influenza were younger than 36 years of age in every locality under investigation. Charts 4 and 5 show the age distribution of mortalities in the two largest cities from the territory of today's Slovakia, Bratislava and Košice. In Bratislava, 71% of the victims of the epidemic were under the age of 35. This could also be confirmed by the data of Ödön Mergl, the chief medical officer of Bratislava, who reported, on the basis of statistics received from hospitals, that half of the infected patients were children and the other half were adults between the ages of 18 and 45.<sup>53</sup> Finally, the average age of victims in Bratislava was 28.

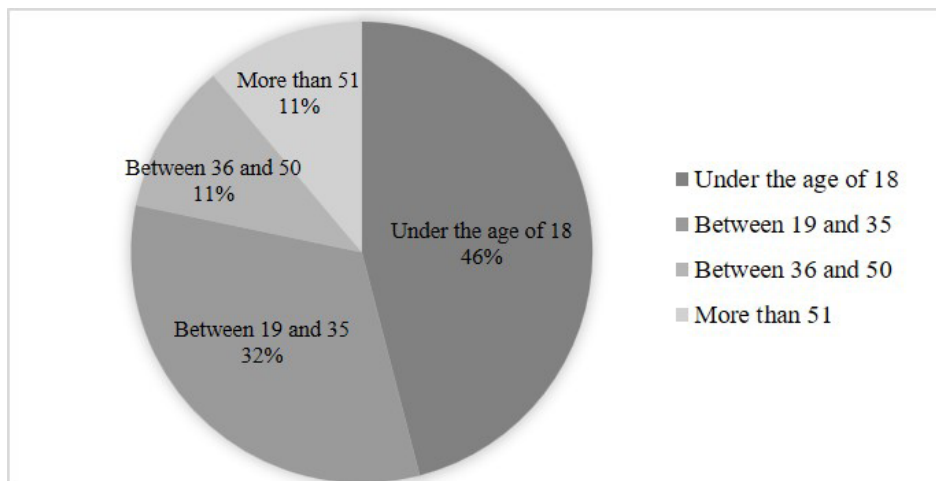


**Chart 4** Victim age in Bratislava calculated from the civil records of deaths. Sources: Štátny archív v Bratislave, Štátne matriky úmrtia Bratislava – Staré mesto, zväzok 52, 1918.

Mortality rates were similar in Košice (see Chart 5), where the vast majority of those who fell victim to the pandemic (78%) were under the age of 35. Here, however, a total of 46% were under 18; 32% of them were between the ages of 19 and 35, and only 22% were over 50. Consequently, the average age of victims in Košice was 22,5. The local daily published data on the age of the victims only once, at the end of November 1918.<sup>54</sup>

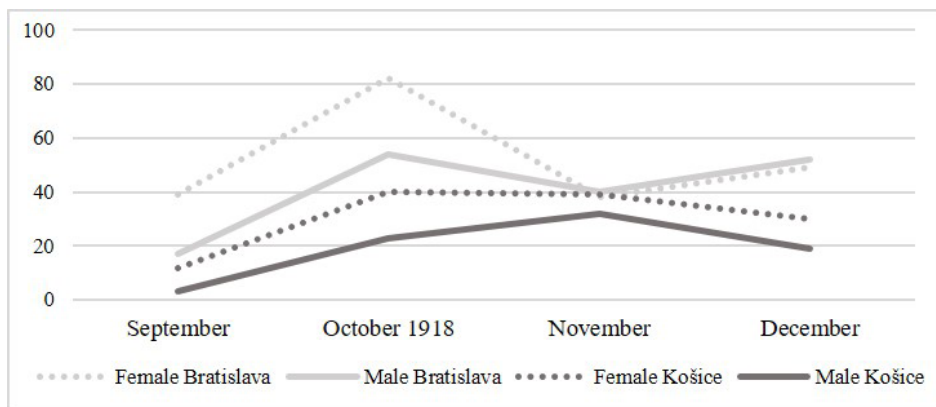
53 A pozsonyi spanyol influenza-járvány. In *Nyugatmagyarországi Híradó*, 16 October 1918, p. 3.

