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**The System of Precautionary Rules
For Ensuring Public Safety During a Pandemic in Japan:
The Example of COVID-19**
BACHELOR'S THESIS

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LATVIJAS UNIVERSITĀTE
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**Piesardzības pasākumu sistēma
sabiedrības drošības nodrošināšanai pandēmijas laikā Japānā:
COVID-19 piemērs
BAKALAURA DARBS**

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SUMMARY

This thesis examines what systems of precautionary rules for ensuring public safety during a pandemic exist in Japan, what systems of rules were recommended in past pandemics in 1918 and 2009, and analyses and compares the implementation of precautionary measures during the COVID-19 pandemic in early 2020. The purpose of this thesis is to understand what precautionary measures get recommended as a “system of rules” during a pandemic in Japan presently and in the past and to what degree these systems match or differ. The research methods used were analytic and comparative. Through the research concluded in this thesis it was discovered that most precautionary measures recommended by the World Health Organization during public health crises were already established in Japan before 2020; that the systems of precautionary rules recommended across different pandemics partially matched, but also exhibited significant differences; and that the system of precautionary rules recommended in Japan in 2020 was more comprehensive and succinct compared to systems in the past.

Keywords: precautionary measures, Japanese culture, pandemic, COVID-19

KOPSAVILKUMS

Šajā bakalaura darbā tika pētīts, kādi piesardzības pasākumi sabiedrības drošības nodrošināšanai pandēmijas laikā pastāv Japānā, kādas noteikumu sistēmas tika ieteiktas iepriekšējās pandēmijās 1918. un 2009. gadā, un tika analizēta un salīdzināta piesardzības pasākumu ieviešana COVID-19 pandēmijas laikā 2020. gadā. Šī bakalaura darba mērķis bija izprast, kādi piesardzības pasākumi tiek rekomendēti kā “noteikumu sistēmas” pandēmiju laikā Japānā mūsdienās un pagātnē, un kādā mērā šādas sistēmas ir līdzīgas vai atšķiras. Izmantotās pētniecības metodes bija analītiskā un salīdzinošā. Caur šajā darbā veikto pētījumu tika noskaidrots, ka vairums Pasaules Veselības Organizācijas sabiedrības veselības krīžu laikā ieteikto piesardzības pasākumi jau bija pazīstami Japānā pirms 2020. gada; ka dažādu pandēmiju laikā ieteikto piesardzības pasākumu sistēmas daļēji sakrita, bet arī izrādīja ievērojamas atšķirības; un ka 2020. gadā Japānā rekomendētā piesardzības noteikumu sistēma bija aptverošāka un kodolīgāka nekā agrākās sistēmas.

Atslēgvārdi: piesardzības pasākumi, Japānas kultūra, pandēmija, COVID-19

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INTRODUCTION

With the COVID-19 outbreak in early 2020 and no vaccine, many countries in the world struggled with implementation of personal protective measures, especially wearing facial masks. However, it is widespread knowledge that in Japan wearing masks is common during influenza season and even in other times. In this thesis author firstly, examined whether precautionary measures, such as wearing masks, washing hands and others exist in Japan and are commonly recommended and treated as a system of precautionary rules in the face of a pandemic; secondly, researched systems of precautionary measures used in pandemics of history; thirdly, observed from contemporary sources and studies what system of precautionary rules were recommended to the public during early stages of the COVID-19 pandemic in 2020 and how they were implemented, and lastly, compared systems of precautionary measures recommended in the past and present.

The goal of this thesis was to understand what anti-infection measures have been recommended in Japan the past and to understand what measures were recommended and implemented during the COVID-19 pandemic, furthermore, to compare such systems and to draw conclusions based on the findings of this research.

The question that this work aimed to answer was whether the system of precautionary rules for ensuring public safety during a pandemic in Japan recommended during the COVID-19 pandemic fully matched those systems recommended during previous pandemics. Furthermore, if the system of rules recommended during the COVID-19 pandemic did not fully match those systems recommended during previous pandemics, to what degree does a match exist.

The research methods employed in this thesis were analytical and comparative. First, scientific sources as well as contemporary news and other sources were used in information research and analysis, then discovered information was compared.

In the first chapter, precaution culture in Japan was examined, starting with research on what constitutes precautionary measures and later identifying the awareness and spread of these measures in Japanese culture. In the second chapter, historic information about previous pandemics was gathered and analysed to understand whether the same measures were used in the past and now. In the third chapter, contemporary sources were analysed to understand the government response and precaution implementation during the COVID-19 pandemic in Japan. In the final chapter, systems of precautionary measures recommended in the past influenza pandemics of 1918 and 2009 were compared to the systems recommended in 2020. After chapters, final conclusions were drawn and theses presented.

1. PRECAUTION CULTURE IN JAPAN

Mankind has encountered illness and contagious diseases since its earliest stages of development. For example, smallpox, the deadly viral infection that was eradicated only as recently as 1979, is estimated to have emerged some 10 000 years BC¹, with the earliest evidence of smallpox found in Egyptian mummies dated at about 3000 years old.² In Japan, Shinto rituals (神事 kamigoto) called *ekijinsai* (疫神齋, “worship of the gods of pestilence”) were performed from the Heian era until the Meiji era to appease the gods and beg for “plagues” (疫病 ekibyō) to cease, indicating that Japanese people have been looking for the ways to protect themselves from contagious epidemics for centuries. The fact that this practice has been revived in light of the COVID-19 pandemic³ is not only an indication of Japanese spiritualism, but also points to their trust in tradition and repeating rituals. To Japanese people, following traditional means of precaution may be just as important as physical self-precautionary measures. However, in this work the author did not look at the spiritual aspects of precautions, but instead looked at more quantifiable, physical and scientific means of protecting oneself in the time of a pandemic.

The basis of precautionary measures examined in this work are the 5 self-protective measures recommended by the World Health Organization (WHO) for transmissible infection prevention. The precautions are as follows:

1. hand hygiene;
2. physical distancing;
3. avoiding touching the eyes, nose and mouth;
4. respiratory etiquette;
5. self-isolation.

In this work, the system of these 5 precautionary measures is known as **the WHO system**. It was also researched whether there are precautionary measures recommended in Japan that fall outside these aforementioned 5 measures. In addition, some general relevant behavioural patterns exhibited by the Japanese society, such as being highly conscious of personal space or being averse to physical contact, while not employed primarily as an anti-viral safety

¹ Barquet, N.; Domingo P. (October 15 1997). *Smallpox: The Triumph over the Most Terrible of the Ministers of Death*. Annals of Internal Medicine volume 127 (8 pt 1).

² Fenner, F.; Henderson, D.A.; Arita, I.; Jezek, Z.; Ladnyi, I.D. (1988). *Smallpox and Its Eradication*. History of International Public Health, No. 6. Geneva: World Health Organization.

³ NHK news (May 15 2020). *Wishing for the end of COVID-19: Shinto ritual for calming illnesses revived after 148 years in Fukushima, Aizu*. Tokyo: NHK News. Available from: <https://www3.nhk.or.jp/news/html/20200515/k10012431481000.html> [Accessed March 17 2021]

measure or for hygiene reasons, were also be explored through the lens of precautionary behaviour. In the first part of this chapter, the author examined the aforementioned precautionary measures and their validity and effectiveness as such. In the second part, the awareness level of the aforementioned precautionary measures in Japan was examined, as well as other measures discovered during research were examined.

1.1. The definition of a system of precautionary rules

The Merriam-Webster dictionary defines “precaution” as “a measure taken beforehand to prevent harm or secure good”.⁴ In the case of the COVID-19 pandemic, until a widely available vaccine is developed and distributed, it is imperative that personal protective and precautionary measures that prevent the harm of infection and secure healthiness are implemented by the general public.⁵ To be able to understand what systems of precaution exist in Japan, the author first examined the five main personal protective measures recommended by the WHO – the WHO system.

Hand hygiene is considered one of the most effective precautionary measures against viral infections. Washing hands thoroughly with soap for at least 20 seconds dissolves the protective fatty layer around a virus and also picks up the destructed particles, ensuring the virus is washed off when rinsing.⁶ Hand sanitizing gel is also effective, given that it has high alcohol content (at least 60% - 80%). Alcohol works similarly to soap when dissolving a virus, however, it does not remove it from the skin like rinsing soap off with water does.⁷ Therefore, washing hands for 20 seconds with soap is still the most recommended option. Drying of the hands is an important part of hand hygiene as wet hands have a higher chance of recontamination.⁸ Difficulties of implementing this health protection practice can arise from lack of necessary resources such as soap and clean water, lack of cultural or habitual behaviour involving hand washing, and lack of understanding for the need of this practice.

⁴“Precaution.” Merriam-Webster.com Dictionary, Merriam-Webster, <https://www.merriam-webster.com/dictionary/precaution>. [Accessed March 17 2021]

⁵ Qualls, N., Levitt, A., Kanade, N., Wright-Jegade, N., Dopson, S., Biggerstaff, M., Reed, C., Uzicanin, A., & CDC Community Mitigation Guidelines Work Group (2017). *Community Mitigation Guidelines to Prevent Pandemic Influenza - United States, 2017*. MMWR. Recommendations and reports: Morbidity and mortality weekly report. Recommendations and reports, 66(1), 1–34. Available from: <https://doi.org/10.15585/mmwr.rr6601a1> [Accessed March 17 2021]

⁶ Hussain, M.; Hussain, I.; Mahnoor; Gulsher, M. (2020). *Coronavirus; Chemistry of Washing Hands with Soap for 20 Seconds*. Pakistan Journal of Public Health. Available from: <https://www.pjph.org/index.php/pjph/article/view/547>. [Accessed March 17 2021]

⁷ Fleming, S. (March 12 2020). *A chemistry professor explains: why soap is so good at killing COVID-19*. World Economic Forum. Available from: <https://www.weforum.org/agenda/2020/03/coronavirus-soap-covid-19-virus-hygiene/> [Accessed March 17 2021]

⁸ Huang, C.; Ma, W.; Stack, S. (2012). *The hygienic efficacy of different hand-drying methods: a review of the evidence*. Mayo Clinic Proceedings. 87 (8): 791–8. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3538484/>. [Accessed March 31 2021]

Physical (social) distancing is the concept of keeping distance from others of at least 2 meters (sometimes 1 meter in the official WHO guidelines), as well as avoiding spending time in crowded places or in groups. By reducing physical contact it is possible to reduce the likelihood of a viral transmission. Recommended by the WHO as “physical distancing”, to emphasise that social connections are highly important during a global pandemic, this measure of precaution was implemented in many countries worldwide during the COVID-19 pandemic.⁹ Difficulties with the implementation of this method can come from people’s unwillingness to become socially and by association physically distanced, as well as being unable to physically distance due to social and economic obligations such as, for example, work.

Considering the most rapid way to get infected with a virus is through mucous organs like the eyes, mouth or nose, preventing infection by keeping contact with said organs minimal is another highly important precautionary measure. Touching of the face is a behaviour not limited to children, but exhibited by adults as well. According to Shiraly et al. (2020), people touch their face an average 10 times an hour¹⁰. As this behaviour is highly habitual and many people may not realize their own actions, wearing a face mask is a means of preventing touching of the nose and mouth, thus reducing the possibility of infection.¹¹ As mentioned, since face-touching can be highly habitual, insufficient willingness to break the habit obstructs the implementation of this precautionary measure. Additionally, wearing a face mask may create a false sense of security and face-touching may still happen despite the barrier of the mask, or of the mask, which can lead to contamination of the hands from the mask.

“Respiratory etiquette” is the practice of sneezing or coughing correctly to minimize the spray that can potentially infect the surroundings. When sneezing or coughing, the face should not be covered with an open palm or clenched fist – instead the mouth should be covered by the crook of an elbow which is touched less often than hands, or a paper tissue that should be disposed of immediately.¹² Covering the mouth and nose with a personal protective equipment (PPE) such as a N95 ventilator, surgical mask, fabric mask or plastic shield significantly reduces the possibility of spreading infection by the wearer, and in the case of

⁹ *COVID-19: physical distancing* (2021). World Health Organization. Available from: <https://www.who.int/westernpacific/emergencies/covid-19/information/physical-distancing>. [Accessed March 17 2021]

¹⁰ Shiraly, R.; Shayan, Z.; McLaws, M.L. (2020). *Face touching in the time of COVID-19 in Shiraz, Iran*. American Journal of Infection Control, Volume 48, Issue 12, Pages 1559-1561. Available from:

<https://www.sciencedirect.com/science/article/abs/pii/S0196655320307744>. [Accessed March 17 2021]

¹¹ *Coronavirus disease (COVID-19) advice for the public*. (2021) World Health Organization. Available from: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public>. [Accessed March 17 2021]

¹² *Coronavirus disease (COVID-19) advice for the public*. (2021) World Health Organization. Available from: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public>. [Accessed March 17 2021]

the N95 protects the wearer from infection. Facial masks have the added benefit of reducing touching of the face.¹³

Also known as quarantine, self-isolation is the practice of limiting interaction with the general public either to the minimum or entirely. Quarantine, the word itself derived from the Italian *quaranta* (forty), was first recorded emerging in its current form in 14th century Venice where arriving ships were required to wait for 40 days before entering port.¹⁴ Staying home when one feels ill is common practice in the West, as it serves not only the purpose of resting and recovering, but also that of isolating the sick from the healthy. Self-isolation or quarantine should be continued until the symptoms of the illness pass.¹⁵ The self-isolation measures of unprecedented strictness proposed by the WHO in 2020 despite the potential effects on the economy proved to be successful if implemented to a satisfactory degree, as in the case of New Zealand¹⁶, but failed in countries where either the governments did not enforce the measures or the public was unwilling to follow through with self-isolation and quarantining to a sufficient degree.

1.2. Precautionary rules adopted by the Japanese society

In Japanese language, “precaution” can be translated as *yobō* (予防), but in media materials regarding the COVID-19 crisis, the words *kansen bōshi* (感染防止, “infection prevention”) also often appear. The same words or similar phrasing (感染と予防, *kansen to yobō*, “infection and prevention”; 感染を防ぐ, *kansen wo fusegu*, “to prevent infection”) is also used in the contexts of influenza, which has a similar set of precautionary measures as COVID-19, both being contagious respiratory illnesses caused by viruses. The author next examined what precautionary measures Japanese people were recommended before the COVID-19 pandemic began, looking at information released by the MLWH, the main government distributor of influenza and anti-infection information and guidelines, to discern whether the precautions were recommended at all and to what degree.

