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A  
BRIEF REVIEW  
OF THE  
OPERATIONS  
OF  
THE HOME DEPARTMENT,

IN CONNECTION WITH

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THE CHOLERA EPIDEMIC

OF THE

23rd Year of Meiji

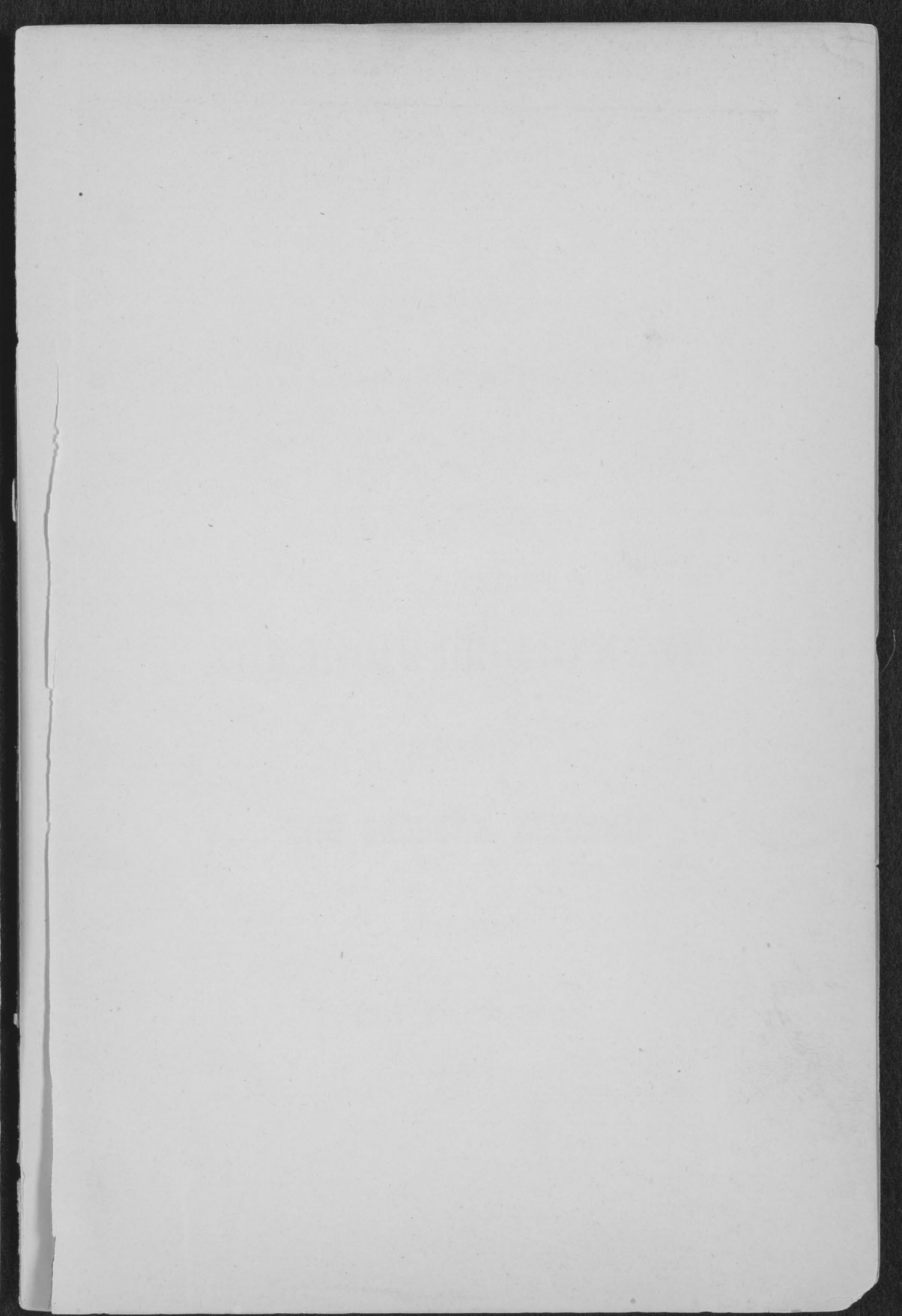
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HOME DEPARTMENT,

Tokyo, Japan.

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ON THE

23rd April 1864

(1864)

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## INTRODUCTION.

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THE cholera epidemic of the 23rd year of Meiji (1890) first appeared in the city of Nagasaki, towards the end of June, and after spreading in Kyūshū and Chūgoku, it reached Tōkyō and Ōsaka, whence it spread over various *ken* or prefectures in Shikoku, and the middle and eastern parts of the main island. The localities where it was most violent were the cities of Akama-ga-seki and Ōsaka, to which followed the city of Nagasaki and the *gun* or county of Onga, in the *ken* of Fukuoka. The total number of cases in the whole country was 46,060, of which 35,248 proved fatal. It was the sixth great epidemic since the 10th year of Meiji (1877), and it was next in severity to that of the 15th year of Meiji (1882).

The cholera epidemic of this year was so violent and malignant that none of the first cases in the city of Nagasaki, which were more than 10 in number, recovered. But the

rate of its propagation was very slow compared with that of the previous epidemics, which spread over the whole country in a few weeks. Yobuko in Saga *ken*, Akama-ga-seki in Yamaguchi *ken*, Wakatsu in Fukuoka *ken*, Misumi in Kumamoto *ken*, and Kagoshima, have frequent communications directly with the port of Nagasaki, but notwithstanding such frequent communications, the cholera only reached these places after a period of from one week to one month, while Kōbe, Ōsaka, Yokohama, and Tōkyō were invaded only after a month or more had elapsed. Such slow propagation, in spite of the violent and malignant character of the disease, may be attributable to the care taken by persons of their health, as well as to the wise and benevolent endeavours of both government and people to carry out preventive measures.

Regulations for the prevention of cholera epidemic were issued by the Home Department, for the first time, on the occasion of the epidemic of the 10th year of Meiji (1877); and in the 12th year (1879), when there was a great epidemic, Temporary Regulations for the Prevention of the Spread of Cholera were promulgated. In the 13th year (1880), these



Regulations were altered, and published under the title of Regulations for the Prevention of the Spread of Infectious Diseases, cholera being thus brought under the same law as other infectious diseases. To these Regulations was annexed a Memorandum of Instructions for Preventive Measures against Infectious Diseases, drawn up under the four heads of Cleaning, Preservation of Health, Isolation, and Disinfection, and the method of execution being given, the prefectural governors were instructed to carry out the provisions in the way most suited, in their opinion, to the condition of each locality.

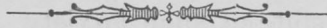
After the occurrence of several epidemics, the above named Memorandum was revised in the 19th year (1886), and the duty of carrying out preventive measures was transferred to the police; measures for isolation, prohibition of communication, and conveyance of patients to quarantine hospitals, as well as for the disinfection of dwelling houses, were all given into the hands of the police for enforcement. Measures of prevention and for disinfection in the case of infectious diseases had previously been under the entire control of the government, but as the City, Town, and Village

Local Government System, which was introduced in April of the 21st year (1888), and gradually came into force after April of the 22nd year (1889), had made a revolution in the system of local government, an alteration had become necessary in the method of carrying into effect preventive measures against infectious diseases, the execution of such measures being a duty, the performance of which devolved upon the people themselves. The Memorandum of Instructions for Preventive Measures was accordingly revised, in agreement with the alteration in the form of local government, and the progress of science in the study of infectious diseases, and the Memorandum, thus revised, was issued at the beginning of the epidemic of this year. There was, accordingly, on the occasion of this epidemic, a change in the persons charged with the duty of carrying out preventive measures, and the functions previously discharged by the government were almost entirely committed to the local authorities of cities, towns, or villages, the government merely exercising the oversight necessary to the effective carrying out of the measures in question. But a short time having elapsed

since the coming into force of the said City, Town, and Village Local Government System, and the Revised Memorandum having been issued after the disease had already spread in various localities and was becoming epidemic, much anxiety was felt in regard to the execution of the preventive measures, the government, which had long been familiar with the measures, having withdrawn its hand, and the city, town, or village authorities, upon whom fell the duty of applying the measures, having as yet had no experience in the matter. Happily, in spite of such anxiety, and beyond expectation, the preventive measures were generally well carried out. Of the measures adopted, the most effective were believed to be the establishment of sanitary companies to give mutual help, the appointment of city, town, and village doctors to visit the dwellings of the poor, consultations with medical associations as to important sanitary matters, the committal of preventive measures and measures for the disinfection of infected houses to doctors, and the frequent repetition of the process of disinfective cleansing. With the development of the principle of self-government, the authorities of cities, towns, and



villages will become increasingly familiar with the execution of sanitary measures, and future epidemics, it is expected, will be met more effectively than has heretofore been the case.



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CHAPTER I.

*General condition of the epidemic.*

ON the 27th of June, 1890, two cases of cholera epidemic suddenly appeared at Jūzenji-gō in the city of Nagasaki, and another case at Inasa-go, in the village of Fuchi, in Nishi-Sonoki gun, near the city. One of the Jūzenji-gō sufferers and the sufferer at Inasa-gō, were coolies who had been engaged in the work of unloading the cargoes of the *Swatow*, a German steamship which entered the port on the 23rd of the same month from Shanghai, and the *Vorwärts*, a vessel of the same nationality,

which had come on the 25th from Hongkong. It was afterwards said that two or three other coolies who engaged in the same work had died after violent vomiting and diarrhœa, but there was no means of discovering whether these were cases of cholera, as they were not reported until after the men had been buried. Inquiries were made of the above named vessels as to whether any persons had suffered or died from vomiting and diarrhœa, but neither vessel reported the occurrence of any such case. As, however, these vessels came from Shanghai and Hongkong, which are situated on the southern coast of China, where the cholera may be said to be a local disease, there is room for suspecting that they conveyed the germs of the disease by which the coolies were attacked.

In the port of Kuchi-no-tsu, in Nagasaki *ken*, there appeared seven cases of cholera during the period of three days from the 5th to the 7th of July. By this time, the cholera at Nagasaki had already spread over the city and become epidemic, but the cases which appeared at Kuchi-no-tsu seem to have been introduced independently from abroad, Kuchi-no-tsu being one of the ports from which

exports are specially allowed to be made, and being a place whence coals from Mi-ike are exported, chiefly for China and India, vessels, both Japanese and foreign, engaged in foreign trade, are going in and out every day. The cases which appeared at this time were either among the coolies engaged in the work of putting coals on board the *Yoritomo-maru*, a Japanese steamship which came from Shanghai on the 4th of July, one day before the cases made their appearance, or among the members of the families of those who were on board the same steamship. After a careful examination had been made, no trace could be found of the disease having come from Nagasaki. There is, consequently, no doubt that the origin of the great epidemic in this year, as that of the epidemics of former years, was brought from China by the two German vessels which entered the port of Nagasaki on the 23rd and 25th of June, and by the *Yoritomo-maru*, which came to the port of Kuchino-tsu on the 4th of July.

The first three cases in the city of Nagasaki, on the 27th of June, were of so violent and malignant a type, that in a few days the disease had spread over the whole city. On the 5th

of July, when the disease had invaded Kuchino-tsu, cases began to appear in various *gun* of Nagasaki *ken*, and on the 6th, there were 30 new cases in a single day. On the 2nd of July, the disease appeared at Yobuko, in Saga *ken*; on the 5th, at Amakusa in Kumamoto *ken*; on the 8th, at Wakatsu in Fukuoka *ken*; and finally, on the 9th, it had extended to Akama-ga-seki, in Yamaguchi *ken*. Towards the middle of the same month, the disease became violent in Amakusa, in Kumamoto *ken*, while it had already become epidemic in the *gun* of Onga, Kurate, and Mi-ike in Fukuoka *ken*, as well as in the city of Fukuoka. In Kagoshima *ken*, Izumi *gun* was invaded, and the disease soon became epidemic. Towards the end of the same month, the disease in the *ken* of Nagasaki and Fukuoka had increased in severity and became very violent; in Saga *ken*, it became epidemic in the city of Saga and in the town of Imari. From Amakusa, the disease gradually extended to the city of Kumamoto and the *gun* of Akita; at Akama-ga-seki, it daily increased in violence; and it thus became epidemic in the western part of Kyūshū, and in Yamaguchi *ken*, which is the western extremity of Chūgoku.



While the cholera was gradually becoming violent in Kyūshū, it also broke out, on the 18th of July, on board a Turkish man-of-war which was at anchor in the port of Yokohama. As there were some more cases on the 20th, the same man-of-war was immediately sent to Naga-ura to undergo a thorough process of disinfection while in a position of isolation. Previous to this, two or three cases had appeared in the city of Yokohama, but all of them were sporadic and of a mild form, the disease showing no disposition to spread. After the disease, however, had broken out on board the Turkish man-of-war, several cases of an infectious character appeared in Yokohama, and they finally became the cause of an epidemic in that city. It was on the 7th of June, or about 40 days previously, that the Turkish man-of-war had cast anchor in the port of Yokohama, but as on the voyage she had called at certain ports in India and China, viz., Bombay, Colombo, Singapore, Saigon, Hongkong, and Foochow, where she obtained coal, water, and articles of food, it is not unreasonable to suppose that the vessel had brought with her the disease, some cases of which appeared on board her.

Having invaded Yokohama, the cholera epidemic soon visited the city of Tōkyō, whence it spread over the *ken* or prefectures in the eastern part of the main island. Although the *ken* in the western part of the main island, of Shikoku, and the *ken* of Chūgoku east of the city of Hiroshima, had not up to this time been invaded, the inhabitants were all in a condition of anxiety, as vessels coming from the infected districts were bringing cases of cholera and had deaths on board.

In the beginning of August, the disease became very severe in Yamaguchi *ken*. The city of Akama-ga-seki presented a miserable condition, and from that city the disease spread over the two *gun* of Toyora and Asa, and finally visited the town of Hagi, thus spreading over almost the whole *ken*. In the *ken* of Kyūshū, it became increasingly violent, the sphere of its operations daily widening. In Nagasaki *ken*, it was still violent as before; in Fukuoka *ken*, it ravaged the two *gun* of Onga and Kurate, and, spreading over the city of Fukuoka and the *gun* of Mitsuma, Yamato, Mi-ike, and Kiku, it became extraordinarily epidemic; in Saga *ken*, it had spread over the whole *ken*, its severity increasing continually;

in Kumamoto *ken* it still prevailed as before; only in Kagoshima *ken* had it become very weak, there being only scattered cases after the epidemic in Izumi *gun* had ceased. But in the place of Kagoshima *ken*, Ōita *ken* was invaded in turn, and the disease first appearing in the town of Nakatsu, gradually spread over several *gun*.

Ōsaka was free for more than a month after the outbreak of cholera at Nagasaki, but could not finally escape its attack. On the 11th of August, a case of violent and malignant form appeared at Ajikawa-Minami-dōri, and the disease immediately spread over the city and the *gun* of Nishinari. On the 21st, there were more than 100 new cases, thus showing that a great epidemic had set in, and the city of Sakai and several other *gun* were invaded.

Previous to the appearance of the epidemic in Ōsaka, the disease was prevailing at Amaga-saki, in Kawabe *gun*, Hyōgo *ken*. In the city of Kōbe, several cases appeared after the 30th of July, when a case broke out on board the *Meiji-maru*, a vessel belonging to the Department of Communications, while she was at anchor in the harbour, and the epidemic

spreading next to Ama-ga-saki finally extended over various *gun*.

While the epidemic was gradually becoming powerful in Ōsaka *Fu* and Kyōto *Fu*, Wakayama *ken* also was invaded, whence it spread to Nara *ken* and Shiga *ken*, and far beyond, to Kōchi *ken*, which is a prefecture in the island of Shikoku. The disease in Hiroshima *ken* suddenly became epidemic towards the end of August, some cases began to appear in the neighbouring *ken* of Okayama, and it began to be prevalent in the *ken* of Ehime and Kagawa, in the island of Shikoku, so that finally the whole region west of Ōsaka became affected.

The epidemic of Tōkyō commenced with a case on the 6th of August, at Minami-konya Chō, in Kyōbashi *ku* (city district). The case was so violent and malignant that it was quickly followed by 31 cases occurring successively in one street, whence the disease spread over the whole prefecture, suddenly increasing in violence towards the end of the same month. In Kanagawa *ken*, while the disease was gradually gaining power in the city of Yokohama, some cases began to appear in the villages near that city, and in the town of Kanagawa, whence it extended to Mi-ura *gun*, finally

spreading over the whole *ken*. The disease having become epidemic in the cities of Tōkyō and Yokohama, it soon invaded Chiba *ken* and Shizuoka *ken*.

Thus the cholera epidemic, beginning from Kyūshū, gradually extended eastward, invading the *ken* of the middle and western parts of the main island, and of Shikoku, finally visiting those of the eastern part of the main island. The number of new cases on the 1st of August was more than 190, reaching over 200 on the 2nd, over 300 on the 18th, 400 on the 21st, 500 on the 23rd, and 600 on the 28th. The whole number of new cases during this month was more than 15,000, of which more than 7,800 proved fatal.

The total number of new cases in the whole country on the 1st of September was 735, which increased to 820 on the 3rd. Towards the end of the month, the daily number fluctuated between 600 and 800, when the ravages of the disease were most dreadful. The largest daily number of cases during the whole epidemic was on the 25th of the same month, when it reached 844. In the prefecture of Ōsaka, the epidemic increased in severity from the first day of September, when there were



200 new cases, and almost the same number occurred daily until the 20th, producing as unhappy and disastrous a state of things as that prevailing in the 19th year (1886). It gradually declined, however, towards the end of the month so that on the 29th, the number of new cases had fallen below 100. The total number of cases in Ōsaka during this month was more than 5,600, being more than one-fourth of the total number of cases in the whole country during the same month.

In the *ken* of Hyōgo, Wakayama, Kyōto, and Nara, in the vicinity of the city of Ōsaka; in Tōkyō, Kanagawa, Chiba, and Shizuoka, in the eastern part of the main island; in Yamaguchi and Hiroshima in Chūgoku; and in Nagasaki, Fukuoka, Saga, Kumamoto, and Ōita, in Kyūshū, where the disease had prevailed from the previous month, the epidemic remained unchanged in some places, while in others it increased in power and violence. In the eastern part of the main island, the disease newly invaded the *ken* of Tochiki, Gumma, and Yamanashi, and among the *ken* west of Ōsaka, it visited Tokushima in the beginning of September, and in the middle of the month it extended to Okayama, finally reaching

Shimane, which is a prefecture on the San-in-dō. Thus, the disease spread over the whole country, except the north eastern part of the main island. The total number of cases during this month was more than 21,400, and the number of deaths was about 17,000.

In the month of October, the epidemic became violent in the *ken* of Tokushima, Kagawa, Ehime, and Okayama, on the opposite shores of the Inland Sea, it being specially malignant in the *ken* of Kagawa. In other parts of the country, however, it generally declined, and in the middle of the month, the number of new cases in the whole country had fallen below 200. In the latter part of the month, there was a fresh epidemic in Miyazaki, a prefecture in Kyūshū, but, being very slight, it began to decrease on the 26th and 27th, and the epidemic finally ceased over the whole country in November, when only some scattered cases were to be found.

It will be seen, from what has been said above, that the epidemic of this year began at Nagasaki, whence the disease extended to the *ken* in Kyūshū, and to the *ken* of Yamaguchi, at the same time. In the eastern part of the main island, it began from the *ken* of Kana-

gawa, and visited Tōkyō, Chiba, and the neighbouring *ken*. The *ken* in the western part of the main island were invaded by the epidemic from the city of Ōsaka; the *ken* of Chūgoku and Shikoku were invaded from Kyūshū in the west, and from Ōsaka in the east; in this way, the great epidemic finally spread throughout the whole country. A brief description of the epidemic, as it existed in each *ken* or prefecture, will be given in the following pages.

### NAGASAKI *KEN*.

Nagasaki *ken* was the starting point of the epidemic which spread over the whole country in this year, and the disease first invaded the ports of Nagasaki and Kuchi-no-tsu, whither it was brought from China by means of vessels, Japanese and foreign, having communication with Shanghai, Hongkong, etc. The first cases appeared on the 27th of June, two at Jūzenji-go in the city of Nagasaki, and one at Inasa-gō, in the village of Fuchi, Nishi-Sonoki *gun*. At Kuchi-no-tsu, the cases appeared independently on the 5th of July. The cases at both ports were of the same malignant type,

and the disease immediately spread and became epidemic. The course of its propagation can not be traced accurately. Previous to the outbreak at Kuchi-no-tsu, one case occurred in Higashi-Sonoki *gun*, on the 2nd of July, and one in the island of Iki, on the 4th. On the 6th, there were 10 cases in the city of Nagasaki, 12 cases in Nishi-Sonoki *gun*, 5 cases in Minami-takaku *gun*, 2 cases in Kitataku *gun* and 1 case in Minami-matsu-ura *gun*, thus producing 30 cases in one day. In the space of only ten days from the outbreak, the total number of cases reached 142, of which 83 cases proved fatal. The daily number of new cases fluctuated between 30 and 40, but on the 21st, the number suddenly rose to 94, and on the 22nd there were 52 fatal cases. After that, the epidemic became increasingly violent, there being 40 to 80 new cases every day, while the number of deaths never fell below 30. Upon one day, the number of deaths reached 58. Although there was a difference in the severity of the disease in each *gun*, the epidemic continued in the *ken* at large until the beginning of September, began to decline in the middle of that month, and finally ceased in October.

CITY OF NAGASAKI.—The epidemic began on the 27th of June, and continued till towards the end of August, being most violent in the middle and towards the end of that month. In the beginning of September, the epidemic suddenly began to decline, and finally ceased. The place where it was most violent in the city was Jūzenji-gō, which produced the first cases, the number of cases in this locality being 78 and the number of deaths 59.

NISHI-SONOKI *Gun*.—The epidemic commenced on the 27th of June, and prevailed concurrently with the epidemic in the city of Nagasaki, but here it was most severe towards the end of July, 68 new cases occurring in a single day. It continued for some time afterwards, but ceased at the same time with the epidemic in the city of Nagasaki. The places where it was most severe in this *gun* were Ōura-gō, Tameishi, and Mogi. Ōura-gō had 174 cases, and Tameishi 131 cases, the greatest number of new cases in one day at the latter place being 22. Mogi is a small village of fishermen in the neighbourhood of the city of Nagasaki, and there the epidemic was very powerful in the middle of August, when for several days, the daily number of new cases



was over 12. It soon began to decline, but again became powerful towards the end of September, when the epidemic was very malignant, and made dreadful ravages, finally declining in the month of October. The total number of cases was 137. The violent epidemic towards the end of July was due to the great epidemic which suddenly took place in the three villages of Doi-no-kubi, Tameishi, and Kawara. The cause of the great epidemic just mentioned was the eating of two sharks, which were brought by the fishermen of Tameishi from the bay of Amakusa, and which, after being boiled when just about to become putrid, were sold to the people of the above named three villages, a number of cases of a most malignant form of disease appearing at the same time in the three villages. There being doubts as to whether the people had not been poisoned by the shark, an examination was made of the discharged matter, which, it is said, was found to contain a great number of cholera bacilli.

HIGASHI-SONOKI *Gun*.—In this *gun*, there were only 28 cases, in the village of Saseho.

KITA-TAKAKU *Gun*.—There were 36 cases, in the village of Ono only.

MINAMI-TAKAKU *Gun*.—After the disease had been brought from foreign countries to the port of Kuchi-no-tsu, on the 5th of July, and had extended from the port of Nagasaki to the village of Chijiwa, on the 10th, new cases continually appeared in these two places, whence the disease spread to other villages, and, after becoming epidemic from the latter part of the month, finally ceased in the beginning of September. The number of cases at Kuchi-no-tsu was 147, and the number of deaths 95. At Chijiwa, the disease was most powerful in the beginning of August, producing a painful state of things, but towards the end of the month the disease disappeared. The number of cases was 166.

