

## **COVID-19 GUIDE FOR iCeMS FOREIGN RESEARCHERS**

This is an edited version of a guidebook distributed to foreign researchers working at iCeMS, Kyoto University. It summarises the essentials regarding COVID-19 in Japan, iCeMS's current plan of action, and what you should do if you feel sick. I take responsibility for any inaccuracies. While some parts (particularly the second half) focus on matters specific to Kyoto, I hope that the guidebook will at least equip other readers with a broad sense for the situation. The guidebook will be updated as the situation evolves.

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## 1. COVID-19 in Japan

### 1.1. Where to find the latest data?

The latest coronavirus data is neatly summarized on the NHK (Nippon Broadcasting Corporation) website. The website is in Japanese, however it is easy enough to navigate. <https://www3.nhk.or.jp/news/special/coronavirus/>

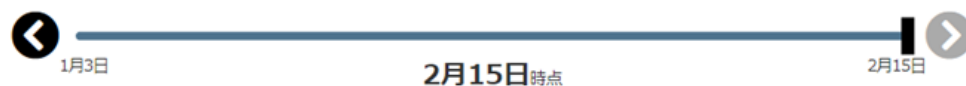
Note that the layout of this website changes often. You may need to scroll up and down to find specific figures.

都道府県	① 病床使用率 (%)	① 重症使用率 (%)	② 療養者数 (人)	③ 陽性率 (%)	④ 新規報告数 (人)	⑤ 前週比 (倍)	⑥ 経路不明 (%)	
Saitama	埼玉県	64	21	32	4.0	14	0.69	34
Chiba	千葉県	63	16	42	5.7	13	0.59	52
Tokyo	東京都	48	100	40	4.7	19	0.68	50
Kanagawa	神奈川県	40	21	16	6.4	10	0.66	37
Gifu	岐阜県	29	17	13	2.8	7	0.59	8
Aichi	愛知県	41	29	16	3.5	7	0.80	49
Kyoto	京都府	37	22	22	2.5	6	0.58	39
Osaka	大阪府	46	50	21	2.3	9	0.63	48
Hyogo	兵庫県	52	57	15	3.4	7	0.60	61
Fukuoka	福岡県	63	30	27	3.3	11	0.84	36

※内閣官房がまとめたデータより

※数字横の矢印は、前回更新時データからの増減を示しています。

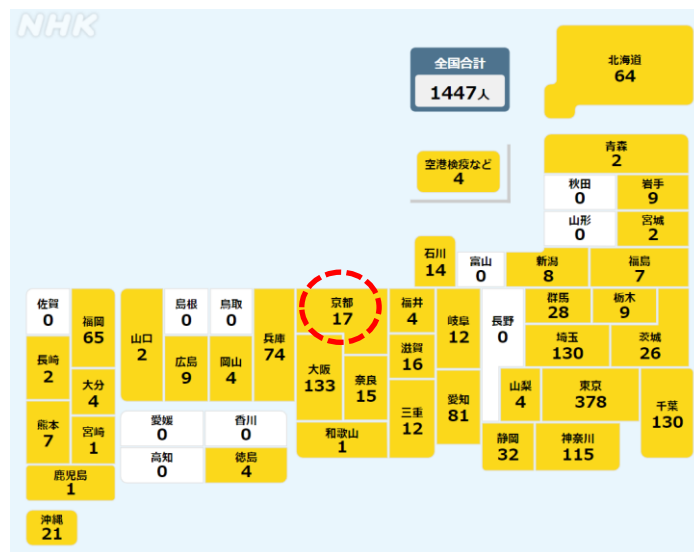
※「病床のひっ迫具合」（病床使用率）については、自治体の中にはすぐに受け入れることができる「即応病床数」を元に、国とは異なる値を公表しているところもあります。



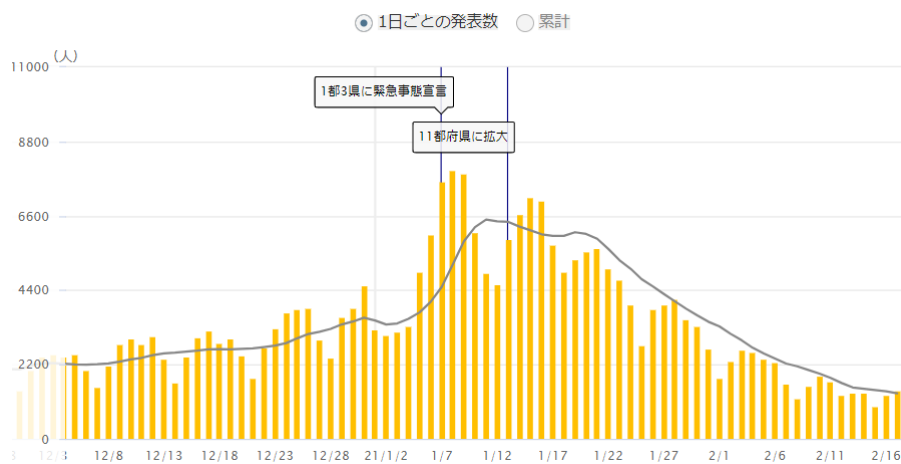
The first important figure that you will see is the one above. It shows several statistics recorded in various prefectures on a given day (in this case, February 15 2021). I have added the English prefecture names on the left-hand side. Starting second from the left, the columns are (1) the percentage occupancy of hospital beds, (1) the percentage of beds reserved for seriously ill patients which are occupied, (2) the number of people receiving treatment (per 100,000 people in the population), (3) the percentage of PCR tests showing a positive result within the last week, (4) the number of new cases within the last week (per 100,000 people in the population), (5) Ratio of (new cases over the past week)/(new cases over the week previous), (6) Percentage of cases in which the source of infection was unknown (averaged over the last week). Note that the first two columns are both labelled as (1), for some reason. Data for other dates can be seen by using the blue slider at the bottom of the figure.