¹³ Chen, Y.; Qin, G.; Chen, J. et al. (2020) *Comparison of Face-Touching Behaviors Before and During the Coronavirus Disease 2019 Pandemic*. JAMA Network Open. Available from: <https://jamanetwork.com/journals/jamanetworkopen/article-abstract/2768767>. [Accessed March 17 2021]

¹⁴ “*Etymologia: Quarantine*”. (2013) *Emerging Infectious Diseases*. 19 (2): 263. Available from: https://wwwnc.cdc.gov/eid/article/19/2/ET-1902_article. [Accessed March 17 2021]

¹⁵ National Health Service. (2021) *Self-isolation and treating coronavirus symptoms*. National Health Service of the United Kingdom. Available from: <https://www.nhs.uk/conditions/coronavirus-covid-19/self-isolation-and-treatment/>. [Accessed March 31 2021]

¹⁶ Bromfield, N.; McConnell, A. (2020). *Two routes to precarious success: Australia, New Zealand, COVID-19 and the politics of crisis governance*. *International Review of Administrative Sciences*. Available from <https://doi.org/10.1177/0020852320972465>. [Accessed March 17 2021]

1.2.1. Awareness in Japan of the WHO system of precautionary rules

Handwashing with soap is well-educated in homes and schools in Japan, and all people have easy access to soap and clean water. Washing hands after going to the restroom, when returning home, before meals is considered common sense in Japan. These practices have deep roots in the Japanese cultural belief that hands are “dirty”, even after washing, because hands touch objects of the outside world and handle money. The Japanese avoid touching food directly with their hands, and service sector workers often wear white gloves that signify cleanliness and purity of the business or service.¹⁷ Hand sanitizers, anti-bacterial sprays and rubbing alcohol are popular, and are often found in public spaces such as building entrances, reception desks, public restrooms and others to be used for free¹⁸. This indicates that Japanese people are likely to be accustomed to having access to hand sanitization. There is great deal of information regarding the importance of hand sanitization and hand hygiene available on the MHLW website. For example, multiple illustrated posters about the proper means of washing hands are available, as well as large amount of written information available for redistribution by local governments, medical institutions, welfare facilities and others.¹⁹ Considering the information discovered during research, the author concluded that the Japanese public are likely to have pre-existing hand hygiene habits, and that information about hand hygiene is widely distributed by the government.

As stated in the previous chapter, the recommended physical distancing guidelines by the WHO indicate that the distance of 1-2 meters should be maintained between people to reduce the risk of infection transmission. In the crowded Japanese cities, such distance is difficult to maintain in small spaces like train cars or pubs. However in the case of Japan, the people practice a different kind of social distancing on a daily basis. Starting from greeting culture, where bows are exchanged from a comfortable distance instead of shaking hands (rarely) or hugging or kissing (almost never), Japanese people do not approach others as closely as Western nationals may, even friends and family. Moreover, people are very conscious of personal space and are constantly aware of keeping distance from others in order

¹⁷ Ohnuki-Tierney, E. (1984) *Illness and Culture in Contemporary Japan: An Anthropological View*. Pg. 28-30. Cambridge: Cambridge University Press.

¹⁸ Tashiro, A.; Shaw, R. (2020). *COVID-19 Pandemic Response in Japan: What Is behind the Initial Flattening of the Curve?* Sustainability 2020, 12(13). Available from: <https://www.mdpi.com/2071-1050/12/13/5250/htm>. [Accessed March 18 2021]

¹⁹ MHLW. *Q&A and information for local governments, medical institutions, welfare facilities and others* (in Japanese). Ministry of Health, Labour and Welfare website. Available from: <https://www.mhlw.go.jp/stf/covid-19/qa-jichitai-iryokikan-fukushishisetsu.html>. [Accessed March 29 2021]

not to make others uncomfortable.²⁰ Thus, while it is difficult to maintain the recommended distance of 1-2 meters, Japanese people are aware of the distance between them and others and will try to keep it. The MLHW website has very limited information regarding social distancing, and it is predominantly linked with respiratory etiquette, cautioning to be aware that sneezing freely and not keeping distance are conditions that exacerbate the spread of an infection. The author concluded that the Japanese are familiar with physical distancing practices and perform them on a day to day basis, although for a different purpose than infection precaution and likely without deliberately keeping distance of a specific meters.

In the case of face-touching, or avoiding touching the eyes, nose and mouth, the author faced some degree of difficulty finding this measure being recommended to the Japanese public. There are few mentions of “avoiding to touch the face” (顔に触らない, kao ni sawaranai; 顔に触れない, kao ni furenai) in information materials about influenza prevention. An article from the Nara Prefectural Infectious Disease Information Center (2019) briefly mentions that touching the face should be avoided.²¹ In “Influenza Infection Prevention Manual” published by the ICHG Research Group in Japan, there is a paragraph that mentions avoiding touching the face during influenza outbreak and following proper hand hygiene.²² In fact, all mentions the author found of face-touching were immediately preceded or followed by hand hygiene recommendations, so the author must conclude that hand hygiene is by far prioritized in Japan. In addition, most materials that mentioned face touching were either targeted at care or medical facilities, or were published by local clinics. No general information regarding face-touching was found on the MHLW website (however, a specific Q&A section for the 2009 influenza pandemic mentions this measure²³). The author concluded that information about face-touching is spread on much smaller scale than hand washing and that public awareness may be insufficient regarding this precautionary measure.

Respiratory etiquette is mentioned often in anti-infection precaution materials in Japan, where it is known as “cough etiquette” (咳エチケット, seki echiketto). In a poster distributed by the National Institute of Infectious Diseases (henceforth NIID), respiratory (cough) etiquette is described as “manners for not infecting people in the vicinity when sneezing or

²⁰ Takeda, T.; Kamagahara, Y.; Lu, X.; Kida, N.; Hara, T.; Ota, T. (2017) *Study of the difference in the movement of experienced and inexperienced persons in Japanese bowing*. In *Advances in Intelligent Systems and Computing*, volume 494; Springer: Cham, Switzerland. Available from: https://link.springer.com/chapter/10.1007/978-3-319-41947-3_23/. [Accessed March 18 2021]

²¹ *Knowing the silent infection* (in Japanese). (2019) Nara Prefectural Infectious Disease Information Center. Available from: <http://www.pref.nara.jp/secure/207368/3102.pdf>. [Accessed March 29 2021]

²² Fujita, N. et al. (2016) *Manual of infection prevention measures at facilities and others: Influenza Infection Prevention Manual* (in Japanese). Tokyo: Medical Consultation and New Remedies Web. Available from: https://www.shinryo-to-shinyaku.com/db/pdf/sin_0053_01_0041.pdf. [Accessed March 29 2021]

²³ MHLW (2009). *Questions and answers regarding the new-type influenza A/H1N1* (in Japanese). Ministry of Health, Labour and Welfare website, Q14. Available from: <https://www.mhlw.go.jp/bunya/kenkou/kekkaku-kansenshou04/02.html>. [Accessed March 20 2021]

coughing”. In the same poster, visual instructions on how to cover the mouth when sneezing correctly are included.²⁴ It should be noted that respiratory etiquette is described as “manners” here instead of a precautionary or preventative measure, because it indicates the subtle application of societal pressure and guilt on the general public to follow the rules and have manners, otherwise others would be bothered and disappointed. There are numerous informational materials available on the MHLW website regarding respiratory etiquette, one reason for that being because, having an established keyword for a name, it is easy to search for and find information about, opposite of face-touching, where no concrete term exists in Japanese. The author concluded respiratory etiquette is widely known term and information about this precautionary measure is spread yearly during influenza season by the government and the media.

The Japanese have an established mask-wearing culture in seasonal conditions such as the winter months (influenza season) and the spring months (allergy season); however, mask wearing, commonly considered to be part of the broader term “respiratory etiquette”, is not an established practice only for practical reasons.²⁵ It is also reflection of the “Japanese collectivism” wherein the general public may behave in certain ways based only on the fact that others do so as well.²⁶ Demand for disposable masks has been increasing year to year in Japan, according to data from Japan Hygiene Products Industry Association data. Adding together quantity of imported and domestically produced masks, the number produced annually has risen from 668 million in 2010 to 6.4 billion in 2019, a growth rate of 866% over almost a decade. In 2019, 78% of imported and locally produced masks were intended for general (household) use²⁷. This exponential growth in itself indicates the tremendous increase of demand, though further telling is the fact that some nearly 80% of all mask demand in Japan is for general use disposable masks. Such enormous demand clearly illustrates that there exists culture of using masks in daily life. Wearing a mask has not only the benefit of reducing the possibility of infection transmission through sneeze or cough particles (飛沫感染, himatsu kansen, “droplet infection”), it has been linked to reduced touching of the nose

²⁴ NIID (2016). Preventing infection with respiratory etiquette (in Japanese) (informative poster). Ministry of Health, Labour and Welfare website. Available from: https://www.mhlw.go.jp/file/06-Seisakujouhou-10600000-Daijinkanboukouseikagakuka/0000123505_3.pdf. [Accessed March 29 2021]

²⁵ Burgess, A.; Horii, M. (2012) *Risk, ritual and health responsabilisation: Japan's 'safety blanket' of surgical face mask-wearing*. *Sociology of Health and Illness*. 2012, 34, 1184–1198. Available from: <https://onlinelibrary.wiley.com/doi/full/10.1111/j.1467-9566.2012.01466.x>. [Accessed March 18 2021]

²⁶ Imada, T. (2012). *Cultural Narratives of Individualism and Collectivism: A Content Analysis of Textbook Stories in the United States and Japan*. *Journal of Cross-Cultural Psychology*. Available from: <https://journals.sagepub.com/doi/abs/10.1177/00220221110383312>. [Accessed March 18 2021]

²⁷ Japan Hygiene Products Industry Association (2019). Production and import of Face Mask. Japan Hygiene Products Industry Association website. Available from: http://www.jhpia.or.jp/site_en/statistics/data5.html. [Accessed March 29 2021]

and mouth, which is further associated with preventing contact transmission.²⁸ Moreover, wearing face mask in public has been found to be associated with other positive hygiene practices and behaviours in Japanese adults, such as hand washing, gargling, avoiding crowds, avoiding close contact with ill people, and receiving influenza vaccinations²⁹. The author surmised from this research that face mask wearing is widespread practice in Japan during influenza season and in other times, and that while mask itself is not guarantee against infection, mask-wearing is linked to good health practices, thus associating mask-wearers to having reduced risk of infection.

In Japanese, self-isolation is generally known as “refraining from going outside” (外出自粛, gaishutsu jishuku). This measure, despite being very potent means of illness prevention, can be difficult to implement in Japan. The reason for this is that in many cases, adults do not have the freedom of choice regarding self-isolation, especially during the weekdays. According to a study by Sugawara et al. (2008), in the event of being requested to self-isolate (stay at home), 30-50 year olds were most likely to answer that they would not stay at home. The authors of said survey concluded that such an answer is likely due to work obligations of working-age adults.³⁰ In Japan asking for time off can be difficult, even when ill. Moreover, employees may be asked to remain at home if ill, but due to societal pressure, feeling like there are expectations on them and not wanting to inconvenience co-workers, they still may come in. Analysing materials available online on the MHLW website that contain the keyword “外出自粛”, the author discovered that it is predominantly found in guideline contexts with infected persons being asked to self-isolate (for example in the notice distributed to local health centers during the 2015 MERS outbreak³¹) and with businesses being urged to consider the possibility of reduced workforce in consequence of self-isolation implementation (for example in the informational material released by the MHLW regarding the 2009 H1N1 pandemic³²). The author therefore concluded that information regarding self-

²⁸ **Chen, Y.; Qin, G.; Chen, J. et al.** (2020) *Comparison of Face-Touching Behaviors Before and During the Coronavirus Disease 2019 Pandemic*. JAMA Network Open. Available from: <https://jamanetwork.com/journals/jamanetworkopen/article-abstract/2768767>. [Accessed March 17 2021]

²⁹ **Wada, K.; Oka-Ezoe1, K.; Smith, D.R.** (2012) *Wearing face masks in public during the influenza season may reflect other positive hygiene practices in Japan*. BMC Public Health 12, 1065 (2012). Available from: <https://doi.org/10.1186/1471-2458-12-1065>. [Accessed March 29 2021]

³⁰ **Sugawara, T. et al.** (2008) *Awareness of the general public regarding refraining from going out during the new-type influenza pandemic* (in Japanese). Journal of the Japanese Association for Infectious Disease Vol 82 No. 5 pg. 427-432. Available from: https://www.jstage.jst.go.jp/article/kansenshogakuzasshi1970/82/5/82_5_427/article/-char/ja/. [Accessed March 29 2021]

³¹ MHLW (2015). *Regarding the response in the case of a national outbreak of Middle East respiratory syndrome (MERS)* (in Japanese) pg. 3. Ministry of Health, Labour and Welfare website. Available from: <https://www.mhlw.go.jp/file/05-Shingikai-10901000-Kenkoukyoku-Soumuka/0000165241.pdf>. [Accessed March 19 2021]

³² MHLW (2009). *Fundamental knowledge regarding the new-type influenza* (in Japanese) pg. 50. Ministry of Health, Labour and Welfare website. Available from: https://www.mhlw.go.jp/topics/bukyoku/kenkou/suido/hourei/jimuren/h21/dl/090223-1a_0003.pdf. [Accessed March 29 2021]

isolation distributed by the government was scarce (pre-COVID-19) and that implementation of this measure in Japan is difficult for certain age groups due to cultural obligations towards work.

1.2.2. Awareness of other precautionary measures practiced in Japan

While researching, the author discovered other behaviours not listed in the recommended list by the WHO, yet recommended in Japan as precautionary measures. Such measures included gargling, keeping indoor spaces ventilated, and leading a balanced lifestyle. In order to comprehend Japanese systems of precautionary rules, these precautionary practices were examined, while noting the scientific validity of each.