KITA-MATSU-URA *Gun*.—The epidemic was at Ōshima and also at Fuku-e in Minami-matsu-ura *gun*. The number of cases in each village was about one-half of the number of cases appearing in the *gun* to which it belonged.

ISHIDA *Gun*, IN THE ISLAND OF IKI.—There were more than 20 cases at Kashi-i and Katsumoto-ura but they could not be called epidemic.

KAMI AND SHIMO-AGATA *Gun*, IN THE ISLAND OF TSUSHIMA.—There was no large epidemic,

but cases appeared on the 31st of July and continued to appear until the latter part of October. Izu-no-hara had the largest number of cases.

### SAGA KEN.

The first case of the cholera epidemic appeared on the 2nd of July, at Yobuko, in Higashi-matsu-ura *gun*, after which there were two or three cases every day, but the disease did not become epidemic. Towards the end of the month, the epidemic commenced in Saga *gun*, and at Imari, in Nishi-matsu-ura *gun*, whence the disease spread over the whole *ken* in the month of August. When it began to prevail in the two *gun* of Ogi and Higashi-matsu-ura, it also increased in severity in the two *gun* of Saga and Kanzaki, and the daily number of cases fluctuated between 30 and 40. In the middle of September, however, the epidemic suddenly began to decline, and although fresh cases continued to appear daily, they were only scattered cases of disease in various localities.

SAGA *Gun*.—The first case appeared on the 12th of July, another appeared on the 19th,

and four cases on the 25th, at the village of Ni-kita. After that, the disease became somewhat epidemic, new cases appearing every day. The disease increased in severity for a time in the beginning of September, but gradually ceased towards the end of the month. The place where it was most powerful was Ni-kita.

KANZAKI *Gun.*—The disease first appeared at Hasu-ike on the 22nd of July, and from the latter part of August new cases occurred on successive days. The disease became epidemic for a time, but ceased in the beginning of September. The places where it was somewhat severe were the two villages of Hasu-ike and Chitose, in which the water of the Chitose river is used for drinking purposes.

OGI *Gun.*—The disease was brought into Nassho, in the village of Higashi-taku, on the 7th of August, by a sailor from Nagasaki. It was of malignant character, and soon became epidemic. The epidemic was most violent towards the end of August and the beginning of September, but suddenly began to decline, and finally ceased on the 18th of September. It was most severe at Iwakura, in the village of Iwamatsu, where the disease was so violent after the 22nd of August, that

sometimes over 20 new cases appeared in a single day. The number of cases in this village was 156, which was three-fifths of the number of cases in the whole *gun*. This village is situated in a high, mountainous region, where the land is dry and the air clear, and a stream of water flows through it.

HIGASHI-MATSU-URA *Gun*. — The disease broke out on the 4th of July, in the harbour of Yobuko, whence it spread to various villages. It became epidemic from the 24th of August, when cases again appeared at Yobuko. It was most violent in the beginning of September, declined for a time towards the end of the month, showed a tendency to prevail again in the beginning of October, but only for a short time, and at last disappeared. The place where it was most powerful in this *gun* was Nagoya, which had 71 cases.

NISHI-MATSU-URA *Gun*. — The disease appeared on the 12th of July, at Naru-ishi, in Nishi-yamashiro, and became epidemic at Imari from the middle of July, but soon ceased without making any serious ravages.



## KUMAMOTO *KEN*.

The first case of cholera epidemic appeared on the 5th of July, at On-no-ike, in Amakusa *gun*, after which, cases occurred in the three *gun* of Ashikita, Uto, and Akita, and in the city of Kumamoto. Cases began to appear in the two *gun* of Tamana and Yatsushiro in August, and in Kōshi *gun* in September, but excepting Amakusa *gun*, Akita *gun*, and the city of Kumamoto, there was no epidemic, each *gun* having only scattered cases. In Amakusa *gun*, the first case was followed by others, and there the disease became epidemic from the middle of July, when the *gun* of Ashikita began to have 3 or 4 cases every day, so that the daily number of new cases in the whole *ken* or prefecture rose above 10. Towards the beginning of August, cases had appeared in the *gun* of Akita, Takuma, Yatsushiro, and Tamana, as well as in the city of Kumamoto; and the daily number of cases in the whole *ken* fluctuated between 10 and 20. This was the condition of things until towards the end of September, when the disease showed signs of declining. The epidemic began to regain its former power in the latter part of

November, but there were only two days upon which more than 10 cases appeared.

CITY OF KUMAMOTO.—The disease broke out on the 12th of July, and became epidemic from the middle of August, but soon ceased towards the end of the month. The epidemic broke out again in the latter part of November, when it was somewhat more powerful as compared with the former epidemic, but it ceased without making serious ravages.

AKITA *Gun.*—The first case occurred on the 24th of July, at the village of Kasuga. The new cases each day were very few in number, but they continually appeared till the latter part of October. Towards the end of November, the epidemic regained its power at the same time as in the city of Kumamoto, but this was only for a short time.

UTO *Gun.*—The disease broke out on the 22nd of July, at the village of Ōtake, and one or two new cases appeared daily from the beginning of August. Ceasing for a time, cases again appeared in the beginning of September, but there was no day which produced 10 new cases. The disease regained its power once more in November, at the same time as in the city of Kumamoto, and the *gun*

of Akita, but did not become epidemic, there being only a little more than 10 cases.

TAMANA *Gun*.—The first case appeared on the 15th of August, and one or two new cases occurred daily until the beginning of September, after which there were only scattered cases every few days.

KōSHI *Gun*.—There were 52 cases during the month of September, but the daily number of new cases was only 5 or 6.

YATSUSHIRO *Gun*.—Four new cases suddenly appeared at the town of Yatsushiro, and at the village of Kōda, on the 4th of August, after which fresh cases appeared daily. After declining for a time, the disease regained power in the latter part of September, but ceased after a time.

ASHIKITA *Gun*.—The first case occurred on the 10th of July, at the village of Minamata, and from the 16th, new cases appeared, but suddenly ceased towards the month of August. Fresh cases appeared subsequently, but they were few in number.

AMAKUSA *Gun*.—This *gun* produced the largest number of cases among the *gun* of Kumamoto *ken*, having about one third of the number of cases in the whole *ken*. The

disease first appeared on the 5th of July, at On-no-ike, which was the beginning of the epidemic in this *ken*. There were 15 cases on the 15th and 16th of the same month, and cases continually appeared until towards the end of October; but the disease is said to have been epidemic only during the months of July and August.

### FUKUOKA *KEN*.

The cholera epidemic of Nagasaki invaded Wakatsu, in Mitsuma *gun*, on the 8th of July, after which Ashiya in Onga *gun*, Hakata in the city of Fukuoka, and Ōmuta, in Mi-ike *gun*, were soon invaded by the disease, both from Nagasaki and from Kuchi-no-tsu, while Kokura and Moji-ga-seki, in Kiku *gun*, and Yoshitomi, in Kōge *gun*, all of which are on the opposite shore of Yamaguchi *ken*, were invaded by the disease from Akama-ga-seki, a port on the coast of that *ken*. From these places the disease finally spread over the whole *ken*, and became epidemic towards the end of July, when it began to take a violent form, so that the number of cases reached over 60 in a few days, and on the 3rd of August, 78 new

cases appeared in a single day. The epidemic was most powerful in the two *gun* of Onga and Kurate, while in the city of Fukuoka and the *gun* of Mitsuma, Yamato, Mi-ike, Kiku, and Kamige, it was sometimes violent and sometimes declining. Thus, the great epidemic continued until the beginning of September, when it began gradually to decline, still producing, however, 20 or 30 new cases every day. From the middle of October, it once more declined, finally ceasing towards the end of that month.

CITY OF FUKUOKA.—The disease appeared on the 17th of July, at Kawabata-machi, Hakata, and on the 20th, at Ōhama-machi, Nichōme, Hakata. It soon spread, increasing daily in severity. The epidemic was most violent towards the end of August, after which it gradually declined and finally ceased in the beginning of October; it was most severe at Ōhama-machi, Nichōme.

KASUYA *Gun*.—There was no epidemic in this *gun*, the cases of disease being scattered. The disease was similar in course to that in the city of Fukuoka.

MUNAKATA *Gun*.—Here, the disease came from the village of Ashiya in Onga *gun*, and



appeared, on the 23rd of July, at Tsuyazaki, and at Misaki on the following day. From that time, the disease gradually became epidemic, following the same course as at the city of Fukuoka. The centre of the epidemic was at Kane-ga-saki, in Misaki, and at Oshima. The disease broke out at Kane-ga-saki, on the 3rd of August, and on the 22nd disappeared for a time. It broke out again on the 17th of September, taking a more violent form than before, but ceased towards the end of the month. Oshima is a small island in the sea of Genkai, 6 nautical miles from the shore. Between the 24th of August and the 8th of September, there were 36 cases in the whole island, which has 314 houses. The inhabitants of that island are so afraid of the cholera epidemic that if any case of disease appears, they immediately leave the island, without applying any measures of disinfection. But the number of deaths was only 18, which shows that the disease was not violent.

ONGA *Gun*.—After the occurrence of two cases on the 17th of July in one house at Ashiya, the disease quickly spread over the whole *gun*, and during the latter part of August and the beginning of September, each

week brought forth more than 100 new cases. Declining for a time, the epidemic again became severe towards the end of September, and continued for more than a month, until the beginning of November, when it finally disappeared. The place where the epidemic was most violent was the two villages of Ashiya and Yamaga, which are situated on opposite sides of the Onga river, and where fishermen and sailors are living mingled with shopkeepers. The cause of the first two cases, which suddenly appeared at a doctor's house in Ashiya, on the 17th of July, is not accurately known, but it is supposed that the disease was brought by a sailor, who, when returning from Nagasaki, suffered from diarrhœa, and came to the house to be examined. The cases were of so malignant a type, that one of them proved fatal soon after attack, and the disease immediately spread over the whole place, producing more than 100 new cases in a few days. The epidemic began to decline from the beginning of September, but broke out again, when it repeated its former ravages, finally ceasing towards the end of October. Among the *gun* of this *ken*, this *gun* had the greatest number of cases, which

was due to the great epidemic at the two villages of Ashiya and Yamaga.

KURATE *Gun*.—The beginning of the epidemic was in Katsuno, which lies along the Onga river, above Ashiya, in Onga *gun*. Between the two places, boats conveying coal go up and down every morning and evening, by means of which the disease from Ashiya was brought into this *gun*. The course of the epidemic of this *gun* was similar to that of Onga *gun*. The places where it was most violent were the two villages of U-eki and Koyano-se, which are respectively situated on the east and west side of the Kama river, in the same relative position to each other as Ashiya and Yamaga. Both villages suffered from the epidemic from the 24th of July, it becoming daily more severe, and following the same course as in Ashiya.

KAMA *Gun*.—The disease appeared on the 20th of July, and until the beginning of August the cases were only among sailors engaged in carrying coal. It afterwards appeared among the coal miners, but the number of cases in the whole *gun* was not more than 60.

HONAMI *Gun*.—There was no serious epi-

demic, and the disease was similar in course to that in the two *gun* of Onga and Kurate.

*MITSUMA Gun.*—The first cases appeared on the 8th and 9th of July, at Ōkawa-machi, Wakatsu, among sailors from Nagasaki; the disease subsequently spread to other places, and was most violent in the beginning of August. The epidemic continued for two months, until the end of September, when it began to decline, finally disappearing in the beginning of October. It was particularly violent at Mukai-jima in Ōkawa, and Enokizu, where there are many marshes and ponds, and the drinking water is of bad quality. Most of the inhabitants drink the water of the Wakatsu river, and it is said that most of the sufferers were found among these persons.

*YAMATO Gun.*—Here, the disease seems to have come from Ōmuta, in Mi-ike *gun*, and the port of Shimabara in Nagasaki *ken*. The first case appeared on the 10th of July, the disease gradually spreading to other places. The epidemic was most powerful from the latter part of August to the beginning of September, finally ceasing towards the end of October. It was most violent in the two villages of Okino-hata and Ari-ake.

MI-IKE *Gun*.—The disease was introduced, on the 21st of July, into Ōmuta, from Kuchino-tsu. In this place is the famous Mi-ike coal mine, and most of the inhabitants are engaged in the work of transporting the coal. The disease became epidemic on its first entry, but, fortunately, it did not become serious. Ceasing for a time in the beginning of September, it appeared again in the latter part of the month, and showed a disposition to prevail again in the beginning of October, but the daily number of new cases was only 2 or 3, and it finally ceased in the beginning of November.

KIKU *Gun*.—The disease was introduced into the town of Kokura, on the 28th of July, from Akama-ga-seki in Yamaguchi *ken*, and again in the beginning of August, from Onga *gun*. It soon spread and became epidemic, and gradually increased in power. It was most violent between the latter part of August and the beginning of September, and ceased in the middle of October. This *gun* was second in the order of severity of the disease among the *gun* of Fukuoka *ken*. The disease was most violent at Kokura, where it prevailed throughout the whole town. This town is



situated on the opposite shore to Akama-ga-seki, where the disease was prevailing. The construction of the Kyūshū railway was going on at this time, and the boats engaged in the work of carrying earth and gravel had no small effect in propagating the disease.

TAGAWA *Gun*.—Here the disease came from Ashiya in Onga *gun*. It was similar in course to that in Onga *gun*, but it did not become epidemic on a large scale. Most of the sufferers were coal miners.

KōGE *Gun*.—The first case appeared on the 29th of July, at Higashi-Yoshitomi, and the disease extended to Takahama in the beginning of August, when it soon became epidemic. Declining a little for a time, it again became severe, and continued till the beginning of October. It was most severe at Takahama, to which followed U-no-shima, both of which places were invaded from Akama-ga-seki.

### YAMAGUCHI *KEN*.

As this *ken* includes the port of Akama-ga-seki, which has intimate connections with Nagasaki and Fukuoka, it was early invaded by the cholera epidemic, which appeared on

the 9th of July. The disease began to prevail in the latter part of the month, in the city of Akama-ga-seki, and in Toyama *gun*, both of which were in direct communication with the infected localities, and it spread over nearly the whole of the *ken* in the beginning of August. It increased in violence daily, and towards the end of August it was equally severe in the city of Akama-ga-seki and in the *gun* of Toyora, Asa, and Abu, the daily number of new cases reaching 54. Between the 1st of August and the middle of September, the disease daily produced 20 to 50 new cases, and although the number of new cases gradually decreased from the latter part of September, the epidemic continued till the middle of October, finally ceasing in the beginning of November.

CITY OF AKAMA-GA-SEKI.—Two cases occurred on the 9th of July, on board a steamer from Nagasaki, and one case on the 17th, on board a small vessel of Japanese build from Ashiya, in Fukuoka *ken*. The first case on shore occurred at Tanaka, on the 20th, which was followed by 2 or 3 other cases. From the 25th, 2 or 3 new cases occurred daily, and, the disease gradually spreading, a great epidemic

was the result. In addition, vessels coming from the infected regions continually brought cases of cholera, and deaths from it. Thus the disease committed ravages on both land and sea, resulting in a very unhappy condition of things. The disease was most violent during the month of August, and began to decline in the beginning of September; it showed a disposition to prevail again in the middle of October, but after a time disappeared.

TOYORA *Gun*.—The disease broke out on the 23rd of July, at Yoshimi-shimo, and immediately spread and became epidemic. An independent case appeared on the 2nd of August, at Fuku-ura in Hikoshima, when the disease showed a tendency to extend, and it subsequently spread to other places. Declining, for a time, in the beginning of September, it again prevailed, towards the end of the month, till the beginning of October, disappearing in the middle of that month. The epidemic was most violent in this *gun* at Yoshimi-shimo, Nagatagō Kokushi, and Hikoshima, all of which are villages on the sea-coast, inhabited by fishermen. Fuku-ura, which is a port of Hikoshima, and where the disease raged violently, is situated at the entrance to the port of Akama-ga-seki,

where vessels of every description are constantly going in and out.

*ASA Gun.*—The first cases appeared on the 21st of July, at Ube, another occurring at Su-e on the 21st. After that, the disease gradually spread and became epidemic, remaining in the same condition from the beginning of August till the middle of September, when it finally disappeared. The epidemic was worst at Habu and Funaki, where the disease was violent and malignant.

*ABU Gun.*—The first cases appeared on the 30th of July, on board a vessel from Ashiya, in Fukuoka *ken*, which entered the port of Tsuru-e-ura, in Hagi, and it was followed by 2 or 3 cases while the vessel was in the port. After the occurrence of a case on the 15th of August, at Hamasaki-machi, in Hagi, the disease soon became epidemic and violent, and gradually infected the whole town of Hagi, whence it spread to the surrounding villages. The epidemic was most violent for two weeks about the latter part of August and the beginning of September, after which it began to gradually decline, finally disappearing in the beginning of October. The town of Hagi was the former capital of the province of Nagato,

and although not so busy a town as Akamaga-seki, it is the most populous city in this *ken*.

YOSHIKI *Gun*.—The first case occurred on the 21st of July, at Akiho. Another case which appeared on the 3rd of August, at Nishi-kiwa was very violent, but the disease disappeared after producing only a few cases.

SABA *Gun*.—The disease first appeared on the 22nd of August, at Nishino-ura. It was violent for a time, but did not become serious, while in other parts, there were only scattered cases.

KUMAGE *Gun*.—The first case appeared on the 27th of July, at Kami-no-seki, whence the disease extended to Murozumi on the opposite shore, and finally to Hira-o, Murozumi, and Ushima. The epidemic continued from the middle part of August till the beginning of September, but the daily number of new cases was not more than 8, even when it was most powerful, the disease taking a very mild form.

### KAGOSHIMA *KEN*.

In this *ken*, the cholera epidemic appeared on the 17th of July, in Izumi *gun*, and soon



became epidemic. But the disease was very inert in its action, there being only one day when the daily number of new cases rose above 10. New cases, however, continued to appear till the latter part of September.

*IZUMI Gun.*—The disease broke out on the 17th of July, at Shimo-chishiki Nago in the village of Naka-izumi, and immediately became epidemic, new cases appearing daily. The epidemic declined for a time in the middle part of August, broke out again in the latter part of September, then ceased in a few days. The greatest number of cases occurred at Shimo-chishiki, in the village of Naka-izumi, which produced the first case.

*HIOKI Gun.*—The disease appeared on the 29th of July, at Kushikino. It did not become epidemic, but 2 or 3 new cases continued to appear till the latter part of September, when the disease disappeared.

### KANAGAWA *KEN*.

In this *ken*, there were two cases of cholera on the 13th and 16th of July, in the city of Yokohama. Another case occurred on the 18th, on board the Turkish man-of-war which

was at anchor in the harbour of Yokohama, and on the 20th, there were some fresh cases on board the same vessel. After this, the disease became epidemic on shore, and, gradually increasing in severity, finally invaded various *gun*. As soon as the disease became epidemic in the city of Yokohama, in the beginning of August, the two *gun* of Kuragi and Tachibana began to have the epidemic, to which followed Miura *gun*. On the 13th, the number of new cases was 37, and the disease in various places daily increased in severity, so that in the beginning of September, when the epidemic was most powerful in the town of Odawara, the daily number of new cases in the whole *ken* reached the sum of 88. When the disease began to decline a little in the town of Odawara, it became powerful in Mi-ura *gun*, while it was declining in the city of Yokohama and in the *gun* of Kuragi and Tachibana; but the epidemic continued till the latter part of September, when it began to decline, and ceased in the middle of October.

CITY OF YOKOHAMA.—One case appeared on the 13th of July, at Ono-e-machi Shichō-me, and another on the 16th, at Uchida-machi Rokuchō-me. On the 18th, a case occurred

on board the Turkish man-of-war, which was followed by some more cases on the 20th. Various cases occurred, subsequently, in the city, where the disease became epidemic in the beginning of August, and soon spread over the whole of Yokohama. The epidemic was most violent during the latter part of August and the beginning of September. It began to decline from the middle of September, but continued till the month of October, when it finally disappeared. The cases which occurred on the 13th and 16th of July in the city of Yokohama, showed no disposition to spread, whereas successive cases appeared after the disease had broke out on board the Turkish man-of-war on the 18th, and a person who was attacked by the disease on the 30th of July, at a lodging house in Minato-machi, was suspected of having had communication with the same vessel. As, furthermore, this vessel in coming to Japan called at infected ports of India and China, the origin of the disease in the city of Yokohama may be supposed to have come with the Turkish man-of-war.

KURAGI *Gun*.—The first case appeared on the 2nd of August, at Hon-moku, near the city of Yokohama, the disease prevailing here at

the same time as in the city of Yokohama. The epidemic was most severe at the village of Naka, where the number of cases was 172 in a single village.

TACHIBANA *Gun.*—The disease broke out on the 3rd of August, at the town of Kanagawa, and it prevailed here at the same time as in the city of Yokohama, as in the case of Kuragi *gun*. The disease became epidemic only at Kanagawa, where the number of cases was 130 in all, whereas in other places there were only scattered cases.

MIURA *Gun.*—One case appeared on the 5th of August at Misaki; one on the 10th at Yokosuka; and one more, on the 15th, at Uraga; each of these spread the disease in its own town, whence it extended to various villages. The epidemic began in this *gun* a little later than in Yokohama, and it was most severe in the beginning and middle of September. The greatest number of cases was 81 at Uraga, next came Yokosuka, with 63 cases, and next Misaki, with 54 cases.

ASHIGARA-SHIMO *Gun.*—On the 23rd of August, the disease appeared at Kazamatsuri, in Ōkubo, and it was soon transmitted to the town of Odawara, through a conduit or by some

other means. It finally became epidemic in that town, and from that town spread to various other towns and villages. The epidemic was most violent during one week at the end of August and beginning of September, soon after which it disappeared. The total number of cases in the town of Odawara was 156, while other places had only scattered cases.

### TŌKYŌ *FU*.

In Tōkyō *Fu*, the first case of cholera appeared on the 23rd of July, at Kobiki-chō Itchōme, in Kyōbashi *ku* (city district). The next appeared on the 6th of August, at Minami-konya-chō, in the same *ku*, and was soon followed by 31 fresh cases in the same *chō* or street. The disease then spread over Yumi-chō, and Echizenbori, in Kyōbashi *ku*, Sakuma-chō in Shiba *ku*, Kamejima-chō, in Nihonbashi *ku*, Ta-machi in Asakusa *ku*, Komume in Honjo *ku*, and Okudo in Minami-katsushika *gun*, this being the beginning of the epidemic in Tōkyō *Fu*. For about two weeks, or till the 21st or 22nd of August, a dozen fresh cases occurred daily, but the condition of things as yet was not alarming. From the



23rd, however, the disease suddenly increased in violence, and day by day became increasingly severe. On the 24th of September, the number of new cases was 148 in a single day, the epidemic being most powerful during one week of which that day was the climax. But the daily number of new cases began to decrease from October, and the disease finally ceased in the month of November.

Of the *gun* and *ku*, the epidemic was most violent in Fukagawa *ku*, to which followed Kanda *ku*, Kyōbashi *ku*, and Nihonbashi *ku*. Of limited localities, the largest number of cases was 38, at the asylum in Honjo *ku*, and next was the Dōtei female school at Shinsaka-e-chō in Kyōbashi *ku*, with 23 cases. Each of the following places had 11 to 15 cases, viz., No. 1 Izumi-chō in Kanda *ku*; No. 12 Takechō in Shitaya *ku*; No. 1 Kakigara-chō Nichō-me, in Nihonbashi *ku*; No. 1 Mitoshiro-chō Nichō-me in Kanda *ku*; No. 37 Midori-chō Gochō-me, in Honjo *ku*; No. 7 Senju Gochō-me, and No. 7 Chō-enji-tani-machi, in Ichigaya. The disease was propagated by means of conduits, and the epidemic was most progressive during the rainy season, when the water was generally dirty.

