

The Influenza Pandemic in Japan, 1918 1920 : The First World War between Humankind and a Virus

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CHAPTER 5
THE LATE EPIDEMIC
(END OF 1919–SPRING OF 1920)



Even children at play wear facemasks. (*Niigata shinbun*, 4 February 1920)

The story of the influenza pandemic in Japan after the Early Epidemic phase ending in spring 1919 continues here in a new chapter in deference to the use of the term “Late Epidemic,” even though this writer believes the influenza strain was the same in the two phases. In this I differ with Edwina Palmer and Geoffrey Rice, the New Zealand-based authors of the best work on the subject of the “Spanish influenza” in Japan.¹ They adopt the view that “antigenic shift” occurred in the virus so that the pandemic should be considered to be made up of “separate epidemics.” Certainly, as stated earlier, the Early Epidemic was characterized by high morbidity and low mortality while for the Late Epidemic morbidity was low and mortality high. From this some argue that two different strains of the influenza virus were involved and that the “Spanish influenza” indicated only the Early Epidemic.

As Rice and Palmer themselves recognize, however, what was different about the symptoms of the influenza that caused the “spring herald” or “mild’ first wave”² outbreaks in spring 1918 from those of the Early Epidemic was simply that the virus was in its initial stages. The pathogen was the H1N1 strain, the virus before it underwent the “model change” of its RNA discussed in Chapter 1. The difference in symptoms, therefore, may not necessarily be evidence of a difference in the viral strain. It is probably very difficult to find scientific evidence, but it must be said that as far as the pathogen is concerned, the virus that caused the “first wave” outbreaks was also responsible for the full-fledged epidemic from October 1918 onward. And, as Rice and Palmer assert, those who came down with influenza in the “first wave” outbreaks developed an immunity that protected them when the pandemic hit with full force in the autumn of 1918.

Regarding the Late Epidemic, likewise, I argue that its characteristic low morbidity was the result of the large number of people who had acquired immunity from having contracted the virus at the time of the Early Epidemic. Meanwhile, if we consider the pandemic from the viewpoint of the virus, we can see how its survival strategy shifted from the “widespread but less virulent” outbreaks of the Early Epidemic to the “limited scope but more deadly” outbreaks of the Late Epidemic.

Perhaps more persuasive proof of continuity between the Early and Late epidemics, however, can be found in the situation of influenza in the military forces, numerous cases of which I shall introduce in this chapter. During this period, new recruits were inducted into the army regiments and the navy’s marine corps stationed at naval ports on 1 December each year, and within ten days of their enlistment, influenza would spread through their ranks. This was because those who had not been infected with the influenza virus joined up “defenseless” (no inoculation being available) against the virus and bedded down in barracks where the virus circulated freely. A certain number

1 Rice and Palmer 1993.

2 Rice and Palmer 1993, p. 393.

of recruits were invariably hospitalized in the military hospitals and in serious cases died there. It was these outbreaks in the military that were to be the catalyst that set off the full force of the Late Epidemic.

If the Late Epidemic had not been caused by the same H1N1 strain of influenza, then we would expect to have reports not only of new recruits but older soldiers and sailors coming down with influenza also. Of course there were some cases when that happened, but the overwhelming majority of influenza patients were new recruits. This chapter will examine this question, referring to reports in newspaper articles of the time.

I learned from my research, therefore, that I could not follow the Rice and Palmer thesis of “antigenic-shift.” My study assumes continuity in the influenza pandemic in Japan from the spring of 1918 to the spring of 1920; the figures for cases and deaths as obtained from my calculations also differ widely from those cited by Rice and Palmer, and I differ with them regarding their assessment of “relatively low mortality.”³ My understanding is based entirely on circumstantial evidence, however, so I would add that should scientific evidence indicate that the virus strains were indeed different, my view would change accordingly.

The Inter-Epidemic Period

Indirect evidence of continuity of the viral strain responsible for the pandemic can be gleaned from the fact that between the Early and Late epidemics several people contracted influenza, developed pneumonia, and died, as suggested by newspaper reports of prominent persons of the time.⁴

Other reports prior to 1 December 1919 include those concerning influenza in the Japanese territories overseas, such as the 11 November *Shin Aichi* headline “Virulent Influenza Hits Once Again: Now Raging in Shanghai,” the *Jiji shinpō* 27 November report of the spread of influenza in the Dangdong area along the border of China and Korea, and the 29 November story telling of numerous cases of influenza in the elementary schools in Dairen (Dalian), China.

Also covering the influenza epidemic in the other parts of the world were articles about how the proliferation of influenza cases in Australia in June, in the winter season

3 Rice and Palmer 1993, p. 389.

4 Among reports revealed in my research are the following:

- A certain Rev. T, former chief of the Takada sect Buddhist head temple in Isshinden, Mie prefecture, developed pneumonia from influenza and died on 23 May 1919 (*Ōsaka Mainichi shinbun*, 24 May 1919).
- A certain Mr. Y, principal of the Osaka prefectural Yūhigaoka Girls High School, contracted influenza in early May and died on 31 May 1919 (*Ōsaka Mainichi shinbun*, 1 June 1919).
- Report that Akashi Motojirō, then serving in overseas Japanese territory as the governor of Taiwan developed pneumonia from influenza and was in serious condition (*Ōsaka Mainichi shinbun*, 6 July 1919). Akashi in fact died in October, later that year.

in the southern hemisphere, had crippled communications there (*Tōkyō Asahi shinbun*, 20 June 1919). In the United States, with the summer of 1919 just over, there was much talk about whether the country would be hit again by an influenza epidemic in the fall.⁵ A U.S. army surgeon-general urged communities to seriously prepare themselves for the possibility. Ultimately the virus struck the United States only sporadically in the rest of 1919. From the beginning of 1920, reports began to appear of influenza outbreaks in various parts of the world—Spain, Japan, Brazil (Rio de Janeiro), and so on. There were also many deaths in Poland.

By the middle of January 1920, influenza was reported in the United States and some patients experienced complications developing into pneumonia. Thus it was not only in Japan that the virus struck again between the end of 1919 and the spring of 1920. I would like here, then, to consider the Late Epidemic in different parts of Japan against this international backdrop. Fortunately, with regard to the Late Epidemic, we can refer to monthly statistics by prefecture for numbers of cases and deaths during the period of the epidemic and for the time of the first cases of the pandemic.⁶ The account in this chapter follows the same regional categories as explained in Chapter 4 and is based on the same local newspaper archives.

Kyushu Region

According to *Ryūkōsei kanbō*, influenza began its renewed spread in the Kyushu region in Kumamoto prefecture in mid-September 1919, and moved on to Saga (late October), Fukuoka and Ōita (early November), Kagoshima (mid-November), and then Nagasaki, Miyazaki, and Okinawa (early December).

The first immediate report⁷ of the Late Epidemic in Kyushu, of a case in a village outside of the city of Fukuoka, appeared in the *Fukuoka nichinichi shinbun* on 13 December 1919.⁸ A 15 December article, however, states that absences of students from the same school had already been conspicuous since 27–28 November, giving evidence that the influenza must have occurred there earlier in November. The location of the village was not far from the city of Fukuoka, so residents of the village were quite possibly infected with the disease that would have spread in the city. At that point the newspaper reports do not mention the outbreak of influenza in the city of Fukuoka itself, but tell rather of its spread in the Buzen area, the eastern part of the prefecture (18 December).

5 Pettit and Bailie 2008, p. 234. Information below in this chapter on the United States is based on this book.

6 *Ryūkōsei kanbō*, chapter 8, see figure 2.