Related to respiratory hygiene, there exists another noteworthy personal protective measure unique to Japan. Considered inappropriate or even vulgar in other countries, gargling (うがい or 嗽, ugai) is extremely commonplace during the influenza season, and in other times as habitual precautionary measure against illness. It may be performed multiple times during the day, but is especially often recommended when returning home, performed together with washing hands.³³ Japanese people have continued to follow this practice since the Heian period (794-1185)³⁴, but it is still debated whether this method is actually preventive, as simply gargling with water cannot rinse away the virus. However, there have been some trials in the past that show results of gargling helping to reduce the viral load on organs in the mouth and throat, thus to some degree reducing the likelihood of infection in healthy persons.³⁵ It is of note that gargling was mentioned in almost all previously examined sources regarding precautionary measures and may be as widespread as hand hygiene, regardless of scientific efficacy. This may be due to Japanese people's tendency to continue traditional behaviours passed on through generations, such as the *ekijinsai* rituals, despite having empirical evidence of their validity.

Another infection prevention measure commonly recommended by the MHLW was found to be keeping indoor spaces well-ventilated, and additionally well-humidified. There is scientific evidence supporting the effectivity of both. While airborne particle inhalation is not the only way to get infected, influenza is nevertheless considered an airborne disease, and there is increasing evidence that where there is adequate ventilation, long-range transmission

³³ **Tashiro, A.; Shaw, R.** (2020). *COVID-19 Pandemic Response in Japan: What Is behind the Initial Flattening of the Curve?* Sustainability 2020, 12(13). Available from: <https://www.mdpi.com/2071-1050/12/13/5250/htm>. [Accessed March 18 2021]

³⁴ **Yoshikai, N.** (2020). *About gargling*. Doshisha Women's College of Liberal Arts website (in Japanese). Available from: https://www.dwc.doshisha.ac.jp/research/faculty_column/12511. [Accessed March 18 2021]

³⁵ **Tsai, C. L., & Wu, P. C.** (2020). *Possible beneficial role of throat gargling in the coronavirus disease pandemic*. Public Health, 185, 45–46. Available from <https://doi.org/10.1016/j.puhe.2020.05.055>. [Accessed March 18 2021]

occurs infrequently.³⁶ Correspondingly, at low humidity, influenza virus has maximum infectivity, whereas high relative humidity of >40% has been found to significantly reduce infectivity of aerosolised viruses.³⁷ Although these measures are not immediately preventative and viral survival in the environment depends each virus, both keeping indoor spaces ventilated and keeping high relative humidity can be considered good infection prevention practices. In the case of being performed as precautionary measures, they were thus considered as part of the system of precautionary rules for preventing viral infections for the purpose of this work.

Finally, a recommendation that the author noticed often was that to have a healthy lifestyle: particularly, to consume balanced meals, to practice sufficient water intake and to get plenty of rest. These measures coincide with those recommended against “lifestyle disease” (生活習慣病, *seikatsu shuukanbyō*), which is a commonly used term in Japan describing various diseases stemming from lifestyle-related habits such as diet, exercise, smoking, drinking, stress and others.³⁸ The fact that lifestyle disease is a well-known term indicates that these issues affect the Japanese public on a deep level, hence a healthy lifestyle being singled out and recommended as a precautionary measure.

After examining online sources published by the Ministry of Health, Labour and Welfare, as well as others, the commonly recommended precautionary measures were found to fall into two categories: those recommended also by the WHO (the WHO system), and others. Out of the WHO system, hand hygiene and respiratory etiquette were found to likely be familiar concepts to the Japanese public and already commonly practiced during influenza season. Social (physical) distancing was found to likely be followed not as precautionary measure, but as cultural behaviour of keeping distance from others, thus the implementation of this measure is difficult to measure. Avoiding touching of the eyes, nose and mouth was only somewhat recommended and it can be concluded that this measure is not well implemented by the public. Self-isolation was found to be considered difficult to implement, and perhaps for that reason only recommended to persons suspected or confirmed to be infected. In addition, other measures not recommended by the WHO were discovered during research. Mask-wearing was found to be extremely widespread among the public, and was found to have other benefits such as reduced face-touching and connection to other positive

³⁶ **Tellier, R.** (2009). *Aerosol transmission of influenza A virus: a review of new studies*. *Journal of the Royal Society Interface* Volume 6 pg. S788. Available from: <http://doi.org/10.1098/rsif.2009.0302.focus>. [Accessed March 29 2021]

³⁷ **Noti, J.D.; Blachere, F.M.; McMillen, C.M.; Lindsley, W.G.; Kshon, M.L.; et al.** (2013) *High Humidity Leads to Loss of Infectious Influenza Virus from Simulated Coughs*. *PLOS ONE* 8(2): e57485. Available from: <https://doi.org/10.1371/journal.pone.0057485>. [Accessed March 29 2021]

³⁸ *Lifestyle disease*. MHLW website. Available from: <https://www.e-healthnet.mhlw.go.jp/information/dictionary/metabolic/ym-040.html>. [Accessed March 29 2021]

hygiene behaviours. Gargling was discovered to be traditional and unwaveringly popular precautionary measure despite scarce evidence of scientific validity. Keeping spaces ventilated and humid were concluded to be commonly recommended and scientifically sound preventative measures, though their efficiency may depend on the virality and other characteristic of each infectious disease. Lastly, living healthy lifestyle with sufficient nutrition, hydration and rest was found to be recommended as a precautionary measure.

2. SYSTEMS OF PRECAUTIONS DURING PREVIOUS PANDEMICS

Having established that when an epidemic of the influenza or some other infectious disease emerges in Japan, ordinary citizens are already aware of the system of precautionary rules they are expected to follow, as the system of precautionary rules was found in the previous chapter to be synonymous with common sense behaviour in Japan, this section of the work explored whether the system of precautionary rules is related to any systems potentially employed before and during previous influenza pandemics, specifically the 1918 H1N1 pandemic (also known as the Spanish influenza) and the 2009 H1N1 pandemic (also known as the 2009 swine influenza) in Japan. The author chose to examine these influenza pandemics for the following reasons: the 1918 pandemic was the largest scale pandemic of modern times, and nearly all following influenza A pandemics in the world have been descendants of the 1918 H1N1 strain, making it the “mother” of all modern pandemics³⁹. The 2009 H1N1 pandemic was chosen because it was the next largest worldwide infectious pandemic until COVID-19 and the author intends to compare how systems of precautionary measures changed during the nearly 100 years between.

2.1. The case of the 1918 H1N1 pandemic

The so-called “Spanish” influenza was the first major influenza pandemic of the post-industrial world. Despite its misleading name, the Spanish influenza likely originated either in the USA or France in 1918 and quickly spread around world, continuing in waves until 1920. It is estimated it affected 500 million people – one third of the world population at the time. With comparatively high fatality rate of >2.5%, it was extremely deadly, resulting in an estimated 50 million deaths.⁴⁰ Unlike most influenza epidemics, the 1918 H1N1 influenza had disproportionately high mortality rate in young adults.⁴¹

The 1918 pandemic is commonly described as consisting of four waves, the second wave of autumn 1918 being the deadliest. In Europe it started in August in France and Spain and spread through the continent; it hit the USA with various timings across cities from August to December.⁴² In Japan, the influenza started in August 1918, consistent with the

³⁹ **Taubenberger, J. K.; Morens, D. M.** (2006). *1918 Influenza: the mother of all pandemics*. *Emerging infectious diseases*, 12(1), pg. 15. Available from: <https://doi.org/10.3201/eid1201.050979>. [Accessed March 19 2021]

⁴⁰ *Ibid.* pg. 15–22.

⁴¹ **Mujica, G.; Sternberg, Z.; Solis, J.; Wand, T.; Carrasco, P.; Henao-Martínez, A.F.; Franco-Paredes, C.** (2020) *Defusing COVID-19: Lessons Learned from a Century of Pandemics*. *Tropical Medicine and Infectious Disease*. 2020; 5(4):182. Available from: <https://www.mdpi.com/2414-6366/5/4/182>. [Accessed March 20 2021]

⁴² **Chandra, S.; Christensen, J.; Likhtman, S.** (2020). *Connectivity and seasonality: The 1918 influenza and COVID-19 pandemics in global perspective*. Cambridge University Press: *Journal of Global History*, 15(3), 408-420. Available from: <https://doi.org/10.1017/S1740022820000261>. [Accessed March 20 2021]

Western world, and spread more widely after October that year. About half of the 55.5 million population were infected and an approximate 390 thousand people are estimated to have died, though the number may likely be higher.⁴³

To combat the spread of the illness, in January 1919, the Department of Hygiene in the Ministry of Internal Affairs started notifying the public with “Instructions for Preventing Influenza” (流行性感冒予防心得, りゅうこうせいかんぼうよぼう ryuukōsei kanbō yobō kokoroe; also read as hayari kaze yobō kokoroe⁴⁴). This information included such recommendations of self-precaution as:

1. starting to implement social distancing;
2. stopping gathering in public spaces like movie theatres or trains;
3. using masks or handkerchiefs when sneezing;
4. often gargling with salt water or warm water;
5. quarantining of infected people,

as well as general advice regarding cleanliness, the airing of bedclothes and bedding in the sun and others.⁴⁵ Immediately, keywords such as “social distancing”, “masks”, “gargling” and “self-quarantine” stand out. In addition, the concepts of avoiding crowded places and respiratory hygiene can be identified. However, there was near no attempt at stopping inter-prefectural, and indeed global travel, which exacerbated the spreading of the infection nationwide.⁴⁶

By the records of the Ministry of Internal Affairs, in October 1919, the government notified each prefecture governor to have people wear masks in public places, and for trains, buses and movie theatres to disallow customers without masks. In January 1920, more formal and stronger notifications were given to the governors. Those included the demand to implement “policies against the flu”, to order the citizens to wear masks, to make appropriate medical treatments available and to promote cooperation with schools, factories, hospitals, military bases and other institutions. The implementation of these orders varied by prefecture. For example, in Osaka prefecture, 3,500 copies of the government notification were reprinted and posted in major places in Osaka city, and in the second wave, 35,000 pamphlets were

⁴³ Noy, I.; Okubo, T.; Strobl, E. (2020). The Japanese Textile Sector and the Influenza Pandemic of 1918-1920. Munich: CESifo, 8651 October 2020, pg. 6. Available from: <https://www.cesifo.org/en/publikationen/2020/working-paper/japanese-textile-sector-and-influenza-pandemic-1918-1920>. [Accessed March 20 2021]

⁴⁴ Kawana, A. (2018). *Regarding past pandemics: The Spanish influenza (part 2)* (in Japanese). Office for Pandemic Influenza and New Infectious Diseases Preparedness and Response, Cabinet Secretariat website. Available from: https://www.cas.go.jp/jp/influenza/kako_02.html. [Accessed March 20 2021]

⁴⁵ Noy, I.; Okubo, T.; Strobl, E. (2020). The Japanese Textile Sector and the Influenza Pandemic of 1918-1920. Munich: CESifo, 8651 October 2020, pg. 9. Available from: <https://www.cesifo.org/en/publikationen/2020/working-paper/japanese-textile-sector-and-influenza-pandemic-1918-1920>. [Accessed March 20 2021]

⁴⁶ Ibid. pg. 8.

printed and distributed in public places. In Hyogo prefecture, warning notifications were distributed in newspapers, as well as films on preventative measures were made and played in theatres. In Koichi prefecture, the pamphlet explaining how to make masks at home was made and 100,000 copies were distributed. Considering that literacy rates were already very high in Japan at the turn of the 20th century (80-90% in males), it can be surmised that the general public, even the lower classes, were able to access and understand the information regarding the precautionary measures. However, it should be noted that the policies and their implementation differed across prefectures, the reason for that being that 1) they were handled by each prefecture and the local police, 2) the severity of the epidemic was different and the local responses varied, and 3) the regional differences in culture created somewhat different attitudes in the public.⁴⁷

The system of precautionary rules recommended during the 1918 H1N1 pandemic in Japan included measures such as social (physical) distancing, avoiding crowded spaces, practicing respiratory etiquette, wearing masks to reduce transmission, gargling, and self-isolation (self-quarantine). Hand hygiene, considered one of the most important measures in the 21st century, was not mentioned in literature regarding the 1918 pandemic. Furthermore, face-touching, or touching of the eyes, nose and mouth was not mentioned. Posters, pamphlets and films were made and the high literacy rates ensured that the information was received by the public, but the actual implementation was not recorded with the same dedication as the notification of the public itself was recorded, thus it is difficult to discern to what degree the recommendations were followed.

2.2. The case of the 2009 H1N1 pandemic

Roughly 90 years after the 1918-1920 pandemic, the second largest influenza A (H1N1) pandemic spread across the world in 2009. Emerging in Mexico and the USA in March 2009, this new influenza strain was the re-combination of existing human, avian and swine flu viruses further combined with another pig flu virus⁴⁸, resulting in the popularistic name “swine flu”. According to 2011 paper by Kelly et al.⁴⁹, the worldwide infection rate was between 11% and 21%, with 18,500 deaths clinically confirmed; another study estimates the

⁴⁷ Noy, I.; Okubo, T.; Strobl, E. (2020). *The Japanese Textile Sector and the Influenza Pandemic of 1918-1920*. Munich: CESifo, 8651 October 2020, pg. 9-11. Available from: <https://www.cesifo.org/en/publikationen/2020/working-paper/japanese-textile-sector-and-influenza-pandemic-1918-1920>. [Accessed March 20 2021]

⁴⁸ Trifonov, V.; Khiabaniyan, H.; Rabadan, R. (2009). *Geographic dependence, surveillance, and origins of the 2009 influenza A (H1N1) virus*. *The New England Journal of Medicine*. 361 (2): 115–19. Available from: <https://www.nejm.org/doi/full/10.1056/NEJMp0904572>. [Accessed March 20 2021]

⁴⁹ Kelly, H.; Peck, H.A.; Laurie, K.L.; Wu, P.; Nishiura, H.; Cowling, B.J. (2011). *The Age-Specific Cumulative Incidence of Infection with Pandemic Influenza H1N1 2009 Was Similar in Various Countries Prior to Vaccination*. San Francisco: PLOS One. Available from: <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0021828>. [Accessed March 20 2021]

true number of deaths associated with the virus to be at about 284,500.⁵⁰ The pandemic was widely known as “new-type influenza” (新型インフルエンザ, shingata infuruenza)⁵¹ in Japan. The MHLW reported 198 deaths caused by the pandemic in Japan as of March 2010⁵², however, some deaths exacerbated by the pandemic but not counted as influenza deaths may not be included, and thus the number of pandemic deaths may be considerably higher. The first case in Japan was discovered in May 16, although it had no history of international travel, indicating the virus was already prevalent.⁵³ Similar to the 1918 H1N1 pandemic, the 2009 pandemic also had excess mortality rates in young adults.⁵⁴

Information about precautionary measures in Japan was disseminated by various governmental and other institutions. For example, infection prevention guidelines published on the Japanese Association for Infectious Diseases’ website state the following measures as rules to be followed:

1. hand hygiene, common precautionary and spray (sneeze, cough) prevention measures;
2. use of appropriate PPE (face masks);
3. separating infected patients from others in care facilities;
4. maintaining the environment of indoor facilities, including ventilation;
5. taking seasonal influenza or new-type influenza (swine influenza) vaccine;
6. implementing self-protection measures and reacting to cases of infection in family.