## ŌITA KEN.

Among the *ken* or prefectures in Kyūshū, Ōita was the last *ken* to be affected by the epidemic, which fact may be attributable to the natural condition of its land surface. The disease seems to have come from Yamaguchi *ken*, and it began to prevail from the 3rd of August, when a case appeared at the town of Nakatsu. While it was prevailing at Nakatsu, the *gun* of Usa, Nishi-kunisaki, Hayami, and Higashi-kunisaki began to show cases, so that the daily number of new cases rose above 10 towards the end of August. In the beginning of September, the disease prevailed all over the *ken*, and the daily number of new cases fluctuated between 20 and 30. Towards the end of the month, the disease began to gradually decline, and finally disappeared in October, although there was some sign of recurrence in the beginning of that month, when the disease was prevailing in Kitamabe *gun*.

NISHI-KUNISAKI *Gun*.—The first case occurred on the 16th of July, at Takata, and it was followed by one or two other cases, but

the disease did not take an epidemic form until the middle of August. The epidemic did not, however, become serious, the daily number of new cases being less than 10. The greatest number of cases was found at the two towns of Takata and Tamatsu.

HAYAMI *Gun*.—There were only a few cases during six weeks following the appearance of the first case, on the 7th of July, and the disease did not become epidemic till the 21st of August, when three fresh cases suddenly appeared. But it was not violent, the daily number never exceeding 10, as in the preceding *gun*, and the disease almost disappeared towards the end of September. The epidemic was worst at Hama-waki, in Beppu, where there are mineral springs.

KITA-AMABE *Gun*.—The first case appeared on the 10th of August, at Yo-ura, in the village of Yohodo, and from the 21st, fresh cases began to appear continually. Towards the end of the month, the daily number reached above 10, and the same condition continued during the month of September, but the disease ceased towards the end of October. The epidemic was worst in this *gun*, the number of cases being about one-third of the num-

ber in the whole *ken*. The places which had the largest number of cases were Usuki, Yohodo, and Amabe. At the town of Usuki, the epidemic was most violent in the beginning and middle of September; at Yohodo, the second case appeared on the 27th of August, and the disease soon spread and became violent; and at Amabe, the epidemic appeared also on the 27th of August.

MINAMI-AMABE *Gun*.—The disease broke out on the 26th of August, at Ō-nyū-jima, and soon became epidemic, but ceased in the beginning of September. There was some sign of recurrence towards the end of October, but it soon disappeared. Ō-nyū-jima is a small island, and the greatest number of cases was at Arajiro-ura in that island, where the disease became epidemic immediately after the appearance of the first case. A tendency to recurrence, towards the end of October, was due to the sudden outbreak of the disease in the village of Kami-katata.

SHIMOGE *Gun*.—The disease broke out on the 3rd of August at Nakatsu, and immediately became epidemic, new cases occurring continually. Although it declined a little in the beginning of September, a number of new

cases occurred daily till towards the end of October, when the disease finally disappeared. At Nakatsu, the disease was so malignant that more than 10 persons were attacked in three days. After more than twelve days, it declined for a time, but, increasing again, it finally spread over the whole town. At the village of Ō-ye, the disease began to prevail from the beginning of September.

USA Gun.—The disease prevailed at the village of Nishi-maki in the middle of August, and for a time had some power, but it finally ceased without having become serious.

### HYŌGO KEN.

This *ken* was invaded by the disease from Kyūshū and Chūgoku in the west, and from Ōsaka in the east. The first case appeared on the 31st of July, on board the *Meiji-maru*, a steamer belonging to the Department of Communications, which came to the port of Kōbe after touching at the ports of Kyūshū and Chūgoku. The disease was subsequently introduced into various parts from Ōsaka and Fukuoka *ken*. The disease, which broke out on the 4th of August, at the village of Ama-



ga-saki, in Kawabe *gun*, soon became epidemic, and was very malignant in its character. Next it began to prevail in the city of Kōbe, then in Muko *gun*, and it finally spread over various *gun* along the coast, continually increasing in severity. It became specially powerful from the middle of September, when the daily number of new cases increased to 50, 60, and 80, and on the 21st, there were 98 new cases; it continued to be violent until the middle of October, when it began to gradually decline. In the beginning of November, there were only scattered cases in the various *gun*.

CITY OF KOBE.—After the appearance of a case, on the 31st of July, on board the *Meiji-maru*, a steamer belonging to the Department of Communications, which was at anchor in the harbour of Kōbe, the disease was introduced from Kyūshū and Ōsaka. It began to prevail from the middle of August, and gradually increased in severity, being extraordinarily malignant during September, this malignancy being kept up until towards the end of October, when the disease finally declined.

KAWABE *Gun*.—This *gun* was behind the city of Kōbe in having the first case, but the

case which appeared on the 4th of August at Ama-ga-saki was so malignant, that it was quickly followed by 26 fresh cases in one week. The epidemic began here earlier than in the city of Kōbe, and it was most violent during the latter part of August and the beginning of September.

MUKO *Gun*.—Here, the disease began to prevail after it had attacked Kawabe *gun*, whence the first case seems to have come. The epidemic was most violent at Ōshō and Toi-shin-den, and from these places it spread over the whole *gun*.

UHARA *Gun*.—This *gun* lies between the city of Kōbe and the *gun* of Muko, and the disease was introduced from both places by means of the railway. The epidemic was powerful at Mikage, but in other places the cases were sporadic.

YATABE *Gun*.—The disease broke out on the 25th of August, at the village of Nagata. There was an epidemic at Hayashida, but there were only sporadic cases in other places.

SHIKITŌ *Gun*.—The first case appeared on the 13th of August, at the town of Shikama, which was followed by several cases from Ōsaka, but the epidemic did not commence

till the middle of September, when the disease suddenly increased in severity, finally extending to Iye-shima, and continuing to prevail till the middle of October. The epidemic was most powerful at Meka and Iye-shima. Iye-shima is a small island which has direct communication with the town of Shikama, and Meka is a village in a low, wet region; it is said that this village was inundated by an overflow of the Anari river during the summer of this year.

AKASHI *Gun.*—The disease broke out on the 21st of August, at Taruya, and new cases continually appeared during the space of six weeks from the beginning of September till the middle of October. The epidemic was most powerful at Ōkura-tani in the town of Akashi.

KAKO *Gun.*—The first cases appeared on the 29th of July, at the village of Futami, but the daily appearance of cases commenced after the beginning of September. The course of the disease here was similar to that in Akashi *gun.*

IN-NAMI *Gun.*—There were signs of the epidemic from the latter part of September, but excepting at the village of Ōshio, only scattered cases occurred.

IT-TŌ *Gun.*—The disease broke out on the

16th of August at Aboshi, and it gradually spread to other towns and villages, being most violent in the middle of September; the greatest number of cases was at Aboshi.

· *Is-SAI Gun*.—The disease commenced on the 5th of September, at Murotsu, and its course was similar to that in *It-tō gun*. The largest number of cases was at Murotsu.

*AKŌ Gun*.—The first case appeared on the 30th of August, at Kami-Kōri, but the disease prevailed in the latter part of September, and was most powerful at Funasaka, where the coolies engaged in the construction of the Sanyō railway were at work. Nearly all of the sufferers were coolies, one or two cases only occurring among the ordinary inhabitants.

*TSUNA Gun*.—The disease broke out on the 10th of August, at Iwaya, and several cases subsequently appeared in various parts of the *gun*. The epidemic commenced in the middle of September, after which it became very violent, and continued till the latter part of October, when it began to decline. The epidemic was most powerful at the towns of Yura and Sumoto. The number of cases in the whole *gun* was 500, the highest next to that of the city of Kōbe, none of the other *gun*

having such a number of cases.

MIHARA *Gun*.—The disease was brought, on the 17th of September, from Tsuna *gun* to the port of Fukura, and this became the cause of an epidemic. Its course was similar to that of Tsuna *gun*, and it was most violent at the port of Fukura and at Nushima. Nushima is a small island, the inhabitants of which were having a hard struggle for existence, on account of the bad fishing for successive years, when the disease invaded the island.

### ŌSAKA *FU*.

The epidemic in Ōsaka *Fu* began with a case which appeared on the 11th of August, at Ajikawa-minami-dōri, Kita *ku*, in the city of Ōsaka, and which, being of a very malignant type, soon spread the infection in the neighbouring region, the disease extending to Honden-chō-dōri, Nishi *ku*, and Kujō, Nishinari *gun*. After 5 or 6 days, the disease spread to the villages of Sangen, Namba, Kizu, Kami and Shimo-Fukushima, Sonesaki, and Kitano, in Nishinari *gun*, then invaded Awaza, and Hori-ye, in Nishi *ku*, and finally reached Nago,



Nihonbashi-dōri, in Minami *ku*. In a few days after the outbreak, the disease prevailed all over the city, and on the 21st of August, or ten days after the outbreak, the daily number of new cases reached over 100. After that, the disease invaded Waka-ye *gun* on the one side, and, on the other side, the city of Sakai. From Sakai, it proceeded southward, invading the *gun* of Ōtori, Minami, and Hine, cases occurring in other *gun* at the same time. On the 1st of September, the daily number of new cases reached 200, and the disease increased so much in severity that, on the 12th, the daily number rose to 274. The epidemic was most severe in the city of Ōsaka, and in Higashinari *gun*, Nishinari *gun*, and the city of Sakai, all of which are near the city of Ōsaka. The two *gun* of Hine and Minami had not a few cases, but they could not be called epidemic, as compared with the city of Ōsaka. The disease began to decline in the beginning of September, when the daily number fell below 100, after which it gradually decreased to 50 and to 10, and, by the beginning of November, it had almost disappeared.

CITY OF ŌSAKA, HIGASHINARI *Gun* AND NISHINARI *Gun*.—The epidemic started from Aji-

kawa-minami-dōri, Kita *ku*, in the city of Ōsaka, and produced 7,500 cases. It was most powerful between the latter part of August and the latter part of September, when the highest number of new cases in one day was 251. During this period, the conveyance of patients to the hospital was quickly followed by the removal of their dead bodies, and the state of things was unspeakably painful and unhappy.

CITY OF SAKAI.—The disease was introduced from Ōsaka, and it became epidemic from the latter part of August. The epidemic continued until towards the end of October, but the highest number of new cases in one day was only about a dozen.

Sumiyoshi, Sumino-ye, Aryū, and Hirano-go in Sumiyoshi *gun*, lie on the highways to Kishū and Nara; Minato, in Ōtori *gun*, is situated near the city of Sakai; Kishiwada, in Minami *gun*, lies on the highway to Kishū, and Sechigo, in the village of Kishima, in the same *gun*, lies on the Mizuma highway; Kōshi, in Hine *gun*, lies along the Kōshi highway, and has communication with the city of Wakayama. In Kitano-tsuji in the village of Nishikori, in Waka-ye *gun*, which suffered severely on the occasion of the former epidemic, the surface

of the ground is very filthy; Toyonaka, in Teshima *gun*, received the disease directly from the city of Ōsaka; Kuka-shō, Niwakubo, Sangō, Morikuchi, Futa-shima, and Nangō, in Manda *gun*, have frequent communications with the city of Ōsaka. All the foregoing places, owing to the circumstances mentioned, were invaded by the epidemic. In some places, the disease was very malignant, but generally its course was similar to that of the city of Ōsaka.

### KYŌTO *FU*.

In Kyōto *Fu*, the disease began to appear in the city of Kyōto in the beginning of August. Although the cases gradually increased in number, there was no great epidemic, the daily number of new cases in the whole *Fu* being from 10 to 15. In the middle of November, the disease suddenly began to decrease, and in a few days finally disappeared. The greatest number of cases was in Shimokyō *ku*, in the city of Kyōto; at Momokawa in Ōhara, in Otagi *gun*, at Nakagawa, in Kadono *gun*, and at Higashi-kujō, in Ki-i *gun*, but the epidemic did not become serious at any of these places.

## WAKAYAMA KEN.

In this *ken*, the first case appeared on the 15th of July, in *Ama gun*, and scattered cases subsequently appeared in various parts of the *ken*. The disease became epidemic, from the latter part of August, in *Ama gun*, *Higashimuro gun*, and *Nishi-muro gun*, it being most powerful in *Ama gun*. The epidemic subsequently appeared in the city of Wakayama, *Nakusa gun*, and *Naka gun*, and from the middle of September the disease prevailed all over the *ken*. It was specially violent towards the end of September, and continued till the middle of October, when it began to gradually decline, finally ceasing towards the end of that month.

*AMA Gun*.—The first case appeared on the 15th of July, at the village of Kata, but the disease showed no disposition to spread. It began to prevail from the 26th of August, when a case occurred at the village of Waka. After that, cases appeared every day, and, becoming epidemic in the beginning of September, the disease continued till the middle of October, being most severe at Kata, about the end of September.

NISHI-MURO *Gun*.—A case of cholera appeared on the 22nd of August, at Fujibashi, on board a ship which had come from the port of Akama-ga-seki, and the disease remained sometimes increasing and sometimes declining, until the middle of October. It is said that it gained extraordinary power for a time at Fujibashi.

HIGASHI-MURO *Gun*.—The epidemic commenced with a case which appeared on the 24th of August, at Shimosato. The epidemic showed the same degree of severity as in Nishi-muro *gun*, and it was most powerful at Miwasaki.

CITY OF WAKAYAMA.—Sporadic cases began to appear from the 19th of August, and the disease became epidemic from the middle of September. The epidemic here was next to that of Ama *gun* in severity.

NAKUSA *Gun*.—The disease first appeared on the 17th of August, at Nasaki, and its course was similar to that in the city of Wakayama; it was most severe at the village of Kusumi.

NAKA *Gun*.—The epidemic seems to have commenced with a case which occurred on the 8th of September, at the village of Arakawa.



It prevailed in the middle and towards the end of September, and declined in the beginning of October. It was most severe at Iwade.

### NARA *KEN*.

In this *ken*, the disease appeared on the 17th and 20th of August, at Imazumi, in the village of Katsuragi, Katsujō *gun*, and at the town of Nara, being conveyed thither by persons coming from Ōsaka. Scattered cases appeared subsequently, and from the middle of September the disease spread all over the whole *ken*, but ceased towards the end of October. It was powerful for a time at Nara and Kōriyama, in the middle and towards the end of September, and at Daifuku and Sakuroi, in Toichi *gun*, in the beginning and middle of October, but ceased without becoming serious. In other places, there were only scattered cases.

### SHIGA *KEN*.

There was some sign of the epidemic for a time at the town of Ōtsu only, in the middle

of September. All the cases in other places were sporadic, consisting of persons from Ōsaka and other infected localities, and the disease in these places could not be called epidemic.

### KŌCHI KEN.

The disease was first introduced by a steamer which came from Ōsaka to the harbour of Urato. On the 22nd of August, the disease broke out at Tanabeshima, in the village of Ōtsu, Naga-oka *gun*, and soon visited the city of Kōchi, where it became epidemic, finally extending to the *gun* of Tosa, Aki, Akawa, and Taka-oka, in all of which places it prevailed at the same time. It prevailed all over the *ken* in the middle of September, and began to decline in the beginning of October, but continued almost till the end of November, on account of the recurrence of the disease in Aki *gun* and its late occurrence in Hata *gun*.

CITY OF KŌCHI.—On the 26th of August, two cases appeared at Kita-shin-machi, and one case at Nakashima-machi, and the disease soon became epidemic. A case which occurred on the 29th, at Yamadayakoji, in

Nōnin-machi, soon infected persons who used the same well, 21 cases of disease being the result. The disease gradually spread over the city from Nōnin-machi as a centre, disappearing towards the end of September.

TOSA *Gun*.—This *gun* is in the vicinity of the city of Kōchi, and as soon as the disease prevailed in the city it invaded this *gun*, at the beginning of September, and prevailed for a month. The disease was most severe at Inarishinchi, which is near the city of Kōchi.

AKI *Gun*.—The disease first appeared on the 3rd of September, at Ukitsu, in the village of Muroto, becoming epidemic for a time, while in other villages there were also more or less cases. Declining for a time, the disease began to prevail again after the appearance of 4 fresh cases at Ukitsu, on the 2nd of October and, sometimes gaining power and sometimes declining, it continued till the beginning of November, when it finally disappeared. It was most severe at the village of Muroto.

KAGAMI *Gun*.—The first case appeared on the 5th of September, at Kaki-uchi, in the village of Aka-oka, and afterwards there was a small epidemic, but in other places the cases were sporadic.

AKAWA *Gun.*—After a case which appeared on the 31st of August at Nagahama, the disease spread gradually, and from October new cases continued to appear daily, till the middle of November, although the disease could not be called epidemic. The disease was most powerful at the villages of Ino and Mimase.

TAKA-OKA *Gun.*—The disease broke out on the 3rd of September, at the village of Kami-no-ka-ye. The villages of Ukisa and Taka-oka had the epidemic at the same time, and in the beginning of November there was some sign of the epidemic in the town of Hamasaki. In other places, there were only scattered cases.

HATA *Gun.*—The first case appeared in the beginning of November, at Tsukinada, and cases continued to appear in the villages along the shore, making a small epidemic. Previous to this, there were some cases, but they were all sporadic.

## HIROSHIMA *KEN.*

This *ken* is skirted by the sea on one side, and has innumerable small islands scattered along the shore. As there is constant communication with other places by means of ships, the

disease was sometimes brought in from Nagasaki, and sometimes from Fukuoka, but the epidemic was caused by a case from Yamaguchi *ken*. The disease first broke out in the city of Hiroshima, where it threatened to become epidemic towards the end of August, when it appeared in a violent form in the prison. The progress of the disease in the prison was fortunately arrested, but in the city it increased in severity daily, and finally spread over the *gun* of Aki, Sa-eki, Kamo, and Toyoda. By the first of September, the number of new cases had reached 50 in a single day, and from that time the same condition continued till towards the end of September, when the disease began gradually to decline, finally ceasing in the beginning of October.

CITY OF HIROSHIMA.—One or two cases appeared now and then from the end of July, and the disease began to become epidemic from the 20th of August. It gradually gained power from the beginning of September, sometimes producing more than 30 cases in one day, and the epidemic continued till the beginning of October. The disease was most violent in the *machi* or streets of Takajō, Kawara, Kako, and Fukuro. Takajō, a street of con-



siderable extent, is resided in by poor people, and the epidemic there was consequently very severe.

AKI *Gun*.—There had already been scattered cases, and the disease had begun to prevail here, when it became powerful in the city of Hiroshima. A large number of cases occurred at the villages of Ni-o-shima, Kamakari-shima, and Shō-yamada.

SA-EKI *Gun*.—The disease prevailed on a small scale at Hatsuka-ichi and Nomi-shimano-oki, while in other places there were only scattered cases. In the island of Itsukushima there were only 7 cases, and of these 7 cases, none originated on the island, all of them being brought from other localities.

NUMATA *Gun*.—That part of this *gun* which is near the city of Hiroshima had more or less cases, but there was no epidemic.

KAMO *Gun*.—The epidemic in this *gun* had a course similar to that in the city of Hiroshima. The greatest number of cases occurred at the town of Takehara. Takehara has a low-lying situation, and is often inundated by the sea; the inhabitants are engaged in the manufacture of salt.

TOYODA *Gun*.—The disease appeared towards

the end of August, and prevailed at the same time as in the city of Hiroshima. The village of Higashino had more than 20 cases, and there the disease showed a disposition to spread for a time; but in other parts of the *gun* most of the cases were sporadic.

MITSUKI *Gun*, AND NUMAKUMA *Gun*.—There was a small epidemic at Onomichi in the former, and at Tomo in the latter *gun*, but the total number of cases in such *gun* was not more than 50 or 60.

### EHIME *KEN*.

This *ken* was invaded by the disease from Yamaguchi *ken*. After the disease broke out at Higashi-nakashima, in Kazahaya *gun*, on the 3rd of August, there were only scattered occasional cases till towards the end of the month, when the disease began to prevail in Wake *gun*, which was soon followed by the two *gun* of Iyo and Nishi-uwa. When the disease declined in Nishi-uwa *gun*, in the middle of September, it broke out in Ochi *gun* with violence, thence spreading gradually over the various *gun*, until the whole *ken* was infected. It was most severe towards the end of Septem-

ber, and began to decline from the middle of October. In the middle of November, fresh cases appeared in Minami-uwa *gun*, but the disease disappeared in a few days.

OCHI *Gun*.—On the 6th of August, a vessel returning from Yamaguchi *ken* brought a case of cholera which terminated fatally, 2 or 3 fresh cases subsequently appearing. The disease began to prevail from the middle of September, becoming very severe towards the end of the month, but finally declined towards the end of October. It was most violent at the village of Kagami and in the town of Imabari.

WAKE *Gun*.—The disease appeared at Furumitsu, on the 14th of August, and soon showed a disposition to spread; although it was not of a malignant type, cases continued to appear till towards the end of October. It was most severe at Gogo-shima and Furumitsu.

IYO *Gun*.—A case which occurred on the 28th of September, at Minami-ryo, immediately took an epidemic form. The disease was somewhat powerful for a time, but ceased in the middle of October.

NISHI-UWA *Gun*.—The disease broke out on the 21st of August, at Yanosaki, and continued to prevail till the middle of September. It

was most powerful at Noto in Hine-shima.

### KAGAWA KEN.

Kagawa *ken*, having easy and frequent communication with Ōsaka and various *ken* of Chūgoku, which had already become infected, was invaded by the cholera epidemic from various localities. The epidemic started at the port of Tadotsu, where the disease first appeared on the 9th of August, and prevailed in its vicinity for more than two weeks, after which it ceased for a time. While the disease was prevailing in the vicinity of Tadotsu, it also broke out in the town of Marugame, to which followed Toyoda *gun*, the city of Takamatsu, and some other *gun*, from the beginning of September. Subsequently, the disease daily increased in severity, and from the middle of the month it began to prevail throughout the whole *ken*. In the beginning of October it became generally powerful, ravaging every part of the *ken*, so that on the 10th of October the number of new cases rose above 100 in a single day. But it began to decline towards the end of the month, and in the beginning of November there was no epidemic, except in Kagawa

*gun*. After this, there were only scattered cases, and the disease finally disappeared.

**TADO *Gun*.**—The disease broke out on the 9th of August, in the port of Tadotsu, and soon extended to Shō, in the village of Yotsu. The disease was of a malignant type, and suddenly became epidemic, threatening to produce a serious condition of things. The epidemic ceased for a time at the end of the month, occurred again towards the end of September, and continued till the latter part of October, after which time the cases were but few in number.

**NAKA *Gun*.**—A case of disease occurred at Marugame, on the 18th of August, and another case two days later; the infection soon spread over the whole town, and finally over the whole *gun*. The disease was particularly malignant, but until the middle of September the daily number of new cases never exceeded 10. After the 21st, however, when the daily number increased to 15, the epidemic became increasingly powerful, there being one day on which there were more than 30 new cases. This state of things continued till the middle of October, when the disease began to decline, finally ceasing in the beginning of November. The



situation of the town of Marugame is low and moist, having no good water suitable for drinking purposes. The town is only about two or three miles from the port of Tadotsu, and as it is in frequent communication with that port, the first case may be supposed to have come from thence.

*TOYODA Gun.*—The first case appeared on the 2nd of September, at Kwan-on-ji, whence the disease spread in a few days, invading several other villages. The epidemic continued till the end of October, being most violent in the middle of that month.