7 Kyushu had only two newspapers at the time, the *Fukuoka nichinichi shinbun* and the *Kagoshima shinbun*, so a first report of influenza in Kyushu might possibly have been reported by a newspaper elsewhere.

8 An elementary school teacher in the village of Mushiroda, Chikushi district (in the present-day city of Fukuoka) contracted influenza and died on 7 December.

Reports on conditions of the spread of influenza in the city of Fukuoka and environs appear soon enough, in the 21 December 1919 *Fukuoka nichinichi*. Already during November, the paper reports, there had been 310 cases of influenza and several people had died. In the first half of December, there were 2,060-odd cases and 31 had died (25 December 1919).

In Kagoshima prefecture, in the village of Sueyoshi near the border of Miyazaki prefecture, at the end of the year, there were six or seven deaths per day (*Kagoshima shinbun*, 29 December 1919). The *Fukuoka nichinichi*, too, published an article on 7 January 1920 telling of the ferocity of the influenza outbreaks in the Kushikino region of Kagoshima prefecture, saying that 160 people had died since early December. This article also tells that 90 people had died of influenza in the above-mentioned village of Sueyoshi. The same paper reported that among the marine corps and on the naval ships at the Sasebo port in Nagasaki prefecture, the epidemic had been raging since 5 December, and by 5 January a total of 1,162 people had contracted influenza and 58 had died. A navy unit on Tsushima Island, too, was hit, with 63 cases. Looking at the situation in Fukuoka prefecture through the pages of the *Fukuoka nichinichi*, we find that a very large number died just in the first five days of January (28 deaths in the city of Moji, 15 among troops at Kokura, 104 in the city of Yahata, and three in the army regiment at Kurume).

Helpless in Prevention

As the situation in Kagoshima shows, mortality was very high in the Late Epidemic. In the Hakozaki police district of the city of Fukuoka there were 732 patients and of them 66 died. There were many deaths in the northern Kyushu industrial belt, where the epidemic peaked from January and into February. It was a very cold and dry winter that year, making conditions ideal for the spread of the virus. Headlines about the “increasingly raging influenza” appeared in the papers day after day.

In Kagoshima prefecture as well, the 8 January 1920 edition of the *Kagoshima shinbun* correctly observes that “the influenza this year has spread perhaps not as widely as in previous years, but it is much more severe, with the result that many people have died.” And yet, it was acknowledged that there was really nothing that could be done to prevent its spread (*Kagoshima shinbun*, 12 January 1920). By 19 January 1920, the number of those who died from influenza had risen to 26 per day (the population of the city of Kagoshima was 92,306 at the end of 1918), and there were repeated reports of entire families succumbing to influenza. The staff of telegraph offices were reduced as workers fell victim to the flu, but telegrams continued to pour in, many of them notifications about people who had died, were in critical condition, or ill as the epidemic spread (*Kagoshima shinbun*, 28 January 1920). In early February, the epidemic began to subside in some areas, but in other areas it continued as intensely as before. Then, with an article about an extension of the closing of an elementary school in Hioki district (part of

present-day city of Minami-Satsuma), reporting on influenza in Kagoshima prefecture came to an end.

In Fukuoka prefecture, the influenza is reported to have spread out from the cities and mining areas and raged fiercely in the countryside, but by early February had begun to subside, with headlines announcing a “decrease in new cases.” Reporting in the *Fukuoka nichinichi* came to an end on 3 March with an article declaring the epidemic “over” in the prefecture.

Chūgoku and Shikoku Island Regions

I was only able to obtain information from one newspaper about the Late Epidemic in the Shikoku region, the *Kagawa shinpō*, but fortunately its reporting both about Kagawa and neighboring prefectures is quite detailed. Its articles frequently cite the views of prefectural authorities closely involved with prevention and treatment, doctors, and the paper’s reporters assigned to the topic. So substantial is its reporting that few other prefectural-level newspapers are better.

At the end of November 1919, the Ehime prefectural authorities put out a list of “precautionary measures” alerting people to keep their distance from infected persons, keep away from crowds, wear facemasks, gargle often, and to take special care to protect children and the weakly from infection. For persons who might have contracted influenza, the authorities recommend: they should rest in bed and a doctor should be called. If they are diagnosed as having influenza they should be isolated as much as possible from other people. Other measures include keeping the environment clean, and disinfecting bedding and clothing by frequent airing in the sunshine. It is quite likely that households that could afford to observe all this advice were limited in number, but at least the prefectural authorities notified all citizens of this information. The same notifications can be observed in other prefectures, but we are not certain if these notices were initiated by the central government.

On 12 December, the *Kagawa shinpō* carried the headline “Influenza is Spreading,” but its 20 December edition reports that there had been outbreaks of influenza in Mitoyo district since early November and that mortality was a high 20 percent of influenza patients. December, when new recruits joined the army each year, was a period when influenza infection exploded. Kagawa prefecture was home to the army’s Zentsūji Division and the division was forced to cancel its regimental flag parade scheduled for 27 December because so many were down with influenza.

A Hellish Ten Days

After the New Year of 1920 turned, influenza spread with increasing intensity, with the *Kagawa shinpō* headlines alone giving a good idea of the gravity of the situation:

“people dying one after another” in the town of Kan'onji (13 January), the influenza was “truly vicious” (15 January), an “influenza hits family of four: young couple dies” (15 January), “nation-wide prefectural order prohibiting anyone from boarding trains not wearing a facemask” (16 January), “influenza assails the city’s schools” (16 January), “schools ordered to close depending on the spread of influenza” (16 January), the lyrics of an influenza-prevention counting song published, delivery of preventative medication reported, and utility of wearing facemasks explained (17 January),⁹ “special procedure for elementary school students absent with influenza” (17 January), “people dying every day from influenza in southern Kagawa” (19 January), “influenza situation in the Takamatsu area: 471 cases and 26 dead” (20 January), “influenza spreading steadily in the Inland Sea” (20 January), “entire family dies of influenza; sorry plight in a teacher’s household” (20 January), “signs of influenza raging through the city’s schools” (21 January), and “influenza epidemic spreads even further, causing price of medical supplies to skyrocket” (22 January).

People sought to protect themselves by holding Shintō purification ceremonies and students and children were inoculated against influenza. Yet even by the end of January there were reports of the “pitiful” situation on Hiroshima Island in the Shiwaku chain of islands and the deaths of 20 out of 400–500 patients in the town of Tadotsu (30 January). On the 31st a report was published that the horses of the Zentsūji Division transport battalion had been hit with an infectious disease; it appears that the influenza had made the leap from humans to horses.

In February, the epidemic slowed somewhat, but there were tragic cases such as the wife who committed suicide after her husband’s death from influenza, and among these reports was one concerning the eastern Sanuki region noting that, while this part of the region had suffered heavily in the Early Epidemic, it had escaped comparatively lightly in the Late Epidemic (18 February). Perhaps the lower infection rate was because people had acquired some measure of immunity during the earlier phase. The *Kagawa shinpō*’s reporting on the epidemic came to an end with a report on 7 March saying “fierce flu in village of Oga, Kida district ends.”

Epidemic Influenza in the Military

For the Chūgoku region, little information is available for the Late Epidemic, but an *Ōsaka Mainichi shinbun* report for 9 December 1919 tells of influenza “attacks at the naval port in Kure” putting 100 sailors from the warships in the hospital and resulting in the death of three men as of the writing; the article quotes the head of the military hospital as saying that the current influenza epidemic was more virulent than previously. On

9 A tutor named Kubo at the Shionoe school in Kagawa district came up with the counting song lyrics, which began “First, avoid taking a chill—that’s the start of catching cold. Each and every one of you—look after your own health!”

