MEDICAL SCIENCE MONITOR

MEDICAL HISTORY

e-ISSN 1643-3750
© Med Sci Monit, 2013; 19: 1131-1141
DOI: 10.12659/MSM.889469

Received: 2013.06.19
Accepted: 2013.07.09
Published: 2013.12.10

The influenza epidemic of 1889–90 in selected European cities – a picture based on the reports of two Poznań daily newspapers from the second half of the nineteenth century

Authors' Contribution:
Study Design A
Data Collection B
Statistical Analysis C
Data Interpretation D
Manuscript Preparation E
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Source of support: Self financing

The largest nineteenth-century epidemic of influenza, called 'the Russian epidemic,' arrived in Europe from the east in November and December of 1889. It was one of the first epidemics of influenza that occurred during the period of the rapid development of bacteriology. It was the first epidemic to be so widely commented on in the intensively developing daily press. Daily Polish newspapers published in Poznań, a Polish city that was then under Prussian rule, also had a share in providing information on the epidemic. Press reports not only referred to the local spread of the disease, but also discussed the situation in numerous, often distant, European cities, such as Paris, London, Vienna, and Berlin. Apart from data about where and when the illness occurred, the reports provided: descriptions of symptoms, treatment methods, data on morbidity and mortality, effect on individual people of high rank in the country, information on the activities of public authorities, and impact of the epidemic on daily life. The 1889-1890 influenza epidemic had 2 faces: the real one, discovered while being afflicted with the disease, and the media one, discovered through the information available in the press.

Key words: influenza • epidemic of 1889–90 • Europe • Poznań • *Dziennik Poznański* • *Kurier Poznański*

Full-text PDF: http://www.medscimonit.com/download/index/idArt/889469

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Background

Influenza is an acute and infectious disease, occurring both seasonally and in epidemic proportions, and still remains of interest for numerous researchers. In antiquity, it might have been known by the name *febris catarrhalis epidemia*, which was described by Hippocrates [1]. The Polish word 'grypa', originating from the French 'la grippe', appeared only in the eighteenth century. Similarly, the name 'influenza' came from Italian and was commonly used in the nineteenth century [2]. By the end of the nineteenth century, influenza epidemics had struck the world several times. As shown in various sources, in the nineteenth century alone epidemics occurred in the years 1803, 1830–1833, 1836–1837, 1847–1848, 1857–1858, 1874–1875, 1889–1891(92), and 1899–1900 [3].

The largest nineteenth-century influenza epidemic in Europe probably had its beginning in November and December 1889. Spreading over Europe from the east, the epidemic received the name 'the Russian influenza' or 'the Asiatic influenza'. As Finkler (quoted in Shope) put it, the epidemic 'flowed over the whole globe in the space of a few months' [4] and it was the first case of influenza in the 'era of bacteriology', initiated by the discoveries of Pasteur and Koch. Outside Europe, the first cases of the disease occurred in May 1889, as reported by a British city doctor, H. F. Parsons. These first cases were observed in 3 independent places, located considerably far from one another: Bukhara in Central Asia (Turkestan), Athabasca in northwestern Canada, and Greenland. Around mid-October of 1889 the disease was noted in Tomsk in Siberia, and in late October it appeared in St. Petersburg, in the European part of Russia [5]. In Bukhara the disease prevailed for six months until it moved to Ufa, Kazan, Moscow, and St. Petersburg [6]. From Russia the disease reached Europe, spreading across it in 3 consecutive waves (1889–1890, 1890–1891, and 1891–1892), differing in terms of morbidity and mortality [7]. Changes that took place in the nineteenth century fostered the rapid spread of the disease. Substantial increase in the population, especially in towns, facilitated the expansion of infectious diseases transmitted from person to person. The intensive development of railways also contributed to this effect because they linked distant places, with numerous intermediate stops, and enabled large numbers of people to travel within a short time and across vast distances. The impact of new ways of travelling on the spread of infectious diseases was noticed by some people relatively early. It was Parsons, mentioned above, that stated that influenza first appeared in the capitals (the cities best connected with one another) and in port cities. He denied the possibility that influenza could travel faster than people and that people staying in isolated places could develop it [8]. This statement shed light on the way in which the disease spread. The cause of influenza had been unknown and it provoked debates as to whether the disease was infectious and whether it was caused by microorganisms transmitted from person to person (germ theory) or by miasma (miasmatic theory). In spite of the advances in microbiology, researchers of the late nineteenth century, such as Charles Creighton in his work entitled *The History of Epidemic 1891-1894*, were trying to prove the miasmatic theory [9].

The 1889 influenza epidemic was not only the first epidemic in the era of bacteriology, but also one of the first so widely commented on in daily press, which was developing intensively in the second half of the nineteenth century. Newspapers published in many European cities (e.g., Paris – *Le Temps* and *Le Matin*, Berlin – *Vossische Zeitung*, and London – *The Times*) reported the spread of the disease in an up-to-date way and in an engaging manner. They gave detailed accounts of the symptoms and consequences of the disease, creating an image of the epidemic in the mind of the reader. Thanks to the press, the information on the spread of the disease tended to reach a given city faster than the epidemic itself [10]. The fact that the epidemic was commented on in the daily press gave rise to a new reality, the so-called 'media reality' [11]. Although the aim of the commentaries was primarily informative, they influenced, whether intentionally or not, the moods and attitudes of the readers, as well as their behavior in the face of the threat. Depending on the character of the report, the newspapers could, for instance, evoke fear of the unknown [12].