Interestingly, point number 1 contains rather vague “common precautionary measures” as an important measure, indicating that the reader is expected to already be aware of what such measures may be.⁵⁵

⁵⁰ Dawood, F. S.; Iuliano, A.D.; Reed, C.; Meltzer, M.I.; Shay, D.K.; Cheng, P. et al. (2012). *Estimated global mortality associated with the first 12 months of 2009 pandemic influenza A H1N1 virus circulation: a modelling study*. The Lancet Infectious Diseases Vol. 12, Issue 9, P687-695, September 1, 2012. Available from: [https://www.thelancet.com/journals/laninf/article/PIIS1473-3099\(12\)70121-4/fulltext/](https://www.thelancet.com/journals/laninf/article/PIIS1473-3099(12)70121-4/fulltext/). [Accessed March 20 2021]

⁵¹ Japanese Association for Infectious Diseases (2009). *New-type influenza diagnosis and treatment guidelines* (in Japanese). Japanese Association for Infectious Diseases’ website. Available from: https://www.kansensho.or.jp/modules/guidelines/index.php?content_id=11. [Accessed March 20 2021]

⁵² MHLW (2010). *Breakdown of influenza A (H1N1) deaths by age/summary of deaths in Japan* (in Japanese). Ministry of Health, Labour and Welfare website. Available from: <https://www.mhlw.go.jp/bunya/kenkou/kekkaku-kansenshou04/rireki/100331-03.html>. [Accessed March 20 2021]

⁵³ Murota, T; Kato, A; Okumura, T. (2010) *Emergency management for information systems in public health a case study of the 2009 pandemic-flu response in Japan*. 2010 8th IEEE International Conference on Pervasive Computing and Communications Workshops (PERCOM Workshops), Mannheim, Germany, 2010, pg. 395. Available from: <https://ieeexplore.ieee.org/abstract/document/5470637>. [Accessed March 20 2021]

⁵⁴ Mujica, G.; Sternberg, Z.; Solis, J.; Wand, T.; Carrasco, P.; Henao-Martínez, A.F.; Franco-Paredes, C. (2020) *Defusing COVID-19: Lessons Learned from a Century of Pandemics*. Tropical Medicine and Infectious Disease. 2020; 5(4):182. Available from: <https://www.mdpi.com/2414-6366/5/4/182>. [Accessed March 20 2021]

⁵⁵ Japanese Association for Infectious Diseases (2009). *New-type influenza diagnosis and treatment guidelines* (in Japanese). Japanese Association for Infectious Diseases’ website, Section VII. Available from: https://www.kansensho.or.jp/modules/guidelines/index.php?content_id=11#n07. [Accessed March 20 2021]

Similar information was spread on local government level. For example, the document detailing the pandemic released by Aichi prefectural government in May 2010 has the section that recommends the following precautions:

- Avoid crowded places and wash hands and gargle when returning home.
- Get plenty of sleep, nutrition, stay warm and take care of one's health.
- Use humidifiers to keep indoor spaces from getting too dry, which can accelerate infection.
- Get tested as soon as one gets sick.
- Wear masks if coughing to prevent infecting others.⁵⁶

Of system of precautionary rules, only hand washing, avoiding crowds (though not explicitly social distancing), wearing the mask and respiratory is mentioned. Neither avoiding face-touching nor self-isolation is recommended here. However, gargling and keeping spaces humidified is mentioned.

In information material released by Bureau of Social Welfare and Public Health in Tokyo, the following measures are listed:

- Wash hands when returning home.
- Keep room humidity and ventilation appropriate.
- Follow correct lifestyle and take time to rest.
- Eat balanced meals and take care to intake water.
- Unless necessary, avoid crowds.⁵⁷

In this document, washing of hands and avoiding crowds are the only measures mentioned of the set established in the previous chapter. However, here as well keeping rooms humidified and ventilated is mentioned, as well as lifestyle and eating habits are called to attention.

The information available from official government sources is largely that regarding the spread of infections and similar data, and information about vaccinations, with precautionary measures taking the smaller role. On the MHLW website, most information regarding precautionary measures links back to one question and answer section that suggests the following precautionary measures:

- washing hands;

⁵⁶ Aichi prefectural government. (2010) *Regarding verification of new-type influenza A/H1N1* (in Japanese). Aichi prefectural government website. Available from: <https://www.pref.aichi.jp/uploaded/attachment/17880.pdf>. [Accessed March 26 2021].

⁵⁷ Tokyo Metropolitan Government (2009) *Tokyo Metropolitan Government's response to the new-type influenza (201st report)* (in Japanese). Tokyo Metropolitan Government Bureau of Social Welfare and Public Health website. Available from: https://www.kaigo.city.edogawa.tokyo.jp/topics/pdf/influenzachui_tokyo_20090925_201.pdf. [Accessed March 26 2021]

- gargling;
- not touching the mouth and nose;
- respiratory etiquette;
- requiring people who exhibit respiratory illness symptoms to wear the mask.⁵⁸

Notably, social distancing was not part of the basic recommended precautionary measures by the MHLW here, nor were self-isolation measures requested from the public.

In summary, during the 2009 pandemic, common precautionary rules recommended to the public were hand washing, respiratory etiquette (when coughing and sneezing) and mask wearing, and avoiding crowded spaces. Other, non-WHO recommended common measures are noted to have been gargling with water or salt water, controlling indoors microclimate and keeping the balanced lifestyle. Not touching the eyes, mouth and nose was mentioned in only one source (MHLW). Neither self-isolation nor explicit social distancing was not found to have been recommended in any source examined. Measures such as vaccination or seeing health professionals, even if recommended, were not listed or examined here, as they do not fall into the main measures established in the first chapter of this paper.

⁵⁸ MHLW (2009). *Questions and answers regarding the new-type influenza A/H1N1* (in Japanese). Ministry of Health, Labour and Welfare website, Q14. Available from: <https://www.mhlw.go.jp/bunya/kenkou/kekkaku-kansenshou04/02.html>. [Accessed March 20 2021]

3. SYSTEM OF PRECAUTIONS DURING THE COVID-19 PANDEMIC

In December 2019, the first cases of a new, unknown virus outbreak were registered in Wuhan, China.⁵⁹ On 11 February 2020, the WHO named this disease "COVID-19", which stands for "coronavirus disease 2019".⁶⁰ From December 2019 until March 2021, there had been 127 million cases confirmed worldwide and 2.7 million confirmed deaths.⁶¹ The first case of COVID-19 in Japan was confirmed on January 16, 2020 in Kanagawa prefecture in a man who had previously travelled to Wuhan.⁶² The case count remained low throughout January and February, starting to increase exponentially at the end of February. A case was discovered on the cruise ship Diamond Princess and the ship was ordered to quarantine in Yokohama, where in total 712 of 3711 people became infected with 14 deaths of passengers recorded.⁶³ As of March 2021, the total national case count was 472,112 (0.37% of the population) and the death count was 9,113 (1.9% mortality rate).⁶⁴

3.1. The government response to the pandemic in the first half 2020

In Japan, virus countermeasures in the first 6 months of 2020 were handled by the government task force called the Novel Coronavirus Response Headquarters (新型コロナウイルス感染症対策本部, shingata koronawirusu kansensho taisaku honbu) that met at the then-Prime Minister Shinzo Abe's Official Residence, as well as the National Institute of Infectious Diseases (NIID), an institution of the MHLW. Announcements were often made by the Prime Minister's office or NIID. The initial roster of the Prime Minister's Novel Coronavirus Response Headquarters task force, established on January 30, consisted of 36 high-ranking bureaucrats from Ministries, yet none of them was an expert in medicine or infection containment procedures, although some had served in a similar panel for the 2009

⁵⁹ Wang, C.; Horby, P.H.; Hayden, F. G.; Gao, G.F. (2020). *A novel coronavirus outbreak of global health concern*. The Lancet, Volume 395, Issue 10223, P470-473, February 15, 2020. Available from:

[https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(20\)30185-9/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)30185-9/fulltext). [Accessed April 5 2021]

⁶⁰ WHO (2020). *WHO Director-General's remarks at the media briefing on 2019-nCoV on 11 February 2020*. The WHO website. Available from: <https://www.who.int/director-general/speeches/detail/who-director-general-s-remarks-at-the-media-briefing-on-2019-ncov-on-11-february-2020>. [Accessed April 5 2021]

⁶¹ WHO (2020). *Coronavirus disease (COVID-19) Weekly Epidemiological Update and Weekly Operational Update*. The WHO website. Available from: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports>. [Accessed April 5 2021]

⁶² WHO (2020). *Novel Coronavirus – Japan (ex-China)*. World Health Organization Disease outbreak news. Available from: <https://www.who.int/csr/don/16-january-2020-novel-coronavirus-japan-ex-china/en/>. [Accessed on March 26 2021]

⁶³ Moriarty, L.F. et al. (2020) *Public Health Responses to COVID-19 Outbreaks on Cruise Ships – Worldwide, February–March 2020*. Centers for Disease Control and Prevention: Morbidity and Mortality Weekly Report. Available from: https://www.cdc.gov/mmwr/volumes/69/wr/mm6912e3.htm?s_cid=mm6912e3_w#contribAff. [Accessed on March 26]

⁶⁴ WHO (2020). *Coronavirus disease (COVID-19) Weekly Epidemiological Update and Weekly Operational Update*. The WHO website. Available from: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports>. [Accessed April 5 2021]

influenza pandemic.⁶⁵ The first Novel Coronavirus Expert Meeting (新型コロナウイルス感染症対策専門家会議, shingata koronawirusu kansensho taisaku senmonka kaigi), consisting of ten public health experts and medical professionals and lead by the director of NIID⁶⁶, was held on February 16, a full month after the first COVID-19 case was discovered in Japan.⁶⁷

During this period, incoming travel from China to Japan was increasingly restricted from Hubei to later other provinces. The MHLW instructed municipal and prefectural governments, that is, cities and prefectures, to create outpatient wards at their public health institutions to isolate COVID-19 patients⁶⁸, however, until February 12, PCR testing (the only kind available in Japan at that point) was restricted to only people who had travelled to Hubei, and due to this lack of testing, the official case count was low. It is important to note that only public health institutions are required to cooperate, as the government cannot give orders to the private health sector. After the government's coronavirus consultation system was established on February 14, 536 consultation centres were established nationwide – the public were to contact these centres for consultation and applying for testing at the specialized outpatient wards.⁶⁹ On February 17, guidelines for the testing centres were released. These instructed medical staff to limit consultations only to people who meet certain criteria: 1) having had cold symptoms or a fever of 37.5°C or over for four days or more (including cases when continuous intake of an antipyretic was necessary); 2) having a strong feeling of fatigue or shortness of breath. The elderly and pregnant women were allowed a consultation after having had the symptoms for at least 2 days.⁷⁰ These high testing requirements, implemented due to fears of overcrowding caused by uninfected patients who believed they had the virus⁷¹, also played a role in the comparatively small number of COVID-19 cases in early 2020 in Japan.

⁶⁵ *Novel Coronavirus Response Headquarters*. Website of the Prime Minister of Japan and his Cabinet, press release, January 30, 2020. Available from: https://japan.kantei.go.jp/98_abe/actions/202001/00034.html. [Accessed April 3 2021]

⁶⁶ *Regarding the opening of the Novel Coronavirus Expert Meeting*. Website of the Prime Minister of Japan and his Cabinet, February 14, 2020. Available from: https://www.kantei.go.jp/jp/singi/novel_coronavirus/senmonkakaigi/konkyo.pdf. [Accessed April 8 2021]

⁶⁷ *First Novel Coronavirus Expert Meeting*. Website of the Prime Minister of Japan and his Cabinet, press release, February 16, 2020. Available from: https://japan.kantei.go.jp/98_abe/actions/202002/00022.html. [Accessed April 8 2021]

⁶⁸ *Fourth Meeting of the Novel Coronavirus Response Headquarters*. Website of the Prime Minister of Japan and his Cabinet, press release, January 1, 2020. Available from: https://japan.kantei.go.jp/98_abe/actions/202002/00001.html. [Accessed April 8 2021]

⁶⁹ *Ninth Meeting of the Novel Coronavirus Response Headquarters*. Website of the Prime Minister of Japan and his Cabinet, press release, February 14, 2020. Available from: https://japan.kantei.go.jp/98_abe/actions/202002/00024.html. [Accessed April 8 2021]

⁷⁰ *Regarding criteria for advising and consultation about the novel coronavirus*. Website of the Prime Minister of Japan and his Cabinet, February 17, 2020. Available from: <https://www.mhlw.go.jp/content/10900000/000596978.pdf>. [Accessed April 8 2021]

⁷¹ Saitou, K. (2020) *Early Stage of a Japan Outbreak: The Policies Needed to Support Coronavirus Patients*. Nippon.com, Tokyo. Available from: <https://www.nippon.com/en/news/100267/early-stage-of-a-japan-outbreak-the-policies-needed-to-support-coronavirus-patients.html>. [Accessed April 8 2020]