19 December the same newspaper reported the outbreak of influenza in the remaining units of the army's 5th Division in Hiroshima,¹⁰ with 800 cases and more than 20 dead from influenza. The following day, it reported that four to five people were dying at the Kure naval port daily. Regarding the Chūgoku region, we find only sporadic accounts in newspapers outside the region of outbreaks in the military, and if access can be obtained to newspapers in the region, it would be possible to learn what the situation was like among the civilian population there.

Kinki Region

The Kyoto-Osaka-Kobe region suffered the highest death toll in the Late Epidemic in Japan. Thus the major local daily newspapers carried numerous articles that record the severity of the epidemic.

While the first reports about the Late Epidemic by the national papers were about the outbreaks of influenza in San Francisco and Shanghai from October through November 1919, the first cases in the Kyoto-Osaka-Kobe area were observed around the middle of December.¹¹

The epidemic raged with equal intensity both in the ranks of the armed forces and among civilians, but apparently spread especially among the new recruits who enlisted in either the army or navy on 1 December. Among the marines stationed at Maizuru port on the Japan Sea, for example, by 18 December, 150 were seriously ill with influenza and 16 had died.

The largest death toll during December was reported in Kobe (population at the end of 1918 was 592,726), and as for the figures for deaths from influenza, 294 died in 12 days between 16 and 27 December,¹² and the daily toll kept growing. The crematories were already backlogged (*Kōbe shinbun*, 27 and 29 December 1919). The Himeji Division of the army was particularly hard hit with 36 having died by 5 January 1920. On 9 January, the paper recorded that with many of the city's trolley drivers absent from having contracted influenza, the number of trolley runs had been decreased, and quoted remarks by the city authorities about the situation.

10 Other units had been sent to Siberia.

11 Outbreak of influenza in the army's 4th Division in city of Osaka, *Ōsaka Mainichi shinbun*, 13 December 1919; outbreak in city of Kobe, *Kōbe shinbun* 14 December 1919 ("spread of influenza in the city has apparently reached its peak as shown by the death of 80 persons on the 13th, half said to be attributed to influenza . . ."); and reporting on the first influenza patients in Kyoto for the Late Epidemic, *Kyōto hinode shinbun*, 14 December 1919.

12 Five deaths on the 16th, followed by 8, 11, 14, 14, 17, 24, 26, 38, 39, 40, and 58 each day respectively.

Death Toll Rises at Beginning of New Year

The real epidemic in the Kyoto-Osaka-Kobe area was yet to come. Mortality in Osaka around the New Year rose sharply and the crematories were swamped with between 200 and 300 bodies, reportedly 50 percent deaths from influenza-associated causes (*Osaka Mainichi shinbun*, 7 January 1920). Schools from kindergarten up began to close (10 and 11 January); the number of deaths in the city of Osaka rose sharply to 370 per day. (One day, five schoolteachers died.) If we estimate that even half the number was due to influenza, the figure is much higher than for late 1919.

The raging of the virus was just as fierce in Kobe, where 1,321 female workers (of a total of 5,000) at the Kanebō Spinning Company developed influenza; 533 had already recovered and 35 had died (*Kōbe shinbun*, 15 January 1920). In mid-January the number of deaths per day rose over 200, and yet for some reason the Kobe authorities at that point did not order the schools in the city to close. In 1920, however, people were urged to use facemasks, although enforcement was not as strict as in the United States where people not wearing facemasks were prevented from boarding trains.¹³ Indeed, in Kobe facemask production could not keep up with the demand for the entire population, and it was only on 23 January that the *Kōbe shinbun* reported that facemasks had finally been provided for all police officers.

People could only pray to the gods and buddhas for deliverance from the dreadful contagion. One *Kōbe shinbun* story describes how people flocked to obtain amulets blessed at the Hachiman shrine in Taihata, near Suma, which had been known since ancient times as efficacious against ill-fortune. “Good men and women . . . throng to the Hyōgo Electric Railway, which packs in the passengers like sardines and at Tsukimiyama station, spills them all out—elegant ladies, rough-hewn craftsmen, and elderly men and women alike” (19 January). From the station they would all climb the two-kilometer mountain path to the shrine and snap up the amulets prepared for sale there by the shrine office. From our current point of view nothing could be more ludicrous; it makes one shiver just to think that if there was even one influenza patient among such people packed into railway cars how rapidly the influenza would have spread, however pious their errand.

Kobe finally decided to close its kindergartens, elementary schools, and secondary schools. An article on 24 January announced that the number of deaths in Hyōgo prefecture was the highest of any prefecture in the whole country. By the end of the month, the epidemic in the city had subsided a bit, but shifted instead to surrounding rural areas, with headlines on 28 January testifying that the “influenza was ravaging in the countryside” and reporting on the closing of schools in Toyooka, Akashi, and Aboshi

13 For example the facemask ordinance ordered by the city in San Francisco in October 1918. Crosby 1989, pp. 107–14.

(district of Ibo). From February onward, however, there are no more articles in the *Kōbe shinbun* about influenza in Hyōgo prefecture.

In Kyoto, the *Kyōto hinode shinbun* began to publish frequent articles reporting the numerous deaths from influenza from around the middle of January 1920, including one on the 13th giving the number of deaths since 1 January for different police districts in the city.¹⁴ It was noted that many of those who died were under 20 years of age. All the elementary schools in the city were closed for ten days starting on 17 January. Influenza had previously not been a notifiable disease, meaning that patients could not be accepted in the city-run Kyoto Hospital; the law, however, was revised, making it possible to accept them. The 18 January paper reports that of the 60 patients the hospital subsequently accepted, three had died. On the 20th, the headlines read “Influenza Epidemic Raging with Increasing Intensity: Peak of Epidemic Still to Come.” But still, the pathogen that was causing the pandemic had not been identified and no one really knew how to prevent infection or treat the resulting symptoms.

This lack of information placed many people at risk. One elementary school in Fushimi (southernmost part of the city of Kyoto) reportedly planned to take its students on an excursion to the Osaka-Kobe area, where influenza was most rampant. The parents of the children submitted a request that the excursion be postponed, but the school said it was impossible to change its plans. We can only remark how sadly misguided it was to take school children into such a dangerous area with such ill-considered timing.

By late January the epidemic had spread to the rural areas of Kyoto prefecture. An article on 23 January tells of the village of Taga in the district of Tsuzuki where all the villagers came down with influenza and 20 people had died to date.¹⁵ In the police district of Fushimi, 223 people were reportedly down with the flu and, of those, two had suffered from influenza the previous year and one person the year before, suggesting that persons who had contracted the flu once were less likely to contract it again (*Kyōto hinode shinbun*, 27 January). The 5 February edition reports that the number of patients had risen to 359 and 61 had died.

By the beginning of February the epidemic both in the city and in other parts of Kyoto prefecture had subsided. It had not died out altogether, however, and kept flaring up again here and there, with new patients and people dying until April. According to an article appearing in early February, the facemasks that people had been urged to wear at one point were less in need once the epidemic died down, and now businesses and drug stores were weighed down with huge stocks of facemasks they could not sell (3 February 1920).

14 Nine for the Shichijō district, 19 for the Horikawa district, eight for the Gojō district, and eight for the Matsubara district.

15 The population of the village was 2,041 according to the 1918 edition of the *Nihon Teikoku jinkō seitai tōkei*.

With a decline in the number of influenza patients, Kyoto Hospital ceased to accept new patients at the end of February. The total number of flu patients the hospital treated since it had begun accepting them according to law revision was 595 (38 still hospitalized as of the end of February) and of them 159 died, or 25 percent. This mortality was very high, indicating that many of the patients accepted by this city-run hospital must have been in serious condition.