Press information on the influenza epidemic reached Polish readers as well. Although Poland did not exist as a country on the map of Europe at that time (because in 1795 the last partition of Poland took place, in which it was divided between Prussia, Austria, and Russia and did not regain independence until 1918), Polish daily newspapers were published in many cities. The Polish press provided information, but it had also an educational and cultural role, thus maintaining the Polish national identity. At the end of the nineteenth century, most of the Polish daily press was published in large Polish cities: Warsaw (in the Russian sector), Krakow (in the Austrian part), and Poznań (under Prussian rule). Not only could the inhabitants of these cities directly experience the epidemic (it began to sweep across Polish lands in December 1889), they could also read about it in the newspapers. As a result, they had a chance to create a mental image of the disease on the basis of experience and external information. It was not only the circulation and readership of the newspaper that the effectiveness of the press depended on. What also mattered was the number of recipients, their intellectual powers, especially the level of illiteracy, and economic opportunities (purchasing power). The level of illiteracy was relatively low in Poland under Prussian rule, especially in Poznań, which was the capital of the region with the historical name Greater Poland and the administrative name The Grand Duchy of Poznań. It is estimated that just 20%-25% of population over the age of 15 were illiterate, since relatively early there was general

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elementary education [13]. Poznań was a city with approximately 70,000 residents. In spite of the intensive Germanization policy, it had the largest concentration of Poles in the whole Prussian sector. Although there were considerable disparities in the income of particular population groups, the residents of Poznań were characterized by a relatively higher average income level than the inhabitants of towns and villages. The daily newspapers that played a significant informative, political, and cultural role in Poznań were *Dziennik Poznański* (1859–1939) and *Kurier Poznański* (1872–1902). Despite numerous difficulties, their unquestionable advantage was the regularity with which local and world reports appeared in them, which was in accordance with the contemporary norms of journalism. These newspapers informed their readers not only about political events, but also about the economy, culture, and public health. It was in these newspapers that the reports on the spreading epidemic of the Russian influenza appeared. Apart from having a local character, they discussed in a detailed way the course of the epidemic and its intensity in many European countries. The greatest attention was paid to such cities as Paris, Berlin, Vienna, London, Madrid, and Barcelona. Some articles were also printed on Rome, Athens, Lisbon, Copenhagen, and Prague, as well as smaller French, German, and Italian cities, and some cities in the United States. Starting in December, as the epidemic intensified, the newspapers included an increasing number of commentaries characterized by increasing length and depth. These features reached their peak in January 1890. The last reports concerning, as it later turned out, the last wave of the epidemic, appeared in February 1890 and reflected the dying out of the epidemic.

Beginnings of the Epidemic – From Constantinople, Through St. Petersburg, to Western Europe

In St. Petersburg, the first cases of influenza occurred in October 1889. The epidemic developed in November, and it was described in the Poznań daily press in December. The first information appeared at the beginning of December and by referring to the German *National Zeitung*, it stated that there was a type of very severe influenza in St. Petersburg, reaching a very large scale, so that around 150,000 people, from the tsar to the lowest layers of the society, developed the disease [14]. What caused surprise was that, although the disease had appeared in Constantinople and, as some people claimed, moved to St. Petersburg from there, it had not spread over the whole area between the 2 capitals [15]. Half of the population of Constantinople was believed to have been afflicted with influenza. In St. Petersburg, as early as the beginning of December, one-third of the hospital beds were occupied by patients with influenza, a disease with symptoms of severe catarrh combined with fever, and its treatment required much effort by doctors [16]. The epidemic in St. Petersburg was spreading particularly fast. According to some sources, 180,000 people had developed the disease, 25–50% of school children had been affected by it, and numerous factories had been closed by middle December [17]. Referring to *Tygodnik Lekarski* (a medical weekly published in St. Petersburg), it was reported that influenza, which was epidemic in our country, has assumed proportions greater than any seen by the contemporary generation. According to estimations, one-third or even a half of the inhabitants of St. Petersburg, belonging to all layers of the society, suffered from this disease [18]. According to other estimations, the total incidence amounted to 100,000 cases; military hospitals were overcrowded, multiple factories and workshops suspended their work because of the workers' illness, and whole districts of the city were abandoned by the population [19]. It was reported that the disease could occur suddenly, without any preliminary signs, and that it touched the young and the old, the poor and the rich. It began with a terrible headache, accompanied by feverishness up to 42°C, unbearable bone aches and aches of the whole body "up to the hair roots", facial rashes, and swollen hands. It was observed that after 5–6 days, the illness subsided without a trace, only leaving the patients weakened for some time [20]. At the beginning of January, the tsar developed the disease again, ministers of internal affairs and communications were still unable to work, 35% of soldiers became ill, and there were many deaths [21]. It was the last piece of information on the topic of this wave of the influenza epidemic in St. Petersburg that appeared in the Poznań press.

As was reported in mid-December, the epidemic was rapidly progressing westwards. In Moscow, 20,000 people developed the disease by the first of December, and by this time the illness had already reached Kursk, Kazan, Jekaterynoslaw, and Novgrod; it had also been in the Polish cities of Warsaw and Lodz [22]. At that time, as reported in telegrams, it appeared in Vienna, Berlin, Copenhagen, and Paris as well, and by the end of December 1889 the disease had spread over the whole of Europe. As Parsons recounted, the epidemic spread along the Mediterranean Sea at the beginning of 1890 and reached Egypt and the United States. In England, the disease spread within the period of 3 months [23]. As was observed, In each of these places the epidemic lasted from a month to about 6 weeks and after it abated at the end of March 1890 (first wave), it would appear as typical seasonal cases of the disease. In some countries (e.g. England) and in some cities (e.g. Copenhagen) the epidemic had its second and third wave in 1890–1891 and 1891–1892 [24].