To curb the spread of the virus, on February 27, Abe called for the closure of all schools from March 2 until the end of spring break (usually in early April).⁷² On March 5, the Abe administration introduced an amendment to the 2012 Special Measures Act to Counter New Types of Influenza to adapt the law to include COVID-19 and it was passed on March 13. This amendment gives the Prime Minister the power to declare a “state of emergency” (SOE) (緊急事態, *kinkyuu jitai*) in areas where COVID-19 was to be determined to be causing a threat to the lives and livelihood of residents. When called into power, the law allows local governments to 1) instruct residents to avoid unnecessary outings unless they are essential workers; 2) restrict or request the temporary closure of public and private businesses; 3) expropriate private land or buildings to build hospitals; 4) seize medical or food supplies from businesses that refuse to sell such supplies, punish such that do not comply, and order businesses to transport emergency goods.⁷³ However, this law does not give the Japanese government the authority to enforce lockdowns or restrict the movement of citizens. In other words, the government may “ask for public cooperation” and the public is expected to follow these instructions, but there are no legal punishments in place for those who do not.⁷⁴ A SOE was announced on April 7 after weeks of steady case count rise. The SOE was only applied to 6 prefectures that had the largest concentration of cases nationwide. Abe claimed that, according to experts, if inter-personal contact was reduced by 70-80%, the case count would peak in 2 weeks, seeming to imply the pandemic would be contained after that.⁷⁵ The SOE was extended to all prefectures nationwide on April 16,⁷⁶ and remained active until May 21, after which only 5 prefectures remained under SOE – it was eventually lifted on May 25,⁷⁷ and the request to refrain from travelling between prefectures was lifted from June 19.⁷⁸ Regarding financial support of individuals, the government announced the “Special Fixed Benefits” program (特別定額給付金, *tokubetsu teigaku kyuufukin*) in April, which offered a

⁷² BBC News. *Coronavirus: Japan to close all schools to halt spread*. BBC News, February 17 2020. Available from: <https://www.bbc.com/news/world-asia-51663182>. [Accessed April 9 2021]

⁷³ Abe, R. (2020). *Revised influenza law to allow Japan PM to declare state of emergency over coronavirus*. The Mainichi, Tokyo. Available from: <https://mainichi.jp/english/articles/20200305/p2a/00m/0fp/011000c>. [Accessed April 9 2021]

⁷⁴ Kyodo News (2020). *PM Abe eyes state of emergency declaration April 7 amid wide virus spread*. Kyodo News, Tokyo, April 6 2020. Available from: <https://english.kyodonews.net/news/2020/04/5c77df980ac8-breaking-news-abe-to-declare-state-of-emergency-over-virus-govt-official.html>. [Accessed April 9 2021]

⁷⁵ Nakagawa, S. (2020). *Abe: Crisis will peak in two weeks if human contact is reduced*. NHK World-Japan, April 8 2020. Available from: <https://www3.nhk.or.jp/nhkworld/en/news/backstories/1016/>. [Accessed April 12 2021]

⁷⁶ Kyodo News (2020). *Japan declares nationwide state of emergency amid virus spread*. Kyodo News, Tokyo, April 16 2020. Available from: <https://english.kyodonews.net/news/2020/04/da404143318b-urgent-japan-looks-to-expand-areas-covered-by-virus-emergency-declaration.html>. [Accessed April 12 2021]

⁷⁷ The Sankei News (2020). *State of emergency lifted nationwide, Prime Minister says infections largely under control, 5 prefectures open after 7 weeks*. The Sankei News (in Japanese), May 25 2020. Available from: <https://www.sankei.com/politics/news/200525/plit2005250065-n1.html>. [Accessed April 12 2021]

⁷⁸ Mainichi Shimbun (2020). *From June 19 travelling the country allowed, plans to resume economic activity announced by the government*. Mainichi Shimbun (in Japanese), May 25 2020. Available from: <https://mainichi.jp/articles/20200525/k00/00m/040/191000c>. [Accessed April 13 2021]

fixed payment of 100,000 yen per resident.⁷⁹ However, due to lacking local administrative capacity, the timing of the pay-outs varied greatly over municipalities.⁸⁰

A different type of support relating to precautionary measures was extended by the government with Prime Minister Abe pledging to provide each household with two reusable cloth masks, known colloquially as “Abenomasks”, a play on his signature “Abenomics” economic policy.⁸¹



Figure 1. “Abenomasks” received in Chiyoda ward, Tokyo.⁸²

This measure received widespread criticism from the public, however, with the small size of the masks, the fact that 2 masks may not be enough for families and bigger households, and the tax-funded cost of 40 billion yen without shipping fees being disputed; some questioned whether the timing of the announcement on April 1 was an ill-timed April Fool’s joke.⁸³ The public continued to disprove of “Abenomasks”, with nearly 100,000 having been returned to authorities by mid-July.⁸⁴ By August, Abe himself had stopped wearing the mask, previously

⁷⁹ Ministry of Internal Affairs and Communications (2020). *Guide to Special Cash Payments*. Ministry of Internal Affairs and Communications website. Available from: https://www.soumu.go.jp/main_content/000715668.pdf. [Accessed April 14 2021]

⁸⁰ [not journal] Kubota, S.; Onishi, K.; Toyama, Y. (2021). *COVID-19 stimulus payments: Evidence from bank transaction data in Japan*. Vox, CEPR, January 27 2021. Available from: <https://voxeu.org/article/covid-19-stimulus-payments-evidence-japan>. [Accessed April 14 2021]

⁸¹ *25th Meeting of the Novel Coronavirus Response Headquarters*. Website of the Prime Minister of Japan and his Cabinet, press release, April 1, 2020. Available from: https://japan.kantei.go.jp/98_abe/actions/202004/00001.html. [Accessed April 14 2021]

⁸² Photo: Mainichi/Takeichi, K. (May 26 2020). Available from: <https://mainichi.jp/english/articles/20200720/p2a/00m/0na/009000c>. [Accessed April 14 2021]

⁸³ Yahoo News (2020). *No masking the mockery: Japan two-mask pledge ripped online*. Yahoo News, April 2. Available from: <https://news.yahoo.com/no-masking-mockery-japan-two-mask-pledge-ripped-035412744.html>. [Accessed April 14 2021]

⁸⁴ Abe, R. (2020). *100,000 unwanted 'Abenomasks' returned or donated to Japan gov't and local bodies*. The Mainichi, July 20 2020. Available from: <https://mainichi.jp/english/articles/20200720/p2a/00m/0na/009000c>. [Accessed April 14 2021]

often described in media sources as “ill-fitting” due to the way it would ride up his face.⁸⁵ (Figure 2)



*Figure 2. Prime Minister Shinzo Abe with an “Abenomask”.*⁸⁶

To summarise, government response during the first six months of 2020 included gathering a task force of ministry officials, and later a team of public health experts and medicine professionals, school closures, amending the existing pandemic law to include COVID-19 and exercising said law to implement a state of emergency by ordering businesses to shorten business hours, as well as providing some economic support in the form of a one-time fixed benefit, and material support in the form of offering 2 reusable masks per household. Generally, government response was remarked upon by critics as slow and unsatisfactory, however, case count remained comparatively lower than in other countries.

3.2. Precautionary measures recommended in 2020

Considering how widespread media coverage has been of the COVID-19 pandemic, numerous sources with varying recommended measures were found to exist. To narrow the scope of research, for the purpose of this thesis the author examined only information provided by the following government sources: Prime Minister’s Office of Japan (首相官邸,

⁸⁵ Kyodo News (2020). *Japan PM says he stopped wearing “Abenomask” as various options available*. Kyodo News, August 3 2020. Available from: <https://english.kyodonews.net/news/2020/08/36abfc7b37df-abe-says-he-stopped-wearing-abenomask-as-various-options-available.html>. [Accessed April 14 2021]

⁸⁶ Photo: Reuters (April 24 2020). Available from: <https://www.straitstimes.com/asia/east-asia/japans-abenomask-plan-faces-further-woes-as-recalls-issued>. [Accessed April 14 2021]

shushō kantei, henceforth Kantei), Ministry of Health, Labour and Welfare (MHLW), and Tokyo Bureau of Social Welfare and Public Health (TBSWPH), as well as information spread by NHK. The official sources were chosen as for the reason that these are the same government sources that have been releasing other COVID-19 information, the Tokyo source specifically for the reason that Tokyo is the largest metropolitan area in Japan, and NHK was chosen as a public media sources for the reason that it is a national broadcaster of nationwide reach, thus presumably allowing it to spread information to a large segment of the population.

3.2.1. The WHO system of precautionary rules

Regarding hand hygiene, on the COVID-19 info hub section of the Kantei website, to-the-point instructions about hand washing and an instructional image was available.⁸⁷ On the COVID-19 Q&A section of the MHLW website, a question regarding precautions in the case of an infected family member gave the following answer: “Wash your hands diligently with soap; disinfect with alcohol.”⁸⁸ TBSWPH prepared detailed instructions regarding precautionary measures in a PDF file. Hand hygiene is number 2, and the instructions include multiple illustrations, but also a detailed list of when to wash hands (for example, after coming home, after sneezing or coughing, before preparing food and before eating, after treating a sick family member et cetera).⁸⁹ Japan’s public broadcaster NHK prepared a dedicated article for hand washing instructions and the importance of hand hygiene during an infectious pandemic.⁹⁰

As discovered in chapter 1, physical (social) distancing is difficult to implement in Japan, particularly in metropolitan areas due to population density and lack of space. However, the government conceived a campaign to prevent gathering in social settings that reflects the social distancing principle on a larger scale – *sanmitsu* (三密) or *mitsu no mitsu* (三つの密), or the Three C’s in English. The name comes from three words that all start with the same kanji of *mitsu*: *mippei* (密閉, shutting tightly), *misshuu* (密集, crowding together) and

⁸⁷ Prime Minister’s Office of Japan (2020). *Preparing for the new coronavirus infection ~Knowing what each person can do~*. Prime Minister’s Office of Japan’s website, Q2: What measures can each person take against new coronavirus infections? (in Japanese). Available from: <https://www.kantei.go.jp/jp/headline/kansensho/coronavirus.html#c2>. [Accessed April 14 2021]

⁸⁸ MHLW (2020). *Novel coronavirus Q&A (for ordinary citizens)*. MHLW website, Section 3 Question 2: What should I be aware of at home if a family member is suspected of being infected with the new coronavirus? (in Japanese). Available from: https://www.mhlw.go.jp/stf/seisakunitsuite/bunya/kenkou_iryuu/dengue_fever_qa_00001.html#Q3-2. [Accessed April 14 2021]

⁸⁹ TBSWPH (2020). *Novel Coronavirus Infectious Disease: Infection Prevention Handbook for Tokyo Residents*. TBSWPH website; page 15. Available from: <https://www.fukushihoken.metro.tokyo.lg.jp/iryo/kansen/kansenyobouhandbook.files/tominmukehbver1.pdf>. [Accessed April 14 2021]

⁹⁰ NHK Kenkō (2020). How to put on the correct mask and how to wash your hands effectively (also to prevent the new coronavirus). NHK kenkō, updated September 23 2020. Available from: https://www.nhk.or.jp/kenko/atc_529.html. [Accessed April 14 2021]

missetsu (密接, close together).⁹¹ In English, the 3 C's that are to be avoided are: 1) closed spaces with poor ventilation; 2) crowded places with many people nearby; 3) close-contact settings such as close-range conversations. *Sanmitsu* was first announced by Kantei on Twitter on March 18.⁹² Flyers like in Figure 3 are also available in different layouts and languages on the Kantei website.⁹³



Figure 3. *Sanmitsu* or the 3C's, flyer.⁹⁴

On the COVID-19 Q&A page on the MHLW website, *sanmitsu* is mentioned multiple times, spelled both 三密 and 三つの密. Physical distancing (フィジカル・ディスタンス, *fijikaru disutanshingu*) is also mentioned briefly in one of the FAQ answers on the MHLW website, recommended toward preschool children who are not recommended to wear masks due to potential breathing difficulties caused by the obstruction of the mouth and nose.⁹⁵ The guidelines from TBSWPH include the sentence “When going and coming from work, take

⁹¹ Prime Minister's Office of Japan (2020). *Preparing for the new coronavirus infection ~Knowing what each person can do~*. Prime Minister's Office of Japan's website, “Asking for cooperation with reducing spread of infection (flyers)”. Available from: <https://www.kantei.go.jp/jp/headline/kansensho/coronavirus.html#c5>. [Accessed April 16 2021]

⁹² Prime Minister's Office of Japan (2020). Notice regarding novel coronavirus. Official Twitter account of the Prime Minister's Office of Japan, March 18 2021 (in Japanese). Available from: https://twitter.com/kantei_saigai/status/1240057648835252224?s=21. [Accessed April 16 2021]

⁹³ Prime Minister's Office of Japan (2020). *Preparing for the new coronavirus infection ~Knowing what each person can do~*. Prime Minister's Office of Japan's website, “Asking for cooperation with reducing spread of infection (flyers)” (in Japanese). Available from: <https://www.kantei.go.jp/jp/headline/kansensho/coronavirus.html#c5>. [Accessed April 16 2021]

⁹⁴ Illustration: Ibid.

⁹⁵ MHLW (2020). *Novel coronavirus Q&A (for ordinary citizens)*. MHLW website, Section 6 Question 12: Should preschool children wear masks? (in Japanese). Available from: https://www.mhlw.go.jp/stf/seisakunitsuite/bunya/kenkou_iryuu/dengue_fever_qa_00001.html#Q6-12. [Accessed April 16 2021]

actions that avoid the 3C's"⁹⁶, and further a full section explaining about physical distancing rules as such as keeping 1-2 meter distance between people, using masks when speaking to people in person and others.⁹⁷ As for NHK, *sanmitsu* is mentioned in a core article covering various aspects of COVID-19, although the information given is sparse, only stating the basic meanings of the concept.⁹⁸

In most materials, face-touching did not have its own section or question, but it was found to be at least mentioned in passing in all sources. On the Kantei website, a sentence like “Do not touch your eyes or nose with unwashed hands” appears in the hand hygiene instructional.⁹⁹ The exact same information is available in the MHLW materials as well. It is mentioned multiple times that touching the eyes or nose is a highly probable way of getting infected, and hence should be avoided.¹⁰⁰ TBSWPH informational paper mentions multiple times that touching eyes and the nose is a cause of infection; however, there were no instances where instructions to avoid such behaviour were given. The only information of an instructional nature regarding nose hygiene was that of covering the nose with a tissue or mask when sneezing¹⁰¹, which for the purpose of this work is considered to be part of coughing etiquette (respiratory etiquette). The NHK article containing generic COVID-19 information did not provide instructions regarding avoiding face-touching. However, another article titled “Think of COVID-19 like a fresh coat of paint” that explains how the virus is everywhere by likening the invisible virus to a hypothetically visible coat of paint, talks in detail about why avoiding face-touching matters through illustrating streaks of paint left on people’s face after they carelessly touch them.¹⁰² (Figure 4)

⁹⁶ TBSWPH (2020). Novel Coronavirus Infectious Disease: Infection Prevention Handbook for Tokyo Residents. TBSWPH website; Page 2 (in Japanese). Available from:

<https://www.fukushihoken.metro.tokyo.lg.jp/iryo/kansen/kansenyobouhandbook.files/tominmukehbver1.pdf>. [Accessed April 16 2021]

⁹⁷ Ibid, pages 19-20.