*MINO Gun.*—There were scattered cases in every part of the *gun*, but the daily number of new cases was small, and the disease here could not be said to be epidemic.

City of *TAKAMATSU*.—The disease was introduced from Okayama and Ōsaka, on the 11th and 13th of September, and immediately spread through several streets. It was of obstinate form, showing no tendency to readily decline. From the middle of October it generally increased in power, at the same time as in the other *gun*, but finally declined in the beginning of November. In the city the epidemic was violent at Zakoba, in Nishi-hama-machi.

SAMUKAWA *Gun*.—The disease appeared on the 13th of September at Inoshishi-zuka, in the village of Tsuda, and, attacking the family and relatives of the first sufferers, prepared the way for an epidemic which affected the whole *gun*. The course of the epidemic was similar to that in the city of Takamatsu, but here it disappeared at the end of October. It was most violent at Tsuda, which has frequent communication by vessel with the infected localities.

AYA *Gun*.—The disease was most malignant at Sakade, which lies between Marugame and Takamatsu, and from that town as a centre it spread over the whole *gun*. The first appearance was on the 7th of September, and, following the same course as in the other *gun*, the disease declined at the end of October.

UDA *Gun*.—The first case appeared on the 13th of September, at the village of Kawanishi, where the disease was most powerful. In the beginning of October, the epidemic was almost as powerful as in Naka *gun*, although only for a time.

KAGAWA *Gun*.—Here the epidemic began from the latter part of September, and continued till the middle of November. The

largest number of cases was at Higashihama, and the epidemic in the whole *gun* was worst between the middle of October and the beginning of November.

### CHIBA *KEN*.

In this *ken*, the disease began to prevail from the beginning of August. It first appeared in Shusu *gun*, to which followed the two *gun* of Higashi-katsushika and Chiba; then spreading over the whole *ken*, it continued till the beginning of October, being most powerful towards the end of September. This *ken* is on the opposite coast to Yokohama, and is near the city of Tōkyō; so that the disease was continually introduced from these two places, and finally an epidemic was the result.

*AWA Gun*.—The first case appeared on the 5th of August, at the village of Tomisaki. A number of new cases continued to appear daily from the latter part of that month, but the epidemic did not become serious.

*HEI Gun*.—The disease broke out on the 8th of August, at Kushi, in Iwai. Cases began to appear continually from the middle of that month, and the disease increased in power in

the beginning of September, but disappeared towards the end of the month.

*ISUMI Gun.*—The first case, which appeared on the 2nd of September, at Kawatsu in the village of Toyohama, was soon followed by several other cases, and the disease became epidemic for a time in that locality. After the 22nd, when a case occurred at Iwochi, it spread extensively, and continued till the middle of October. The epidemic was worst at Kawatsu and Buhara in the village of Toyohama.

*SHUSU Gun.*—The disease broke out on the 7th of August, at Futama-tsuka, in the village of Ii-no, and Fu-tsu in the village of Fu-tsu. It soon spread, and became powerful for a time, but declined greatly towards the end of the month, when the cases took a sporadic form. The epidemic was worst at Fu-tsu.

*CHIBA Gun.*—A case occurred on the 16th of August, at Saginuma, in the village of Tsudanuma, and 3 cases in one house, at Kukuta in the same village, on the 17th. The disease soon became epidemic, and was somewhat powerful until the middle of September, when it began to decline, finally ceasing in the beginning of October.

*HIGASHI-KATSUSHIKA Gun.*—The disease ap-

peared on the 14th and 15th of August, in the towns of Kokane, Noda and Funabashi. It extended to Gyōtoku towards the end of that month, when it became epidemic, and continued till the middle of October. This *gun* had the greatest number of cases in this *ken*, and the epidemic was violent for a time at Gyōtoku.

UNAKAMI *Gun*.—The first case appeared on the 29th of August, at the town of Motochōshi, and after a few days several fresh cases occurred in succession. After the 20th of September, when there was a sudden outbreak of several cases, the disease became so powerful that there were more than 70 cases in this one town. The epidemic finally ceased in the middle of October.

### SHIZUOKA *KEN*.

In this *ken* cases of cholera began to appear from towards the end of August. On the 22nd of September, more than 20 new cases occurred, but afterwards the daily number fell below 10, and the disease could hardly be called epidemic. The disease took a malignant form for a time at the town of Yu-i, in Ihara *gun*, which had



more than 50 cases. Although Nishihara in Ihara *gun*, Inatori and Shimota in Kamo *gun*, Mikuriya, Numazu, and Naga-izumi in Suntō *gun*, and Shimizu in Udo *gun*, had the largest number of cases in the *gun*, the cases were scattered, and ranged in number between 10 and 15.

#### TOCHIKI *KEN*.

In this *ken*, cases appeared on the 2nd of September, at the town of Tochiki, in Shimotsuke *gun*, and on the 3rd, at the village of Shinoi, in Kōchi *gun*. They were of a malignant type, and soon showed the epidemic disposition, the number of cases in the village of Shinoi reaching over 50. But the epidemic was only in these two places, and it ceased in both places in the latter part of the month.

#### GUMMA *KEN*.

In Gumma *ken*, the disease was first introduced into Usui *gun*, from Tōkyō, on the 1st of September, finally taking an epidemic form in the two *gun* of Usui and Nishi-gumma. In Usui *gun*, the first cases appeared in the

district between Matsu-ida and Usui, and also between Itahana and Toyo-oka, where cases continued to appear till towards the end of October. In Nishi-gumma *gun*, the disease broke out on the 14th of September, at Takasaki, and soon spread through the whole town, but here it was inert as compared with Usui *gun*. In other places the disease did not become epidemic, the cases being scattered.

#### YAMANASHI · *KEN*.

In this *ken*, sporadic cases appeared in Tsuru *gun* from the beginning of September, the disease becoming epidemic from the 11th, when a case was brought from Yokohama. It finally extended to Kita-koma *gun*, where it prevailed at the same time as in Tsuru *gun*. The epidemic in both *gun* disappeared towards the end of September, but then appeared in a slight form in the city of Kōfu, where, however, it ceased without becoming serious. The propagation of the disease seems to have had a close connection with the drinking water supply.

## TOKUSHIMA *KEN*.

In Tokushima *ken*, the epidemic began on the 3rd of September, when a case appeared at the village of Mikita, in Kaibu *gun*. Some days afterwards, it spread to the two *gun* of Naka and Itano, to which followed the city of Tokushima, the epidemic finally affecting the whole *ken*. Towards the end of the month, when it was powerful in Naka *gun*, Myōtō *gun* also had the epidemic in a mild form. In the beginning of October, when the disease was declining in Naka *gun*, it suddenly became violent in the city of Tokushima, while there were signs of recurrence in Itano *gun* at the same time; but the disease almost disappeared from the whole *ken* towards the end of October. The epidemic was inert, the daily number of new cases fluctuating between 10 and 30, not exceeding 30 on the day which produced the largest number.

NAKA *Gun*.—The first case appeared on the 2nd of September, at the village of Tachibana-ura, and the infection immediately spreading, the whole village was affected. This place was the centre of the epidemic of Tokushima

*ken*, where the disease, being specially malignant, produced a painful state of things. The epidemic was most powerful towards the end of September, when the daily number of new cases was more than 10, but it ceased in the middle of October.

ITANO *Gun*.—The disease broke out on the 7th of September, and new cases continued to appear till towards the end of October, most of them being sporadic. The disease presented an epidemic disposition for a time at the village of Muya only.

CITY OF TOKUSHIMA.—Two cases appeared on the 7th and 8th of September, at Tomita-ura-machi, both of which came from Ōsaka. Another case, which occurred on the 10th, in the same *machi* or street, came from Kaibu *gun*. Subsequently, cases appeared continually, and the disease finally spread over the whole city. The epidemic was most severe from the beginning till the middle of October, when it began to decline, and ceased towards the end of the month. The places where it was worst were Jūroku-koji in Tera-machi, and Takajō in Tomita-ura-machi, and it is said that in the former place new cases occurred every day between the 3rd and 24th of October.

MYŌTŌ *Gun*.—The disease, which appeared on the 19th of September, at the village of Kamona, soon assumed an epidemic form, but there was no epidemic in other places, excepting at Tsuda-ura.

### SHIMANE *KEN*.

In this *ken*, cases appearing on the 7th of August, in Suki *gun* in the island of Oki, on the 17th in Ochi *gun*, on the 7th of September in the city of Matsu-e, on the 29th, again in Suki *gun*, and on the 8th of October, in Tatenui *gun*, showed an epidemic disposition for a time, but this soon ceased producing only a small number of cases. An outbreak of disease on the 16th of September, at Hanehigashi in An-no *gun*, the cause of which is supposed to have come from Kyūshū and Akama-ga-seki, alone showed a disposition to become powerful; it continued till the 11th of November, the number of cases being 50.

### MIYAZAKI *KEN*.

This *ken*, which lies in one corner of Kyūshū, long seemed to have escaped being invaded by



the disease. But on the 20th of October, when the disease was gradually disappearing from the infected localities, a case suddenly appeared at Ōtsudō, in the village of Hosoda, Minami-naka *gun*; the infection spread to several other persons, and soon there was an epidemic, which produced new cases, daily, for the space of three weeks, after which it finally ceased. In other places, there were only scattered cases, and these could not be said to be an epidemic.

All the *ken* not mentioned in the foregoing pages escaped the ravages of the epidemic.

The following table shows the proportion of cases and deaths, and their ratios as regards population and houses, in each of the infected *Fu* or *ken* above mentioned.

Name of <i>Fu</i> or <i>Ken</i> .	Name of <i>Gun</i> or City.	Number of cases.	Number of deaths.	Number of deaths per 100 cases.	Number of cases per 1,000 of population.	Number of deaths per 1,000 of population.	Number of infected families per 1,000 houses.
NAGASAKI <i>KEN</i> .	Nagasaki ... ..	835	676	82.18	15.14	12.28	81.80
	Nishi-sonoki ... ..	1,269	841	66.27	7.48	5.95	33.19
	Higashi-sonoki ... ..	53	39	73.58	0.71	0.52	2.83
	Kita-takaku ... ..	89	65	73.03	1.45	1.06	5.92
	Minami-takaku ... ..	838	489	58.35	5.37	3.13	23.11
	Kita-matsu-ura ... ..	188	114	60.64	1.62	0.98	5.27
	Minami-matsu-ura ... ..	144	99	68.75	2.05	1.31	8.21
	Ishida ... ..	57	41	71.93	1.58	1.14	6.17
	Kami & Shimo-agata.	285	180	63.15	8.98	5.67	38.95
	Total ... ..	3,758	2,544	67.66	4.93	3.33	22.25
SAGA <i>KEN</i> .	Saga... ..	275	215	78.18	2.85	2.21	12.01
	Kanzaki ... ..	99	78	78.78	2.18	1.72	10.18
	Ogi ... ..	256	156	60.94	4.66	2.84	15.58
	Higashi-matsu-ura ... ..	218	133	61.01	2.64	1.61	10.68
	Nishi-matsu-ura ... ..	59	47	79.66	0.95	0.76	3.97
	Other <i>Guns</i> ... ..	105	88	83.81	0.47	0.39	2.28
	Total ... ..	1,012	717	70.85	1.79	1.27	7.29
KUMAMOTO <i>KEN</i> .	Kumamoto ... ..	102	75	73.52	2.35	1.73	7.77
	Akita ... ..	206	125	60.68	2.29	1.41	11.10
	Uto ... ..	151	87	57.61	3.52	2.03	12.91
	Tamana ... ..	61	53	86.89	0.50	0.43	2.04
	Koshi ... ..	56	33	58.92	1.44	0.85	5.27
	Yatsushiro ... ..	109	74	67.88	1.33	0.90	6.11
	Ashikita ... ..	91	55	60.44	1.73	1.04	7.62
	Amakusa ... ..	429	240	55.94	2.45	1.37	9.89
	Other <i>Gun</i> ... ..	101	63	62.38	0.25	0.15	1.12
	Total ... ..	1,306	805	62.40	1.23	0.76	5.09

Name of <i>Tu</i> or <i>Ken</i> .	Name of <i>Gun</i> or City.	Number of cases.	Number of deaths.	Number of deaths per 100 cases.	Number of cases per 1,000 of population.	Number of deaths per 1,000 of population.	Number of infected families per 1,000 houses.
FUKUOKA <i>KEN</i> .	Fukuoka ... ..	255	200	78.43	5.34	4.19	24.26
	Kasuya ... ..	54	43	79.63	1.47	1.17	5.53
	Munakata ... ..	107	66	61.10	3.17	1.96	10.07
	Onga ... ..	836	645	77.15	17.10	11.01	68.99
	Kurate ... ..	378	279	73.81	9.56	7.06	31.43
	Kama ... ..	60	47	78.33	2.46	1.93	11.24
	Honami ... ..	73	61	83.56	5.42	4.53	13.30
	Mitsuma ... ..	384	292	76.04	4.45	3.38	21.67
	Yamato ... ..	221	177	80.09	3.77	3.02	13.43
	Mi-iike ... ..	187	145	77.54	5.35	4.15	15.43
	Kiku... ..	425	339	79.76	7.70	6.15	32.86
	Tagawa ... ..	142	111	78.18	4.42	3.46	13.13
	Kōge... ..	205	138	67.33	5.30	3.56	21.44
	Other <i>Gun</i> ... ..	231	183	79.22	0.95	0.76	2.12
	Total ... ..	3,558	2,726	76.62	4.69	3.40	14.01
YAMAGUCHI <i>KEN</i> .	Kumage ... ..	109	75	68.80	1.23	0.84	4.03
	Saba ... ..	66	52	78.79	0.85	0.67	3.18
	Yoshiki ... ..	51	33	64.70	0.88	0.57	2.63
	Asa ... ..	186	136	73.12	3.00	2.19	12.68
	Toyora ... ..	356	233	65.45	3.82	2.50	13.95
	Abu ... ..	452	315	69.69	4.41	3.07	17.23
	Akama-ga-seki ...	627	523	83.57	20.40	17.01	76.49
	Other <i>Gun</i> ... ..	153	116	75.72	0.40	0.31	1.44
	Total ... ..	2,000	1,483	74.15	2.24	1.66	8.32
KAGOSHIMA <i>KEN</i> .	Izumi ... ..	138	84	60.86	2.33	1.42	7.03
	Hi-oki ... ..	68	41	60.29	0.80	0.52	3.51
	Other <i>Gun</i> ... ..	75	48	64.00	0.16	0.10	0.65
	Total ... ..	281	173	61.57	0.45	0.28	1.60

Name of <i>Fu</i> or <i>Ken</i> .		Name of <i>Gun</i> or City.	Number of cases.	Number of deaths.	Number of deaths per 100 cases	Number of cases per 1,000 of population.	Number of deaths per 1,000 of population.	Number of infected families per 1,000 houses.	
KANAGAWA <i>KEN</i> .			Yokohama ... ..	686	559	81.48	5.62	4.58	18.01
			Kuragi ... ..	378	303	80.16	7.98	6.39	25.63
			Tachibana ... ..	231	185	80.09	2.62	2.10	11.25
			Miura ... ..	381	275	72.18	4.10	2.96	15.81
			Kōza... ..	66	42	63.64	0.79	0.50	3.54
			Ōsumi ... ..	66	46	69.70	0.95	0.66	2.82
			Ashigara-kami ...	52	35	67.31	1.34	0.90	5.67
			Ashigara-shimo ...	303	226	74.59	5.38	4.02	26.23
			Other <i>Gun</i> ... ..	74	55	74.32	0.19	0.14	0.09
			Total ... ..	2,237	1,726	77.16	2.28	1.73	9.40
TŌYKŌ <i>FU</i> .	CITY OF TŌKYŌ.	Kōjimachi <i>Ku</i> .	63	50	79.37	1.32	1.04	5.48	
		Kanda „	458	358	78.17	5.18	4.16	16.87	
		Nihonbashi „	404	335	82.92	4.01	3.32	17.43	
		Kyōbashi „	485	334	81.24	4.94	4.01	17.86	
		Shiba „	310	271	90.03	3.20	2.80	18.06	
		Yotsuya „	82	69	84.15	2.86	2.40	7.80	
		Ushigome „	108	83	76.85	2.31	1.78	8.61	
		Hongō „	121	98	80.99	2.13	1.72	6.98	
		Shitaya „	204	156	76.47	2.75	2.18	9.39	
		Asakusa „	444	362	81.53	3.49	2.87	12.22	
		Honjō „	283	231	81.63	3.37	2.75	8.90	
		Fukagawa „	382	340	89.01	6.08	5.41	21.49	
	Ebara ... ..		161	140	86.96	2.06	1.70	8.83	
	Kita-toshima ... ..		56	42	75.00	0.83	0.62	3.04	
	Minami-adachi ...		70	58	82.85	2.06	1.57	9.78	
	Minami-katsushika.		163	137	84.05	2.65	2.23	11.26	
	Other <i>Gnn</i> ... ..		173	141	81.50	1.29	0.94	4.63	
	Total ... ..		3,967	3,265	82.30	3.91	3.23	11.18	

Name of <i>Fu</i> or <i>Ken</i> .		Name of <i>Gun</i> or City.	Number of cases.	Number of deaths.	Number of deaths p-r 100 cases.	Number of cases per 1,000 of population.	Number of deaths per 1,000 of population.	Number of infected families per 1,000 houses.
ŌITA	KEN.	Nishi-kunisaki ...	120	84	70.00	2.45	1.74	9.00
		Hayami ... ..	115	81	70.43	1.62	1.20	6.08
		Kita-amabe ... ..	453	267	58.94	4.91	2.90	23.62
		Minami-amabe ...	105	57	54.28	1.36	0.74	4.32
		Shimoge ... ..	184	134	72.88	2.67	1.68	10.06
		Usa ... ..	81	44	54.32	1.11	0.60	4.51
		Other <i>Gun</i> ... ..	137	101	73.72	0.43	0.30	1.64
		Total ... ..	1,195	768	64.26	1.56	1.00	5.82
HYŌGO	KEN.	Kōbe ... ..	1,432	1,104	77.10	10.63	8.19	36.24
		Yatabe ... ..	90	64	71.11	5.08	3.61	19.35
		Muko ... ..	144	112	77.78	4.07	3.17	18.23
		Ubara ... ..	79	62	69.62	3.02	2.37	12.79
		Kawabe ... ..	388	316	81.44	8.10	6.59	26.84
		Akashi ... ..	211	180	85.31	3.39	2.89	11.41
		Kako ... ..	133	107	80.45	2.42	1.95	10.59
		Innami ... ..	69	57	82.61	1.36	1.13	5.62
		Shikito ... ..	238	192	80.67	4.80	3.87	20.29
		It-to ... ..	92	67	72.82	1.65	1.20	6.71
		Issai ... ..	105	89	84.76	2.54	2.15	11.15
		Akō ... ..	128	101	78.91	2.07	1.63	6.31
		Tsuna ... ..	500	345	69.00	4.41	3.04	19.75
		Mihara ... ..	104	84	80.77	1.68	1.35	5.84
		Other <i>Gun</i> ... ..	90	70	77.78	0.19	0.15	0.77
		Total ... ..	3,803	2,950	77.59	2.95	2.30	11.84
ŌSAKA	CITY OF ŌSAKA.	Nishi <i>Ku</i> ...	1,578	1,356	85.93	12.30	10.57	48.05
		Minami „ ...	1,090	916	84.04	7.41	9.27	34.08
		Higashi „ ...	517	464	89.74	4.54	4.07	21.46
		Kita „ ...	727	635	87.59	8.62	7.54	31.11



Name of <i>Fu</i> or <i>Ken</i> .	Name of <i>Gun</i> or City.	Number of cases.	Number of deaths.	Number of deaths per 100 cases.	Number of cases per 1,000 of population.	Number of deaths per 1,000 of population.	Number of infected families per 1,000 houses.
ŌSAKA <i>FU</i> .	Nishi-nari ... ..	2,565	2,160	84.21	16.89	14.22	64.16
	Higashi-nari ... ..	511	406	79.45	7.38	5.86	28.78
	Sumiyoshi ... ..	151	126	83.44	5.07	4.23	19.87
	Shimakami ... ..	51	41	80.39	1.81	1.45	6.80
	Shimashimo ... ..	57	50	87.72	1.28	1.14	5.63
	Toyoshima ... ..	117	96	82.05	3.45	2.85	13.46
	Sakai ... ..	301	270	89.70	6.32	5.67	25.35
	Ōtori... ..	121	98	80.99	2.29	1.85	9.93
	Minami ... ..	215	176	81.86	4.35	3.56	18.91
	Hine... ..	235	199	84.68	3.90	3.30	15.14
	Tanboku ... ..	67	53	79.10	3.21	2.54	14.42
	Waka-e ... ..	64	58	90.63	2.08	1.89	10.26
	Manda ... ..	213	185	86.85	6.06	5.26	26.51
	Other <i>Gun</i> ... ..	223	188	84.30	0.93	0.78	4.14
	Total ... ..	8,801	7,477	84.96	6.45	5.48	26.83
KYŌTO <i>FU</i> .	CITY OF KYŌTO. Kamikyō <i>Ku</i> ...	207	167	80.67	1.76	1.42	6.66
	Shimokyō ,, ...	442	385	87.10	3.19	2.77	11.18
	Kadono ... ..	93	81	87.10	2.93	2.55	11.60
	Ki-i ... ..	116	100	89.80	2.66	2.30	8.62
	Other <i>Gun</i> ... ..	146	130	89.04	0.88	0.34	1.58
	Total ... ..	1,004	863	85.96	1.41	1.21	5.45
WAKAYAMA <i>KEN</i> .	Wakayama ... ..	270	229	84.81	4.81	40.8	18.34
	Nakusa ... ..	197	138	70.05	2.45	1.71	9.08
	Ama ... ..	372	247	63.97	8.95	5.95	33.43
	Naka ... ..	102	78	76.47	1.19	0.91	2.32
	Arita... ..	50	34	68.00	0.73	0.50	2.74
	Nishi-muro ... ..	150	102	68.00	1.76	1.43	7.48

Name of <i>Fu</i> or <i>Ken</i> .	Name of <i>Gun</i> or City.	Number of cases.	Number of deaths.	Number of deaths per 100 cases.	Number of cases per 1,000 of population.	Number of deaths per 1,000 of population.	Number of infected families per 1,000 houses.
WAKA- YAMA KEN.	Higashi-muro ... ..	148	112	76.35	2.16	1.63	7.54
	Other <i>Gun</i> ... ..	44	41	93.18	0.09	0.09	10.73
	Total ... ..	1,333	981	73.59	2.09	1.48	8.38
NARA KEN.	Sōnokami... ..	64	54	84.37	1.03	0.87	3.88
	Sōnoshimo ... ..	68	47	69.12	1.77	1.23	8.02
	Toichi ... ..	94	71	75.53	3.17	2.39	16.32
	Katsuge ... ..	58	48	82.76	1.43	1.18	6.43
	Other <i>Gun</i> ... ..	158	138	87.34	0.62	0.54	3.00
	Total ... ..	442	358	81.00	1.12	0.91	5.22
SHIGA KEN.	Shiga ... ..	82	67	81.71	1.23	1.01	4.86
	Other <i>Gun</i> ... ..	52	42	80.76	0.09	0.07	0.39
	Total ... ..	134	109	81.34	0.20	0.16	0.83
KŌCHI KEN.	Kōchi ... ..	157	115	73.16	6.75	4.95	14.56
	Tosa ... ..	99	63	63.64	2.52	1.62	10.22
	Aki ... ..	122	81	66.39	3.77	2.50	13.84
	Kagami ... ..	60	41	68.33	1.94	1.33	8.21
	Akawa ... ..	109	83	76.14	5.33	4.06	16.32
	Takaoka ... ..	76	56	73.68	2.16	1.59	7.38
	Hata... ..	59	33	55.93	1.39	0.78	4.53
	Other <i>Gun</i> ... ..	41	31	75.61	1.76	1.34	6.30
	Total ... ..	723	503	69.43	2.93	2.04	9.99
HIROSHIMA KEN.	Hiroshima ... ..	782	643	82.22	9.38	7.71	27.93
	Aki ... ..	168	121	72.02	1.19	0.86	5.47
	Saeki... ..	102	74	72.55	0.92	0.67	3.84
	Numata ... ..	61	53	86.89	1.44	1.25	6.45
	Kamo ... ..	149	113	75.84	1.26	0.96	5.25

