

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

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図書名	The Influenza Pandemic in Japan, 1918 1920 : The First World War between Humankind and a Virus
その他の言語のタイトル	日本を襲ったスペイン・インフルエンザ
シリーズ	Nichibunken monograph series ; 18
URL	http://id.nii.ac.jp/1368/00006047/

CHAPTER 10

SUMMARY, COUNTERMEASURES, LESSONS



Home Ministry poster bidding people to “Wear a mask when traveling by train or trolley and don’t forget to gargle after coming back home.” (from *Ryūkōsei kanbō*)

Ultimately, a total of 740,000 lives were lost in the 1918–1920 influenza pandemic: 453,000 in the Japanese main islands and 287,000 in the overseas territories (excluding the Kwantung Leased Territory), a figure that accounted for 0.96 percent of the population of what was then the Empire of Japan. Since the figure is less than 1 percent, it may sound very small, but considering that mortality—regardless of illness or not—in a normal year (deaths in Japan and overseas territories combined) was 2.26 percent, or 22.6 per mil, the “0.96 percent” corresponds to 40 percent of that mortality. That is to say, the death toll in Japan from the influenza pandemic accounts for approximately 40 percent of Japanese who died in a normal period.

Table 10-1 shows the number of deaths from influenza and influenza mortality in Japan and its overseas territories as well as the overall mortality. This book devotes many pages to newspaper reports about the ravages of the influenza pandemic in Japan proper, but it should be noted that influenza mortality in Japan’s overseas territories was much higher than that of the mainland. This point deserves to be explored further.

Table 10-1. Number of Deaths and Mortality in the Empire of Japan 1918–1920

	Population	No. of deaths	Mortality (‰)
Japan Proper	55,963,053	451,544	8.1
Sakhalin	105,765	3,749	35.4
Korea	17,284,407	234,164	13.5
Kwantung	687,316		0.0
Taiwan	3,654,398	48,866	13.4
Total	77,694,939		0.0
Total, excl. Kwantung	77,007,623	738,323	9.6

Population: As of 1 October 1920, based on the first National Census.

Table 10-2. Population of Japan Proper around the Pandemic Period

	Population (A)	Population (B)	Population (C)	No. of births	Fertility (‰)	No. of deaths	Mortality (‰)	Rate of population increase
1916		53,496	55,235	1,805	33.7	1,188	22.2	11.5
1917		54,134	56,035	1,812	33.5	1,200	22.2	11.3
1918		54,739	55,663	1,792	32.7	1,493	27.3	5.4
1919		55,033	56,253	1,779	32.3	1,282	23.3	9.0
1920	55,963	55,473		2,026	36.2	1,422	25.4	10.8
1921	56,666			1,991	35.1	1,289	22.7	12.4

Note: Unit is 1,000 for population and numbers of deaths and births. Rates shown are per thousand. Population (A) is based on National Census, population (B) is estimation by the Cabinet Statistics Bureau, and population (C) is “population de facto (B-type),” an estimated population given at the end of the annual *Nihon Teikoku jinkō dōtai tōkei* (relevant years).

Table 10-2, meanwhile, shows the population, fertility and mortality of the mainland alone. It includes two types of population statistics, one being estimated by the Cabinet Statistics Bureau¹ and the other based on the National Census.² Population figures up to 1920, when the nation's first census was conducted, diverge from one source to another. In order to examine both the mainland and overseas territories in this final chapter, therefore, I draw on the *Nihon Teikoku tōkei nenkan* (Statistical Yearbook of the Empire of Japan), and this may result in some figures that are slightly different from those cited in previous chapters.

Total Population Shows No Decline

Numbers in both Tables 10-1 and 10-2 are totals for the whole nation and reveal that mortality was not the same in all parts of the country. Roughly speaking, the influenza mortality was high in the Kyoto-Osaka-Kobe area and the western region, reducing the population there, but in the other parts of the country the population remained almost the same.