⁹⁸ NHK Kenkō (2020). [New coronavirus] What is important now: From an infectious disease control expert. NHK Kenkō, updated April 27 2020 (in Japanese). Available from: https://www.nhk.or.jp/kenko/atc_1669.html. [Accessed April 14 2021]

⁹⁹ Prime Minister’s Office of Japan (2020). *Preparing for the new coronavirus infection ~Knowing what each person can do~*. Prime Minister’s Office of Japan’s website, Section 2 (in Japanese). Available from:

<https://www.kantei.go.jp/jp/headline/kansensho/coronavirus.html#c2>. [Accessed April 16 2021]

¹⁰⁰ MHLW (2020). *Novel coronavirus Q&A (for ordinary citizens)*. MHLW website. Available from:

https://www.mhlw.go.jp/stf/seisakunitsuite/bunya/kenkou_iryoudenguefeverqa_00001.html#Q6-12. [Accessed April 16 2021]

¹⁰¹ TBSWPH (2020). Novel Coronavirus Infectious Disease: Infection Prevention Handbook for Tokyo Residents. TBSWPH website (in Japanese). Available from:

<https://www.fukushihoken.metro.tokyo.lg.jp/iryo/kansen/kansenyobouhandbook.files/tominmukehbver1.pdf>. [Accessed April 16 2021]

¹⁰² Manabe, Y. (2020) Think of COVID-19 like a fresh coat of paint. NHK Mirai Switch (in Japanese). Available from:

<https://www3.nhk.or.jp/news/special/miraiswitch/article/article42/>. [Accessed April 16 2021]



Figure 4. Explaining how dirty hands can infect a person by likening the virus to paint.¹⁰³

Respiratory etiquette, or cough etiquette in Japanese, was found to be a well-known term in Japan in the first chapter of this thesis. Researching how it was communicated to the public in 2020, it was discovered that on the Kantei website, cough etiquette was singled out along with the 3C's and hand hygiene¹⁰⁴, indicating that it is considered one of the most important precautionary measures in Japan. Multiple illustrations were available. (Figure 5) On the Q&A section of the MHLW website, the answer to the question “What is ‘cough etiquette’?” included a plainly explained definition¹⁰⁵, along with a URL link to another section of the website which provides detailed instructions about proper sneezing or coughing manner.¹⁰⁶ TBSWPH guidelines for Tokyo citizens provides a full page that includes a bullet point list of respiratory etiquette related manners, as well as visual instructions on best sneezing or coughing practices. It even notes that the rubbish bin in which used tissues are disposed to should be covered in a plastic waste bag to avoid contaminating the bin itself.¹⁰⁷ When utilizing the Google search engine to look for results only from the NHK website that include the keywords 咳エチケット or せきエチケット (coughing etiquette), no results with sufficiently comprehensive information regarding the precaution measure in question were discovered. Some sources included singular mentions of being careful when sneezing or coughing and practicing good coughing etiquette, but no further information on the topic.

¹⁰³ Illustration: Carpe Diem Entertainment. (2020) Available from:

<https://www3.nhk.or.jp/news/special/miraiswitch/article/article42/>. [Accessed April 17 2021]

¹⁰⁴ Prime Minister's Office of Japan (2020). *Preparing for the new coronavirus infection ~Knowing what each person can do~*. Prime Minister's Office of Japan's website, Section 2 (in Japanese). Available from:

<https://www.kantei.go.jp/jp/headline/kansensho/coronavirus.html#c2>. [Accessed April 17 2021]

¹⁰⁵ MHLW (2020). *Novel coronavirus Q&A (for ordinary citizens)*. MHLW website (in Japanese). Available from:

https://www.mhlw.go.jp/stf/seisakunitsuite/bunya/kenkou_iryuu/dengue_fever_qa_00001.html#Q3-4. [Accessed April 17 2021]

¹⁰⁶ MHLW (2020). *Cough etiquette*. MHLW website (in Japanese). Available from:

<https://www.mhlw.go.jp/stf/seisakunitsuite/bunya/0000187997.html>. [Accessed April 20 2021]

¹⁰⁷ TBSWPH (2020). *Novel Coronavirus Infectious Disease: Infection Prevention Handbook for Tokyo Residents*. TBSWPH website; Page 14 (in Japanese). Available from:

<https://www.fukushihoken.metro.tokyo.lg.jp/iryo/kansen/kansenyobouhandbook.files/tominmukehbver1.pdf>. [Accessed April 20 2021]



Figure 5. Illustrations of proper respiratory (coughing) etiquette.¹⁰⁸

Self-isolation in the sense of “refraining from going outside” (外出自粛, gaishutsu jishuku) was generally found to be mentioned in a set with other precautionary measures. The Kantei source had information both regarding how to act when going outside, and requests to avoid outings. “外出の自粛” is mentioned in the context of the 3C’s.¹⁰⁹ On the MHLW Q&A page, the term “outside” is mentioned 17 times, and “refraining from going outside” 6 times, which indicates it is expected citizens may not be able to completely avoid going outside, hence instructions being provided for such cases, making the existence of the requests to stay inside somewhat paradoxical. Such a sentence also appears: “In the case of going outside for items necessary for maintaining life and health, such as going to a medical institution, purchasing food, medicine, and daily necessities, going to work, exercising or taking a walk outdoors etc., the request to refrain from going outside does not apply”, highlighting once again that wide-spread self-isolation among citizens is expected to be impossible in Japan. However, simultaneously recommendations for adopting teleworking and refraining from staying outside past 8 o’clock in the evening, and using bicycles for commuting are also given.¹¹⁰ As for the TBSWPH guidelines, “refraining from going outside” is mentioned only in the context of when exhibiting symptoms such as coughing or a fever. “Outside” is mentioned in contexts of instructions for mask-wearing or hand-washing relating to leaving and returning the house or workplace.¹¹¹ Searching NHK website for articles related to self-isolation

¹⁰⁸ Illustration: Prime Minister’s Office of Japan (2020). Available from: <https://www.kantei.go.jp/jp/headline/kansensho/coronavirus.html#c2>. [Accessed April 20 2021]

¹⁰⁹ Ibid.

¹¹⁰ MHLW (2020). *Novel coronavirus Q&A (for ordinary citizens)*. MHLW website (in Japanese). Available from: https://www.mhlw.go.jp/stf/seisakunitsuite/bunya/kenkou_iryuu/dengue_fever_qa_00001.html#Q1-2. [Accessed April 20 2021]

¹¹¹ TBSWPH (2020). *Novel Coronavirus Infectious Disease: Infection Prevention Handbook for Tokyo Residents*. TBSWPH website (in Japanese). Available from: <https://www.fukushihoken.metro.tokyo.lg.jp/iryuu/kansen/kansenyobouhandbook.files/tominmukehbver1.pdf>. [Accessed April 20 2021]

showed an overwhelming topical authority of articles aimed at relieving boredom, stress or worries caused by staying inside for prolonged times, as well as such urging citizens to exercise or look for alternative means of entertainment or hobbies. Articles explaining the concept or necessity of this measure were found to be largely news articles, for example the March 27 article reporting on the political aspect, mentioning a potential lockdown and calling attention to the 3C's.¹¹²

To summarise, hand hygiene was thoroughly covered in all sources. Physical distancing (via *sanmitsu* or the 3C's) and respiratory (coughing) etiquette were both well-covered in all sources except for NHK. Avoiding face-touching was mentioned in passing in all sources except NHK, where an article with more in-depth discussion of this measure was found. Self-isolation was found to be mentioned in all sources in the same contexts as instructions on how to behave when outside, although with lesser frequency than the latter.

<i>Precautionary measure</i>	<i>Source</i>			
	Kantei	MHLW	TBSWPH	NHK
Hand hygiene	well-covered	well-covered	well-covered	well-covered
Physical distancing	well-covered	well-covered	well-covered	scarcely covered
Avoiding face-touching	scarcely covered	scarcely covered	scarcely covered	somewhat covered
Respiratory etiquette	well-covered	well-covered	well-covered	scarcely covered
Self-isolation	well-covered	well-covered	somewhat covered	somewhat covered

Figure 6. Comparison table of each precautionary measure of the WHO system by source.

3.2.2. Other recommended precautionary measures

Having researched the system of 5 WHO-recommended precautionary measures, the author next looked at those precautionary measures that had been discovered in the earlier chapters of this work, such as a gargling, a maintaining ventilation and humidity, and a leading the balanced lifestyle.

Gargling, a precautionary measure widely recommended in the past influenza pandemics, as well as generally practiced in Japan, was not found to be recommended in any of the 4 sources looked at in this chapter. The author presumed there may have been a decision made within the government not to recommend this measure, as it does not have significant scientific basis and it is not recommended by the WHO. In an NHK article from

¹¹² NHK Politics Magazine (2020). Refraining from going outside unnecessarily in 5 prefectures: "Each person's actions are important" Minister of Health, Labour and Welfare. NHK Politics Magazine, March 27 2020 (in Japanese). Available from: <https://www.nhk.or.jp/politics/articles/statement/32623.html>. [Accessed April 21 2021]

May 1, which consists of answers given to COVID-19 questions by a doctor, he notes that gargling (with green tea) has no scientific proof of working as an anti-infection method.¹¹³

Maintaining a fresh micro-climate, or airing indoor spaces often, was found to be mentioned in contexts related to *mippei* (enclosed spaces) of the *sanmitsu*, but also as a recommendation on its own on the Kantei website.¹¹⁴ In MHLW’s COVID-19 questions and answers page, Question 9 in Section 1 provides highly detailed instructions on how to maintain well-aired spaces, dividing information seasonally by winter and summer.¹¹⁵ The TBSWPH guidelines also dedicate a full page to this precautionary measure.¹¹⁶ In multiple NHK articles, 換気 (*kanki*, ventilation) was mentioned only in *sanmitsu* contexts.

A healthy lifestyle or having balanced meals was not found to be mentioned in 2020 materials with the same frequency as, for example, in the 2009 materials. Presumably, the reason for that is that in 2009, the focus was on broader preventative measures that could potentially reduce the chance of influenza infection, whereas in 2020 the scale of the pandemic was so large that each precautionary measure recommended had to be absolute; in other words, measures such as gargling or living healthy that would not have an immediate preventative effect were not added to instructional sources to reduce the amount of information and fixate the focus on measures that are supremely beneficial.

In summary, of the measures found to be mentioned in the sources of previous chapters, only ventilation, or airing indoor spaces, was found to be mentioned in 2020 sources. Gargling and healthy lifestyle (including balanced diets and exercising) were not found to be mentioned or recommended as precautionary measures.

<i>Precautionary measure</i>	<i>Source</i>			
	Kantei	MHLW	TBSWPH	NHK
Gargling	not mentioned	not mentioned	not mentioned	not mentioned
Ventilation (airing)	somewhat covered	well-covered	well-covered	scarcely covered
Healthy lifestyle	not mentioned	not mentioned	not mentioned	not mentioned

Figure 7. Comparison table of each precautionary measure of non-WHO system measures by source.

¹¹³ NHK Shutoken. *Questions about the novel coronavirus 2*. NHK Shutoken (in Japanese), May 1 2020. Available from: <https://www.nhk.or.jp/shutoken/net/20200501m.html>. [Accessed April 23 2021]

¹¹⁴ Prime Minister’s Office of Japan (2020). *Preparing for the new coronavirus infection ~Knowing what each person can do~*. Prime Minister’s Office of Japan’s website, Section 2 (in Japanese). Available from: <https://www.kantei.go.jp/jp/headline/kansensho/coronavirus.html#c2>. [Accessed April 23 2021]

¹¹⁵ MHLW (2020). *Novel coronavirus Q&A (for ordinary citizens)*. MHLW website (in Japanese). Available from: https://www.mhlw.go.jp/stf/seisakunitsuite/bunya/kenkou_iryuu/dengue_fever_qa_00001.html#Q1-9. [Accessed April 23 2021]

¹¹⁶ TBSWPH (2020). *Novel Coronavirus Infectious Disease: Infection Prevention Handbook for Tokyo Residents*. TBSWPH website; Page 17 (in Japanese). Available from: <https://www.fukushihoken.metro.tokyo.lg.jp/iryoo/kansen/kanssenyobouhandbook.files/tominmukehbver1.pdf>. [Accessed April 23 2021]

Utilizing the learnings discovered thus far, two systems of precautionary measures, or systems of precautionary rules can be identified. The first one is the system of 5 precautions recommended by the WHO already serving as the basis of this thesis, **the WHO system** of precautionary rules. The second system can be classified from the research made in this chapter by including only measures that were found to be well-covered by at least 3 of the 4 sources. Such parameters create a system consisting of hand hygiene, physical distancing, respiratory etiquette and ventilation of indoor spaces, hereafter known as **the Japan 2020 system** of precautionary rules.

3.3. Implementation of the systems of precautionary measures by the public

To assess how well the WHO system of precautionary rules was implemented by the public during the COVID-19 pandemic in 2020, the results of two studies by the same group of scientists were examined. The first Machida et al. study conducted on February 25-27 2020 gathered data about personal protective measures (PPM) adopted by ordinary citizens during the initial stages of the COVID-19 outbreak in Japan. The follow-up study by the same group of authors conducted April 1-6 2020 reflected how the implementation of PPM had changed since the first study. This data gives a valuable insight into how the government policies and changes in the attitudes of the society regarding the pandemic may have influenced the adoption of precautionary measures by the public. In addition, data from other studies were examined to produce a broader understanding of the degree of implementation of the precautionary rule sets.