Name of <i>Fu</i> or <i>Ken</i> .	Name of <i>Gun</i> or City.	Number of cases.	Number of deaths.	Number of deaths per 100 cases.	Number of cases per 1,000 of population.	Number of deaths per 1,000 of population.	Number of infected families per 1,000 houses.
HIROSHIMA <i>KEN</i> .	Toyoshima ... ..	105	71	67.61	0.91	0.62	3.62
	Mitsuki ... ..	66	49	74.24	0.55	0.41	2.36
	Numakuma ... ..	57	43	75.44	0.73	0.55	2.98
	Other <i>Gun</i> ... ..	91	72	79.12	0.18	0.15	0.85
	Total ... ..	1,581	1,239	78.37	1.21	0.95	4.91
EHIME <i>KEN</i> .	Uma ... ..	58	49	84.48	0.81	0.68	5.48
	Ni-i ... ..	74	60	71.62	0.98	0.68	4.04
	Shufu ... ..	66	46	69.70	2.11	1.47	8.33
	Ochi ... ..	315	215	68.25	2.83	1.93	12.24
	Kazahaya... ..	51	31	60.78	1.55	0.94	5.08
	Wake ... ..	137	103	74.67	4.36	3.28	15.48
	Iyo ... ..	102	71	69.61	3.06	2.13	12.99
	Nishi-uwa ... ..	117	51	43.59	1.40	0.62	5.30
	Kita-uwa... ..	71	56	78.87	0.61	0.48	8.77
	Other <i>Gun</i> ... ..	209	155	74.16	0.61	0.46	2.67
	Total ... ..	1,200	837	69.75	1.29	0.90	5.01
KAGAWA <i>KEN</i> .	Takamatsu ... ..	234	165	70.51	7.21	5.08	24.97
	Samukawa ... ..	199	129	64.82	5.61	3.64	18.97
	Yamada ... ..	53	42	79.25	1.17	0.93	5.51
	Kagawa ... ..	179	131	73.18	2.30	1.67	8.02
	Aya ... ..	114	90	78.95	1.84	1.45	6.72
	Uda ... ..	206	153	74.27	4.45	3.30	16.79
	Naka ... ..	493	360	73.02	6.68	4.88	23.14
	Tado... ..	121	86	71.07	4.19	2.97	14.43
	Mino... ..	52	43	82.69	0.76	0.62	3.25
	Toyoda ... ..	237	185	78.06	3.46	2.70	86.70
	Other <i>Gun</i> ... ..	64	45	70.31	1.00	0.71	3.76
	Total ... ..	1,952	1,429	73.21	3.24	2.37	13.34

Name of <i>Fu</i> or <i>Ken</i> .	Name of <i>Gun</i> or City.	Number of cases.	Number of deaths.	Number of deaths per 100 cases.	Number of cases per 1,000 of population.	Number of deaths per 1,000 of population.	Number of infected families per 1,000 houses.
CHIBA KEN.	Awa ... ..	81	46	56.89	2.01	1.14	8.29
	Hei ... ..	178	112	62.92	4.07	2.56	16.80
	Isumi ... ..	152	95	62.50	1.70	1.07	6.81
	Shusu ... ..	85	64	75.29	2.61	1.96	7.92
	Amaha ... ..	60	44	93.33	2.11	1.55	6.40
	Chiba ... ..	131	95	72.51	1.81	1.31	6.43
	Higashi-katsushika..	257	218	84.83	1.96	1.67	9.84
	Katori ... ..	50	42	84.00	0.41	0.35	1.76
	Unakami ... ..	155	119	76.13	2.06	1.58	8.96
	Other <i>Gun</i> ... ..	258	180	69.77	0.46	0.32	1.41
	Total ... ..	1,407	1,015	72.05	1.18	0.85	4.70
SHIZUOKA KEN.	Kamo ... ..	86	72	83.72	1.05	0.88	5.18
	Suntō ... ..	63	46	73.02	0.69	0.50	3.96
	Ihara ... ..	96	61	63.54	1.63	1.03	8.19
	Other <i>Gun</i> ... ..	150	120	80.00	0.31	0.25	1.52
	Total ... ..	395	299	75.70	0.55	0.42	2.76
TOCHIKI KEN.	Shimo-tsuga ... ..	62	51	82.26	0.39	0.32	2.08
	Kōchi ... ..	73	47	64.37	0.69	0.44	3.06
	Other <i>Gun</i> ... ..	42	23	54.76	0.14	0.07	0.76
	Total ... ..	177	121	68.36	0.31	0.26	1.58
GUMMA KEN.	Nishi-gumma ... ..	87	72	82.76	0.75	0.62	3.05
	Usui ... ..	103	77	74.76	2.12	1.58	8.26
	Other <i>Gun</i> ... ..	29	22	75.86	0.06	0.04	0.27
	Total ... ..	219	171	78.04	0.32	0.25	1.38
YAMANASHI KEN.	Kōfu ... ..	52	41	78.85	1.70	1.34	6.42
	Minami-tsuru ... ..	88	58	65.91	1.85	1.22	8.89
	Other <i>Gun</i> ... ..	137	95	69.34	0.36	0.25	1.82
	Total ... ..	277	194	70.00	0.60	0.42	2.97

Name of <i>Pu</i> or <i>Ken</i> .	Name of <i>Gun</i> or City.	Number of cases.	Number of deaths.	Number of deaths per 100 cases.	Number of cases per 1,000 of population.	Number of deaths per 1,000 of population.	Number of infected families per 1,000 houses.
TOKUSHIMA KEN.	Tokushima ... ..	219	180	82.19	3.58	2.94	12 39
	Myōtō ... ..	79	59	74.68	1.40	1.05	6.31
	Naka... ..	191	141	73.82	2.16	1.60	8.67
	Itano... ..	91	77	86.80	0.78	0.66	3.30
	Other <i>Gun</i> ... ..	66	46	69 67	0.24	0.19	1.15
	Total ... ..	646	503	67.86	1.09	0.85	4.53
OKAYAMA KEN.	Okayama... ..	413	338	81.84	8.70	7.11	36.63
	Mino... ..	201	154	66.61	7.62	5.83	31.99
	Wake ... ..	211	149	70.62	5.30	3.49	17.57
	Oku ... ..	60	51	85.00	1.25	1.06	4.64
	Jōdō... ..	132	93	70.45	2.64	1.86	8.55
	Kojima ... ..	163	130	79.75	2.07	1.66	8.50
	Asakuchi... ..	93	79	84.94	1.07	0.91	46.07
	Oda ... ..	80	53	66.25	0.11	0.73	4.83
	Other <i>Gun</i> ... ..	151	116	76.82	0.27	0.21	1.12
	Total ... ..	1,504	1,163	77.33	1.48	1.15	6.70
SHIMANE KEN.	Anno ... ..	57	43	75.44	2.18	1.64	7.09
	Other <i>Gun</i> ... ..	122	91	74.59	2.27	0.20	10.6
	Total ... ..	179	134	74.90	0.37	0.28	1.38
MIYAZAKI KEN.	Minami-naka ... ..	126	78	61.90	2.26	1.40	7.44
	Other <i>Gun</i> ... ..	23	20	86.96	0.20	0.18	0.88
	Total ... ..	149	98	65.77	0.88	0.58	3.07



## CHAPTER II.

### *Operations of the Home Department in connection with Preventive Measures.*

On the 28th of June, 23rd year of Meiji (1890), the following telegram was received from the governor of Nagasaki *ken* — “Two cases of cholera have appeared in the port of Nagasaki, on the 27th, and both have proved fatal.” Five subsequent telegrams were received up to the 29th, when the number of cases reached 7. The Minister of State for Home Affairs immediately gave orders to T. Yagishita, an officer of the Home Department, to go to Nagasaki.

On the 30th of June, the Minister of State for Home Affairs gave strict instructions to the governor of Nagasaki *ken* to carry out measures of prevention and disinfection, in order quickly to extirpate the disease. The governors of Hyōgo, Yamaguchi, Kanagawa, Fukuoka, Saga, Kumamoto, and Kagoshima were also instructed to pay special attention to preventive measures.

On the 29th of June, an inquiry was made by the Director of the Central Sanitary Bu-

reau as to the cause and the course of the propagation of the disease, to which the governor of Nagasaki *ken* replied that the matter vomited and discharged generally contained cholera bacilli, and that the disease was supposed to have been caused by foreign vessels. T. Nakahama, an officer of the Home Department, was thereupon ordered to go to Nagasaki with K. Kusaka, an officer of the same Department.

On the 2nd of July, the Director of the Central Sanitary Bureau gave instructions to the Nihon Yūsen - Kwaisha (Japanese Mail Steamship Co.) as to the treatment of cases of cholera and diarrhoea when they occurred on board steamers having communication with the port of Nagasaki. The governor of Ōsaka *Fu* was ordered, at the same time, to issue similar instructions to the Ōsaka Shōsen-Kwaisha (Ōsaka Merchant Steamship Co.).

On the 3rd of July, the Minister of State for Home Affairs consulted the Central Board of Health with regard to the opening of the disinfecting stations of Akama-ga-seki, Hyōgo, and Naga-ura, and as to the carrying out of the Regulations for the Inspection of vessels coming from Cholera infected Localities, Notification No. 31, 15th year of Meiji (1882), on account

of the epidemic of Nagasaki. The Board reported on the 4th, that an inspection of vessels should be quickly enforced, that in the city of Nagasaki communication with infected parts should be strictly prohibited, and that a land inspection was also necessary to stop the propagation of the disease; the governor of Nagasaki *ken* was furthermore instructed to carry out these measures.

The governors of Hiroshima, Okayama, Ehime, Kagawa, and Ōita, were instructed to carry out the inspection of vessels, under Article XIII of the Regulations for the Prevention of the Spread of Infectious Diseases.

The Director of the Central Sanitary Bureau instructed the governor of Nagasaki *ken* to control the disposal of old clothing, rags, waste paper, etc., materials suspected of conveying the germs of the disease.

On the 4th of July, the Director of the Central Sanitary Bureau suggested to the governors of Kumamoto, Fukuoka, and Kagoshima, that by this time it was necessary to carry out the inspection of vessels under Article XIII of the Regulations for the Prevention of the Spread of Infectious Diseases.

On the 5th of July, the Minister of State

for Home Affairs informed the governors of the five *ken* of Fukuoka, Saga, Kumamoto, Mie, and Toyama, which contain ports from which exports are specially allowed to be made, that they should soon carry out the inspection of vessels, according to Article XIII of the Regulations for the Prevention of the Spread of Infectious Diseases, and should pay special attention to measures for preventing an invasion of cholera epidemic.

On the 7th of July, the Minister of State for Home Affairs notified, with Notification No. 21. that, on account of the epidemic in the port of Nagasaki, vessels must be inspected at Akama-ga-seki, in Yamaguchi *ken*, Kōbe, in Hyōgo *ken*, Yokohama, in Kanagawa *ken*, and at Hakodate in Hokkaido *cho*. Again, with Notification No. 22, he notified that all such vessels bound for Kōbe, Hyōgo, and Ōsaka should stop for inspection at Wada Point, Seshū, in Hyōgo *ken*, and that vessels bound for Yokohama and Tōkyō should stop for inspection at Naga-ura, Sōshū, in Kanagawa *ken*.

The governor of Yamaguchi *ken* was instructed to inspect, also, such passengers as landed at the port of Moji, at the disinfecting station of Akama-ga-seki.

As soon as the report of the outbreak of cholera in the port of Kuchi-no-tsu was received, the Director of the Central Sanitary Bureau notified the governor of Fukuoka *ken* to maintain an attitude of watchfulness.

On the 8th of July, the Minister of State for Home Affairs gave instructions to the governor of Yamaguchi *ken* regarding the method of raising money to meet, at the time of inspection, expenses in connection with cholera patients, and deaths on board vessels, and for disinfection. These instructions having been given to the governors of those *ken* having disinfecting stations, in June of the 19th year (1886), when the disinfecting station of Akamaga-seki was not yet opened, it became necessary to give these instructions to the last-named place at this present time.

On the 9th of July, the Central Board of Health held a special meeting, and, after consideration, presented the following memorial to the Minister of State for Home Affairs. "The epidemic of Nagasaki *ken* is daily increasing in severity, and cases are continually found on board vessels coming to Wakatsu, in Fukuoka *ken*, and to Akama-ga-seki, in Yamaguchi *ken*. By this time, it has become hopeless to prevent



the propagation of disease out side of *ken* of Nagasaki. It is hoped, therefore, that orders will be given for the carrying out of disinfecting and cleansing processes at Tōkyō, Yokohama, Kōbe, and Akama-ga-seki, and that officers will be sent to superintend the work, and it is hoped that by so doing the eastern provinces of the country will escape the invasion of the epidemic."

On the 10th of July, the Minister of State for Home Affairs, according to the memorial presented by the Central Board of Health on the 9th, gave instructions to the governors of Tōkyō, Ōsaka, Kanagawa, Hyōgo, and Yamaguchi, to carry out the processes of disinfecting and cleansing.

On the same day, the governors of Kanagawa and Hyōgo were instructed to consult with the foreign consuls, and examine into the existence of any cases of cholera, or any deaths from cholera, in any vessels coming by way of Hongkong and Shanghai, cases of cholera being often found on board vessels coming from those ports to Nagasaki, and if any were found, to do what was necessary in the matter.

The Central Board of Health reported, after investigation, upon the Memorandum for In-

spection on Railways which had been given to the Board to examine, some days previously, and the governors of those *Fu* and *Ken* having railways were instructed to carry out the of the Memorandum, while the same matter principle was communicated by the Director of the Bureau of General Affairs of the Home Department to the Head Officer of the Railway Bureau.

The Governor of Fukuoka *ken* was instructed to make a strict inspection, according to Article XIII of the Regulations for the Prevention of the Spread of Infectious Diseases, in the case of vessels coming from Kuchi-notsu, and other infected localities.

T. Yagishita, an officer of the Home Department, who was then at Nagasaki, was ordered to go to Akama-ga-seki, in order to overlook the carrying out of the processes of cleansing and disinfection.

The Director of the Central Sanitary Bureau made a communication to the governor of Nagasaki *ken*, stating that, as the disease at Nagasaki had already spread all over the city, the prohibition of communication with infected parts in the city would not now be of any use.

On the 11th of July, the Director of the

Central Sanitary Bureau made a communication to the governor of Miyazaki *ken* as to the necessity of paying attention to vessels coming from Nagasaki.

On the 13th of July, the Minister of State for Home Affairs gave instructions to the governors of those *ken* having communication with Nagasaki, to pay special attention even to sporadic cases, as there was by this time a danger of the gradual spread of the cholera from Nagasaki.

Deputy Inspector-General Y. Saneyoshi, a member of the committee of the Central Board of Health, was sent to Ōsaka and Kōbe, to over-look the carrying out of the processes of cleansing and disinfection.

On the 15th of July, the Director of the Central Sanitary Bureau called together the sanitary officers of Tōkyō and Yokohama at the Central Sanitary Bureau, and consulted with them regarding the order and manner of carrying out the processes of cleansing and disinfection.

On the 18th of July, Dr. S. Nagayo, the Director of the Central Sanitary Bureau, and Surgeon-General T. Ishiguro, a member of the committee of the Central Board of Health,

were requested to go frequently to Tōkyō and Yokohama, to overlook the carrying out of the processes of cleansing and disinfection.

General rules, together with a passage relating to cholera from the revised Memorandum of the Instructions for the Prevention of Infectious Diseases, which were under examination at the Central Board of Health, being completed, the Director of the Bureau of General Affairs was ordered by the Minister to inform the governors of *Fu* and *Ken* that they should apply measures of prevention according to the principle of the revised Memorandum.

Dr. Y. Saneyoshi, a member of the committee of the Central Board of Health, who was then at Kōbe, reported upon the processes of cleansing and disinfection carried out at Ōsaka and Kōbe. The Director of the Central Sanitary Bureau immediately sent this report to the governors of Tōkyō and Kanagawa, for the sake of comparison.

On the 19th of July, there came a report that the disease had broken out, on the 15th, at the village of Sonesaki, in Nishinari *gun*, Ōsaka *Fu*, on board a ship which had called at the port of Nagasaki some time previously. The Director of the Central Sanitary Bureau

immediately communicated the intelligence to the Head Officer of the Railway Bureau, and the governors of *Fu* and *Ken* along the Tōkaidō railway, for their attention.

Dr. S. Nagayo, the Director of the Central Sanitary Bureau, went to the disinfecting station at Naga-ura.

On the 21st, the governor of Yamaguchi *ken* suggested to the Director of the Central Sanitary Bureau that any vessel of Japanese build, from any port of Kyūshū, which was passing the strait of Akama-ga-seki, should be stopped for inspection, to which the Director immediately agreed.

The governor of Kanagawa *ken* reported that a case of cholera had appeared on a Turkish man-of-war which was at anchor in the port of Yokohama, and as it was followed by other cases, the man-of-war was sent to Naga-ura. The Director of the Central Sanitary Bureau thereupon communicated the intelligence to the Department of H. I. M.'s Household, the Army and Navy Departments, the Railway Bureau, Tōkyō *Fu* and the Police Department, as well as to the authorities of the neighbouring *ken*.

On the 22nd of July, the Minister of State



for Home Affairs instructed the governor of Kanagawa *ken* that, although there was as yet no sign of the propagation of the disease in the city of Yokohama, yet, as there were several cases on board the Turkish man-of-war, the city was now in a dangerous condition. As epidemics in the eastern part of the main island always originate with an outbreak at Yokohama, the governor was instructed to institute effective measures of prevention, by carrying out strict processes of cleansing and disinfection, so as to prevent the spread of the disease at its beginning.

The governor of Kagoshima *ken* having reported that there was a case of cholera at Nago-ura in Izumi *gun*, and that the disease shewed an inclination to spread, the Minister of State for Home Affairs immediately instructed him to apply strict measures of prevention, and prevent its propagation at the outset.

The governor of Yamaguchi *ken* reported that there were often cases on board vessels coming to the port of Akama-ga-seki from the port of Ashiya, in Fukuoka *ken*. The Director of the Central Sanitary Bureau communicated the matter to the governor of Fukuoka *ken*,

requiring him to examine into its cause.

The Director of the Central Sanitary Bureau informed the governor of Okinawa *ken* that as the cholera epidemic of Nagasaki had already extended to the island of Amakusa, in Kumamoto *ken*, and also to Kagoshima *ken*, he should give proper attention to the vessels coming from those localities.

On the 28th of July, as the epidemic in Yamaguchi *ken* was gradually increasing in severity, the Director of the Central Sanitary Bureau addressed a communication to the governors of those *ken* having direct communication therewith, enjoining the exercise of special attention.

On the 1st of August, T. Yagishita, an officer of the Home Department, was ordered to go to Yokohama.

I. Yamano-uchi, an officer of the Home Department, and T. Yagishita, an officer of the same Department, were ordered to go to the *ken* of Yamaguchi, Fukuoka, Kumamoto, and Kagoshima.

Enquiry as to the steps to be taken in regard to vessels entering the port of Yokohama in disregard of the quarantine signal, having been made by the governor of Kanagawa *ken*, some

days previously, an order was issued to him, after consultation with the Minister of State for Foreign Affairs, that such vessels should be sent back to Naga-ura for inspection.

On the 5th of August, the disease which had broken out at Nakatsu, in Ōita *ken*, being conceived to be infectious, the Director of the Central Sanitary Bureau communicated with the governor of the *ken* as to the necessity of exercising special care at the outset. The Director, at the same time, requested the governors of Ehime and Kagawa to give their attention to vessels having communication with the above named locality.

On the 7th of August, several cases suddenly appeared at Nishi-konyachō, in Kyōbashi *ku*, Tōkyō. J. Shindō, an officer of the Home Department, was immediately sent thither to examine the place. Subsequently, the epidemic having established itself in the city of Tōkyō, J. Shindō was often sent to the quarantine hospital and various other places.

On the 8th of August, T. Kato, an officer of the Home Department, was sent to Yokohama.

On the 10th of August, the governor of Kumamoto *ken* requested the government to be allowed to prohibit communication with Tomi-

oka, in Amakusa *gun*, and also to be allowed, hereafter, to make only a report after the prohibition had been carried out, as such measure needed at once to be put in force, and this was agreed to.

On the 11th of August, T. Nakahama, an officer of the Home Department, was sent to Naga-ura.

On the 17th of August, the governor of Ōsaka *Fu* sent a memorial to the Minister of State for Home Affairs, from the Ōsaka Private Board of Health. The substance of the memorial was to the effect that strict measures of prevention should be immediately carried out in the localities suspected of having the disease, before it was propagated widely, and that if the quarantine expenses were too heavy for local taxes, assistance should be given from the national treasury.

On the 20th of August, the Minister of State for Home Affairs gave instructions to the Superintendent of Police in Tōkyō, and to the governors of the nine *Fu* or *Ken* of Tōkyō, Ōsaka, Kanagawa, Hyōgo, Yamaguchi, Saga, Kumamoto, Ōita, and Kagoshima, to increase their efforts in regard to quarantine matters, pointing out that while the fact that the

epidemie had not quickly spread over the whole of the country, in spite of its malignancy, was chiefly due to the care of the people themselves for their health, it was also due to the kind and assiduous efforts of the sanitary officers, physicians, etc., in regard to the work of inspection.

T. Nakahama, an officer of the Home Department, was ordered to go to Naga-ura.

On the 25th of August, as the epidemic in Ōsaka *Fu* had suddenly become very violent, instructions were given to the governors of the adjacent *Fu* or *Ken* to pay strict attention to preventive measures.

I. Yamano-uchi and T. Yagishita, officers of the Home Department who had been ordered to go to Kumamoto and Kagoshima, along with other *Ken*, were on this day ordered to go to Ōsaka without going to the above named *Ken*.

On the 27th of August, the Minister of State for Home Affairs personally went to the Central Board of Health, and asked its members about the preventive measures to be carried out there after. The measures they suggested were as follows ; (1) That disinfecting cleansing which had already been carried out in the cities



of Tōkyō, Ōsaka, Yokohama, Kōbe, and Akamaga-seki, according to the memorial of the Central Board of Health, should be repeated, and should be carried out in important places such as Sendai, Niigata, Hakodate, and Naoetsu; (2) that people should be instructed to follow the principles of the revised Memorandum of the Instructions for the Prevention of Infectious Diseases, and of the Memorandum of Instructions for Disinfection; (3) that people should be encouraged to take good care of their health; (4) that inspecting officers should be attached to every railway station having communication with the infected localities; and (5) that sanitary officers should be sent to the *ken* in the north-eastern part, not yet attacked by the epidemic, to overlook the carrying out of the processes of cleansing and disinfection.