There is very little information for the prefectures other than Kyoto, Osaka, and Hyōgo (Shiga, Nara, and Wakayama) in the Kinki region. The newspapers published locally in each prefecture as well as the local editions of papers headquartered in Osaka must have had articles on the subject, but the editions published by the Osaka headquarters and in Kyoto and Kobe only sporadically reported on the situation in other prefectures.

Chūbu Region

The earliest newspaper report for the Late Epidemic in the Chūbu region was an article on 25 November 1919 in the *Shin Aichi* saying, “cases of children suffering from epidemic influenza in various parts of Aichi prefecture have recently been discovered.” Here I will trace the progression of the Late Epidemic as seen mainly in articles published in this newspaper.

The paper reported from around the middle part of December on the outbreak of influenza among recruits who had joined the army that month; a 16 December article notes the numerous cases in the Toyohashi 60th Infantry Regiment and elsewhere, observing that “the majority are new recruits.” Further details published the following day indicate that of 89 cases recorded in the army hospital and troop barracks, only six were those enlisted for two or more years. Reports of further cases among new recruits in other regiments around the region appeared in subsequent editions of the paper. In the private sector, the paper reported 240 cases and eight deaths at the Ōgaki factory of the Nippon Spinning Company (Nichibō) by 17 December (*Shin Aichi*, 20 December 1919).

From late 1919 to the beginning of 1920, the *Shin Aichi* reported on the influenza rampant in other regions, but for the Tōkai region only reported on the outbreak and then disappearance of cases in army regiments. However, the 11 January edition carried the report that during December the previous year, there had been more than 3,000 cases in areas of Aichi prefecture other than Nagoya and 109 people had died from influenza. However, it seems that the epidemic did not inflict widespread harm in the Tōkai region including Nagoya; at least there are very few articles and no reports of a very serious situation for the Late Epidemic phase.

The *Shin Aichi* reported that the temple Hōraiji in Mikawa held a special prayer service from 29 January through 4 February to drive away the “evil pestilence” and visitors to the temple received amulets intended to protect them against disease.

In early February we begin to notice headlines that suggest that the epidemic was subsiding,¹⁶ but outbreaks were shifting to rural areas. The *Shin Aichi* reported on outbreaks in the mountainous region of the Mikawa area and on the Atsumi peninsula, but there are no articles about central areas such as the city of Nagoya. The epidemic seemed to have come to an end there when it reported on 3 March that, “the influenza epidemic has finally waned.”

Mortality Peaks in February

It was not until 25 December 1919 that the city of Nagano-based *Shinano Mainichi* newspaper reported: “Epidemic is most pronounced in the rural district of Nishi-Chikuma near the present-day city of Matsumoto, with 162 cases (of whom three died) and the rural district of Kamiminochi (north of the present-day city of Nagano) with 102 cases (of whom three died), in outbreaks that generally began around 1 December.” After the New Year, the paper reported that the epidemic hit the city of Nagano, stating that 31 people had died since the 1st of that month as of noon on 10 January 1920 (11 January 1920, *Shinano Mainichi*). Starting on 21 January, the paper began to publish daily updates giving statistics for current cases, cumulative number of cases, recent deaths, and cumulative mortalities for the three main local cities of Nagano, Matsumoto, and Ueda as well as for the whole prefecture as of two days previous.¹⁷ When we examine these statistics, we can see that between 20 and 30 people died daily in January in Nagano prefecture, with cumulative deaths as of 2 February at 398. The cumulative number of cases was given as 3,532, which puts mortality at 112.6 per mil, quite a typical figure for the Late Epidemic.

Use of facemasks was actively encouraged in Nagano prefecture from the beginning of 1920, but the ever-stronger virus apparently penetrated the masks and infection spread nonetheless; by early February, the daily average number of deaths was 40 to 50 for the prefecture. Schools were closed and in one village in Suwa district (near Lake Suwa), reportedly almost the entire population was sickened. One member of the village had gone on a pilgrimage to Ise Shrine but despite his purpose of seeking divine protection, had ended up bringing back epidemic influenza instead. The epidemic spread to the nearby district of Ina and the paper reported that in the town of Ina (population at the end of 1918 then was 13,184) 44 people died (*Shinano Mainichi*, 11 February 1920).

On 10 February, the death toll in Nagano prefecture rose to over 60 per day and, with the supply of coffins exhausted, it was reported that some had had to be put to rest

16 For example, the Chita factory of Tōyō Spinning Company in the town of Handa, Chita district, with more than 6,000 workers, had had 1,331 cases of influenza since the end of the previous year, but “there were only less than 40 deaths” (*Shin Aichi*, 2 February 1920).

17 This series of articles gives figures for the cities of Nagano, Matsumoto, and Ueda and for all of Nagano prefecture up to and including 27 January and from 28 January changes the “all” category to “all the districts” (*gunbu*).

in wooden boxes made for storing tea (*chabako*) (13 February). Mortality peaked with 69 dying on 12 February for a cumulative figure of 842 (cumulative number of cases was 5,491). However, the epidemic then moved gradually into the countryside, and on 21 February it was reported that the “epidemic intensified” with an increase in deaths of people in their prime years. The paper published warnings about potential infection aimed at the silk spinning factories about to start up production in March.

After the beginning of March, there were headlines suggesting that the “influenza epidemic has somewhat subsided,” but it was by no means over. The statistics published by the *Shinano Mainichi* showed figures of 58 new cases and 23 new deaths in Nagano prefecture as of 6 March. When the Nagano prefecture authorities reported on this situation to the Home Ministry, the director of the Sanitation Bureau finally responded saying that “epidemic influenza” should be added to the list of notifiable diseases (*Shinano Mainichi*, 14 March 1920). What a slow response!

It was 7 June before new cases ceased to be reported and an article appeared announcing “epidemic finally over” (10 June 1920). Partly due to the conscientious reporting in the *Shinano Mainichi* of the details of the pandemic to the very end, we know that Nagano was the prefecture that suffered from the Late Epidemic the longest as far as reports in the press are concerned.

Intense Impact on Rural Areas

Now looking at Hokuriku, the northernmost part of the Chūbu region made up of the prefectures along the Japan Sea side of Honshu, we find that it is the *Niigata shinbun* that first reported outbreaks of the Late Epidemic on 15 November 1919 saying that the “epidemic influenza has recently begun to spread at a dreadful pace” in the city of Niigata. In December, the paper reported on outbreaks in Muramatsu, home to an infantry regiment, and in places like Nuttari and Sanjō located adjacent to the city of Niigata, deaths from influenza had already begun to occur. Most of the articles about the epidemic influenza in the prefecture concerned its spread in the army regiments.

Influenza spread among the civilian population after the beginning of 1920 and deaths were reported in Niigata, Kashiwazaki, and other cities (9 January 1920), and the peak of the Late Epidemic came, as with other parts of Hokuriku, in the latter half of January. The 23 January *Shinano Mainichi* raised the alarm with headlines declaring “Epidemic! Epidemic!” “Thousands Infected Each Day—All Urged Caution. Many Have Died,” and reported on conditions of the epidemic in different areas. One of the most notable articles among these reports is a 29 January article that says mortality in the city is low. It says the number of deaths was small for a wide spread of the flu, a notable feature compared to the previous year. However, by February, the number of influenza patients who died had increased, with 30 dying during the first nine days of the month.

Reporting on deaths from influenza does seem to have shifted to focus on the rural

parts of the region. Small cities with populations of a few thousand only, like the towns of Tochio, Suibara, and Tsugawa were reported to have many deaths each (31 January 1920). The epidemic raged on Sado Island, too, with 580 cases and 28 deaths by 31 January (2 February 1920).