Paris and Other French Cities

The influenza epidemic reached Paris most probably at the turn of November and December of 1889. The first information in the Poznań press that concerned the epidemic in Paris appeared in mid-December (in Parisian newspapers *Le Matin* and *Le Temps*

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this topic was first raised at the end of November and it dominated these newspapers for 2 months) [25]. As was reported [26], 'a mysterious disease, spreading more and more violently in St. Petersburg, [was] said to have appeared in various parts of Europe, like for example among different shop assistants of the well-known Parisian store Louvre' [27]. What followed from medical reports was that beginning on 26 November, 670 out of 8000 Louvre employees developed a type of benign influenza that usually abated without complications within 4 days. Many people in the city were afflicted with the disease as well [28]. Slightly different data concerning the number of the Louvre workers were given in a telegram from Wolff's office [29]. Following the information from the telegram, it was announced that 670 out of 3900 Louvre employees developed influenza, and it was added that 'there were also cases of the disease in the city, but the disease passes without any harmful consequences' [30].

At the beginning, newspaper reports were written in a rather reassuring tone, such as 'the whole epidemic does not raise serious concern, which is why doctors consider safety precautions to be unnecessary' [31]. However, 2 weeks later (around 25–28 December) it was observed that influenza epidemic assumed a more serious nature. The disease often ended with pneumonia and the hospitals were incapable of accommodating such an enormous number of patients. Barracks were arranged in the yards and gardens of field hospitals, and 'according to the official list, 200 people more [died] in Paris [that] week in comparison to the previous week' [32]. There was another, very similar piece of news: 'influenza is assuming a more dangerous character, changing now into pneumonia and lung congestion; Parisian hospitals are not sufficient and separate tents had to be arranged in yards and gardens; there were 200 more cases of death last week than in the previous one' [33]. Thus, it is likely that there was a rapid increase in the severity of the epidemic in the second half of December, and especially around 28 December 1889. This was when numerous new cases occurred, accompanied by adverse effects such as pneumonia, which often led to death. In December 1889 and January 1890 a decrease in the Parisian epidemic was noted, but it suddenly appeared in other French cities, such as Toulouse, Grenoble, and Ajaccio [34] and, twice as severely, in Toulon [35]. The improvement of the situation in Paris was only temporary, though. Already in the first days of January 1890 university lectures were suspended, and all the schools were closed, as well as in Montpelier and Angers [36]. Because of influenza, the opera house in Lyon was closed [37]. It was reported that the influenza was spreading all around France, especially in the cities. All the doctors in a Parisian hospital Hotel Dieu developed the disease. Statistical data showed that the mortality rate at that time was 30% higher than at the same time the previous year [38].

The entire month of January 1890 was marred by the epidemic. The Polish press included a lengthy and dramatic commentary on this topic. Although the message concerned the state of the day 6 January, it was released on 22 January in *Gazeta Polska* [a Polish daily]. The message read, 'Influenza, still!... It is no longer laughed at, as when it first arrived. Death strikes time after time' [39]. As was reported, influenza grew so severe that even large hospitals could not accommodate all the patients who were sent in on stretchers from police stations or transported in carriages and cabs from city ambulances. Barracks borrowed from the ministry of war had to be arranged in the hospital yards [40]. Death rates were indicated in press reports to be relatively high because the staff of funeral homes was overwhelmed with burials and demanded that the funeral rituals be simplified. They achieved their aim, because, for example, the pall was no longer stretched on the walls of the churches to shorten the funeral. The newspapers described the events in a dramatic way, relating that day after day there were 400 to 500 funerals, almost as many as during the siege of 1870 [41]. A dramatic image of the disease emerged also in relation to the manner of 'life's end' and to the risk factors. It was described that some patients ended their lives suddenly on the streets, which applied also to a large number of people known in the world of science. It was said that individuals of strenuous mental activity were particularly susceptible to the disease. However, some people had difficulty believing it; as they emphasized, the working people suffered to the same extent as the wealthy classes, because 'the plague [did] not save any categories' [42]. It was soon noticed in Paris that the epidemic had an influence on the economy, since the most striking symptom of the severity of the disaster was an unprecedented decrease of trade in food products. Negative changes in trade were observed in bakeries and butcher's shops, because several hundred kilograms less bread and meat was sold daily. The decrease was noted in comparison to the usual sales and in all of the city districts. In response to the reduction in sales, it was revealed, 'butcher's shops of La Vilette have dismissed a part of their staff, which had never happened before' [43]. Education froze in a similar way, as all the high schools, middle schools, and other types of schools were closed. Almost all of the students of a polytechnic school developed the disease, and also the military school in Saint Cyr was closed. Offices worked poorly at that time, especially the post office, which, 'overwhelmed with New Year's greetings at that time of the year, could not manage on its own; it had to demand help from the soldiers in the process of delivering the letters around the city' [44]. As reported in the newspapers, representatives of the government were also subject to the disease (e.g., the President of the republic [45] and ministers). The ministers recovered at the end of January, though, and they were able to celebrate at New Year's parties, but 'many officials were absent at these receptions, such as the Russian ambassador' [46]. Some members of the parliament were ill as well [47].