On the 29th of August, the Minister of State for Home Affairs, in accordance with the suggestion of the members of the Central Board of Health, instructed the Superintendent of Police in Tōkyō, and the governors of Tōkyō, Ōsaka, Kanagawa, and Hyōgo, to repeat the processes of disinfection and cleansing, and also to send physicians to the districts inhabited by poor people. At the same time, the governors of *Fu*

and *Ken* in the vicinity of Ōsaka were ordered to institute effective preventive measures of cleansing and disinfection before the invasion of the disease, and also to encourage people to take good care of their health.

On the 30th of August, the inspection of vessels in the ports of Akama-ga-seki, Kōbe, and Yokohama, was discontinued by Notification No. 28, while the same was ordered to be carried out in the port of Hakodate, in Hokkaidō, in regard to vessels coming from Kōbe and Yokohama, by Notification No. 29.

The governors of Kanagawa, Hyōgo, and Yamaguchi were ordered thenceforewards to apply Article XIII of the Regulations for the Prevention of the Spread of Infectious Diseases, when cases of, or deaths from cholera occurred on board vessels:

On the 5th of September, T. Yagishita, an officer of the Home Department, who was then in Ōsaka, was ordered to go to Kyōto and Hiroshima, and I. Yamano-uchi, an officer of the same Department, was ordered to return to Tōkyō.

On the 23rd of September, instructions were given to the governors of *Fu* and *Ken* to cheer the people, and to encourage the under officials

by visiting infected districts, as well as the quarantine hospital, and to try to quell the epidemic by the united effort of officials and people.

On the 26th of September, T. Yagishita, an officer of the Home Department, was ordered to go to Hyōgo *ken*.

On the 10th of October, the revised Memorandum of the Instructions for the Prevention of Infectious Diseases, and the Memorandum of the Instructions for Disinfection, were given to local governors for their instruction, after having been thoroughly examined at the Central Board of Health.

On the 28th of October, the inspection of vessels in the port of Hakodate was ordered to be discontinued.

### CHAPTER III.

#### *Proceedings of the Local Governments in connection with Preventive Measures.*

#### NAGASAKI KEN.

In this *ken*, according to the usual annual custom, sanitary inspectors were appointed in the city of Nagasaki and its adjacent towns and villages, from the 1st of June, to exercise supervision over articles of food and drink, and also to see to the cleansing of dwelling houses. On the 27th of June, some cases of cholera epidemic suddenly appeared, and soon showed a disposition to spread, and the disease, in spite of the increased efforts of the sanitary inspectors to stop its progress, became more and more malignant. A central quarantine station was thereupon established, on the 2nd of July, and in order to stop the progress of the epidemic, large assemblages of people, such as at theatres and religious celebrations, were

forbidden. Cases of persons suffering from diarrhœa were ordered to be reported, and the source of drinking water was specially ordered to be cleansed. Branch quarantine stations, both land and marine, were established at important places outside of the city, and also at various ports, to stop the further progress of the disease. Afterwards, thorough cleansings were often effected in all parts of the *ken*, and every means of prevention was tried. In every town or village, inspection was carried out both on land and sea. The heads of sanitary companies visited every house, that people might not conceal any case of cholera, and the processes of cleansing and disinfection were often repeated. But in spite of all such endeavours, the disease could not be prevented from spreading.

During the epidemic, the Nagasaki Branch of the Japanese Private Board of Health sent its members to every street of the city, and either instructed the people as to the principal points of the preventive measures, or printed the instructions and distributed them to every house. The Nagasaki Medical Society expressed their desire to give assistance in regard to the inspection and treatment of patients, by



sending out 27 physicians, while the members of the higher class of the Medical Department of the Fifth Higher Middle School asked that they might engage in the work of inspection. Both sets of volunteers were attached to the central quarantine station, and they either performed the duties of quarantine inspectors, or overlooked the carrying out of the processes of disinfection and cleansing, thus rendering no small benefit to the work of prevention. The Tsushima Sanitary Board also rendered much help to the governor of that island in regard to the work of prevention.

### SAGA *KEN*.

As soon as the report of the outbreak of cholera reached Saga *ken* from Nagasaki, the people were instructed to institute sanitary companies. Subsequently, stations for the inspection of vessels were established at important places, and, with reference to the epidemic in Fukuoka *ken*, inspection was carried out at railway stations. After the disease had entered the *ken*, cases of diarrhoea were ordered to be reported, and certain assemblies and entertainments were forbidden. A

central station for the board of inspectors was established at the Local Government Office, and it was ordered that inspectors should be appointed in the affected places, according to the regulations for such appointments in cities and *gun*; to these inspectors was entrusted the carrying out of measures of prevention and disinfection.

Each *gun* and city in this *ken* had been ordered to carry out a process of cleansing, with the object of preventing bad diseases after the spring, and this was repeated after the cholera had appeared at Nagasaki; the carrying out of this was overlooked by officers who were sent for the purpose. While the disease was prevailing, officers were constantly sent out to encourage the authorities of towns and villages, and the heads of sanitary companies, and also to employ physicians for the work of inspection. It was found that bad habits of concealing cases of cholera, and unwillingness to go to the quarantine hospital, still existed, but they seemed to be gradually lessened by the admonitions of the sanitary companies.

## KUMAMOTO *KEN*.

As the cholera epidemic invaded Amakusa *gun*, notwithstanding the adoption of measures of prevention, consisting of the establishment of stations for the inspection of vessels at important places along the sea coast, the measures adopted were carried out more strictly. Isolated stations were established in Amakusa *gun* for persons returning from Nagasaki on account of cholera, at which such persons were obliged to remain for 7 days. As there were signs of the epidemic in every part of the *ken*, a central quarantine station was established in the Local Government Office, and a committee of more than 50 persons was appointed to engage in the work of prevention. Subsequently, branch quarantine stations were established in the affected districts, and communication with the affected parts was forbidden, these various means being tried to prevent the disease from spreading. During the epidemic, sanitary meetings were held by benevolent persons at various places, and people were taught the importance of prevention by being shown pictures with a magic lantern. The Kumamoto Medical So-

ciety, after holding a meeting, presented to the governor a memorial in regard to preventive measures, and requested to be allowed to distribute throughout the whole *ken* several thousand copies of the Memorandum of Instructions for Prevention and Disinfection. In this and other ways, the Society rendered not a little help in the work of prevention and disinfection. The desire of the people to conceal cases of cholera, and their abhorrence of quarantine hospitals, seemed to decrease somewhat.

### FUKUOKA *KEN*.

On receiving the report of the outbreak of cholera in the port of Nagasaki, orders were given to the towns and villages along the sea coast to pay attention to preventive measures, and when the disease showed an inclination to spread in Nagasaki, stations for the inspection of vessels were immediately established at important ports, and a thorough cleaning was ordered to be carried out in the towns and villages along the sea coast. Precautionary measures along the coast having been thus instituted, the same measures were then

ordered to be taken at various places on land, but, in spite of such precautions, cholera finally invaded and became epidemic in this *ken*. In various parts of the *ken*, there are many coal mines, which give employment to a great number of miners and coolies belonging to the lower class. The coolies being engaged in transporting coal, there is constant communication between one part and another. Such being the condition of things, the disease might be expected to arise from within, if it did not come from without. Consequently, every means was tried for preventing the outbreak of disease. Central and branch quarantine stations were established, communication with the infected parts was prohibited, stations were established for the inspection of vessels and passengers, processes of cleansing and disinfection were often repeated, sanitary companies were instituted, and the inspection at railway stations was carried out. It was arranged in this *ken*, that the expense of prevention, disinfection, etc. should be defrayed by each town or village; if this was too heavy, the town or village should be assisted by its *gun*, and if the expense was too heavy for the *gun*, assistance should be derived from



a local tax. Patients were admitted to the quarantine hospital, which was constructed by means of contributions from cities, towns, and villages. There are branches of the Japanese Private Board of Health in various parts of the *ken*, but they did not render much help in the work of prevention. The Genyō Medical Society sent its members, in turn, to the quarantine hospital established by the city of Fukuoka, to undertake the care of patients. Most of the practitioners were very indifferent in regard to the epidemic, some of them endeavouring to be excused from examining and treating the sufferers, and it is said that some tried to conceal cases of the disease. People generally seem to have known the importance of prevention, better than before, but their bad habit of concealing cases, and of refusing to go to the quarantine hospital, did not entirely disappear.

### YAMAGUCHI *KEN*.

The outbreak of the cholera epidemic at Nagasaki being reported, instructions were immediately given, on the 30th of June, to the authorities of the city of Akama-ga-seki,

and the *gun* of Toyora, as well as to the heads of the police offices of the city and the *gun*, to pay attention to vessels, whether steamers or sailing vessels of Japanese build. The same instructions were also given to the authorities of the various *gun* along the sea coast. From the 5th of July, the inspection of vessels was carried out in the port of Akama-ga-seki, and on the same day, a temporary board of inspectors was established in the Local Government Office. On the 8th, a disinfecting station was opened at the port of Akama-ga-seki, according to the Notification of the Minister of State for Home Affairs, and the business of inspection commenced. While the epidemic was gradually becoming powerful in Nagasaki, officers were sent to Akama-ga-seki, to carry out measures of prevention, after consultation with the authorities of the city, by giving attention to vessels coming to the port, by repeating a thorough process of cleansing, and by visiting the dwellings of poor people. The officers were also sent to the various *gun* along the sea coast, where they were instructed to carry out processes of inspection, disinfection, and cleansing. The disease, however, which had already spread over Fukuoka *ken*, invaded

this *ken* towards the end of July, in spite of the measures of prevention both inland and on the sea coast, and gradually spread over various *gun*. A central quarantine station was thereupon opened in the Local Government Office, and efforts were directed towards preventing the extension of the disease within the *ken*. From the 20th year of Meiji (1887), it had been the custom with this *ken* to carry out a thorough process of cleansing in each city, town, and village throughout the *ken*, twice a year, in spring and autumn, and as there were signs of epidemic in this year, an extra cleansing was ordered to be performed. Generally, in each *gun*, sanitary companies were formed, persons to take charge of various sanitary matters were appointed, and the people contracted among themselves to afford each other mutual help, all such measures having proved of great benefit in the work of prevention. The Yamaguchi Branch of the Japanese Private Board of Health having intercourse with a medical society in each *gun*, the members distributed printed papers, held lecture meetings, visited every house, and gave instruction as to the principles of prevention, by going round the various places.

Medical societies and practitioners gave instruction as to the measures of prevention, contributed medicines, and, when every house was visited, they gave much assistance to the authorities of towns and villages. In the city of Akama-ga-seki, they appointed districts for a certain number of persons, it being the duty of these persons to treat the patients within their district, while the Medical Society in Otsu *gun* sent its members, in turn, to the localities where physicians were deficient, to examine and treat the sufferers. The people seemed generally to regard the quarantine hospital with aversion and tried to conceal cases, and often they had recourse to prayers to idols.

### KAGOSHIMA *KEN*.

In Kagoshima *ken*, a board of inspectors was instituted on the 2nd of July, the inspection of vessels was commenced on the 5th, and towards the end of the month, an inspecting station was opened in the city of Kagoshima, and it was ordered that cases of diarrhoea should be reported. Instructions were given to the authorities of *gun*, cities, towns, and villages to

form sanitary companies, and to carry out processes of disinfection and cleansing. In the affected regions, the processes of disinfection and cleansing were strictly carried out in places where the germs of the disease might lie hidden, persons in the neighbourhood of diseased houses were requested to move to a distance, all dead bodies were ordered to be buried, and persons carrying dead bodies, according to an agreement made with the persons themselves, were obliged to stay 24 hours in an isolated vacant house, and were not allowed to communicate with any other person. There was a Medical Society in Izumi *gun*, but its members were unwilling to look after the treatment of patients and the adoption of preventive measures at the time of epidemic. The people still had a habit of concealing cases and of refusing to enter the quarantine hospital, but after the discharge of a patient suffering from a mild attack, who had been specially admitted to the hospital, and who was cured, people came and asked to be admitted. The Medical Societies in the *gun* of Takaki, Satsuma, Minami-isa, and Koshiki-shima, held a special meeting immediately the epidemic showed an inclination to prevail, and, after consultation



as to the measures of prevention to be adopted, instructed the people upon the important points of the preventive measures, while the practioners tried to avoid the examination of sufferers. As a bad habit existed there of concealing cases, sanitary companies were instituted as a check upon it. Sick persons were treated in their own houses, as they refused to go to the quarantine hospital. In the *gun* of Hioki and Ata, neither the Medical Society nor the medical practioners took any active part in regard to the work of prevention. The custom of concealing cases was met by the institution of sanitary companies, and the patients were treated in their houses, as the quarantine hospital was regarded by them with aversion. In the *gun* of Kagoshima, Taniyama, and Kita-ōsumi, and in the city of Kagoshima, the Kagoshima Branch of the Japanese Private Board of Health, and the Medical Society gave their attention to preventive matters, often holding lecture meetings to instruct the people in the importance of prevention, while the practioners also rendered due service. Here, the people did not conceal cases, but some of them had a strong feeling against the quarantine hospital.

## KANAGAWA *KEN*.

In Kanagawa *ken*, upon the reception of news of the outbreak of cholera at Nagasaki, instructions were immediately given, on the 1st of July, to the authorities of the City Office of Yokohama, to carry out a thorough cleansing of the city. On the 7th, the disinfecting station at Naga-ura was opened, according to the Notification of the Minister of State for the inspection of vessels. On the 13th, the disease for the first time appeared in the city, and the quarantine hospital was opened at the same time. After the 19th, as cases appeared on board the Turkish man-of-war, officers were often sent on board to consult in regard to matters of disinfection, prevention, etc., and the vessel was finally sent to Naga-ura, to remain in an isolated position. The appearance of the disease at Ōsaka and other places being notified, an inspection was commenced on railways, and inspectors were appointed at every police office. When the disease began to prevail, a central quarantine hospital was established in the Local Government Office, and it was ordered that cases of diarrhœa should be reported. Towards the end of July, when cases appeared

in succession, persons to take charge of the business of prevention were appointed to inspect the carrying out of the process of cleansing in the city, twice every day, while in the City Office, persons were specially appointed to prepare disinfectants and have them ready on demand. In addition, 20 policemen were specially appointed to take charge of the process of cleansing, and the repetition of a thorough cleansing ordered; water closets on the wayside, and the water closets of theatres and markets were ordered to be sprinkled with disinfectants every morning, after being cleansed; an isolated house belonging to the Yokohama inspecting station was also thoroughly cleansed while the beds and utensils used for eating and drinking were disinfected. Policemen were directed to urge the application of the process of cleansing in the lower-class lodging-houses in the neighbouring towns and villages. The water of wells in the village of Naka, and other villages in Kuragi *gun*, was examined, and the inhabitants were warned to be careful in drinking it. The inhabitants of Yokosuka asked to be allowed to obtain water from the conduit of the Yokosuka Ship-Yard, and the request was granted. The drains in the city of Yokohama

were washed out with water from conduits or from pumps, whenever the process of cleansing was carried out. When a case of cholera appeared in any place, the dirty places in that neighbourhood were marked off, and within those limits the processes of cleansing and disinfection were strictly carried out. Most of the instruments used in the Yokohama disinfecting station were of an old-fashioned kind, and they were replaced by a steam-engine, by means of which articles were disinfected by the moist heat process. When the disease appeared in a low-class lodging-house, or a house in the city where coolies were congregated, if the persons lodging there were too many to be removed to one of the fixed isolated houses, such lodging house was itself considered as an isolated house, and food was conveyed thither, while communication with such a house was prohibited during the shortest period of incubation. The total number of persons removed to isolated houses was 1,668, of which, those who were attacked by the disease numbered 42. As the water in the town of Odawara in Ashigara-shimo *gun* is of bad quality, owing to the imperfect system of conduit, the inhabitants were warned as to the danger of

drinking unboiled water, and boiled water was distributed among them.

As soon as there were signs of an epidemic in the city of Yokohama, the Yokohama Branch of the Japanese Private Board of Health printed the memorandum of instructions in regard to preventive measures, and distributed the papers to every house in the city and the surrounding districts, as well as to the offices of the towns and villages of each *gun*. They also held lecture meetings upon several successive evenings, and instructed people in regard to prevention, thus helping greatly towards the carrying out of preventive measures. The Yokohama Medical Society made a special arrangement of seeing that preventive and disinfective processes were thoroughly performed in infected houses. Although poor persons of the lower classes were not careful as to preventive measures, the people generally - did not murmur against cremation. There was no concealment of cases of cholera, and those who refused to go to the quarantine hospital were very few in number. At the town of Hachi-ōji, in Minami-tama *gun*, a sanitary committee was formed by the members of the Town Assembly, the members of which committee often met to consult as to



the processes of cleansing and disinfection, and certain members were specially appointed to see that these measures were carried out. In Mi-ura *gun* there is a medical society, the members of which met together as soon as there were signs of an epidemic, and consulted as to measures of prevention, the principal points of which they printed and distributed to every town and village. At Ōsaka, in the town of Fujisawa, Kōza *gun*, 46 persons of reputation and property were appointed members of a sanitary committee, while at Matsu-bayashi, in the town of Chiga-saki, which had the largest number of cases in the *gun*, the members of the Village Assembly and the heads of companies were made members of the sanitary committee, and were empowered to urge the carrying out of the process of cleansing as well as to guard against the concealment of cases of cholera. The practitioners of the town of Odawara, in Ashigara-shimo *gun*, often held lecture meetings, and gave instruction as to measures of prevention and disinfection, and they instituted a system of a gratuitous treatment for the poor people, while the sanitary companies made special arrangements, and managed things, it is said, in a very good way.

In other *gun*, the old five-family groups were utilized as sanitary companies, and the institution of such companies had a good effect in reference to the carrying out of the process of cleansing in the *gun* of Mi-ura, Kamakura, Ōsumi, Yurugi, and Ashigara-kami, while, in the *gun* of Kuragi and Tachibana, the arrangement was entirely useless owing to imperfect formation. There was no concealment of cases of cholera in the *gun* of Nishi-tama and Minami-tama, and but little in the *gun* of Ōsumi, Yurugi, Ashigara-kami and Tsukui, while in the *gun* of Kuragi, Tachibana, and Kamakura, there was some concealment in the beginning, but none afterwards. The people generally did not object to cremation; in the *gun* of Ashigara-kami only, people refused to have it carried out.

### TŌKYŌ *FU*.

In Tōkyō *Fu*, funds to meet the expenses of a thorough cleansing in every part of the city of Tōkyō were asked for at a special meeting of the City Assembly, by the City Council, and the processes of disinfection and cleansing were carried out in the middle of July. The

city was subsequently invaded by the epidemic, and as the quarantine hospital at Honjo could not admit any more patients, a hospital was opened at Komagome. Previous to this, the governor of Tōkyō *Fu*, after consultation with the Superintendant of Police called together the officials of the Tōkyō Medical Society, and asked their opinion as to the measures of prevention and disinfection to be adopted. The Society having considered the matter at an extra general meeting, presented the following paper of suggestions.

I.

*Preventive Measures against Cholera.*

In regard to the prevention of cholera, the matter of first importance is to instruct the people to take good care of their health.

1. In each *gun* or *ku*, information respecting preventive measures should be made public by holding a special meeting in connection with sanitary matters, or the information should be printed and distributed to every house in each *gun* or *ku*.

2. Landlords and agents should be called together in a school, or in a *ku* office, and should be kindly instructed in reference to preventive measures by physicians, police, and *gun*, *ku*, town, or village officials, and disinfectants should be given to them. Agents should, in turn, kindly pass on the information to tenants.
3. In every town or village of the *gun* or *ku*, sanitary companies should be formed to give mutual help.
4. A certain number of physicians should be specially appointed by the office of the *gun* or *ku* to take charge of the business of prevention, and their names should be reported beforehand to landlords and agents. If the landlords, agents, or sanitary companies report the occurrence of a case of cholera, the physicians should immediately proceed to the place to examine the case.

These physicians should be properly remunerated.

II.

*Disinfection and Treatment of Cholera  
Patients.*

In regard to measures of disinfection, and measures for the extirpation of this disease, it is of the first importance for physicians to exercise much care, and as their object would often be defeated by any disagreement of opinion either with the police or with a sick family, the following rules are suggested to avoid the occurrence of such evil.

1. Landlords, agents, or members of sanitary companies should always be attentive to the existence of any case of cholera in a district under their charge, and if there is any suspected case of diarrhoea, or of vomiting and discharging, they should sprinkle disinfectants upon the discharged matter, and immediately report the case to the physicians engaged in preventive work, and ask them to examine into it.
2. If a physician finds a case of cholera, he should immediately report it according to



the regulations and the question as to whether the patient should be sent to the quarantine hospital, or should be allowed to be treated at home, should be left to the decision of the family physician.

3. Policemen engaged in the management of cholera patients should be allowed to wear common clothing, under certain circumstances, and the cause of the disease and other matters should be enquired of the family physician, not of the patient.
4. If the family physician, or the patient, requires that matter vomited or discharged by a patient, or clothing, or utensils, should be thrown away or burned, the request should be complied with.
5. If a physician requires that processes of cleansing and disinfection, should be specially performed at a certain place, these processes should be immediately carried out at that place, and, in such case, the cost of these measures should not be exacted from the persons living there.

6. In a *gun* or *ku* which has no quarantine hospital, a suitable building should be set apart for the treatment of cholera patients.
7. Any physician engaged in the treatment of cholera patients within Tōkyō *Fu* should be required, although not a member of the Medical Society to follow the rules of the agreement made by the Society for this occasion.

### III.

#### *Gratuitous Treatment.*

As cholera prevails chiefly in districts where poor people live, it is necessary to provide means for giving gratuitous treatment.

1. Tickets for gratuitous treatment should be issued.
2. If a physician reports that a sick family is very poor, the authorities of the *gun*, *ku*, town, or village should make the necessary provisions for helping the sufferer.

IV.

*Agreement of Medical Society.*

The members of the Tōkyō Medical Society will make a special agreement on this occasion, and will begin to carry out preventive measures.

1. A physician examining a case of diarrhoea, or vomiting and discharging, should order the matter vomited or discharged to be disinfected.
2. When a physician examines a case of diarrhoea, or of vomiting and discharging, he may tell the patient to call in another physician, under certain circumstances, and may then adopt suitable measures in conjunction with that physician.
3. If two physicians agree in suspecting a case examined by them to be one of cholera, they should immediately send in a report to the proper office with their signature attached.

In response to the various suggestions of

the foregoing, the following reply was given to the Tōkyō Medical Society.

I.

1. The head of the police office, and the authorities of the *gun* or *ku*, shall be instructed to consult with the president of the Private Board of Health and the head of the Branch Medical Society in that *gun* or *ku*.
2. The place and manner of calling together landlords and agents shall be fixed after consultation between the head of the police office and the authorities of the *gun* or *ku*, and the physicians shall be those selected by the Branch Medical Society, and the *gun* or *ku* physicians.
3. Sanitary companies shall be instituted.
4. Physicians shall be appointed for preventive work, and the cost of remuneration shall be asked for at the City or *gun* Assembly.

II.

1. The manner of distributing disinfectants, and the place for keeping the same, shall be fixed after consultation on the part of the head of the police office, the authorities, of the *gun* or *ku*, and the head of the Branch Medical Society, so that landlords, agents, and families where there is sickness, may be able conveniently to carry out the process of disinfection as the occasion may demand.
2. When a physician reports a case of cholera, he should state his opinion as to whether the patient should be sent to the quarantine hospital or may be treated in his own house, in accordance with which opinion the police must act, save under unavoidable circumstances. The Medical Society should fix the conditions under which the patients are to be sent to the hospital or allowed to be treated at home, and should obtain beforehand the sanction of the Police Department thereto.
3. At the beginning of an epidemic, while it



is not yet severe, the police need not wear uniform under certain circumstances.