One of the presumed characteristics of the Late Epidemic is high mortality, but the cumulative number of patients from November—when the first report of cases appeared—through 3 February stood at 16,041 and deaths at 1,009 (mortality is therefore 63 per mil patients). For the 21 to 31 January period, there were 7,514 cases and 476 deaths (also 63 per mil), and for the 1 to 3 February period 1,740 cases and 192 deaths, or 110 per mil (7 February article).

The epidemic spread after that to small cities like Niitsu, Maki, Nakajō, and Shibata and into the countryside. After counting 109 dead in late February, the paper reported “finally we can see the influenza beginning to retreat” in the city of Niigata (27 February). Skepticism about the effectiveness of the so-called inoculations is also reported (3 March). Even in March, influenza was rampant as before in the rural districts of Kita-Kanbara, Naka-Kanbara, Kariha, and Uonuma, leaving much misery and tragedy in its wake.

In late March, the influenza epidemic in Niigata seemed to subside; a *Niigata shinbun* headline on the 23rd reads “Epidemic Recedes: New Cases are Few,” and yet fierce outbreaks continued and cases and deaths were reported here and there, including on Sado Island, as reported on 11 April. In the city of Niigata itself, there were 50 deaths from influenza in the first ten days of April alone. Articles about outbreaks of epidemic influenza continued to appear sporadically in the paper even during May and into June, with the last on the subject published on 9 June.

In neighboring Toyama prefecture, under the headline “Fierce Influenza Epidemic: Cases Increasingly Prevalent,” the *Toyama shinpō* reported in its 5 December 1919 edition on the crowded conditions of the Toyama Red Cross Hospital. By 10 December, the reports cited deaths from the epidemic, and on the 14th, it was reported that since 1 January 1919, 72 people had died in Toyama prefecture.

And that was only the beginning. From the middle of December, the headlines indicated that the epidemic gradually became fiercer.¹⁸

Where were the children whose schools had closed? An article under the headline “Libraries Crowded with Users” offers an interesting glimpse of the situation, indicating that the local libraries were overflowing with the boys and girls whose schools had closed. That sounds all very studious, yet there was every possibility they would be infected with influenza at the library.

18 For example: “Epidemic Influenza Increasingly Prevalent” (17 December); “Influenza Epidemic Spreads to Takaoka” (18 December); “Epidemic Influenza Keeps on Spreading: Number of Patients Increases Daily” (22 December); “All Schools Close throughout the City” (24 December).

In Toyama prefecture from the beginning of February, we see headlines like “Influenza Epidemic Beginning to Subside: Gradual Decrease in Occurrence of New Cases” (*Toyama shinpō*, 1 February), indicating that although there were still many patients and influenza mortality remained high, the situation appeared to be improving. Schools began to reopen and the concern of people in general was somewhat relieved, although in some places, such as at the Takaoka factory of the Nisshin Spinning Company, influenza continued to spread even in late February. The end was in sight, however, unlike the case of Nagano and Niigata prefectures, where the epidemic continued until June.

In Ishikawa prefecture, the *Hokkoku shinbun* reported about the spate of influenza cases in the city of Kanazawa on 5 December. The article noted that during November, there had been 238 deaths from influenza, but commented optimistically (7 December) that the figure was 300 fewer in comparison with the previous year. No other article appeared about the influenza before the end of the year, but from the beginning of 1920, the epidemic had apparently begun to spread quickly. The records of the Kanazawa City Hall show 70 requests for cremation within the first five days of January. Death in those 70 cases no doubt includes causes other than influenza, but epidemic influenza was then spreading at a rapid pace in various parts of the prefecture. The prefecture sought to prevent the spread of infection by various means, such as by issuing an unofficial warning against sharing sake cups at parties and banquets (*Hokkoku shinbun*, 9 January), and soon after that the chief of the Kanazawa police issued an official notice to this effect to all restaurants in the city (16 January).

While the epidemic began to subside in Ishikawa prefecture, especially the city of Kanazawa, by the end of January (24 January), infection continued to spread on to the Noto peninsula. As reported in the *Hokkoku shinbun*, the epidemic was apparently deadly in Wajima (30 January), Anamizu (30 January), and Nanao (1 February), resulting in many cases and development into pneumonia.¹⁹ After that, there were some outbreaks in the military in early April, but the epidemic gradually subsided, and, except for some sporadic cases and deaths in the Nomi district, came to an end.

Kantō Region

The Late Epidemic in the Kantō region resulted in large number of deaths within a comparatively short period of time between the end of 1919 and February 1920. Prior to its impact on civilian society, influenza spread in the military forces; its impact was greatest in the Imperial Guard based in Tokyo, which reported many cases and among whom numerous patients died. This division, as distinct from other divisions of the

19 What the newspapers mean by “deadly” is that the mortality among influenza patients was high; “10 Percent of Recent Patients are Dying” (14 February).

army, was made up of recruits from all over the country, and the high infection rate was no doubt due to the large number of recruits coming in without immunity to the virus.

The first report of influenza in the Kantō region was published in the *Yomiuri shinbun* on 11 December 1919 (“Influenza Epidemic Strikes Imperial Guard Troops”), noting that more than 180 men were patients at the military hospital, 11 in critical condition and two dead. The two who died, moreover, had just joined the army on 1 December. An article on 20 December in the *Tōkyō Asahi shinbun*, under the headline “Deadly Influenza Hits Military Forces Throughout Country: More than 200 Officers and Men Dead,” reported on the epidemic in the armed forces all over the country, indicating that the Imperial Guard had taken the heaviest blow, with 1,137 cases, and 29 deaths, as of 18 December. At that point in time, the total number of influenza cases for the army nationwide was 7,160, among whom 214 patients had died.

Of course, however, the virus did not target only the military forces. From the autumn of 1919, the national and local governments had been issuing notices about prevention and warnings about infection, but none of these had any effect. On 14 December an article headlined “Virulent Influenza Assaults the Yamanote Area” reports that the raging of the epidemic had hit both the higher-ground areas (known as *yamanote*) and the lower-ground areas (*shitamachi*) of Tokyo with equal force, and that there were reputedly some 3,000 cases in the *yamanote* area alone (*Tōkyō Asahi*). During December, however, the epidemic was concentrated mainly within the armed forces.

The Three-Week Terror

The influenza epidemic spread among the citizens of Tokyo from the beginning of 1920. All the newspapers began reporting on the situation. The number of bodies carried to the crematory at Mikawajima numbered 59 on 1 January, 149 on 2 January, 196 on 3 January, 157 on 4 January, 164 on 5 January, surpassing the 155-bodies per day capacity of the crematory, and creating a backlog over the latter days (*Miyako shinbun*, 8 January). Even if not all of the deceased had died of influenza, it is clear from these figures how fiercely the virus had attacked the city. The *Jiji shinpō* paper quoted 156 as the number of deaths after the New Year as of 8 January in 1917, before the pandemic began, comparing that figure with “the 235 deaths this year as of 7 January” (10 January).

The notices of death published in the *Tōkyō Asahi* on 11 January 1920 offer a vivid image of the toll from the epidemic. Although it is true there was some concentration of notices resulting from the New Year’s holidays, the cluster of thick black-framed notices testifies to the large number who died during this period from the spread of influenza. Among them are fairly prominent figures like Count Yoshikawa Akimasa, a member of the Privy Council, Mimura Kunpei, a leading figure of the Mitsubishi group, and the wife of a famous businessman, Akiyama Kōnosuke.