Regarding hand hygiene, the first study by Machida et al. found 83.8% respondents indicated they practice washing hands with soap and using hand sanitizer multiple times a day. A close 82.9% respondents practiced respiratory etiquette. 74.5% of those working, when asked whether they could take time off work if they had a fever or cold, responded they “definitely could” or “probably could”, which in this survey counted as the self-isolation indicator (i.e. willingness and ability to self-isolate). Only 67.4% respondents practiced social distancing measures, and an even smaller 59.8% were avoiding touching the eyes, nose and mouth. However, those implementing all 5 measure in the WHO system amounted to only 34.7% of respondents, with a meagre 6.5% stating they implement measures “always”.¹¹⁷

In the follow-up survey by Machida et al., all numbers had increased. Percentage of respondents practicing hand hygiene increased to 88.2. The second best-practiced measure,

¹¹⁷ Machida, M; Nakamura, I.; Saito, R.; Nakaya, T.; Hanibuchi, T.; Takamiya, T.; Odagiri, Y.; Fukushima, N.; Kikuchi, H.; Kojima, T.; Watanabe, H.; Inoue, S. (2020). *Adoption of personal protective measures by ordinary citizens during the COVID-19 outbreak in Japan*. International Journal of Infectious Diseases, Volume 94, May 2020, Pages 139-144. Available from: <https://www.sciencedirect.com/science/article/pii/S1201971220302307>. [Accessed April 25 2021]

respiratory etiquette, saw a small increase to 84.6%. The willingness and ability of people to self-isolate had risen to 79.0%, but the biggest increase was that of respondents practicing social distancing measures, which surged to 82.2%. On the other hand, avoiding face touching had a miniscule escalation to only 61.8%. The overall percentage of respondents implementing all 5 PPM grew to 41.7%.¹¹⁸

<i>Precautionary measure</i>	February 2020	April 2020	Change
Hand hygiene	83.8%	88.2%	4.4%
Social distancing	67.4%	82.2%	14.8%
Avoiding touching eyes, nose and mouth	59.8%	61.8%	2.0%
Respiratory etiquette	82.9%	84.6%	1.7%
Self-isolation	74.5%	79.0%	4.5%
Implementing all measures	34.7%	41.7%	7.0%

Figure 8. Comparison of the implementation by the public of the WHO system (Machida et al., 2020).

Observing the changes in implementation, the 14.8% increase in people practicing social (physical) distancing, a measure that was second-least-implemented during the first survey, stands out. This growth can likely be attributed to the government efforts to promote *sanmitsu* or the 3C's, which directly calls for reduction of social interactions and avoiding social situations in public spaces. While hand hygiene and self-isolation, and respiratory etiquette measures saw smaller increases percent-wise, these measures nevertheless have high implementation rates, with the lowest (self-isolation) standing at 79%.

It should be emphasized that these Machida et al. studies formulated “self-isolation” as the ability to stay home when feeling unwell. However, in the case where the job specification allows it, the option to work from outside the office is becoming increasingly common in other parts of the world, connecting to a smoother transition to working from home during the COVID-19 pandemic and being considered part of self-isolation, regardless if unwell or not. For example, in the USA, about half of the workforce were estimated to be working from home in mid-2020¹¹⁹. Yet in Japan, outdated technological setups and comparatively confined dwellings posed difficulties with introducing “telework” (テレワーク, *terewāku*). The second

¹¹⁸ Machida, M.; Nakamura, I.; Saito, R.; Nakaya, T.; Hanibuchi, T.; Takamiya, T.; Odagiri, Y.; Fukushima, N.; Kikuchi, H.; Amagasa, S.; Kojima, T.; Watanabe, H.; Inoue, S. (2020) *Changes in implementation of personal protective measures by ordinary Japanese citizens: A longitudinal study from the early phase to the community transmission phase of the COVID-19 outbreak*. International Journal of Infectious Diseases, Volume 96, July 2020, Pages 371-375. Available from: <https://www.sciencedirect.com/science/article/pii/S1201971220303465>. [Accessed April 25 2021]

¹¹⁹ Brynjolfsson, E.; Horton J, Ozimek, A.; Rock, D.; Sharma, G.; Yi Tu Ye, H. (2020). *Covid-19 and remote work: an early look at U.S. data*. NBER Working Paper 27344, page 4. Available from: <https://www.nber.org/papers/w27344>. [Accessed April 25 2021]

Machida et al. (2020) study was conducted in the beginning of April when calls aimed at companies to allow employees to work from home were just starting to appear. But a survey from June 2020 found that the use of telework increased from 6% in January to 17% in June, although, these numbers are still significantly lower than those of other developed countries.¹²⁰ Considering this, it can be understood why the Machida et al. surveys framed the self-isolation question as they did – the reason is likely that they were aware that self-isolation can only be implemented by people in special circumstances that would allow it, and that such people are fewer in Japan than in other countries. In addition, pre-COVID-19, teleworking was practiced by a very small number of the population, so the concept was not easy to adapt by companies.

As mentioned, 4 of the 5 WHO system precautionary measures were implemented above 79%. On the other hand, avoiding face-touching, the measure with the lowest implementation in the first study, only saw an implementation rise of 2 percent, peaking at 61.8%. Considering that this is one of the main infection routes, it can be surmised that the public may be too focused on other measures like hand hygiene and wearing a mask, and “letting their guard down” regarding avoiding face-touching. The act of wearing a mask alone can create a false sense of security in a person, leading to paying less attention to other means of personal precaution.

A precautionary measure that can be classified as being part of respiratory etiquette, wearing a mask, was found to be widespread and well-practiced in Japan in previous chapters of this work. However, it should be noted that the technique of wearing the mask can influence its effectiveness as a precautionary measure. In order to prevent transmission, correct wearing, removal and disposal of masks is of the highest importance. A study conducted in Japan in April 2020 found that despite 83.5% respondents wearing the masks correctly, other aspects of mask-handling as such as removing the mask correctly, replacing when damp or discarding immediately after using only had compliance rates ranging from 38.3 to 62.9 per cent.¹²¹ These findings indicate that while the Japanese people are aware of the necessity and benefits of wearing a mask, the proper handling of used masks can be improved, further highlighting the fact that wearing a mask and hand hygiene alone, no matter how well implemented, are not enough as standalone PPM, and should be implemented together with proper face-touching etiquette, that is, avoiding to touching the face entirely.

¹²⁰ Okubo, T. (2020) *Spread of COVID-19 and telework: Evidence from Japan*. CEPR: Covid Economics Issue 32, 26 June 2020. Available from: <https://cepr.org/content/covid-economics-vetted-and-real-time-papers-0#block-block-9>. [Accessed April 25 2021]

¹²¹ Machida, M.; Nakamura, I.; Saito, R.; Nakaya, T.; Hanibuchi, T.; Takamiya, T.; Odagiri, Y.; Fukushima, N.; Kikuchi, H.; Amagasa, S.; Kojima, T.; Watanabe, H.; Inoue, S. (2020) *Incorrect Use of Face Masks during the Current COVID-19 Pandemic among the General Public in Japan*. International Journal of Environmental Research and Public Health. 2020; 17(18):6484. Available from <https://doi.org/10.3390/ijerph17186484>. [Accessed April 25 2021]

In addition, the same studies also found that men and people from low-income households are more likely to be lax with personal protective measures¹²². Considering the bias of survey respondents (online survey service users who have the means and time to be participating), the real percentage is potentially lower.

In summary, WHO system PPM such as hand hygiene, social distancing, respiratory etiquette and self-isolation were found to be well-implemented during the early stages of the COVID-19 pandemic in Japan in 2020, but avoiding face-touching was not and its implementation rate could be improved. Implementation of all measures simultaneously, which stood at 41.7%, was also in need of improvement. Likewise, implementation of PPM by people of low-income households and men in particular also was found to be lacking and needing to be improved.¹²³

¹²² Machida, M. et al. (2020). *Adoption of personal protective measures by ordinary citizens during the COVID-19 outbreak in Japan*. International Journal of Infectious Diseases, Volume 94, May 2020, Pages 139-144. Available from: <https://www.sciencedirect.com/science/article/pii/S1201971220302307>. [Accessed April 25 2021]

¹²³ Machida, M.; Nakamura, I.; Saito, R.; Nakaya, T.; Hanibuchi, T.; Takamiya, T.; Odagiri, Y.; Fukushima, N.; Kikuchi, H.; Amagasa, S.; Kojima, T.; Watanabe, H.; Inoue, S. (2020) *Changes in implementation of personal protective measures by ordinary Japanese citizens: A longitudinal study from the early phase to the community transmission phase of the COVID-19 outbreak*. International Journal of Infectious Diseases, Volume 96, July 2020, Pages 371-375. Available from: <https://www.sciencedirect.com/science/article/pii/S1201971220303465>. [Accessed April 25 2021]

4. COMPARING SYSTEMS OF PRECAUTIONS OF PREVIOUS PANDEMICS WITH THE 2020 SYSTEM OF PRECAUTIONS

Having researched and analysed information from historic sources from both the 1918 and 2009 influenza A (H1N1) pandemics, and the measures recommended and implemented during the early stages of the 2020 COVID-19 pandemic, in this final chapter the author compared the systems and remarked on correlations and discrepancies discovered between the systems. Firstly the precautionary measures of the WHO system were compared across the 3 pandemics, following which the other measures discovered during the research of this work were compared.

4.1. Comparison to the WHO-recommended system of precautions

The five precautionary measures recommended by the WHO in 2020 and considered as part of **the WHO system** in this work are hand hygiene, physical (social) distancing, avoiding touching of the eyes, nose and mouth, respiratory etiquette and self-isolation. In **1918**, the recommended measures that match with the 5 measures recommended by WHO were found to be social distancing (avoiding crowded public spaces), respiratory etiquette (covering the mouth and nose while coughing or sneezing, wearing masks) and self-isolation (staying at home when sick, isolating the sick from the healthy). Hand hygiene and avoiding face-touching were not found to be recommended. In **2009**, the recommended measures varied by source. Hand-hygiene, respiratory etiquette and avoiding crowded spaces was recommended in all cases, and avoiding face-touching was mentioned in one source (MHLW). Social distancing (giving a specific meter distance) or self-isolation (quarantining as a precautionary measure) were not found to be mentioned. In **2020**, hand-washing was covered in all sources. Physical distancing (*sanmitsu*) and respiratory (cough) etiquette were covered in all sources except for NHK. Avoiding face-touching was somewhat mentioned in all sources and well-covered the NHK source. Self-isolation was well-covered in some of the sources, but only somewhat covered in others.

<i>Precautionary measure</i>	<i>Recommended in Japan in</i>		
	1918	2009	2020
Hand hygiene	no	yes	yes
Social (physical) distancing	yes	no	yes
Avoiding touching the eyes, nose and mouth	no	somewhat	somewhat
Respiratory etiquette	yes	yes	yes
Self-isolation	yes	no	somewhat

Figure 9. Comparison of precautionary measures of the WHO system recommended to the public in the 2020 COVID-19, 2009 H1N1 and 1918 H1N1 pandemics.

Hand hygiene was mentioned frequently in sources from the 21st century, but was not mentioned at all in the historical sources from 1918-1920. In the 2009 sources, hand hygiene was mentioned consistently and often highlighted as one of the most important infection prevention measures. It was often recommended in the same context as gargling. In 2020 washing hands was almost always the first to be recommended, and detailed instructions, often with visual illustrations, were provided as well. As hand hygiene was found to be well-educated in Japan and clean water, soap and hand sanitizers being freely available, it was expected that implementation of this prevention method in early 2020 would be high, and it was proven to be true (Machida et al. 2020). A change in awareness in 2020 was highly noticeable compared to 1918, but not when compared to 2009, indicating the 21st century already has an established hand hygiene culture in Japan. Further improvements in hand hygiene adoption would be to increase the frequency and duration of performing the washing, and to further educate social groups where implementation may be lacking.

Social (physical) distancing was found to be recommended in the 20th century to prevent the spread of the influenza. Avoiding crowded public spaces, especially enclosed ones, was also advised. In 2009, social distancing as such was not found to have been recommended. However, avoiding crowded places unless necessary was mentioned in multiple sources. In 2020, social distancing was brought to the forefront of the government’s efforts to curb the infections with *sanmitsu* (3C’s) campaign, which instructed people to avoid specific settings when outside the house, as well as to practice physical distancing when avoiding socialization was impossible. In addition, the author noted that certain cultural aspects like keeping a “personal space bubble” and a physically distanced greeting culture may have already existed as a foundation for the Japanese to adapt to social/physical distancing faster. And indeed, according to Machida et al. (2020) survey results, social distancing practice rates increased rapidly from February to April 2020, indicating that the Japanese people found it easier to

accept this precautionary measure than perhaps others that did not have a campaign centred around them. Comparing 2020 to 1918 and 2009, similarities in recommendations to avoid gatherings were noted, but the policies and the results of such were found to be much more pronounced in 2020. However, there is room for improvement in avoiding social gatherings at all, considering such social situations have not been entirely shut down due to a lack of legal power to do so by the government even in the face of a pandemic such as COVID-19.

Avoiding touching the eyes, nose and mouth was not mentioned as such in the historic sources citing precautionary measures recommended during the 1918 H1N1 pandemic. Although the recommendation to use a handkerchief while sneezing, which was found to be mentioned, by nature implies that the mouth should not be touched with a bare hand, this was considered respiratory etiquette in the scope of this work, so it can be concluded avoiding face-touching was not explicitly endorsed in 1918-1920. For the 2009 H1N1 pandemic, “not touching the mouth and nose” was outright mentioned in only one source (MHLW website), but not mentioned in any way in the other sources. In 2020, although part of the WHO system of PPM and vital to curbing the spread of infection, this precautionary, and indeed preventative, measure was recommended only in some sources, and the Machida et al. (2020) data proved that its implementation was also highly lacking. It was ascertained by the author via various sources that, while following other measures such as wearing masks and good hand hygiene, is important, it can result in the negative effect of lowered attention paid to equally important measures such as avoiding face-touching. Compared across the 3 years examined in this thesis, 2009 was found to have the most coverage of this precautionary measure, although only in the solitary MHLW source. With the general adoption rate having stood at 61.8% in 2020 (Machida et al. 2020), it is self-evident that this precautionary measure needs raising further awareness and increase of implementation by the public – not only in the face of the COVID-19 pandemic, but to reduce the risk of a multitude of infection risks.