The epidemic affected not only Paris, but also the provinces. In Lyon, neither the municipal government nor the judiciary was

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able to function. Similarly, the weavers of Lyon who 'used to produce those most beautiful silk fabrics, the subject of general admiration, [were] haunted by the pest, although fresh air [was] abundant in their picturesque district on the Croix-Rousse hill' [48]. Likewise, the epidemic appeared in Marseille and Corsica, where it progressed in a slightly milder manner. In Toulouse, however, the schools were closed and the post office did not perform its function, just like in Bayonne, Bordeaux, and Nantes. What is more, the epidemic reached the Loire basin: 'in Saumur, 400 officers were given holiday... In Evreux all the teachers [were] ill, just like the rector of the city high school, much to the delight of the students... In the barracks of the dragoons there [were] so many people sick that a considerable part of the barrack buildings had to be separated for them' [49]. The epidemic spread over Rouen, Le Havre, and industrial towns of the Seine, where all types of cloth were produced. Numerous inhabitants of Rouen fled the disease and left the city. All weaving workshops ceased to operate in Lille, and in the railway workshops alone there were 80 workers and 30 apprentices sick. Education in schools was suspended and the sales of medicines increased significantly at the chemist's. In Dunkirk, each chemist sold 80 medicines on a daily basis. Charity organizations were unable to provide help to all those in need. The deficiencies in hospital care were soon observed; 'if, instead of influenza, we were attacked by contagious typhoid fever, smallpox or cholera,... what would happen to the sick, who... have to be placed in tents, in the yards, when there is snow and the temperatures reach minus eight degrees!' [50]. This is the picture of the epidemic in France that the Polish reader was given. The last piece of information appeared on 29 January and it concerned medical issues related to doctor Potain (Pierre Potain, 1825–1901). Potain, one of the Parisian medical greats, was believed to have stated that the prevailing influenza was not a regular flu, insomuch as it was accompanied by the enlargement of spleen, which was not a typical symptom of flu [51].

Rome and Other Italian Cities

First information from Italy concerning the epidemic appeared in the Poznań press in the second half of December. As was reported in the issue from 17 December 1899, influenza occurred in Rome with a certain severity, but it did not entail any deaths. It was suggested that its source was the Russian princes, who travelled with their entire families from the infected St. Petersburg to Rome. It was rumored that doctors diagnosed the influenza symptoms in them [52]. At the beginning, it was not certain how high the risk of spreading the disease was. Newspaper articles claimed, 'it has not been shown yet whether there is a reason for concern in the face of a low number of cases and mild character if the disease' [53]. The disease did not spare Italian aristocrats. As was reported in mid-January 1890, the Duke of Aosta, Amadeo I of Savoy, developed the disease [54]. Although he consulted a well-known doctor Baccelli from Rome, after a short illness he died on Saturday, 18 January, at 6:45 a.m. The cause of death was pneumonia, probably developed in the course of influenza [55]. Information from Italy on the influenza epidemic appeared in the Polish press only once more, on 8 February 1890, and it said, 'the condition of Bartole Viale, the minister of war, who has been suffering from influenza, has improved a little [56].'

Madrid and Other Spanish Cities

First news on the influenza epidemic in Spain appeared in the second half of December. The reports said that the disease was spreading particularly rapidly. First, it occurred in Malaga, then in Barcelona, then in Madrid, in which 30,000 people were afflicted with influenza within a few days [57]. Until 20 December 1889, almost 20,000 people fell ill in Madrid [58]. In Barcelona, the number of the sick stood at 30,000 by the end of December [59], but as early as 1 January 1890 it was reported, 'the number of the sick increased significantly and now amounts to 52,000; there are numerous deaths' [60]. The constant fluctuation of temperature was considered to be one of the factors contributing to such rapid spread of the disease. It was emphasized that the number of doctors during the epidemic was not sufficient, as many of them developed the disease themselves. It was reported that 'in offices and schools, the number of the sick [amounted] to hundreds; 86 postmen fell ill in the post office and as a result, letters were not being delivered for 2 days because of shortages in staff; the number of train connections had to be changed and diminished owing to the lack of officials' [61]. For this reason, a few schools were also closed. At the end of December, the newspaper reports drew the attention of the readers to high mortality, because of which the daily number of deaths increased 3 times as a consequence of influenza in Madrid itself [62]. Among the patients were the president of the cabinet, the minister of foreign affairs, and the speaker of the chamber of the deputies [63]. At the beginning of January 1890, King Alfonso XIII of Spain fell ill, who was at the time five years old [64]. After a temporary improvement [65], his health deteriorated on around 10 January [66]. Around 12 January, the condition of the king was already bad [67]. It was reported that 'the condition of the young Spanish king [caused] serious concern... The doctors [said] we should be prepared for a disaster soon, especially because the whole nervous system [was] attacked and the king [was] in the state of total indolence. Nevertheless, the doctors [did] not lose hope that he [would] survive' [68]. The king's illness caused a certain 'ministry' to remain in service for the duration of the king's recovery, despite the ministry's resignation 'in order to alleviate the difficulties of the queen regent, so concerned about the fate of her only son' [69]. Eventually, the king recovered.