The pandemic hit full stride in Tokyo, however, from the middle of January and

ran for a terrifying three weeks. Page 5 of the *Tōkyō Asahi* on 11 January was filled with epidemic-related articles with headlines testifying to the “fearsome mortality,” the advent of the influenza “reign of terror,” and warning readers “if you cough even once, don’t go out!” Other headlines told of more than 100 people dying each day in the city, the total patients since 1 January was 90,000, about 38 people who died in the old Tokyo quarter of Fukagawa, and so on. Still more stories reported that factories had closed one after another as the epidemic grew more deadly, there were 60 new patients falling ill day after day, and a panic was spreading through the ranks of soldiers of two divisions of the army stationed in Tokyo.

From 14 January, the three Tokyo newspapers began to run figures for those who had died from influenza and the number of new patients tallied as of two days before printing. The *Jiji shinpō* began to run figures for those who died from influenza as of two days before printing from 23 January. The *Yomiuri shinbun* began such reports from the 22nd. These papers, as well as the *Tōkyō Asahi*, relied on figures announced by the Tokyo Metropolitan Police Department, but they did not state clearly how “death from influenza” was defined. For Table 5-1, I have compiled such figures as can be gleaned from the *Tōkyō Asahi* and the *Jiji shinpō*. As we can see from this chart, the peak for both deaths and new cases was 19 January. The figures for the days before 12 January were also high but toward the end of the month, the figures drop off sharply and deaths also steadily decrease.

The situation on 19 January filled the city with dread and on the 21st a headline in the *Jiji shinpō* pleaded “When Will the Influenza Epidemic Subside?” reporting 337 dead on 19 January, a record-breaking number of deaths. On the 21st, an emergency meeting of the Tokyo city counselors was held and the infectious-disease hospitals in the Honjo and Ōkubo districts were made officially open to influenza victims; the counselors also decided to put out a call to nurses associations in neighboring prefectures to invite applications for 150 new nurses to

Table 5-1. Cases and Deaths in the City of Tokyo (1920)

Date	Deaths	Total no. of cases	New patients
As of 12 Jan.	192	23,350	
16 Jan.	297	32,622	
17 Jan.	299		26,390
18 Jan.	266		23,000
19 Jan.	337		32,000
20 Jan.	296		23,000
21 Jan.	287		21,000
23 Jan.	274		
24 Jan.	256		12,000
25 Jan.	244		
26 Jan.	216		
27 Jan.	230		
28 Jan.	213		4,000
30 Jan.	188		3,000
31 Jan.	144		2,000
1 Feb.	179		
2 Feb.	119		2,000
3 Feb.	101		1,000
4 Feb.	114		
6 Feb.	80		
8 Feb.	52		

work in Tokyo in order to tide over the emergency (*Yomiuri shinbun*, 21 and 22 January). Headlines from those days attest to the exhaustion of nurses overwhelmed by patient care under the epidemic (*Tōkyō Asahi*, 20 January); many deaths from influenza among men and women in the prime of life (*Tōkyō Asahi*, 20 January); 20,000 cases of influenza in the military and more than 900 deaths, the heaviest toll in the army divisions in Tokyo (*Tōkyō Asahi*, 22 January); and the blow the epidemic dealt to the public transportation and communications services, with 500-600 absences of workers daily (*Tōkyō Asahi*, 23 January).

Surely everyone who lived in Tokyo in those days must have been in fear for their very lives. The national authorities created several different posters, in quite splashy colors for those times, and had them distributed throughout the prefectures, and they published many articles in the newspapers about prevention and treatments to cope with influenza, but it appears that none of these efforts had the least effect in slowing the epidemic. The only effective factor was time, and as we can see from the statistics after the beginning of February, the number of deaths had begun to drop off. The 10 February *Jiji shinpō* provides a note to a table of deaths (totaling 52) that the number of people dying of influenza is gradually decreasing. With the number of deaths having fallen to one or two for all the city's wards, the epidemic was finally over (*Yomiuri shinbun*, 28 February).

Over 10 Percent Mortality

For areas of the Kantō region other than Kanagawa prefecture, which we will examine in Chapter 8, reports in the *Jōmō shinpō* show that the situation in the Gunma prefecture town of Tatebayashi was the direst. Influenza broke out among both male and female workers—spreading throughout the entire dormitory of 36 rooms—in the Jōmō Muslim factory in this industrial community as early as October 1919 and resulting in 97 cases and seven deaths by 25 October (*Jōmō shinpō*, 4 November). Reports also told of influenza cases during November in the Gunma prefecture towns of Kiryū, Ōgo, Ōmama, and Banba.

In Gunma prefecture, as in Tokyo, the epidemic spread full force after the beginning of 1920. As of 10 January, there were 974 cases and 128 deaths prefecture-wide (*Jōmō shinpō*, 14 January), demonstrating the high mortality characteristic of the Late Epidemic in the prefecture. The *Jōmō shinpō* published influenza epidemic statistics obtained from police stations around the prefecture roughly every two weeks, showing that Tatebayashi, where many factories were located, was hit the hardest. The figures in these statistics, however, appear to be a mixture of cumulative cases and newly identified cases. Compared to the city of Tokyo and Nagano prefecture, the daily average of new patients and the number of deaths seem to be somewhat low figures. The lack of statistics for daily figures is somewhat troubling, but although there were some outbreaks resulting in several dozen patients at any one time in small and medium-sized cities, it appears that the number of deaths for the prefecture as a whole was in the range of several dozen per day.

That is not to say that the epidemic was light in Gunma prefecture as a whole. In areas where influenza was most serious, it struck whole families in one blow, and in some villages almost everyone succumbed and deaths were in the dozens. This was true especially of villages isolated in mountainous areas (*Jōmō shinpō*, 9 February 1920).

It was not until around 20 February that the paper reported the decrease in new cases. The following day came the report that “[Cases of] Influenza Decreasing Daily” and again “Yet Deaths Not Comparatively Lower,” indicating that the high mortality continued. This phenomenon was reported in the newspaper at the time under the headline “Influenza Epidemic This Year: Mortality Over 10 Percent.”

By March, while there were still reports of “influenza raging” from some places, on the whole news of the “end” of the epidemic began to come in from here and there; the situation was uneven, but as a whole, the epidemic was over by the end of the month. Although localized, there were relapses as late as May, and like neighboring Nagano prefecture, it was the end of May before the pandemic had completely passed.

Heavy Blow to Mining Town

In Tochigi prefecture, to the east of Gunma, the progress of the influenza epidemic was similar. The first article in the local *Shimotsuke shinbun* concerning the Late Epidemic influenza appeared in the 6 January 1920 edition reporting on “the sporadic observation of the death of people who had contracted influenza.” On 15 January it was reported that 149 people had died since the first reports, and outbreaks were especially intense in the town of Ashio, in the district of Kamitsuga, famous for its copper mines, where the report cited 1,912 cases and 104 dead. Perhaps because it was a mining community, the toll in Ashio continued to climb and the newspaper on 20 January reported 2,250 patients and 150 deaths, here again demonstrating the high mortality.

Outbreaks were reported not only in Ashio, but Utsunomiya, Nikkō, Yūki, Koga, and other towns, and as of 31 January, the total number of patients in Tochigi prefecture since the outbreak began came to 12,411 and 785 had died (5 February). These high figures continued into February, and in Ashio, as of 11 February, the cumulative number of patients had doubled to 4,436 and deaths to 372 (13 February). As of 15 February, the cumulative total of cases for Tochigi prefecture as a whole was 17,928 cases with 1,361 deaths, with 803 cases and 61 deaths for the prefecture’s capital city of Utsunomiya and the largest numbers for the district of Kamitsuga (Ashio) where there were 7,083 cases and 548 deaths (17 February).