Respiratory etiquette was a measure mentioned across nearly every source in all ages, in no small part due to the prevalent mask culture in Japan. In the early 20th century, mask wearing was recommended to contain the spray of sneezes, and instructions on how to make such masks were reportedly distributed to households. It is unknown if masks were sold commercially, but the author would propose it as a possibility. In 2009, masks were again recommended to be worn if coughing or sneezing to prevent the spread of infection, as well as information regarding coughing etiquette when not wearing a mask was disseminated to the public. In 2020 during the early stages of the COVID-19 pandemic, respiratory (cough) etiquette was well-covered in all sources except NHK, where scarce information relating to

coughing etiquette was found. However, wearing masks was strongly recommended in all sources. Comparing 2020 to 2009 and 1918, respiratory etiquette was universally recommended in all years and almost all sources. Implementation of respiratory etiquette by ordinary Japanese citizens in 2020 was quite high (Machida et al. July 2020), although the technique of wearing masks was disputed by Machida et al. (September 2020), indicating further public awareness is required.

Self-isolation, or self-quarantine, was discovered in 1918-1920 sources and was undoubtedly one of the main methods endorsed by the government to impede and suppress the spread of the influenza infection. In 2009, self-imposed quarantine was not found to be recommended, and this was further highlighted by the fact that many instructions, such as wearing a mask when coughing, imply it was culturally expected that even when ill, Japanese people are likely to be out in public due to the inability to stay at home stemming from sense of duty, shame-avoidance or other social motivators. In 2020, although the cultural scene was unlikely to have shifted, self-isolation was found to be recommended on a larger scale and more pressingly. Possibly, this was a result of the clear difference in scale of pandemic between 2009 and 2020, creating pressure of the government to call for more severe precautions more aggressively. Compared to 1918 and 2009, 2020 sources had the most information relating to self-isolation and the necessity of it. However, implementation is difficult to measure; indeed the Machida et al. (2020) survey posed the question regarding this PPM as “Would you be able to self-isolate?” rather than “Would you self-isolate?”, leaving a clear impression of the choice being more than personal, but influenced by various societal and economic pressures. For self-isolation to be more widely implemented, the author determined that changes in the workplace dynamics and the Japanese society’s outlook on working as a process need to happen before supportive measures such as teleworking can also be implemented.

4.2. Comparison to other common precautions

In regard to other measures that were discovered as having been recommended in 1918 and 2009, those measures were gargling with water or salt water, maintaining indoors climate, and practicing a balanced lifestyle. In **1918-1920**, gargling with salt or warm water was mentioned, but maintaining indoors climate, which would have been difficult without modern humidifier or air conditioning technology, was not mentioned, nor were any references to lifestyle choices discovered. In **2009**, all 3 precautionary measures were found to be mentioned in nearly all sources. Yet in **2020**, only indoors climate (specifically ventilation)

was mentioned in one source, and the other measures (gargling and lifestyle) were not mentioned at all. This could indicate both a cultural shift to avoid recommending measures that have no immediate, scientific effect, and a deliberate choice to focus instead on PPM that match those of the WHO system.

<i>Precautionary measure</i>	<i>Recommended in Japan in</i>		
	1918	2009	2020
Gargling	yes	yes	no
Indoor climate (ventilation)	no	yes	yes
Healthy lifestyle	no	yes	no

Figure 10. Comparison of precautionary measures other than those of the WHO system recommended to the public in the 2020 COVID-19, 2009 H1N1 and 1918 H1N1 pandemics.

Gargling was equally recommended in 1918 and 2009, and recommended strongly as such compared to 2020 when it was mentioned only in one source, wherein it was dismissed as having no scientific basis. Ventilating rooms to reduce the viral particles in the air was not recommended in 1918 as perhaps this measure had not yet been established as scientifically valid and useful in reducing infections. On the other hand, it was strongly recommended in 2009 with the aforementioned reasoning included. In 2020, it was mentioned in some sources, but not as a primary preventative method. Compared to 2020, 2009 sources had stronger representation of this measure, whereas 1918 sources had none. Different from the other 2 measures in that it was only recommended in 2009, having a healthy lifestyle was the least mentioned of these 3 measures. Regarding improving awareness, considering claims that it is preventative are unfounded, gargling as a precaution method does not require further spreading and indeed the lack of representation in 2020 was rather correct. However, the importance of ventilating rooms remains relevant regardless of virus origin, as it is a helpful method against all airborne infectious diseases, and thus should keep being recommended. As for living a healthy lifestyle, having balanced diet and exercising, while these will not prevent a COVID-19 infection, a healthy body has a stronger immune system and thus general campaigns geared toward improving the health and longevity of citizens are a requirement in any time, pandemic or not.

4.3. Comparison between systems of precautionary rules

In order to draw the final conclusions, the author lastly compared the systems of precautionary rules established within this thesis. Those were such:

1. the WHO system (5 PPM recommended by the WHO in 2020);
2. the Japan 1918 system (PPM recommended in Japan during the 1918 H1N1 pandemic);
3. the Japan 2009 system (PPM recommended in Japan during the 2009 H1N1 pandemic);
4. the Japan 2020 system (PPM recommended in Japan during the 2020 COVID-19 pandemic).

The Japan 1918 system consisted of precautionary measures such as social distancing, respiratory etiquette, self-isolation and gargling. The Japan 2009 system was made up of measures such as hand hygiene, avoiding face-touching, gargling, indoor climate control and healthy lifestyle. The Japan 2020 system included PPM such as hand hygiene, social distancing, avoiding face-touching respiratory etiquette, self-isolation, and indoor ventilation. For the purpose of comparison, measures that were found to be mentioned at least once were considered as “somewhat mentioned”, with measures that were mentioned in more than half of the sources considered “fully mentioned”. However, even a solitary mention indicates that the measure was indeed recommended to the public.

<i>Precautionary measure</i>	<i>System of precautionary rules</i>			
	WHO system	Japan 1918 system	Japan 2009 system	Japan 2020 system
Hand hygiene	yes	no	yes	yes
Social distancing	yes	yes	no	yes
Avoiding touching eyes, nose and mouth	yes	no	somewhat	somewhat
Respiratory etiquette	yes	yes	yes	yes
Self-isolation	yes	yes	no	somewhat
Gargling	no	yes	yes	no
Indoor climate (ventilation)	no	no	yes	yes
Healthy lifestyle	no	no	yes	no

Figure 11. Comparison of all systems of precautionary rules established within the scope of this work.

Establishing the WHO system as scientifically approved and the 3 measures, despite useful in reducing infection rates, especially in the case of ventilation, as not scientifically proven, the other 3 systems can be compared. Analysing each system individually, it was understood that the 1918 system was lacking important precautionary measures such as hand hygiene and avoiding face-touching, but was overall somewhat solid in terms of usefulness to

the public. The 2009 system had the largest number of measures recommended overall, however, 3 of the measures were of the non-scientific kind. Comparing the 2020 system, which had at least basic coverage of all important measures and a lack of less important ones, to the previous 2 systems, it was deduced that the 2020 system was the most comprehensive in terms of providing the Japanese public with the necessary information on how to prevent the spread of the infectious disease, in this case COVID-19.

CONCLUSIONS

The aim of this thesis was to understand what precautionary measures to avoid infection have been recommended in Japan, and to compare such measures with those recommended in 2020 during the COVID-19 pandemic. This was done by understanding what precautionary measures are considered the most essential, researching historic sources to build an understanding of past examples, and investigating the degree of recommendation and implementation of precautionary measures in the first half of 2020. The conclusions were drawn from the comparison and analysis of the systems of precautionary rules established through the research conducted in this thesis. The goal this thesis set out to achieve was to understand, what PPM were recommended in Japan across different ages and pandemics, and to compare such PPM systems. The questions to answer were, whether the system of precautionary rules for ensuring public safety during a pandemic in Japan recommended during the COVID-19 pandemic matched systems employed in previous pandemics fully, and if partly, then to what degree.

In order to grasp what precautionary measures exist in Japan in the interim of pandemics, research was conducted about the WHO system measures in Japan. Based on this cultural understanding, a research of further depth into the examples of the past, the precautions recommended during the 1918 and 2009 H1N1 influenza A pandemics was carried out. This research allowed for understanding of how precautions are recommended in Japan, as well as what cultural implications the methods and volume of recommendations highlight. Such cultural implications were, for example, the continuous recommendations of how to act when sick in public, instead of recommending to remain at home in isolation, which points to the difficult relationship of the Japanese with the sense of responsibility towards their job (duty) and the community at large (shame aversion). Furthermore, this research of historic sources allowed for establishing the 1918 and 2009 systems or precautionary measures, which consisted of the WHO system measures and other measures found to have been recommended in each period that in turn allowed for unveiling a fuller cultural context. Following historic sources, contemporary sources from 2020 were examined and analysed to understand the onset of the COVID-19 pandemic in Japan and to create the opportunity to later correlate government actions to an increase or decrease of implementation of PPM by the public. A detailed analysis of each WHO system and non-WHO system precautionary measures was carried out via a set of 4 sources considered to be either official or having a wide reach within Japan, thus presumably having the ability to influence a broad audience of citizens.

After analysing multiple sources that provided information about what types of precautions were recommended during which pandemic, those sets of precautions were then grouped into “systems” by period, resulting in 3 systems of precautionary rules: the Japan 1918 system, 2009 system and 2020 system, which, together with the WHO system of recommended precautionary measures form the 4 systems, the comparison of which became the basis for conclusions. Comparing the systems resulted in multiple findings. Firstly, it was discovered that the 1918 and 2009 systems did not create a full match with the 2020 system. Furthermore, neither did the 1918 system and 2009 system fully match between one another. Secondly, it was discovered that the 2020 system was the most comprehensive in terms of validity and scientific relevancy. Compared to it, the 1918 system was the most lacking in providing all fundamental precautions of the WHO system to contemporary Japanese citizens. The 2009 system was found to provide sufficient information regarding the fundamental precautionary measures of the WHO system, but also included other, not scientifically proven measures, which amounted to the 2009 system failing to provide the most necessary information in the most succinct manner.

The scope of this research was limited by multiple factors. Firstly, the precautionary measures initially chosen for their scientific validity (the WHO system), while undeniably important and necessary, should not be considered the ultimate set of precautionary rules and the only such to be followed. Among the other preventative measures discovered during the course of research there exist measures, for instance ensuring ventilation of indoor spaces that were considered secondary in the scope of this research, but in reality are of equal scientific validity as those of the WHO system. Reducing the importance of such measures may create a misunderstood impression of the awareness of public safety in Japan. Secondly, the sources utilised within this work make up only a small amount of all online sources in Japan distributing valuable information about precautionary measures, and indeed were limited to the online space. Being physically unable to experience the reality of the 2020 pandemic-struck Japan limited the author’s ability to understand the Japanese public’s true level of awareness or implementation of precautionary measures, and resulted in a reliance on data and cultural comprehension only. Thirdly, the three points in time, 1918-1920, 2009 and 2020 observed in this thesis again created a very narrow look into the Japanese people’s interaction and experience of pandemics and their infection prevention efforts. A more comprehensive look including larger blocks of the 20th century may create a more thorough portrait of the relationship between the cultural consciousness of precautionary measures and preserving the safety of communities and economic integrity of the nation during public health crises such as pandemics in Japan.

A series of conclusions were drawn from the research:

- The 5 precautionary measures recommended by the WHO for infection prevention were known in Japan before the COVID-19 pandemic began in 2020.
- Some cultural aspects of Japanese society, such as a distanced greeting culture and disfavor of physical touch, may influence certain precautionary measures, such as social (physical) distancing in a positive way.
- Many precautionary measures recognized as valid in 2020 were already known and recommended in 1918, indicating Japanese people have been following good infection prevention practices since at least the early 20th century.
- The 2009 sources provided various recommendations about how to prevent infection, including such of dubious scientific validity as gargling; however, most recommendations in 2009 covered not only the H1N1 influenza prevention, but also general recommendations on improving healthy and thus the immune system, which cannot be considered bad practice despite providing an overabundance of information.
- The 2020 pandemic onset in Japan was slower than in other countries, as was the government response. It is possible one of the reasons why the case count remained low despite government inaction is that precautionary measures were being recommended as in any other infection disease outbreak situation, and due to cultural tendencies to abide by societal rules, the Japanese public may have kept the virus at bay via their stronger-than-other-nations precaution following habits.
- Out of all measures, avoiding touching the eyes, nose and mouth was discovered to be the least well implemented and raising public awareness was found to be necessary.
- The precautionary measure that the Japanese public found the easiest to implement well was found to be hand hygiene, which indicates that public awareness is already commendably high.
- Comparing 2020 system of precautions to the systems of history, it was discovered that the 2020 system was the most concise and consisted of scientifically certified, fundamental infection prevention measures.

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Dokumentārā lapa

Bakalaura darbs “Piesardzības pasākumu sistēma sabiedrības drošības nodrošināšanai pandēmijas laikā Japānā: COVID-19 piemērs” izstrādāts LU Humanitāro zinātņu fakultātes Āzijas studiju nodaļā.

Ar savu parakstu apliecinu, ka pētījums veikts patstāvīgi, izmantoti tikai tajā norādītie informācijas avoti un iesniegtā darba elektroniskā kopija atbilst izdrukai.

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Rekomendēju darbu aizstāvēšanai

Vadītājs: prof. p. i. Kaspars Kļaviņš _____ 10.05.2021.

Recenzents: _____

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Darbs aizstāvēts Āzijas studiju bakalaura gala pārbaudījuma komisijas sēdē

____.____.2021. prot. Nr. _____, vērtējums ____ (_____)

Komisijas sekretāre: lekt. Ildze Šķestere

Āzijas studiju BSP studiju metodiķe _____ Natālija Ambrosova