Here let me briefly mention how deaths from influenza affected, or did not affect, population. There are many types of statistical series that indicate that despite many deaths from influenza the national population continued rising. Meanwhile, the statistical series "Population (C)" (population de facto, B-type) in Table 10-2 shows the population at the end of 1918 decreased by nearly 400,000 from the population at the end of the previous year.³ Even if "Population (C)" shows the decline in population through such calculation, we cannot tell whether that really conformed with the actual situation at that time. Indeed, a look at the numbers of births and deaths shown in the table reveals that the number of births is higher than that of deaths for any year. At the time, there was no major migrant exodus that could have had a significant effect on the total population of Japan. The influenza pandemic can be considered not to have been so serious that it markedly reduced the Japanese population.

First "Baby Boom" after the End of the Pandemic

Turning to the rates of population increase, we see that the rate of increase that had stood at more than 10 per mil dropped sharply in 1918–1919. Also notable is a "baby boom"

1 Naikaku Tōkei Kyoku 1930.

2 *Jinkō no dōkō* 2005, pp. 8–9.

3 They calculated "population de facto, B-type" by adjusting "population de facto, A-type," which was obtained by adding "incoming temporary residents" to "population with permanent domicile" and then subtracting from that total "outgoing temporary residents." The difference between the number of "incoming" temporary residents and that of "outgoing" temporary residents, which should have been identical, was cancelled out by the proportional distribution method. In any case, these are entirely desktop calculations and of questionable reliability.

that came in 1920, before the pandemic had not yet subsided. The fertility of 36.2 per mil was the highest level recorded in the NTJDT. That year and the following year (1921) showed an extraordinary rise in fertility.⁴ Probably a reaction to the relatively low fertility of 1918–1919, the phenomenon might have been a miniature version of the post World War II baby boom. It was an example of a compensatory recovery of a population often seen following a war or a great natural disaster.

Why was the Pandemic Forgotten?

Why was the 1918–1920 influenza pandemic that caused such a huge loss of human lives “forgotten”? It was forgotten not only in Japan but everywhere, including the United States. Alfred W. Crosby speculates about the reasons. First, “The war, itself, was probably the most important cause of the relative indifference to the pandemic.” Second, “The enormous disparity between flu’s morbidity and mortality tended to calm potential victims.” Third, “The disease moved too fast, arrived, flourished, and was gone before it had any ephemeral effects . . .”⁵

These reasons can apply to Japan’s case, too. In addition it should be noted that in Japan the period of the influenza pandemic coincided with a very important phase of the country’s history.

The middle of the Taishō era (1912–1926) marked a major turning point in psychological, social, and material terms. It was a time of direct confrontation between socialist ideas that had been introduced from abroad and traditional thinking, pressing people, especially intellectuals, to take a clear stand. Social activism, symbolized by the “rice riots,” was gaining momentum as rural discontent was encouraged by the activism of the urban labor movement. It was also during this period that industrial output surpassed agricultural output. Electric power production increased, ordinary homes had electric lights, and people’s night lifestyle changed completely. They could work and read at night with far greater ease.

Japan emerged among the victor nations of World War I without much cost and even became a member of the Council of the League of Nations. Its international status rose and its expansion onto the Chinese continent began full scale. It made demands on China and injected a series of loans and capital into its economy, but China was in the midst of civil war and failed to come up with any effective countermeasures. European countries, meanwhile, were occupied with the world war itself and later with postwar reconstruction. Thus it was mainly the United States that was witness to and

4 Partly due to a decline in infant mortality at that time, the first baby boomers who were born from 1920 on were to become a vigorous industrial labor force starting in the latter half of the 1930s and a large military force in the 1940s. This point cannot be underestimated in examining the history of the Shōwa era (1926–1989).

5 Crosby 1976; see especially chapter 15, “An Inquiry into the Peculiarities of Human Memory,” pp. 311–28.

rivalled by Japanese expansion on the Asian continent; Japan's way of responding to competing U.S. interests at that time was to be a major factor triggering the outbreak of the Pacific War.

Domestically, the period saw new developments that ultimately led to the enactment of the universal suffrage law despite being initially limited to men, in conjunction with the peace preservation law (1925). The University Establishment Ordinance (1919) allowed private schools to join the ranks of universities. A rise in the literacy rate enhanced writing culture among the masses, and the number of book and magazine titles published increased at a remarkable pace.