On 22 February, the *Shimotsuke shinbun* carried the headline “Influenza Epidemic Gradually Subsides but Mortality Continues to Rise: Worst in Shimotsuga and Nasu Districts.” Still, the theaters in Ashio that had been closed since January were finally reopened and relief was in sight (28 February). There were fewer new patients, but the number of deaths [per day] was not much lower; that pushed up the mortality, to 23 people per 100 (29 February).

In March the epidemic had as a whole more or less passed. There were sporadic outbreaks, even after that, and the 28 March paper reported on outbreaks in the mountainous village of Fujiwara in the district of Shioya. A task force of health officials had been sent in to try to eradicate the problem, and in the list of its members we come across the name of Gomibuchi Ijirō, the doctor of the town of Yaita who had made a name for himself in the 1918 Early Epidemic. Reports in April and May of sporadic outbreaks in the prefecture were the last to appear as the Late Epidemic came to an end in Tochigi prefecture.

Tōhoku (Ōu) Region and Hokkaido

The Late Epidemic in Japan's northeastern region (Ōu) began in early December 1919 and extended over a relatively long period until the end of April 1920. The first report, carried in the *Tō-ō nippō* on 9 December, states that of 21 death certificates submitted to Aomori prefecture's Hirosaki municipal office, a fairly large number reported deaths from influenza and gave locations near the headquarters of the Imperial Army's 8th Division in the city. New recruits had quickly taken ill after enlisting in Hirosaki, and a 13 December article says 205 were patients at the army hospital. The same situation prevailed in the other places in the northeast where army regiments were headquartered. In this region, the army was obviously the ground zero of the epidemic.

The *Yamagata shinbun* chronicled the onset of the epidemic in Yamagata in a 19 January 1920 article, stating that on 22 January there were more than a thousand cases and 32 deaths in the prefecture. On the 23rd, the paper reported that "the influenza has gradually spread, with 333 cases and seven deaths in the city of Yamagata," and on the following day that, of those from Yamagata prefecture who enlisted in the military, 18 died, including eight in the Imperial Guard. At the beginning of February, the paper included an article about how six inmates in a prison died as did several members of the chief prison guard's family (3 February). Another article recounted the story of an influenza patient who had suffered nasal bleeding and died on a train (4 February), probably because of propagation of the influenza virus that rapidly destroyed the cells of the traveler's upper respiratory tract. Although there was much news about the spread of the influenza and the tragedies surrounding people who died, the total number of articles is relatively small, and a 19 April article is the last report of the epidemic in Yamagata prefecture.

The first article of the Sendai-based *Kahoku shinpō* about the onset of the Late Epidemic was published on 17 December, under the headline "Virulent Flu Rages, Attacking Army Divisions." At the headquarters of the army's 2nd Division in Sendai, 224 had been infected with influenza and two had died, and "all of them are new recruits," says the article. By 5 January, a total of 63 army patients had died. Around the time the influenza was on the decline in the army, the papers begin to report outbreaks among civilians in Miyagi prefecture. Articles on 17 and 18 January tell of outbreaks in the districts

of Watari and Katta, south and southwest of Sendai, but for some reason there are no articles reporting on civilian influenza in Sendai. The statistical data, to be introduced in the following chapter, shows that Sendai's mortality from influenza ranked the lowest.

It was from the end of January that reports of many more deaths from influenza in Miyagi prefecture began appearing, especially in rural areas. A 10 February article reports that the total of 4,654 cases and 290 deaths had occurred in rural police jurisdictions. Miyagi prefecture and its capital city of Sendai were not unaffected, but the impact of the epidemic was relatively slight. Why such a prefecture and city should have fared lightly during the Late Epidemic is not known.

The situation in Iwate prefecture as seen through *Iwate nippō* articles was likewise relatively good. A 19 December article tells of 124 cases and eight deaths in the 31st Infantry Regiment in Hirosaki, in neighboring Aomori prefecture. In mid-December the epidemic broke out in such rural areas as the district of Shiwa (located in the heart of Iwate prefecture) and the northwestern district of Iwate (20 December) and in the city of Morioka one patient died (21 December). While there were some cases and deaths in the southwestern district of Waga toward the end of 1919, even after the New Year, a headline noted that “fortunately the Demon Flu hasn't unleashed its violence on our prefecture” (13 January 1920). The paper repeatedly urged the readers to wear facemasks, gargle, and get a preventive flu vaccine.

Such good fortune did not last long, however. Soon there were reports of the influenza raging in Kamaishi, a township in southeastern Iwate facing the Pacific Ocean, where 618 persons had been infected since the outbreak (22 January, *Iwate nippō*). The epidemic was fierce there probably because, like the copper-mining town of Ashio in Tochigi prefecture described above, Kamaishi was an iron-mining and industrial town. A 27 January article says there were a total of 1,700 cases and more than 100 deaths in Iwate prefecture as a whole. In the Kamaishi police district (including the neighboring town of Ōzuchi), which was hardest hit in the prefecture, 73 died, and the article reporting this was headlined, “Flu Goes on a Rampage in Seacoast District” (1 February). A feature of the epidemic in this prefecture is that areas hit by the endemic and those that were not were intermingled. This may have been because some towns and villages were isolated both geographically and by heavy snows in winter.

By 17 February a total of 156 people had died from influenza in Kamaishi. Elementary schools in the town had been closed. In Iwate prefecture as a whole the epidemic was in its closing phase, but in some places it was still rampant and with a high mortality. Reporting about the epidemic in the prefecture ceased at the end of March.

Akita Least Hit, Fukushima Hardest Hit

Reporting on the Late Epidemic began in Akita prefecture with an 11 January 1920 article in the *Akita sakigake shinpō*. At that point, a total of 13 people had died from

the epidemic since its first case of the outbreak. Members of the military forces infected with influenza in the prefecture were limited to a regiment in the city of Akita. One account mentions that patients who had been hospitalized were released after tests using a microscope showed no bacilli. Given the lack of scientific knowledge about influenza in those days, such actions probably could not have been helped.

By 20 January, a total of 360 people had contracted influenza in Akita prefecture and 13 had died (23 January)—still the figures were low, so low that an article on the previous day is headlined “Does the Flu Dislike City Folk and Students?” A 1 February *Akita sakigake* article gives the figures for cases and deaths for the six prefectures of Ōu region. The figures for Akita are the lowest at 585 cases and 31 deaths. The figures for Fukushima, however, are by far the highest at 10,120 cases and 488 deaths.

The influenza later spread somewhat in Akita; during the first three days of February 101 people contracted the virus and 13 died. The number of cases is small but the mortality is high—a distinctive feature of the Late Epidemic. In the army regiments, too, while many fell ill by early February and the army hospital was full of flu patients, no one died (12 February), and the flu soon subsided (3 March).

In March there were reports in the *Akita sakigake* of outbreaks and deaths in rural areas (14, 20, and 30 March). A 1 April article lists the figures for cases and deaths by prefecture. The list shows Akita’s figures were still the lowest in the Ōu region, at 2,192 cases and 217 deaths, one tenth those of Fukushima. Compared with the figures of Tokyo and Osaka, both of which suffered most in Japan, Akita’s figures are only 0.5 percent in terms of cases and under 2 percent in terms of deaths.

Transport Hub Heavily Affected

In Aomori prefecture, according to the *Tō-ō nippō*, the influenza epidemic erupted in the army immediately after new recruits joined on 1 December, and a total of 36 had died by 5 January 1920. School students were also reported to have contracted influenza in the prefecture by the end of 1919 (23 December 1919 article), and as of 16 January 1920 more than 40 people had died from influenza in the city of Aomori alone (18 January article). There were deaths in the cities of Hachinohe and Aomori, and infection began to spread within police department itself (20 January article). In rural areas, too, the epidemic spread “at a swift pace” (28 January). By 31 January the death toll stood at 2,221 in the prefecture, many of them concentrated in the *gun* districts of Higashi-Tsugaru, Minami-Tsugaru, and Kamikita, as well as in the city of Aomori. Numerous deaths in rural areas is a feature of the pandemic.