54 Megnyitják a középiskolák felsőbb osztályait. In *Felsőmagyarország*, 28 November 1918, p. 3-4.



**Chart 5** Victim age in Košice calculated from the civil records of deaths. Source: Štátny archív v Košiciach, Štátne matriky Košice, 1918

The average age of the victims of the epidemic was shockingly low in other regions, too. The median age of Spanish influenza victims was 24 in Devín, 26 in Levice, 25 in Kráľovský Chlmec, 22 in Trebišov and 27 in Veľké Kapušany (22,65 years). In Sečovce, the average age of the death was slightly higher, it was 37.<sup>55</sup>



**Chart 6** Gender of the epidemic victims calculated by the civil records of deaths. Sources: Štátny archív v Bratislave, Štátne matriky úmrtia Bratislava – Staré mesto, zväzok 52, 1918; Štátny archív v Košiciach, Štátne matriky Košice, 1918.

55 The median age of victims was, in every locality, calculated on the basis of civil records.

Regarding the gender of the dead, women were typically in the majority, which can be explained, among other things, by the fact that the men were still returning home from the front or had already contracted the disease on the battlefield. Chart 6 indicates that in the case of Bratislava and Košice, the female death rate exceeded the male death rate both among minors and adults. In Bratislava 56%, while in Košice 61% of the victims of the pandemic were women. Similar statistics have been preserved from other localities in Northern Hungary.<sup>56</sup> In Liptov, for example, it was reported that “*noticeably mostly girls and younger women fall victim to the disease*”.<sup>57</sup>

Finally, Table 1 shows the number of fatalities in different regions of the territory of today’s Slovakia. An analysis of the evidence shows the epidemic may have caused up to 450 deaths at the county level, while in the two major cities (in Bratislava and Košice) hundreds of people lost their lives, and in smaller towns (for example, Komárno with 22,000 inhabitants, Prešov with 16,000 or Levice with 9,600) some 50–60 deaths were reported, too. However, it should be added that statistics also include the number of people who died from pneumonia.

Place	Number of deaths caused by the Spanish influenza in the official statistics and secondary literature	Number of deaths caused by the Spanish influenza and pneumonia in the civil death records
Banská Štiavnica <sup>58</sup>	5	?
Bratislava	243 <sup>59</sup>	370 <sup>60</sup>
Detva <sup>61</sup>	212	?
Devín <sup>62</sup>	–	13

56 In Levice 48%, in Sečovce 50%, in Kráľovský Chlmec 65%, in Trebišov 58% and in Veľké Kapušany 55% of the Spanish flu victims was woman.

57 A spanyol nátha terjedése megyénkben. In *Liptó*, 29 September 1918, p. 3.

58 HOMOR. *Spanyolnátha Selmecebányán* [online]. [cit. 2024-05-15]; Available on: <http://sopronselmec100.uni-sopron.hu/spanyolnatha-selmecebanyan>

59 A pozsonyi spanyol influenza-járvány. In *Nyugatmagyarországi Híradó*, 16 October 1918, p. 3.; Pozsony egészségügyi viszonyai novemberben. In *Nyugatmagyarországi Híradó*, 12 December 1918., p. 3-4.;

60 Štátny archív v Bratislave (ŠA BA), Štátne matriky úmrtia Bratislava – Staré mesto, zväzok 52, 1918.

61 GOLIAN. Vývoj úmrtnosti vo farnosti Detva v rokoch 1781 – 1920. In *Historická demografie*, 2016, Vol. 41, no. 1, p. 64.

62 ŠA BA, Devín – Štátne matriky zomrelých 1907–1922, 1918.

Gemer-Malohont <sup>63</sup>	450	?
Komárno <sup>64</sup>	60	?
Košice	28265	198
Kráľovský Chlmec	–	34
Levice	–	61
Liptovský Mikuláš <sup>66</sup>	5	?
Nitra <sup>67</sup>	18	?
Petržalka <sup>68</sup>	?	2
Prešov <sup>69</sup>	58	–
Sečovce <sup>70</sup>	–	16
Spiš County <sup>71</sup>	250	?
Turzovka and its surroundings <sup>72</sup>	250	?
Trebišov <sup>73</sup>	?	17
Veľké Kapušany and surroundings <sup>74</sup>	?	21
Vlčkovce <sup>75</sup>	18	?
Žabokreky nad Nitrou (district) <sup>76</sup>	78	?
<b>Total:</b>	<b>1929</b>	<b>732</b>

Table 1 Number of deaths caused by the Spanish influenza in the official statistics and the civil records. Civil records also include the deaths caused by pneumonia.