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In mid-January, the newspapers described the devastation induced by the epidemic in Spain. It was reported that 'in Madrid, there [was] dreadful misery, low temperature between –7 and –8 degrees', and 'workers did not earn anything because of the influenza', 'women and children wander along the streets, begging out of hunger; poor people do not have stoves; ¾ of the influenza patients have developed pneumonia; 200–300 people die on a daily basis and they are buried at night so as not to create panic; similarly sad news from Barcelona' [70]. These were the last pieces of information on the influenza epidemic in Spain.

Vienna

First reports referring to the epidemic appeared in mid-December 1889 and concerned the lectures given by 2 professors of the University of Vienna who were well-known at that time - Hermann Nothnagel (1841–1905) and Otto Kahler, the son (1849–93). The lectures dealt with the topic of the etiopathology of influenza. According to them, even if the influenza, ie, the catarrh rheumatic fever), appeared in the form of an epidemic, it was not contagious but it attacked abruptly. Miasmas, bacteria, and microorganisms were believed to carry the infectious agent and even pets were susceptible to the disease [71]. A few days later it was reported, 'in Vienna, schools [would] be closed until January, a military command suspended their training,' and 'influenza spread in Vienna to such an extent that all civil schools were closed before the beginning of the holiday' [72]. This testified to the spread of the epidemic, although the disease might have still seemed to be harmless. However, in the consequent issues of the newspaper in 1889 it could be read that the mild progression of influenza turned out to be more serious in the symptoms. Cases of pneumonia and pleurisy started to occur and hospitals were overcrowded [73]. As some believed, it was from Vienna that the disease spread to Krakow, carried by a student who travelled there for Christmas [74]. At the beginning of January 1890 it seemed that the epidemic in Vienna was coming to an end. Nevertheless, it was also reported that Archduke Karl Ludvig and 3 princesses were affected by the disease [75]. The influenza did not abate in the beginning of January and the National Health Council decided to suspend the classes in the schools of Lower Austria until 7 January and to request the mayor to open a hospital for influenza patients [76]. An atmosphere of horror could be sensed, for example in a note saying: 'the influenza is increasing incessantly and it assumes an alarming size' [77]. It was emphasized in the press that the initial conviction that there was no danger was mistaken. The newspapers indicated that influenza took its revenge for the disregard with which it was originally treated and it led to a number of deaths from pneumonia [78]. In mid-January the readers were informed about one more symptom of influenza, which was described by Professor Ernst Fuchs. What he discovered was a deformation of the eye cornea, in the course of which multiple bubbles appeared on the cornea. It was called *koratitis dendritica* because of its branched shape. It left scars and impeded vision [79]. The epidemic started to subside in the second half of January and the schools were reopened after having been closed for the previous few weeks because of influenza. Epidemiological data concerning Vienna were given in the press; 'before Christmas, 25–30 out of 100 children were sick, while on 15 January the statistics were 5–6 out of 100, which was only 2 more than usually. There were no deaths among the students, but 4 teachers died' [80].

Berlin and Other German Cities

The first news release concerning the influenza epidemic in Berlin appeared in the Poznań newspapers around mid-December 1889. On 12 December, a short note was published stating that the epidemic reached Berlin and Spandau, where as many as 600 workers were affected by the disease [81]. On the next day, referring to the Berlin press, it was emphasized that influenza was spreading more and more around Berlin with the result that doctors were overburdened with work [82]. Attention was drawn also to the decreasing number of students in schools and to the fact that the illness affected numerous post office clerks, telegraphers, and the majority of the Wallner Theatre staff [83]. Several days later, it was reported that the epidemic in Berlin had greatly largely increased and the number of influenza cases reached 150,000. It was later announced with slight astonishment that doctors constituted a considerable percentage of the sick. What is more, university and veterinary academy professors were afflicted with the disease and had to suspend classes. Prof. Virchow developed influenza as well, but he did not cease to give lectures. However, it was also reported, 'as far as we know, some patients exaggerate their symptoms to rest on the pretext of getting medical treatment' [84]. A few days later, as the newspapers revealed, influenza had reached every occupational group; many officials could not fulfil their duties and the fire brigade had such a large number of sick employees that 'a few stations needed to cease to work; bailiffs had to suspend auctions and even forfeiting until recovery' [85]. In reference to *Vossische Zeitung*, the Poznań press stated that a committee was formed consisting of Berlin personages. It was to be entered, among others, by several of the most famous doctors of Berlin so that, with the support of voluntary donations of the public, the group could work out statistics of influenza epidemic and its symptoms in Berlin. The help of the statistical office was to be ensured [86]. Some years later, Otto Leichtenstern, who was a doctor and a German researcher studying the influenza epidemic of 1889, estimated that 50% of the contemporary German population was afflicted with the disease. Parsons, in turn, estimated for the city of London approximately 25% were sick [87].

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Among serious commentaries there were also slightly amusing features: for example, 'restaurant owners and owners of alcoholic drinks factories are trying to cure the inhabitants of Berlin on their own. The newest brand of vodka that appeared in the local warehouses was called Influenza Bitter and the display window of a restaurant reads 'The best stop against influenza.' Presumably the new advertisement will do its job' [88].