It is possible that those major developments at home and abroad might have made the influenza pandemic look like a "light" outbreak. Be that as it may, despite its huge death toll the pandemic had a low mortality of at most 2 percent of patients and that of 0.8 percent vis-à-vis the population. It did look not very serious compared with the plague or cholera for whom the mortality of patients could have been tens of times that rate (although people are not easily infected with these diseases). That it was treated as "light" is evident in the fact that it was called the "Spanish cold" in Japan. Influenza is a pernicious virus totally different from the common cold. When the pandemic was taking place and several hundred thousands of Japanese lives were lost in 1918–1920, it must have seemed like a nightmare. Psychologically, people perhaps wanted to forget it as soon as possible.

In 1923, not long after the pandemic was over, the Great Kantō Earthquake occurred, reducing Tokyo and Yokohama to ashes. The death toll in that disaster was high, approximately 100,000 according to a recent survey, and the material damage was incomparably larger than the influenza pandemic. A comparison of the two events shows a stark contrast between them in terms of human lives and material damage. The 1918–1920 influenza had no effect on the cityscape, while the shaking and fires from the Kantō earthquake produced vast burnt-out ruins in Tokyo, Yokohama, and elsewhere. For the present book, I searched for photos testifying to the influenza pandemic but found few; that is probably because there is little about the pandemic that is picturesque. Even if it had been, the catastrophic earthquake that succeeded it must have pushed the influenza pandemic into the far corners of people's memories.

Nudging the pandemic even further into past history would have been the second Sino-Japanese War (1937–1945) and the Pacific War (1940–1945), in which a far greater number of Japanese, military and civilian, died than suffered from influenza. Today, nearly a century later, attention to possible outbreaks of new strains of influenza is increasingly called for and people have finally begun talking about the pandemic of 1918–1920.

Countermeasures

Did the Japanese government and the medical world take any measures against the pandemic that produced such a high death toll? The answer is both yes and no. Yes, because the national and local governments, the police, the medical profession, and hospitals recommended that people take injection of preventive vaccine and repeatedly issued notifications urging them to wear facemasks, rinse their mouths, wash their hands, avoid crowds, and the like. Elementary and secondary schools were quickly closed when patients appeared among students. Such steps are basic countermeasures to deal with respiratory diseases and are the only measures we take even today. In 1918–1920, in some cases the military stopped drills. Railway and communications organizations cut back on their services as many workers had come down with influenza, but they nevertheless continued operation. Given no other measures available in those days, they did well, indeed. All such efforts must have contributed to the fact that the number of deaths from the 1918–1920 influenza pandemic was no more than 0.8 percent of the population.

The countermeasures were not thorough enough, however. Nor were they all effective. Places of entertainment were closed only in the Kwantung Leased Territory, but rarely anywhere else. Although passengers on crowded trains on their way to shrines and temples to pray for divine protection from the influenza were most likely to contract the disease, no official restrictions were imposed. Warnings issued by prefectural authorities and well-known medical doctors were repeatedly published in newspapers, along with schedules for receiving preventive vaccine injections. The injections, however, had no effect whatsoever against the influenza.

Pathogen Unknown

A glimpse of how frightened people of the time were of the influenza pandemic is provided by the fact that whenever there was a “discovery” of a germ that might be the cause of influenza at home or abroad, the findings were published simultaneously in newspapers across the country. For instance, there was a report, prior to the real start of the influenza pandemic, about a discovery by a French doctor of an influenza “germ.”⁶ The news was published in early March 1919 that three British military surgeons had discovered an influenza “germ” but that one of them, infected with it, had died.⁷ That an “influenza pathogen” was identified in Japan, at Kyushu University as well as at the sanitation section of the Kagawa prefectural government, was reported in the press.⁸

Of course, they were all false reports, for influenza viruses were not discovered until much later. Still these reports are proof of people’s yearning for identification of the pathogen that caused influenza, as well as for prevention and medical treatment based on that discovery.

6 The news was published in newspapers throughout Japan, dated 19 October 1918.

7 For example, *Kyōto hinode shinbun*, dated 9 March 1919.

8 *Fukuoka nichinichi shinbun*, dated 13 November 1918.