63 SIMON, *Az átmenet bizonytalansága*, p. 24.

64 SIMON, *Az átmenet bizonytalansága*, p. 24.

65 Kassa város 1918. évi népmozgalma. In *Úradné Noviny župy Abauj-Turňanskej a mesta Košíc*, Vol. 19, No. 6-7, May 8, 1919, p. 76.

66 Halálozás. In *Liptó*, 22 September 1918, p. 3.; Halálozás. In *Liptó*, 29 September 1918, p. 2; Halálozások. In *Liptó*, 20 October 1918, p. 2.

67 Egészségügy. In *Nyitra megyei Szemle*, 13 October 1918, p. 3.

68 ŠA BA, Kniha úmrtí Petržalka, Zväzok 2, 1918.

69 A spanyolnátháról. In *Eperjesi Lapok*, 10 November 1918, p. 2.;

70 ŠA KE, pracovisko Archív Trebišov, Štátne matriky úmrtia, Sečovce, zväzok 3, 1918.

71 Der Munizipalausschuß der Zipser Komitates. In *Karpathen-Post*, 5 December 1918, p. 2-3.

72 SYLVIA z Limericku and MINTALOVÁ. Z činnosti pomocnej misie Britského Červeného Kríža Lady Muriel Paget na Slovensku. In *Historický časopis*, 2008, Vol. 56, no. 3, p. 500.

73 ŠA KE, pracovisko Archív Trebišov, Štátne matriky úmrtia, Trebišov, zväzok 5, 1918.

74 ŠA KE, pracovisko Archív Trebišov, Štátne matriky úmrtia, Veľké Kapušany, zväzok 3, 1918.

75 *Vlčkovce. História*. [online]. [cit. 2024-05-15]; Available on: <https://www.vlckovce.sk/obec-2/o-obci/historia/>

76 Egészségügy. In *Nyitra megyei Szemle*, 13 October 1918, p. 3.

## Conclusion

The paper aimed to explore the impact of the second wave of the Spanish influenza pandemic on the northern regions of historic Hungary, the present-day territory of Slovakia between September and December 1918. As the comparison of contemporary pandemic statistics and the civil death record shows, medical professionals in many cases could not differentiate between the fatalities caused by pneumonia and those related to the Spanish flu. On the example of Bratislava and Košice might be observed that the official statistics, which were calculated by the chief medical officers, the number of deaths attributed to the epidemic was much higher than in the civil records, in spite of the fact that the cause of death was determined by medical healthcare workers also in the civil registries. However, the accurate data collection was also hindered by the actual political circumstances, the collapse of the Austro-Hungarian Monarchy and the Hungarian Aster Revolution in almost all regions in the territory under investigation. The local and regional bodies of the Hungarian public administrative were forced to deal with problems connected to public supply, looting and robberies, as well as the end of the war and the mass return of WWI soldiers. In addition, the Czechoslovak administration in the autumn of 1918 had no staff that would be able to deal with the pandemic in the Slovak territory of the newly created state. The most important Slovak newspapers of the time did not publish accurate statistics about the epidemic either, as they were busy with the political transformation, and for the most part they did not have correspondents in regions such as Abov-Turňa, Šariš and Zemplín. Moreover, it should be taken into consideration that it is difficult to map how many unreported cases existed. Consequently, the accessible archival sources do not enable scholars to determine the exact number of deaths related to the pandemic.

According to the civil death records, most fatalities between September and December 1918 were attributed to pneumonia, not Spanish influenza, which suggests that medical personnel who registered the causes of death were divided on how to diagnose the disease and the severity of the epidemic. Some specialists denied the pandemic's existence, while others tried to inform and warn the population about the seriousness of the disease. Further research could examine the church registers and compare them to data gained from the civil records of deaths. It is also necessary to map the consequences of the pandemic in regions that are not included into this study. In addition, the careers of the medical officers and renowned medical experts of the region should be explored too, since they played an important role in how the political elites of the time viewed the epidemic, and, of course, many of the key sources related to the Spanish influenza statistics were created thanks to them.



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1918

Štátny archív v Košiciach, pracovisko Archív Trebišov, Štátne matriky úmrtia, Kráľovský Chlmec,  
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