The Christmas issue of the newspapers informed that the topic of influenza, 'a disease fashionable nowadays' was taken up by the Berlin society of internal medicine and that the debates were attended by 'the most estimated figures of Berlin' [89]. One of them was Doctor Ernst von Leyden (1832–1910), the so-called 'secret adviser', who 'finally drew the conclusion that the epidemic belonged among mild diseases and that its complications did not exceed the size of the past cases of the epidemic; 10% of the population was afflicted with the disease in total' [90]. The results of the debates as regards the etiology of influenza and the consequences of its misunderstanding were also revealed. As was reported, 'As for the origin of the disease and whether it is contagious, in other words transmitted from person to person, or whether it occurs as a result of bad air which we inhale, no final agreement was arrived at' [91]. According to the newspapers, the theory of person-to-person spread of the disease was rejected by the Paris medical faculty and for this reason schools failed to be closed on time. From the beginning of the year 1890, epidemiological data concerning influenza were published in the press, based on the report of the Berlin statistical office. It could thus be read that, 'from 8 to 14 December, there occurred 2 deaths from influenza. The number of various diseases also increased substantially for the same reason. And so, in the second week of December, 23 people died of laryngitis and chronic cold, 70 people succumbed to pneumonia, 121 people to pulmonary consumption, and 25 to the multiple inflammations of respiratory organs. In the third week of December ie, in the period of 15–21 December), 27 people died of laryngitis, 27 succumbed to chronic cold, 122 to pneumonia, and finally, 10 people died of pleurisy.' The article concluded, 'this extraordinary increase in mortality can be attributed to influenza' [92].

What is more, the reports from Berlin concerned the morbidity in the emperor's court. According to the newspapers, in the second week of January, the Princess of Bismarck developed a very serious influenza of an extremely severe character. Prof. Schweininger was called for [93]. It was later reported that 'since 4 a.m. this morning (7 January – Author's note), Empress Augusta has had difficulty breathing. Her physical powers are decreasing at an alarming pace.' It was then added, 'at 1:12, the empress is about to die' [94]. The next issue of the newspaper, from 9 January, announced the death of Empress Augusta, the aged spouse of William I. The lady died on 7 January at 4:29 p.m.; 'she did not suffer for a long time; influenza led to death because it was accompanied by pneumonia, which the body of the empress could not fight off' [95]. The same article described in a detailed way how the illness of the empress progressed. It was reported that in addition to the family, the people who took care of the sick lady were the court preacher, doctor Koegl, and a Sister of Mercy, Joanna Schoev, 'who had already looked after the empress for several years.' The article mentioned later that the sick lady was given ice-cold milk and ice cubes but 'she could not swallow; she wished to speak but her powers failed her. This state lasted until 2 p.m.' [96]. The press revealed that the autopsy of Empress Augusta's body confirmed that the cause of her death was pneumonia and that the loss of strength was a result of her long-term suffering [97].

As far as other important people are concerned, the press reported on the deterioration of baron Frankenstein's condition [98]. Most probably, the cause of it was again influenza, which would confirm the fact that influenza had an impact on the work of deputies, few of whom attended the proceedings of Parliament [99].

A few months later, the medical newspapers published doctor Leyden's lectures on the influenza epidemic in Berlin. Leyden declared that 'the disease was spreading with extraordinary severity in every part of the city and attacked a half of the inhabitants, regardless of the social status, sex, and age; it did not spare even the breast-fed babies.' However, when the doctor was drawing conclusions on the character of the disease, he added that 'in general, influenza had a mild character in Berlin, and the majority of deaths were caused by complications' [100].

The epidemic also affected other German cities. At the beginning of January 1890, it was reported that in Stuttgart 'the Queen developed influenza; the King has been suffering for 2 days and his old his neuralgic pain has returned' [101]. A few days later, the newspapers announced, 'the King is still feeble, while the queen is better and her appetite is increasing' [102].

The press informed on the size of the epidemic among various occupational groups as well. Referring to *Stamtanzelger fur Wurtemberg*, the newspapers announced that on 6 January there were 1600 influenza victims among the military, 600 of whom were from Ulm, 450 from Ludwigsburg, 139 from Stuttgart, and 115 in Heibronn. There was also 1 death [103]. In Stuttgart, 240 members of the national railway staff were afflicted by influenza, 'as a result of which numerous goods trains could not be dispatched' [104].

The epidemic prevailed also in Munich, Dortmund, Frankfurt, Aachen, and Braunschweig. At the beginning of January, the newspapers announced that public schools were to be closed in Munich until 13 January [105]. In mid-January, it was reported

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that a clergyman, Johann Joseph Ignaz von Dollinger (1799–1890), died of influenza in Munich and a detailed memoir of his life was published [106]. The economic consequences of the epidemic were described in Dortmund, in which coal production decreased in mines as influenza spread among the miners [107]. In the first decade of January, influenza mortality data from Frankfurt were disclosed. The newspapers stated, 'according to official reports, 16 people died of influenza and its complications last week. Mortality was generally very high in the previous week, as 136 people died' [108]. In Aachen, the police management ordered that all schools should be closed until 23 January [109]. The epidemic reached the city of Braunschweig as well. The press informed that influenza is so widespread that the school holiday was prolonged for another week [110]. In Stuttgart, however, a medical council (Medicinische Collegium) summoned by the Ministry of Internal Affairs in Wurttemberg to investigate this issue disputed the use of health-police means. In other words, they disagreed that schools should be closed because of the disease since, as it was claimed, 'this epidemic, both in the past and now, more affects adults than school children' [111].