One event reported with fanfare in the press was a presentation meeting of the Japan Medical Association concerning a pathogen said to be causing the influenza held at the hygiene lecture hall of the Tokyo Imperial University on 24 November 1918. A major and heated debate unfolded between Kitasato Shibasaburō⁹ and his associates who believed Pfeiffer's bacillus to be the cause of the epidemic, on the one hand, and the members of the Tokyo Imperial University School of Medicine and the Institute for Infectious Diseases who thought Kitasato was mistaken, on the other.¹⁰ From today's point of view, the findings of both sides were essentially wrong, so the debate carried little significance in the history of research. Still, "I heard that it was a really serious and intense debate," says a member of the Keio University School of Medicine who recalled what he had heard from older colleagues.

Japanese medical scientists also introduced remedies for the influenza pandemic internationally. A three-member team led by Dr. Yamanouchi Tamotsu published a report of the findings of their experiment in *The Lancet*, a medical journal based in London.¹¹ According to the report, a germ isolated from the saliva and blood of influenza patients was sprayed at the noses of the subjects of the experiment—an unbelievable experiment by today's standards—and with this result they rejected the theory that Pfeiffer's bacillus was the cause of the influenza.

That experiment, says the report, was conducted with 52 hospital doctors and nurses as test patients with their permission. Experiments of that sort were performed in various countries at that time. In the United States, there were cases in which, through a bargain with members of the military, those who had committed some crime agreed to be subjects of such experiments on the condition that they would be acquitted.¹²

Despite all these attempts, the virus of the 1918–1920 influenza was not identified. With the development of the optical microscope and methods of isolation and cultivation of bacteria, lethal bacteria that had posed threats to humankind began to be identified one after the other in the second half of the nineteenth century, relieving people from their menace. The virus of the 1918–1920 influenza pandemic was too small to be identified with nineteenth-century technology. It was not until the 1930s, more than ten years after the end of the pandemic, that influenza virus was identified in pigs by American virologist Richard E. Shope. The influenza virus in humans was isolated much later, in the 1970s. As long as it was believed that the causative agent of influenza was bacteria, the true cause would be impossible to find. Little wonder that it was discovered only after the electron microscope was invented and virology developed.

9 Opposing the education ministry's jurisdiction over the Institute for Infectious Diseases, Kitasato resigned as its director and involved himself in founding the Keio University Faculty of Medicine and Hospital. Based on his research the Kitasato Institute's prophylactic [preventive] vaccine was derived from pneumococcus and Pfeiffer's bacillus.

10 *Jiji shinpō*, 25 November 1918. The following day, too, this newspaper carried remarks by Dr. Shiga Kiyoshi of the Kitasato Institute.

11 Yamanouchi 1919, p. 971.

12 Crosby 1976, p. 268.

Lessons

The 1918–1920 influenza pandemic virus was thus beyond the capacity of medical science at that time, and as long as that was the case, it was impossible to find an effective method to prevent its spread. Thanks to a handful of American researchers, the swine influenza virus was first identified, and several decades later human influenza viruses were isolated. Japanese researchers were not involved in the process.

In the industrial countries, little was learned from the 1918–1920 influenza pandemic. Sustained efforts to identify viruses require abundant research funds and the extraordinary abilities and perseverance of researchers, as well as the strong support of the government, the mass media, and public opinion. Japan lacked all of these resources.

What Japan had been doing at the time of the influenza pandemic was to embark on a full-fledged endeavor to control tuberculosis, which was then a national disease, and the number of tuberculosis patients and deaths from the disease had begun to decrease. The severe impact of the influenza pandemic not only on young, prime-of-life people but also infants drew the attention of officials and non-officials alike. Measures were taken for the protection and growth of infants, and infant mortality dropped from a high of 180 per mil in 1920¹³ to 130 per mil in 1926, and further down to 50 per mil in the 1930s, although such a decrease might have occurred even without the influenza pandemic.

It must be concluded, therefore, that Japan did almost nothing about the Spanish influenza disaster, wasting what could have been learned from the huge loss of 450,000 lives. It is absolutely necessary to determine what is most indispensable in preparation for attacks of new strains of influenza virus or other serious epidemics. That so little was drawn from the Spanish influenza should itself be used as a lesson. We must start by observing how much damage humans suffered in the past pandemics and what efforts were made, or not made, to deal with each new strain of influenza virus. The battle between humans and viruses, especially influenza viruses, will be fought for as long as both exist on the earth.

13 That mortality is higher than for any country today. In Europe and the United States infant mortality was as low as 50 per mil by that time.