Physicians shall be asked the cause of cases of disease, as proposed in the suggestions.

4. An order for the necessary proceeding shall be given after the expense has been required of the Standing Committee of the Local Assembly.

5. Cleansing expenses which cannot be paid by private persons shall be required of the Assembly of the city, town, or village, and then an order for the proceeding shall be given.

6. Examination shall be made with a view to establish such buildings.

7. After enquiry has been made into the matter, a Police Order or Notification shall be issued.

### III.

1. When necessary, tickets shall be issued,

the expense of which shall fall upon the local tax.

2. Some suitable method of giving assistance shall be devised in accordance with the suggestion.

As the authorities of Tōkyō *Fu*, and the police authorities, united with the physicians in the work of carrying out the processes of prevention and disinfection, the work was carried out very smoothly.

Previous to the epidemic, in order to make the measures of prevention effective, by affording conveniences for treatment to poor people, the Japanese Private Board of Health collected money by subscription, and issued free tickets for poor cholera patients. Hearing of this benevolent action, His Majesty the Emperor gave a donation of *yen* 1,000 and Her Majesty the Empress *yen* 500. The money thus collected reached a sum of more than *yen* 2,600, with which money about 14,000 free tickets were issued. These tickets were entrusted to the authorities of the Local Government, and the authorities distributed

them to poor people through the offices of the *gun* and *ku*.

The Private Board of Health in each *gun* or *ku* tried to arouse the spirit of people to the necessity of caring for their health, the members holding lecture meetings at various places to give instruction in the principles of prevention, and printing instructions which were distributed to every house. The Board appointed inspectors, and instructed them to inspect every part of their *gun* or *ku*, and appointed physicians specially to examine poor sufferers, and to examine the drinking water, thus rendering great help to the work of prevention.

### ŌITA KEN.

When the epidemic in Nagasaki *ken* was gradually becoming powerful, officers were sent to important places to instruct the people to pay attention to preventive measures. Subsequently, a thorough cleansing was ordered to be carried out throughout the whole *ken*, after which the inspection of vessels was commenced. When the epidemic in the *ken* began to show signs of spreading, religious celebra-

tions and other popular gatherings were ordered, in kind terms, to be stopped, and way-side water-closets and those belonging to theatres and eating houses, were ordered to be sprinkled with disinfectants daily, it being also directed that this work should be overlooked by the police. The process of disinfection was directed by the authorities of towns and villages and by the heads of sanitary companies as well as by the police, and the work was either superintended or assisted in by the *gun* and Local Government officials. The people of towns and villages made an agreement by which they were bound to stop communication with infected localities. They established a station of observation at the entrance to their town or village, where persons coming from any infected locality were inspected; if such persons were inhabitants of that particular town or village, they were obliged to remain isolated for a time, and were then allowed to proceed to their own home, after being examined by a physician, but strangers were generally not allowed to enter the town or village. The Nakatsu Branch of the Japanese Private Board of Health, and the Medical Society of each *gun*, specially held lecture meetings, and direct-

ed people's attention to the measures of prevention and disinfection, practitioners also rendering not a little help to the work of prevention. The people appeared to pay much more attention to the matter of prevention, but the habit of concealing cases of cholera, and the abhorrence of the quarantine hospital, did not entirely disappear.

### HYŌGO *KEN*.

In Hyōgo *ken*, before the disease began to prevail, the disinfecting station at Wada Point was opened, with a view to the inspection of vessels. As Dr. Saneyoshi, a member of the committee of the Central Board of Health was sent from the Home Department, the authorities of the cities of Kobe and Himeji, and of the town of Nishinomiya in Muko *gun*, the policemen, and the authorities of the neighbouring *gun* and of the towns and villages, as well as physicians, were called together, and consultation was held as to measures of prevention and disinfection, and these measures were soon ordered to be carried out. As the disease began gradually to prevail from the beginning of August, a central quarantine station was es-



tablished on the 25th, and a branch station at every place where the epidemic was becoming powerful. It was ordered that sanitary companies should be formed in the cities, towns, and villages, and inspecting physicians were appointed to inspect the residences of poor people, endeavour being thus made to prevent the invasion of disease. In the places where the disease had become epidemic, quarantine physicians were appointed, who were instructed to carry out the measures of prevention and disinfection in union with the authorities of towns and villages, while the policemen were ordered to overlook and assist in the work. Things being thus managed, a very good result was obtained, and the practice of concealing cases of sickness seemed to have ceased. In the city of Kōbe, the medical practitioners presented a memorial in the 20th year of Meiji (1887), stating that they were willing to undertake the duty of quarantine physicians whenever it became necessary that such physicians should be appointed, and, in accordance with that memorial, the chief magistrate of the city of Kōbe, previous to the epidemic in this year, after consulting with the practitioners, appointed from among the medical companies

of practitioners, physicians for the quarantine hospital, for the inspection of cases of disease, and for the inspection of the residences of poor people. This management being found to be very beneficial, many other towns followed this example.' In most of the villages of the *gun*, the people regarded the quarantine hospital with much aversion, so sufferers were allowed to be treated at their own homes, as far as possible, in order to prevent the concealment of cases.

### ŌSAKA *FU*.

In Ōsaka *Fu*, as the disease at Nagasaki showed a disposition to spread, instructions were given to the owners of the steamers communicating with that port, as to the management of cases of cholera, and deaths from the same, occurring on board during the voyage. Stations for the inspection of vessels were established at the mouths of the rivers Aji and Kizu, and at the harbour of Sakai, and a process of thorough cleansing was carried out in the cities of Ōsaka and Sakai. A temporary station for the preventive business was established in the Local Government Office, in the beginning

of August, when the epidemic began gradually to prevail. As the vessels entering the Aji and other rivers often brought cases of cholera, and the disease showed signs of spreading along the banks, vessels which were anchored in these rivers were ordered to proceed, with their crews, to the river mouth, as soon as the loading and unloading of cargoes was finished. Towards the end of the mouth, a central quarantine station was established, with branches at various places, according as circumstances demanded; and it was ordered that cases of vomiting and discharging should be reported, and that all such cases should be diagnosed by the physicians specially appointed. The quarantine hospitals at Honjo, Chishima, Momoyama, and Ten-nōji were opened, and, graduates of the Medical Department of the Imperial University were requested to become their directors. The process of cleansing, among other measures of prevention, was strictly and thoroughly carried out, at the cost of a large sum of money, so that the back streets inhabited by poor people, which had been noted for their filthiness, presented an entirely new appearance. During the epidemic, the Ōsaka Private Board of Health sometimes held

lecture meetings for giving instruction in the principles of prevention of disease and the preservation of health, members were sent to visit sick families and quarantine hospitals to show sympathy with the sufferers, the carrying out of the process of disinfection and other measures was overlooked, free tickets for pure water were given to poor people, and, when the disease became violent and malignant, the Board established an asylum for children who had lost their parents. Gifts of *yen* 200 from Her Majesty the Empress, and *yen* 300 from the Imperial Household, encouraged the members in a more thorough carrying out of the measures of prevention. These efforts of both government and people were not, however, so effective as had been expected. The city of Ōsaka always suffers considerably whenever an invasion of the epidemic takes place, and it was a matter of public opinion that the loss inflicted could only be prevented by the improvement of the drinking water. The Ōsaka Private Board of Health, consequently, presented a memorial to the City Assembly, with respect to the improvement of the water system, and the Assembly having unanimously voted its acceptance, the work was soon com-

menced. Philanthropic physicians among the practitioners joined the Private Board of Health, and assisted in its operations, and Shinto priests and Buddhist monks preached the importance of the measures of prevention, but the practise of concealing cases, and the abhorrence of the quarantine hospital, did not cease among the lower classes.

### KYŌTO *FU*.

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In Kyōto *Fu*, as cases of cholera began to appear from the middle of July, physicians from the Local Government Hospital were sent to make a bacteriological examination whenever a case appeared. On the 20th of August, persons were appointed to take charge of the preventive business, the formation of sanitary companies was ordered, cases of vomiting and discharging were directed to be reported, and, finally, the quarantine hospitals in Kami-kyō *ku* and Shimo-kyō *ku* were opened. In the beginning of September, as the epidemic in Ōsaka *Fu* was becoming powerful, the authorities of the *gun* in the vicinity of Ōsaka *Fu* were instructed to perform the processes of disinfection and cleansing, while in the infected regions of this *Fu*,



instructions were given and officers despatched to expedite the carrying out of these processes. In this *Fu*, the process of cleansing was often performed before there was any epidemic, and cleansing and disinfection were repeated two or three times in the dirty parts inhabited by poor people. The city physicians were also temporarily appointed to inspect the dwellings of the poor, and they often discovered not only cases of cholera but also cases of typhoid fever. A temporary sanitary committee was formed, consisting of members of the City Council and of the City Assembly, and of volunteers, the members of which were ordered to work in union with the city physicians, and their work seemed to have a good effect. It was stated in the Memorandum of Instructions for Prevention, issued by the Home Department, that the matter vomited and discharged, as well as excrement mingled with the vomited and discharged matter, might be used as manure, after having been properly disinfected. But, in accordance with the memorial presented by the Local Board of Health, all such matter was burnt up. In each *gun*, the measures taken this year were almost the same as those taken on former occasions, The Kyōto Branch of the Japanese Private

Board of Health having collected the sum of *yen* 1,399.51 from subscribers, issued tickets for free treatment, and gave them to the poor. There were medical societies in the city of Kyōto and in two or three *gun*, but none of these showed activity in the matter, and this was the case with the practitioners generally; the people's abhorrence of the quarantine hospital showed an inclination to gradually disappear.

#### WAKAYAMA *KEN*.

In this *ken*, watchfulness was exercised along the sea coast before there was any case of cholera in the *ken*, and after the appearance of two or three cases it was ordered that cases of vomiting and discharging should be reported, and the inspection of vessels was carried out. When the epidemic in Ōsaka had gradually become powerful, the day and manner of a thorough cleansing were appointed, stations for inspection on land were opened at important places, a central quarantine station was established in the Local Government Office, and branch stations in every infected place, every means being thus adopted to stay the inroads of the disease.

The Wakayama Branch of the Japanese Private Board of Health held a general meeting, and often held lecture meetings for giving instruction in the preventive measures, and made suggestions to the officers in regard to the preventive measures. The Medical Society also held lecture meetings, and tried to give assistance in the work of prevention to the Board of Health. The Sanitary Society of volunteers in the city of Wakayama collected contributions, and expended the money in the employment of poor people for the cleansing of the water system. There was a great improvement in people's attention to sanitary matters, and the concealment of cases of sickness and the dislike of the quarantine hospital entirely ceased.

### NARA KEN.

On the 14th of July, the authorities of each *gun* were ordered to urge forward the cleansing of dwelling houses and of drains, as the first preventive measure to be carried out by the sanitary companies just instituted, instruction being, at the same time, given for the appointment of town or village physicians. Subsequently, sanitary officers were sent to each town or village office to consult as to the

manner of carrying out the process of cleansing. The *gun* authorities were instructed to induce volunteers to hold lecture meetings to awake the people to the importance of sanitary measures. Towards the end of August, when the epidemic in Ōsaka had gradually become powerful, orders were given to the *gun* and other authorities to form preventive committees and to instruct the police and town or village physicians to inspect the dwellings of the poor. In the middle of September, a central quarantine station was established, to which followed branch stations in the infected places. The business of carrying out the processes of prevention and disinfection was wholly committed to the town and village authorities, the government only instructing as to the order and manner of the work, and overlooking its performance. In order to avoid any bad feeling on the part of the people, the police were instructed to wear plain clothes as far as possible. As the order to report cases of vomiting and discharging had hitherto had no effect, it was intended not to give any such order this year, but, it being suspected that physicians sometimes did not make proper examination, the order was finally given, when

the post-mortem reports increased in number. This increase might be attributable to the fact that families attacked by sickness, generally objecting to be reported, did not call in a physician until sufferers were in danger of death. It was found, consequently, in this *ken*, that the order to report cases of vomiting and discharging had rather an evil effect. The Nara Branch of the Japanese Private Board of Health held lecture meetings, distributed printed copies of the memorandum of instructions in regard to prevention and disinfection, collected money for the poor sufferers of the town of Nara, and remunerated the officials of the sanitary companies in acknowledgement of services they rendered. The people generally perceived the importance of the measures of cleansing and prevention, and carried out the process of disinfection and cleansing without orders from the government. But the concealment of cases of cholera, and feeling against the quarantine hospital, did not entirely disappear.

#### SHIGA *KEN*.

In Shiga *ken*, the clerks of each *gun* engaged in attending to sanitary matters were called



together in July to consult as to the matter of prevention; the Local Board of Health held meetings, and finally the order was given to the *gun* and other authorities to form sanitary companies, and to carry out the process of cleansing. In order to prepare for the inspection on railways, new quarantine houses were constructed at the two railway stations of Kusatsu and Yonehara. It was directed that cases of vomiting and discharging should be reported, quarantine hospitals were opened at Ōtsu and Nagahama, and preparations were ordered to be in readiness for disinfection, etc. on board the Lake Biwa steamers. Precautionary measures being thus taken, the disease ceased without causing any great epidemic. The process of disinfection was carried out by the town or village authorities, assisted by the police, and superintended by the local government and *gun* officials and superintendents of police. The Ōmi Private Board of Health printed the memorandum of instructions in regard to prevention, and distributed the papers among the people, and often held lecture meetings to give instruction in the principles of prevention. The medical societies of each *gun* held special meetings to investigate the matter of pre-

vention, and 13 physicians of the town of Nagahama voluntarily engaged in the inspection and treatment of cholera cases.

### KŌCHI *KEN*.

Reports of the occurrence of cases of cholera in the *ken* or prefectures of Kyūshū, Shikoku, Chūgoku, and Ōsaka *Fu* being received soon after the occurrence of the epidemic at Nagasaki, orders were given to carry out the process of cleansing, and to report cases of vomiting and discharging. Stations for inspecting vessels were opened, towards the end of August, at various ports, and a central quarantine station was established in the Local Government Office. As the disease began to prevail in Nagaoka *gun*, communication with the infected parts was prohibited, the processes of disinfection and cleansing were carried out in the infected districts, and a quarantine station was established. When the disease became epidemic in the city of Kōchi and other places, religious celebrations, theatrical performances and other gatherings of people were prohibited, bad articles of food such as unripe fruit, etc. were forbidden to be

sold, and finally, a quarantine hospital was established, all necessary measures of prevention being thus carried out. Nōnin, in the city of Kōchi, is a narrow and filthy street inhabited by poor people, where in spite of various measures adopted for its extirpation, the disease finally became epidemic. An extensive and thorough cleansing was at once performed in 21 adjoining houses by 60 men, 30 bags of lime being provided, together with 60 empty straw bags, sand, etc., and this cleansing was so effective that the epidemic soon ceased, only two cases subsequently occurring. Previous to the epidemic, the Kōchi Private Board of Health tried to arouse the<sup>er</sup> attention of the people in regard to preventive matters, by holding lecture meetings and by distributing printed papers. The Board of Health in Hatagun, advised the institution of companies for the work of prevention in each village, and its members gave much assistance in regard to the formation of such companies, which proved advantageous to the work of prevention. The Nanyō Medical Society of Takaoka also rendered much assistance in preventive work. It often happened that practitioners refused to examine or to treat cholera patients, fearing

that they might thus lose the favour of other sick families. A physician was consequently employed in each town or village during the epidemic, to treat poor people, and to help in the carrying out of preventive measures. The people in places which had suffered from the ravages of the disease on a former occasion, paid much attention to the measures of prevention, but in other place, some people were so much afraid of the disease that they fled, taking the members of their family with them. Some persons had recourse to prayers to idols, and some established stations at the entrance to villages, and, while refusing to give lodging to strangers, confined in the station persons who had returned from the infected localities. But these persons were less careful to prevent disease among themselves, and, in consequence, there was much concealment of cases.

### HIROSHIMA *KEN.*

When the disease at Nagasaki began to show a dangerous condition, stations for the inspection of vessels were established in various important ports. As the port of Akama-ga-seki,

in Yamaguchi *ken*, has direct communication with Nagasaki, and a connection not less close with this *ken*, officials were sent to that port in order to consult as to measures of prevention. On the 21st of July, a quarantine station was established in the Local Government Office, and a thorough cleansing was ordered to be performed, within one week, in the city of Hiroshima and some other towns. As a celebration was about to take place at the temple of Itsukushima, on the 30th of July, it was ordered that special watchfulness should be exercised before and after that occasion, in consequence of which there was no propagation of the disease, in spite of there being a great concourse of people. Quarantine stations were subsequently opened on land, on the boundary between this *ken* and Yamaguchi *ken*, and stations for inspectiong vessels, as well as stations of observation, were established at several places along the sea coast, and it was arranged that whenever there was a case of cholera, sanitary officers and physicians should be immediately sent to the place where the case had appeared. In spite of such precautionary measures, the epidemic made its appearance in the beginning of September, when a



central quarantine station was established, and an examination of the drinking water was made. When the epidemic became powerful in the city of Hiroshima, the chairman of the quarantine committee, the chief magistrate of the city, and the members of the City Council went round the affected streets, to cheer and console the people. In the city of Hiroshima, inspectors were appointed who were instructed to inspect every house daily, and to advise the people to pay attention to the preventive measures, and to the matter of preserving their health. The city was divided into districts, and a number of coolies were employed in each district to carry out the measures of prevention, under the direction of the inspectors. Such measures as could not be carried out at the expense of private persons, were to be carried out at the expense of the city, and such measures were often repeated in places having a large number of cases. In each *gun*, the towns and villages formed companies for mutual assistance, and the processes of prevention and disinfection were often examined by policemen and by the *gun* officials, who went round for the purpose of inspection. The Hiroshima Medical Society

held a special meeting before there was any epidemic, and agreed to report cases of vomiting and discharging before the issue of any order from the government. The Society often held consultation as to the measures of prevention, and offered suggestions when enquiries were made by the governor. In this and other ways the Society rendered much help in the work of prevention. The Hiroshima Branch of the Japanese Private Board of Health held lecture meetings at various places in the city, and tried to arouse attention to the prevention of disease and the preservation of health, and also tried to stop the concealment of cases of sickness. The citizens themselves established a station for quarantine business, made an agreement in regard to sanitary matters, and distributed good water where the drinking water was bad. In order to prevent the concealment of cases, which was common among the poor, and to ensure the timely performance of the process of disinfection, the city funds and money subscribed were used in helping the sick poor, clothing, food, and even night clothes being given to them. Such kind measures could not, however, stop the concealment of cases, and the quaran-

tine hospital was by most regarded with aversion.

### EHIME *KEN*.

In Ehime *ken*, the inspection of vessels was early carried out at important ports, from the beginning of July, and the process of cleansing was frequently ordered to be performed. After the disease had come into the *ken*, instructions were given to form sanitary companies, and also to appoint an inspecting committee in accordance with the government regulations. Stations for the inspection of vessels at various places were ordered to take charge of the preventive business throughout the affected districts in their neighbourhood. Various gatherings of people were stopped, communication with the infected districts was prohibited, and the necessary measures of prevention were taken, according to the condition of the epidemic.

### KAGAWA *KEN*.

In this *ken*, the inspection of vessels was the first measure undertaken, and next an

order was given to the physicians to report in a simple form all cases of vomiting and discharging. When the disease began to show signs of spreading in the *ken*, a central quarantine station was established in the Local Government Office, to which followed branch stations, which were from time to time established in the various infected districts. After the epidemic had become powerful in the city of Ōsaka, officials and people were busy in the work of prevention, both along the sea shore and in the interior. The measures of prevention, disinfection, and cleansing were entrusted to an inspecting committee, composed of policemen and physicians, as well as to the authorities of cities, towns, and villages, the *gun* officials having only to encourage and superintend the carrying out of the measures. The Board of Health and the Medical Societies of Takamatsu and Marugame held lecture meetings every day for giving instruction as to the necessity of the preventive measures to be carried out. The concealment of cases, and dislike of the quarantine hospital, did not entirely disappear.

### CHIBA *KEN*.

In Chiba *ken*, the sanitary officials were sent, on the 4th of July, to the towns and villages along the sea coast, to consult as to the places for establishing stations for the inspection of vessels, and the preparation of disinfectants, and also as to the buildings to be used for quarantine hospitals. Subsequently, as the disease became epidemic in the city of Yokohama, and some cases appeared which showed a disposition to spread within the *ken*, a central quarantine station was established in the Local Government Office, towards the end of August. Branch stations were also established in the important towns of Fu-tsu and Funabashi, while physicians were ordered to report cases of vomiting and discharging. After the disease began to prevail at various places, the governor, with the under officials, often visited the infected spots, sending sanitary officials to such places in particular to take charge of sanitary matters. Some of the towns and village bought disinfectants, and distributed them to each house to provide for their contingent use; some temporarily appointed a town or village physician to take



charge of the work of inspection and treatment of cholera cases, and some bought up the unripe fruit, bad fish, and shell fish on sale, and had them burnt. The process of disinfection was carried out by the town and village officials who visited every house, and instructed people to pay attention to the process of cleansing and to the preservation of their health, and warned them not to conceal cases of cholera. Neither the Board of Health nor the Medical Society took an active part in these measures. Among the practitioners, some tried to be excused from examining cases of vomiting and discharging, fearing that they would be shunned by other sick families, but the physicians in general showed much improvement in moral principle, as compared with the previous occasion. Some of the people still had recourse to prayers to idols, and in places where there was an epidemic for the first time, the people, being afraid of its infection, joined together and made a bamboo stockade across the road in their village, in order to prevent the carrying of the dead bodies of cholera patients to the cemetery, and attempted to behave in a violent way. But there was less concealment of cases than be-

fore, and the dislike of the quarantine hospital seemed to have greatly abated.

### SHIZUOKA *KEN*.

In Shizuoka *ken*, a central quarantine station was established in the Local Government Office, in the middle of July, and the inspection of passengers was carried out at important railway stations. Subsequently, as vessels coming to the harbour of Shimizu often brought cases of cholera, the inspection of vessels was ordered to be carried out in that harbour. Previous to the invasion of the disease, the process of cleansing was ordered to be performed, officials being sent to superintend the work. The cities, towns, and villages were furthermore, instructed to organize sanitary companies, whose duty it was to carry out the processes of prevention and disinfection, which processes were frequently overlooked by the inspecting officials. The Board of Health, and the Medical Society of the city and *gun*, often held lecture meetings, and instructed the people as to the principles of prevention and the preservation of health. The people were so afraid of the disease that

they relied upon idols for help. The custom of concealing cases still existed among the people, and in those towns and villages which had the greatest number of cases, the cause of this excess seems to have been the concealment of cases of cholera.

### TOCHIKI *KEN*.

In this *ken*, instructions were given to *gun* officials, and to the town and village authorities, in the beginning of July, to make preparation for preventive measures by appointing the officials to take charge of sanitary matters. A process of thorough cleansing was subsequently ordered to be performed in every part of the *ken*, the police being instructed to overlook the work in the city, or in places where there was a railway station. Where the stations were most in communication with other places, quarantine houses were provided, and other preparations made, to be ready against the time of need. Rules were also issued for the organization of sanitary companies. Afterwards, when the disease began to prevail in the cities of Tōkyō and Yokohama, the inspection of passengers was carried out

at railway stations, and a central quarantine station was established in the Local Government Office in the beginning of September, the disease then appearing at Tochiki, in Shimo-tsuga *gun*, and immediately becoming epidemic. Branch stations were established in the offices of the *gun* invaded by the epidemic, and inspecting stations were established in any places far distant from the *gun* office. The processes of prevention and disinfection were carried out by the towns and villages, under the control of the sanitary officials, the inspection at railway stations alone being performed by government officials. The Medical Society and medical practitioners did not take any active part in these measures. The Tochiki Branch of the Japanese Private Board of Health gave great assistance in the work of prevention, and also issued free tickets for poor people. Some benevolent gentlemen made a contribution of disinfectants. The people generally had much improved in their appreciation of the importance of sanitary matters, since the occasion of the previous outbreak, but the concealment of cases, and the unwillingness to go to the quarantine hospital, had not yet disappeared.