London and Other British Cities

First information concerning the epidemic in London appeared in the press around the middle of December 1889. As was then reported, it was relatively strong there – 'it showed such a special preference to lawyers and the court magistracy that some chambers of the palace of justice had to suspend their work for several days' [112] During the epidemic particular attention was paid to the differences in the morbidity between the sexes, since it was noted that women were less vulnerable to it [113]. In the first week of January 1890, the reports were more alarming. It was pointed out that in London 'influenza, still' [114] and 'the number of the sick... has multiplied significantly' [115]. It was indicated that the disease was mainly going around post office clerks [116]. In the second half of January, it was revealed that influenza prevailed in London and also very persistently in the province. In Birmingham, 50,000 people were affected by the disease [117]. In London, as was reported on 17 January, 'when it comes to last weeks deaths due to pneumonia, there were 1070 of them, 522 more than on average' [118]. The epidemic spread also over other cities, and it was reported that mortality intensified in a frightening way in Edinburgh, Glasgow, and Dublin [119].

In England, like in other countries, the epidemic did not spare important people. At the beginning of January, the information was published in the newspapers that 'in London, the German ambassador, Count Hatzfeld, has just developed influenza' [120] and 'lord Salisbury suffers from influenza; the lord's doctor is the court physician of the Queen, doctor Jenner' [121]. Two days later it was revealed that Salisbury's condition improved considerably [122]. Information also appeared on the improvement of the condition of the German ambassador, who 'travelled to the province of the Rhine, accompanied by his physician, in order to rest after the illness' [123]. What is more, the contemporary minister of agriculture suffered from influenza, too; as was written, 'Mr. Chaplin had a severe attack of the disease' [124].

Notices on the Influenza Epidemic in Other Cities

Occasional notices on the flu epidemic also appeared in relation to other cities. The records stated that in Brussels the queen felt much better [125]. In Sofia, in turn, 'influenza spread greatly and a large number of the military school came down with the disease' [126]. The newspapers mentioned that 'the weather in Lisbon [was] extraordinarily cold; –5 degrees' and 'Sicily, Greece, and Athens [were] also in misery' [127]. As for the situation in Prague, 'influenza occurred in over 100 cases on 27 December [128]. In Copenhagen, in turn, it was reported on 13 December that 56 people developed the illness in the previous week and as many as 38 of them were members of the army [129]. The Poznań newspapers contained news from across the ocean as well. It was revealed at the end of December 1889 that in New York 'influenza [was] spreading over various parts of the United States; several hundred people [had] already fallen ill in [the] city; the character of the disease, though, [was] not very serious as yet' [130]. However, as the later study of Frost showed, the first wave of the epidemic in the USA was not as mild as it was then believed to be. The reason for this was that the mortality rate increased in the January of 1890 because of pneumonia afflicting people suffering from influenza. The rate reached 10.96 per 1,000,000, as opposed to less than 1 in the previous years (1887–89) [131]. In February the rate decreased to less than 3 and in March the value stood at around 1.5, which points to the fact that the disease was subsiding. Some of the news stories were slightly amusing; a story about a printer from Detroit who launched a new invention, a signboard with a replaceable paper overprint. The object was to be hung above the door and to deter unwelcome visitors. Among such inscriptions as 'Friends, unfortunately, are never lent money here,' 'We are equipped with soap and thread' or 'Our lives have already been secured,' there was one which read 'Thank God, we have already had influenza' [132].

Poznań

What did the epidemic in Poznań look like, then? The fact that influenza occurred in Poznań was first mentioned in the press on 21 December 1889. Information appeared that 'influenza reached our city a few days ago, but as for now it has a mild character.' It was added in a soothing tone, 'nevertheless, the disease is

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neither contagious nor dangerous, and it abates in a period of a few days' [133]. The next day brought news different in tone: 'influenza begins to spread over our city; it has reached many households and even the army has been afflicted by it' [134]. The disease must have prevailed in the city for at least a few days if it had already reached 'many households' [135]. As is suggested in the notes from the meeting of the Society of Friends of Science, Faculty of Medicine from 10 January 1890, 'influenza arrived in Poznań in mid-December 1889 and assumed a mild character' [136]. None of the December issues gave any data concerning morbidity in Poznań or any other town of Greater Poland. When put against the background of the alarming situation in Western European cities, this lack of information in Poznań could have a 2-fold effect on the reader. On the one hand, it could create a mild image of the epidemic in Poznań. On the other hand, it could be an indication that the threat is yet to come, especially that in other regions of Europe, as well as in other Polish cities, the epidemic had already lasted for 2–3 weeks.

At the beginning of January 1890 there were general comments that influenza progressed in a mild way and it was added that there was only 1 death [137]. It was the first notice of a death in the course of the epidemic in Poznań. The subsequent 2 weeks of January 1890 witnessed an intensification of morbidity and an increase in mortality related to influenza and its complications. There was 'an increasing number of cases' [138]; schools were closed as 50–60% of children developed influenza [139]. It was reported on 10 January that the epidemic in Poznań '[did] not seem to have reached its climax because its cases [constituted] an increasing number; in some cases its character [was] more serious and consequently it [induced] pneumonia and bronchitis' [140]. Influenza in Poznań began to abate by around 19 January. The newspapers informed that according to the doctors, 'influenza [was] beginning to enter a slower stage and it [was] expected to disappear soon. It [was] already less intensive in the country; probably it [was] abating also in Northern Europe, moving to Southern Europe instead' [141].

At the beginning of February it was clearly stated that 'influenza, having afflicted many a person, [had] left our city almost completely.' It was also claimed that although at first it was treated lightly, it turned out to be in fact more serious than it was presented [142]. Further observation was surprising, though, since it suggested that at least a part of the cases of the disease were only figments of imagination.