For about one month starting on 28 January the *Tō-ō nippō* published a list showing the number of new cases, the number of deaths, and the cumulative number of deaths, by district (*gun*)/city.

In March the epidemic worsened in Aomori prefecture. The *Tō-ō nippō* reported

deaths from illnesses including influenza in the city of Aomori repeatedly (four deaths on 16 March; five deaths on 17 March [17 and 18 March]; 17 deaths, of whom eight died from influenza, on 19 March [20 March]). On 26 March, 32 deaths from influenza were reported in the city of Hirosaki since 1 March. A 29 March article is headlined, “Epidemic Intensifies Again: Patients Dying One after the Other,” thus crushing hopes for improvement of the situation. The Tsugaru area was hit especially hard, with repeated stories of the misery there reported on 1, 7, and 12 April. In the town of Goshogawara and its environs there were 533 cases and 110 deaths, a very high mortality.

From the end of April people were finally relieved to see newspaper headlines like “Aomori Epidemic Subsides” (23 April) and “Epidemic is Completely Over” (7 May). The number of deaths from influenza in the city of Aomori was 565 in 1920, double the figure of 281 deaths in the previous year. Why, then, was the epidemic so severe in Aomori while it was relatively mild in the neighboring Akita and Iwate prefectures?

One reason was that many people of Aomori traveled to Hokkaido as seasonal workers. Some of them must have been exposed to the virus brought by migrant workers from other parts of Japan and transmitted it to Aomori during their stopovers there as they returned home. Under the headline “Many Fishermen Die as Influenza Rages,” a 17 March *Tō-ō nippō* article reports the ferocity of the influenza in the district of Furu’u (a fishing community on Shakotan peninsula in western Hokkaido), relating that migrant workers from Aomori had contracted influenza and that some of them had returned home.

Another reason for the high toll in Aomori was the presence of the army’s Hirosaki Division where the first cases broke out, with many flu patients spreading the virus there among civilians. A third reason was that ports on the Aomori side served as the key nodes linking Hokkaido and the main Honshu Island. Sea routes connected the ports to Hakodate and Muroran in southern Hokkaido. Influenza carriers most likely came and went frequently through these ports, busily spreading the virus. In March, the fishing season started in Hokkaido, further enlivening people’s movements, and intensifying the spread of the epidemic.

Suffering in Hokkaido

In Hokkaido, as early as 30 November 1919 the *Hokkai Times* reported that an elementary school in the district of Kamikawa in the central part of the island had just been closed after half of its students reported ill with influenza. By the end of the year outbreaks were reported in Otaru as well (25 December).

In its 9 January 1920 article the *Hokkai Times* portrays the severity of the epidemic that had broken out toward the end of the previous year, saying, “a fearful influenza assaulting Sapporo has caused more than 50 deaths from 20 December through 5 January.” By mid-January cases were reported from Iwamizawa, Kushiro, Iwanai, Tokachi, and other areas. The 17 January edition tells of the closing of schools in Sapporo.

The *Hokkai Times* reported on 20 January the number of influenza cases and the number of deaths in Hokkaido's major cities during the period from the day of first outbreaks in November until 15 January were: Sapporo (2,137 cases; 57 deaths); Hakodate (415 cases; 28 deaths); Otaru (348 cases; 14 deaths); Asahikawa (39 cases; eight deaths); Muroran (325 cases; 20 deaths); and Kushiro (302 cases; 35 deaths). As of that time there were no reports of cases or deaths from Kitami, Sōya, or Shiribeshi.

Concerning Hokkaido's capital city of Sapporo, which was the city worst hit by the epidemic on the island, of a total of 350 deaths, 209 were from influenza from 1 to 27 January. By age group the largest number of 65 deaths, was for those aged between 21 and 30 (*Hokkai Times*, 30 January)—clear evidence of a major feature of the 1918–1920 influenza that claimed lives of those in the prime of life. By early February, cases finally occurred in the areas that had escaped the influenza until then—Kitami, Sōya, and Shiribeshi—meaning that the pandemic swept over the entire island of Hokkaido. Here, too, the mortality was high, as in the other regions, a marked feature of the Late Epidemic. There were reports of many having died in some towns.²⁰

By the end of February, the influenza epidemic in Sapporo had subsided, but then the epidemic spread to Bibai, famous for its coal mines, where dozens of people succumbed and between five and seven people died daily during the outbreak (*Hokkai Times*, 24 February).

When the fishing season began in March, the influx of migrant workers from other prefectures began. With some 2,000 people entering the leading port of Yoichi (for herring fishing) from outside, there were some seven cases and five deaths per day (*Hokkai Times*, 8 March). In Otaru, not far from Yoichi, as well, while the epidemic had initially been comparatively light, the number of cases and deaths sharply rose, and from January through the end of February, 175 died from influenza. Fifty-nine more died in the first 12 days of March, showing that deaths were still on the rise in mid-March (17 March).

Reporting on the influenza epidemic on the main island of Hokkaido came to an end in May, but on 6 June, the *Hokkai Times* carried a large article describing the terrible situation that had unfolded on the Chishima Islands (the Kurils) and Etorofu Island (Iturup) while they were cut off from the main island during the winter months in both transport and communications. Influenza had spread among the workers at the canneries at Tennei in the village of Rubetsu on the eastern coast of Etorofu Island and the ethnic Ainu settlement nearby. More than a hundred people succumbed, and then began to die one after the other. There was a shortage of coffins to put them in, so the bodies were piled up and were cremated together. Resigned to the prospect that they would eventually die as well, both those afflicted and those still healthy consumed the last of their food

20 For instance, the 12 February 1920 *Hokkai Times* tells that 446 had succumbed to influenza since the first outbreaks and of these 22 had died in the town of Abashiri. These figures are by no means small compared with the town's population of 27,899 (according to the National Census conducted in October 1919), and the figures were still on the rise.

supplies, and then came face to face with starvation. The story commends the Rubetsu village headman, who steadily made the rounds of the sick and faithfully performed his duties to the end of the epidemic.

Overview

The Late Epidemic dragged out in some parts of the country as long as June 1920, but in most places it struck like a storm and in a relatively short period of time vanished. The accounts of the various regions confirm again the relatively small morbidity along with the high mortality in comparison with the Early Epidemic. The peak of the Late Epidemic was between late January and March, and this was also a period characterized by a high mortality during the Early Epidemic. Circulating among humans, birds, and other animals, the virus seems to have increased its toxicity, evolving into a mutant strain of greater virulence.

One other observation that was made at the time was that those who had once contracted influenza were less likely to have contracted it the following year.²¹ In order to demonstrate that this was the case scientifically, however, statistics on the epidemic by geographic unit for both phases of the pandemic are needed, but the data available, which is by prefecture and large city unit, is too coarse to support such a test. Chapter 8 includes a case study of Kanagawa prefecture by district, and at the end of the following Chapter 6 I will compare the situation of the two phases of the pandemic.

21 Concerning the Late Epidemic, the *Ryūkōsei kanbō* (p. 88) includes the following passages: “Most of the influenza patients of the Late Epidemic were those who had escaped the Early Epidemic, and their condition was relatively serious. Some of those who had contracted influenza in the previous epidemic did so again this time, but generally their condition was rather mild.” “Generally, those areas that had not been seriously affected in the previous pandemic were hit severely this time, whereas those areas that suffered very egregious conditions in the previous pandemic experienced relatively light cases of influenza this time.”