## GUMMA *KEN*.

In Gumma *ken*, before the appearance of the epidemic, instructions were given to the *gun*, town, and village authorities to provide disinfectants, and also to make preparations for the establishment of quarantine hospitals, and, towards the end of July, it was ordered that cases of vomiting and discharging should be reported. In the middle of September, a central quarantine station was established in the Local Government Office, to which followed branch stations in the police offices in the towns of Takasaki and Annaka, the inspection of passengers at railway stations being commenced at the same time. On the 25th the Standing Committee of the Local Assembly held a special meeting, and voted a sum of *yen* 2,600, in addition to the estimated expense for sanitary matters of *yen* 300. In the *gun* of Usui, where the disease was prevailing, physicians were employed to inspect each house, and disinfectants were bought and distributed to every house, the expense for such measures amounting to several hundred *yen*. The people of the lower classes were very indifferent in regard to the measures of prevention, and did



not show any gratitude for the kind instruction given by the officials, considering it to be too much of an interference. They regarded the quarantine hospital with much aversion, and sufferers going to the hospital entertained no hope of returning, the members of their respective families having the same feeling as if the patients were being sent to the graveyard.

#### YAMANASHI *KEN*.

The process of cleansing was ordered to be performed before any appearance of the epidemic, and in September, when the epidemic showed signs of spreading in Minamitsuru *gun*, officials were sent thither to direct measures of prevention and disinfection, and also to assemble the people for instruction in the principles of prevention and the preservation of health. In the cities, towns, and villages, physicians were employed to inspect the districts inhabited by poor people, where they discovered a number of cases of cholera. The Kyōtō Private Board of Health of Higashi-yamanashi *gun* often sent out its members to various localities, where they held lecture meetings in regard to sanitary matters, and helped the town

and village officials in the work of prevention and disinfection. The poor of the lower classes did not perceive the importance of the preventive measures.

### TOKUSHIMA *KEN*.

In this *ken*, before there was any epidemic, stations for the inspection of vessels were established, a thorough process of cleansing was ordered to be carried out in the various places along the sea coast, and a preventive committee was instituted in the Local Government Office. In the beginning of August, when the disease was threatening from all quarters to invade the *ken*, the appointment of preventive committees was ordered in the towns and villages along the sea coast, and the city and *gun* authorities were called together to consult as to the measures of prevention. After the epidemic had invaded the *ken*, it was directed that sanitary companies should be formed in accordance with the regulations for the formation of such companies, just issued, and that cases of vomiting and discharging should be reported, and a central quarantine station was established in the Local Government Office. The processes

of prevention and disinfection were carried out by the city, town, and village officials, and by the policemen, and were directed and overlooked by the Local Government and *gun* officials. When the disease was prevailing in a limited district, communication with that district was prohibited, and a thorough cleansing was carried out there. The Tokushima Branch of the Japanese Private Board of Health, and the Tokushima Eisei Dōshi-kwai, often held lecture meetings, and kindly instructed the people as to the importance of prevention, and the preservation of health, and the members distributed, printed copies of the instructions as to preventive measures. Companies of physicians also held special meetings for consultation on matters regarding preventive measures. The Tokushima City Council voted a sum of *yen* 5,000 for the establishment of a quarantine hospital. The custom of concealing cases of cholera still existed, and the dislike of the quarantine hospital did not disappear.

### MIYAZAKI *KEN*.

In Miyazaki *ken*, stations for the inspection of vessels were established on the 18th of July,

which were increased or decreased according to the condition of the epidemic in the various districts. As the disease began to prevail at Daidōtsu, in the village of Hosoda, Minami-naka *gun*, from towards the end of October, a temporary inspecting station was established, communication with that place was prohibited, and other measures of prevention were strictly carried out. The measures of prevention and disinfection were carried out by the sanitary officials, police, and *gun* officials, while the village authorities were chiefly engaged in providing disinfectants. When the disease had somewhat declined, a thorough disinfecting cleansing was ordered to be performed in the infected district, in order to root out the germs of the disease. The board of health called Nisshū Eisei-kwai collected subscriptions to the amount of *yen* 426.60, and assisted in the work of prevention and treatment of cases of cholera. The members of the Village Assembly, and some benevolent persons, gave their help in the construction of a quarantine hospital, and in providing food, fire-wood, and charcoal. The people were so afraid of the disease that two out of every ten persons in the infected district fled elsewhere. The custom

of concealing cases existed to a very slight extent, and it is said that no member of a sanitary company was allowed by the other members to conceal a case.

### SHIMANE *KEN*.

Some cases of cholera having appeared in this *ken* after the disease had become epidemic in Nagasaki and other localities, the inspection of vessels was carried out according to Article XIII of the Regulations for the Prevention of the Spread of Infectious Diseases. The measures of prevention were entrusted to the city, town, and village authorities, and the carrying out of such measures in the infected regions was overlooked by officials sent from the Local Government. The Shimane Branch of the Japanese Private Board of Health held lecture meetings, and endeavoured to arouse the people's attention to the importance of the preventive measures. The custom of concealing cases, and the dislike of the quarantine hospital still existed, more or less, but there seemed to be much improvement in the people's care for the preservation of their health.



SAITAMA *KEN*.

Upon receiving the report of the gradual increase of the epidemic in Nagasaki *ken*, the sanitary officials of the Local Government and the *gun* officials assembled to consult as to the measures of prevention. When the epidemic invaded Tōkyō and Yokohama, it was arranged by consultation with the Nihon Tetsudō Kwaisha (Japanese Railway Co.), that if any case of cholera should be found in a railway carriage, the train should stop during the performance of the process of disinfection. On the 5th of August, the inspection of passengers was commenced at the railway stations of Urawa and Ōmiya, and at the railway stations of Honjo and Kumagaya, after the disease had become epidemic in the neighbouring *ken* of Gumma. Notwithstanding such precautions, the disease finally invaded this *ken*, when a central quarantine station was established in the Local Government Office, and branch stations were gradually established in all the police offices. At Ji-onji and Koshigaya, in Minami-saitama *gun*, and at Angyō, in Kita-adachi *gun*, where the epidemic was violent, inspecting stations for the extirpation of the disease were establish-

ed, and in other places stations were opened for the inspection of passengers on board vessels. Hearing that the epidemic in Nagasaki *ken* had become more powerful, the Local Government Office immediately commenced to provide disinfectants and appliances for disinfecting, instructions being given to the authorities of *gun*, towns, and villages, to provide disinfectants in each town and village. In the railway stations, and at important places inland or along rivers, stations for inspection and disinfection, and quarantine hospitals, were established. It was directed that when there was any report of a case of cholera, inspectors should be sent from such stations to see to the performance of measures of prevention and disinfection, the *gun* authorities and the heads of police offices being ordered at the same time to send inspecting physicians and practitioners to examine every person in the whole or in a part of the infected town or village. During such examination, the physicians were followed by the town and village officials, and the heads of sanitary companies, who were directed to urge forward the process of cleansing and to find out any concealed cases of disease. It was arranged in the *gun* offices, that as soon as a case

appeared, inspectors, *gun* physicians, and inspecting physicians, should be sent to direct the processes of prevention and disinfection, to prohibit communication, and either to send the sufferer to the quarantine hospital, or to allow him to be treated in his own house, according to circumstances. In places where the epidemic showed an inclination to spread, branch stations for inspection were established under the control of *gun* physicians. In some towns and villages, quarantine hospitals were established before there was any case of cholera, nurses, servants, etc. being appointed, and disinfectants and appliances for disinfection provided, to make ready beforehand against the invasion of the epidemic. Things being thus arranged, the processes of prevention and disinfection could be duly carried out as soon as any case of cholera appeared. The Board of Health, and the Medical Society, took no active part in these measures, but the *gun* physicians, who had been appointed early in this *ken*, rendered not a little benefit in the work of prevention.

#### IBARAGI *KEN*.

There was only a small number of cases, and the disease did not become epidemic in this

*ken*, but as it was prevailing in Tōkyō, Yokohama, and other localities, inspection was carried out on both land and water. As the station of Oyama, although it belongs to the neighbouring *ken* of Tochiki, has an important relation to this *ken*, officials and physicians were sent thither, after consultation with that *ken*, to carry out the inspection of passengers. Orders were given, in addition, to carry out the process of cleansing, to report cases of vomiting and discharging, and to form sanitary companies.

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TABLE SHOWING THE AMOUNT OF MONEY EXPENDED ON MEASURES FOR THE PREVENTION OF CHOLERA.—(1890).

<i>Fu, Ken, and Hokkaido.</i>	Local tax.	City, town, or village contribution.	Subscriptions, etc.	Total.
	<i>yen.</i>	<i>yen.</i>	<i>yen.</i>	<i>yen.</i>
Tōkyō <i>Fu</i> .....	61,874 678	5,519 739	1,560 248	68,954 665
Kyōto „ .....	1,685 600	8,169 091	509 852	10,364 543
Osaka „ .....	29,257 252	12,529 065	735 424	42,521 741
Kanagawa <i>Ken</i> ...	31,763 021	7,009 645	3,243 290	42,015 956
Hyōgo „ ...	11,277 456	12,708 042	—	23,985 498
Nagasaki „ ...	24,643 885	18,381 467	3,855 224	46,880 576
Niigata „ ...	375 313	268 554	14 221	658 118
Saitama „ ...	3,979 207	799 026	3,888 918	5,167 151
Chiba „ ...	4,537 715	8,461 792	1,491 063	14,490 570
Ibaragi „ ...	235 360	290 349	318 715	844 424
Gumma „ ...	1,920 007	1,852 777	645 926	4,418 710
Tochiki „ ...	1,945 090	806 245	251 148	3,002 393
Nara „ ...	2,013 772	1,734 132	—	3,747 904
Mie „ ...	227 944	138 485	108 583	475 012
Aichi „ ...	29 810	892 175	38 956	1,260 941
Shizuoka „ ...	1,039 465	2,648 897	1,972 360	5,660 722
Yamanashi „ ...	193 417	1,273 084.5	—	1,466 501.5
Shiga „ ...	995 193	1,561 930	—	2,557 123
Gifu „ ...	222 922	724 286	—	947 208
Nagano „ ...	370 136	177 234	—	547 370
Miyagi „ ...	651 951	186 858	68 824	907 633
Fukushima „ ...	174 630	8 443	22 518	205 591
Aomori „ ...	—	215 079	6 350	221 429
Yamagata „ ...	—	101 157	10 000	111 157
Akita „ ...	—	9 725	—	9 725
Fukui „ ...	238 444	244 161	2,367 105	2,849 710
Ishikawa „ ...	376 139	682 993	—	1,059 132
Toyama „ ...	177 531	425 704	78 282	681 517
Tottori „ ...	386 533	315 819	—	702 352
Shimane „ ...	4,838 184	2,162 909	655 054	7,656 147
Hiroshima „ ...	3,611 705	4,795 550	5,964 007	14,371 262
Yamaguchi „ ...	14,266 894	21,409 314	1,975 389	37,651 597
Wakayama „ ...	8,791 551	2,630 701	81 830	11,504 082
Tokushima „ ...	4,064 750	3,594 317	58 870	7,717 937
Kagawa „ ...	6,296 762	12,807 298	54 045	19,158 105
Ehime „ ...	1,341 229	5,535 734	2,624 438	9,501 401
Kōchi „ ...	4,714 798	954 095	84 397	5,753 290
Fukuoka „ ...	23,320 860	37,075 085	2,142 466	62,537 911
Ōita „ ...	7,834 663	3,914 873	3,361 858	15,111 394
Saga „ ...	6,391 860	5,033 779	498 315	11,923 954
Kumamoto „ ...	7,447 622	16,025 825	362 431	23,835 878
Miyazaki „ ...	803 476	1,245 282	426 606	2,475 364
Kagoshima „ ...	1,703 190	759 148	166 923	2,629 261
Hokkaidō „ ...	791 967	—	—	791 967
General total...	277,111 422	206,079 864.5	36,143 636	519,334 922.5

Note: There was no report from Okayama *Ken*.



TABLE SHOWING THE NUMBER OF CASES OF CHOLERA, AND OF SICK FAMILIES, WITH THE  
NUMBER OF HOUSES AND THE POPULATION IN EACH INFECTED LOCALITY. (1890).

<i>Fu, ken, and Hokkaidō.</i>	Dates of appearance and disappearance.	Population.	Number of houses.	Number of sick families.	Cases.	Deaths.
Tōkyō <i>Fu</i> .....	May. 16, Appearance. Dec. 13, Disappearance.	1,314,453	285,532	3,193	4,027	3,307
Kyōto „ .....	Jun. 21, „ Dec. 12, „	714,275	157,602	859	1,005	864
Ōsaka „ .....	Jun. 17, „ Dec. 29, „	1,364,761	271,231	7,278	8,815	7,486
Kanagawa <i>ken</i> .....	Jun. 28, „ Dec. 18, „	958,653	178,053	1,674	2,237	1,726
Hyōgo „ .....	May. 18, „ Dec. 8, „	1,289,452	266,042	3,151	3,858	2,987
Nagasaki „ .....	Jun. 27, „ Dec. 26, „	762,812	147,905	3,291	3,767	2,550
Niigata „ .....	Jul. 15, „ Oct. 11, „	1,245,086	213,713	88	38	30
Saitama „ .....	Apr. 2, „ Oct. 28, „	819,601	131,495	73	116	81
Chiba „ .....	Jul. 13, „ Dec. 25, „	1,195,097	210,749	991	1,407	1,015
Ibaraki „ .....	Jul. 10, „ Nov. 9, „	831,780	141,512	77	96	72
Gunma „ .....	Apr. 23, „ Nov. 1, „	682,484	131,248	178	219	171
Tochigi „ .....	Jun. 16, „ Nov. 24, „	556,101	85,660	135	177	121
Mie „ .....	Jul. 23, „ Oct. 23, „	271,366	52,843	13	19	14
Nara „ .....	Jul. 22, „ Dec. 7, „	395,369	68,601	358	442	358
Aichi „ .....	May. 9, „ Sept. 16, „	319,434	71,235	3	3	2

Shizuoka	"	.....	Jun. 15,	"	715,775	129,502	357	395	299
Nov. 15,	"								
Yamanashi	"	.....	Jun. 4,	"	458,047	81,437	254	293	208
Dec. 16,	"								
Shiga	"	.....	Aug. 13,	"	678,740	135,301	112	134	103
Nov. 9,	"								
Gifu	"	.....	Aug. 18,	"	19,696	5,320	1	1	1
Aug. 19,	"								
Nagano	"	.....	Jul. 6,	"	685,427	137,822	20	20	14
Sept. 20,	"								
Miyagi	"	.....	Jun. 29,	"	491,073	73,791	19	19	14
Sept. 80,	"								
Fukushima	"	.....	Aug. 30,	"	148,914	23,988	2	2	—
Sept. 26,	"								
Aomori	"	.....	Jul. 24,	"	70,599	12,064	18	22	17
Oct. 6,	"								
Yanagata	"	.....	Jun. 23,	"	391,497	59,950	10	11	8
Oct. 2,	"								
Akita	"	.....	Jun. 22,	"	304,963	52,017	12	12	3
Oct. 8,	"								
Fukui	"	.....	Jun. 6,	"	521,285	98,203	26	27	19
Sept. 30,	"								
Ishikawa	"	.....	Jul. 19,	"	92,735	16,611	9	9	9
Sept. 21,	"								
Toyama	"	.....	Jul. 10,	"	761,928	150,324	19	19	12
Nov. 3,	"								
Tottori	"	.....	Jul. 22,	"	274,852	55,557	27	29	20
Oct. 27,	"								
Shimane	"	.....	Jul. 29,	"	482,639	102,144	143	184	138
Nov. 20,	"								
Okayama	"	.....	Jul. 3,	"	1,014,627	188,473	1,265	1,505	1,163
Dec. 21,	"								
Hiroshima	"	.....	Jun. 30,	"	1,304,495	275,475	1,352	1,706	1,325
Dec. 5,	"								
Yamaguchi	"	.....	Jul. 9,	"	892,637	181,645	1,512	2,000	1,483
Nov. 24,	"								
Wakayama	"	.....	Jul. 15,	"	636,569	128,427	1,098	1,333	981
Nov. 24,	"								
Tokushima	"	.....	Jul. 19,	"	594,769	115,923	526	647	504
Nov. 20,	"								

<i>Fu, ken, and Hokkaidō.</i>	Dates of appearance and disappearance.	Population.	Number of houses.	Number of sick families.	Cases.	Deaths.
Kagawa <i>Ken</i> .....	Jul. 15,	603,141	115,385	1,539	1,952	1,429
Ehime " .....	Dec. 6, "					
May. 1, "		928,049	187,561	939	1,259	885
Dec. 6, "						
Kōchi " .....	Jul. 19, "	246,608	57,375	573	723	503
Dec. 18, "						
Fukuoka " .....	Jun. 20, "	1,170,292	211,170	2,959	3,559	2,727
Nov. 28, "						
Jul. 7, "		793,535	153,262	863	1,195	768
Dec. 21, "						
Saga " .....	Jul. 2, "	564,700	102,916	751	1,012	717
Nov. 30, "						
Kumamoto " .....	Jun. 11, "	1,056,969	212,321	1,080	1,306	817
Dec. 31, "						
Miyazaki " .....	Aug. 12, "	169,288	34,157	105	149	99
Dec. 11, "						
Kagoshima " .....	Jun. 29, "	621,997	130,332	208	281	173
Nov. 7, "						
Hokkaidō .....	Aug. 17, "	113,454	22,982	12	30	19
Nov. 6, "						
GENERAL TOTAL ...		29,530,024	5,664,846	37,048	46,060	35,248



<i>Fu, ken, and Hokkaidō.</i>		1 Case in a Family.	2 Cases in a Family.	3 Cases in a Family.	4 Cases in a Family.	5 Cases in a Family.	6 Cases in a Family.	7 Cases in a Family.	8 Cases in a Family.	9 Cases in a Family.	10 Cases in a Family.	11-41 Cases in a Family.	Total.	Family extinguished.
Shimane	<i>Ken</i> .....	111	24	7	1	—	—	—	—	—	—	—	143	1
Okayama	" .....	1,120	113	27	2	2	1	—	—	—	—	—	1,265	12
Hiroshima	" .....	1,166	156	26	3	—	—	—	—	—	—	—	1,352	25
Yamaguchi	" .....	1,239	205	43	19	3	3	—	—	—	—	—	1,512	22
Wakayama	" .....	932	135	33	8	—	—	—	—	—	—	—	1,098	23
Tokushima	" .....	441	61	12	5	2	2	—	—	—	—	—	526	3
Kagawa	" .....	1,249	205	55	26	2	1	—	—	—	—	—	1,539	14
Ehime	" .....	758	124	37	17	3	3	—	—	—	—	—	939	5
Kōchi	" .....	465	78	22	5	2	1	—	—	—	—	—	593	5
Fukuoka	" .....	2,443	328	85	19	5	2	—	2	—	—	—	2,888	27
Ōta	" .....	645	140	52	20	3	3	1	1	—	—	—	863	4
Saga	" .....	596	97	23	20	6	3	—	—	—	—	—	751	—
Kumamoto	" .....	919	103	43	8	1	1	—	—	—	—	—	1,080	—
Miyazaki	" .....	74	22	5	4	—	—	—	—	—	—	—	105	1
Kagoshima	" .....	153	37	9	1	2	1	—	—	—	—	—	208	1
Hokkaidō	" .....	9	3	—	—	—	—	—	—	—	—	—	12	1
GENERAL TOTAL .....		31,481	4,145	935	292	76	35	11	7	1	1	4	37,048	325



TABLE SHOWING THE NUMBER OF QUARANTINE  
HOSPITALS, CASES ADMITTED, DEATHS, RE-  
COVERIES, ETC.—(1890).

<i>Fu, Ken, and Hokkaidō.</i>	Quaran- tine hospitals.	Cases.	Deaths.	Re- coveries.	Persons infected in the hospital.
Tōkyō <i>Fu</i> .....	2	2,477	1,862	615	17
Kyōto „ .....	5	282	218	65	2
Osaka „ .....	5	4,215	3,312	893	66
Kanagawa <i>Ken</i> .....	12	975	718	257	6
Hyōgō „ .....	18	1,228	822	399	22
Nagasaki „ .....	15	853	597	256	25
Saitama „ .....	3	6	2	4	—
Chiba „ .....	15	209	126	83	24
Gumma „ .....	4	37	29	8	2
Tochiki „ .....	3	7	5	2	—
Mie „ .....	1	1	1	—	—
Nara „ .....	1	15	12	3	1
Shizuoka „ .....	2	5	4	1	—
Shiga „ .....	2	32	23	9	1
Gifu „ .....	1	1	1	—	—
Miyagi „ .....	1	1	1	—	—
Ishikawa „ .....	1	1	1	—	—
Shimane „ .....	3	29	18	11	1
Okayama „ .....	13	468	325	137	6
Hiroshima „ .....	14	6	6	—	—
Yamaguchi „ .....	42	522	315	177	31
Wakayama „ .....	1	69	51	18	1
Tokushima „ .....	39	419	298	120	21
Kagawa „ .....	5	684	474	210	7
Ehime „ .....	3	4	3	1	—
Kōchi „ .....	2	207	132	75	4
Fukuoka „ .....	23	1,061	779	301	50
Ōita „ .....	16	323	166	157	42
Saga „ .....	2	17	5	12	—
Kumamoto „ .....	32	495	249	246	22
Miyazaki „ .....	1	68	32	36	3
Kagoshima „ .....	2	109	52	57	3
Hokkaidō .....	4	17	10	7	—
General total .....	293	14,843	10,679	4,160	357

TABLE SHOWING THE NUMBER OF VESSELS INSPECTED.

Name of port.	Period during which inspection was enforced.	Vessels inspected.					Vessels bringing cases of or deaths from cholera.			Sums paid for inspection.
		Japanese.		Foreign.		Total.	Japanese.	Foreign.	Total.	
		Disinfected.	Only inspected.	Disinfected.	Only inspected.					
Nagasaki.....	55	2	14	3	10	29	—	—	—	<i>yen.</i> 17,222.795
Kōbe .....	55	7	155	4	37	203	6	—	6	7,677.838
Akama-ga-seki..	55	33	5,857	—	5	3,895	34	—	34	5,451 424
Hakodate .....	113	37	526	1	9	573	1	—	1	6,785.061
		79	4,552	8	61		41	—		
General total.			4,631		69	4,700			41	37,137.118

Note: This inspection of vessels was carried out according to the Regulations for the Inspection of Vessels coming from Cholera Infected Localities, Notification No. 31, June, 1882.

## ERRATA.

- P. 97, line 5, insert "principle" from line 6, before "of the Memorandum."  
P. 116, line 11, for "practioners" read "practitioners."  
P. 121, lines 4, 11 " " " "  
P. 126, line 20 " " " "  
P. 140, line 1 for "provention" read "prevention"; line 2 for "practioners" read "practitioners."  
P. 144, line 2 from foot, for "unanimonsly" read "unanimously."  
P. 157, line 11, for "varions" read "various."  
P. 158, line 9, for "sanitry" read "sanitary."  
P. 164, line 15, for "practioners" read "practitioners."