Conclusions

The first wave of the so-called 'Russian' influenza epidemic, which occurred commonly all around Europe in the years 1889–90, drew the careful attention of the Poznań press. The first reports on the victims of the disease that could point to the beginning of an epidemic appeared in the first days of December 1889 and concerned the city of St. Petersburg. The first information on the arrival of the epidemic in Western European cities referred to Berlin and later to such cities as Paris, Vienna, London, Barcelona, and Madrid.

The earliest articles were written in a soothing tone and a laconic form, aiming primarily at providing information. The following days brought a successive increase in the amount of information, as well as in its breadth, detail, and expressiveness. The reports raised the topic of new instances of the disease in an ever larger number of cities and they included numerical data concerning morbidity, based on statistics. In order to gain credibility, the articles contained information on the increasingly common complications and deaths. What could arouse the interest of the reader was the news on the illness and deaths of well-known and important people like kings or ministers. Furthermore, the newspapers described the consequences of the epidemic, such as overcrowded hospitals, lack of doctors and losses in trade. They used expressions like 'dreadful misery' or 'women and children wander along the streets.' As a result, the character of the articles became more expressive, creating an image of impending and pervasive threat of the spreading influenza. The most attention was paid to the epidemic in Paris, Berlin, and Vienna. The epidemic in Spain was also reported on in a comprehensive way. The fact that the Poznań press showed such interest in the situation in Paris, Berlin, and Vienna may have reflected the severity of the disease in those cities. What is more, the information on these cities could have been essential for the Polish readers whose country was deprived of statehood and dependent on Prussia and Austria, which caused a difficult geopolitical and economic situation.

What completed the image of the threat was the increasing amount of information on influenza cases in subsequent European cities, the fast spread of the epidemic in a given place (numerous cases in various social groups within a short time) and doctors' discussions on the ways in which the disease was spreading. Moreover, the etiology of the disease was then unknown and there were not any effective methods of preventing it. Influenza, as described in the press, appeared to be a disease that spread quickly and, although it was soon cured in the majority of cases, it was still largely unpredictable. As the epidemic progressed, the consequences of the disease were increasingly serious and why it arrived at a place and why it left it were unknown. The press mentioned cases of the disease and deaths occurring among the poor and the rich alike, as well as among different social groups: rulers, lawyers, employees, doctors, and officials. The illness attacked, irrespective of sex and age group, or whether the victim had been healthy or particularly frail. Influenza, thus, seemed to be an egalitarian disease, even though it was obviously more difficult to recover from it in poverty and in the cold, when the victim had to work hard, did

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not have sufficient food, or when influenza was accompanied by another ailment. There were also notices which decreased the dramatic effect of the serious reports. Either they emphasized the fact that the epidemic was mild or they assumed a humorous tone (e.g., an article on Influenza Bitter vodka).

An analysis of the way the newspapers handled the topic of the epidemic allows for an observation that as time passed, there was a change in the level of 'information saturation.' The amount of the news grew rapidly from about mid-December; it remained at a high level in the first half of January and decreased in the second half and in February. Even though far less frequent, there were still cases of influenza in February 1890, commonly ending with complications and deaths. Nevertheless, influenza ceased to be the principal topic of the newspapers. The fact that the epidemic was abating was noted also in the medical press, which stated 'influenza is clearly on the decline on the whole European continent; only in England, where it arrived late, it is still very severe.' The article added that even though the epidemic was mild, 'it has recently taken many victims because of various complications. Doctors constituted a large proportion of the influenza mortality' [143]. By February and March, influenza ceased to be of concern to the daily press, despite the fact that there were still cases of the disease in March. And so, it was reported, but only in the medical press, that in the second week of March, 24 people died of the disease in London, 29 people died in Hamburg, and 103 people developed the illness in Copenhagen [144]. Soon, however, the first wave of the epidemic abated completely.

The 1889–90 influenza epidemic had 2 faces: the real one, discovered through being afflicted with the disease, and the media one, discovered through the information available in the press. Regardless of its actual intensity, newspaper reports could make it appear to be 'a truly global influenza pandemic' [145].

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137. *Kurier Poznański*, *op. cit.* (note 38)
138. *Dziennik Poznański*, *op. cit.* (note 104)
139. *Dziennik Poznański*, *op. cit.* (note 95)
140. *Dziennik Poznański*, *op. cit.* (note 104)
141. *Dziennik Poznański*, *op. cit.* (note 54)
142. *Dziennik Poznański*, No. 28, 4 February 1890
143. 'Rozmaitości', *op. cit.* (note 111)
144. 'Rozmaitości: Grypa', Nowiny Lekarskie (1890), No. 4, 201–3
145. Referring to this issue, M. Honigsbaum describes the 1889 pandemic in the following way: 'Coinciding with the late Victorian boom in newspapers and the growth of the telegraphic network, the 'Russian' influenza was chronicled by the press, with the consequence that the virtual 'dread' of its depredations reached Paris, London, and New York well in advance of the actual sickness. The result was that whereas before 1890 The Times had used 'pandemic' just twice, after 1890 it became linked to the speed of global communications and other tropes of modernity. A pandemic was no longer simply an epidemic affecting 'all' the people, it had become a global media event' (Marc Honigsbaum, 'The Great Dread: the 'Russian' Influenza in the United Kingdom',

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