At present, the central government is using four categories to describe the intensity of the pandemic. These four categories are referred to as Stages 1 – 4, respectively, with

State 4 corresponding to the highest level of intensity. The orange and red colors in the above table indicate numbers which exceed the criteria of Stage 3 and Stage 4, respectively. It can be seen that for the Kanagawa, Gifu, Aichi, and Kyoto prefectures, at least one box is coloured orange and no boxes are colored red. This means that the intensity of the pandemic is classified as Stage 3 for these prefectures. For all other areas in the table, at least one box is colored red, and so the intensity of the pandemic is classified as Stage 4. According to the official description, Stage 3 corresponds to ‘rapidly increasing infection’ and Stage 4 corresponds to ‘explosive infection’. Importantly, the medical system is considered to be ‘functioning insufficiently’ at Stage 4 (the official description is given in the table labeled 感染状況の4段階 on the NHK website).



The next important figure that you will see shows a distorted Japan (above). This shows the number of new coronavirus cases reported in each prefecture on the previous day (in this case, on February 17). For your reference: Tokyo = 東京 (378 cases)、Kyoto = 京都 (17 cases, red circle)、Osaka = 大阪 (133 cases), Hyogo = 兵庫 (74 cases).



By scrolling down further you should be able to find the graph shown on the above, which plots the total number of new cases per day throughout all of Japan. The grey

curve is an average over the past 7 days. The left vertical line indicates when the latest state of emergency was declared in the Tokyo area and neighboring prefectures. The right-hand vertical line indicates when the state of emergency was extended to several other prefectures including Kyoto. You can view the cumulative total by clicking “累計”.

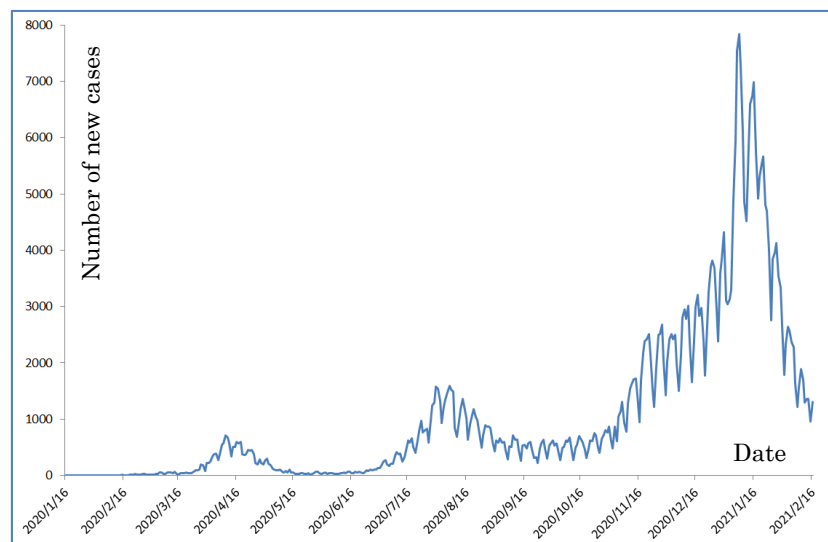
To view data for the Kyoto prefecture, click on “データで見る” (located at the top of the page), then click on “都道府県ごとの感染者”, scroll down to the plot entitled “都道府県ごとの感染者数の推移”, and then choose 京都府 from the pull-down menu.

Another excellent source of data can be found on the Nikkei Shimbun website: <https://vdata.nikkei.com/newsgraphics/coronavirus-japan-chart/#d1>

This website shows all of the relevant graphs on one page, and so no tedious navigation is required. The graph titles can be highlighted with the mouse cursor, allowing them to be easily inserted into Google Translator. The relevant plots for the whole of Japan (rather than Tokyo alone) can be found under the heading “全国”.

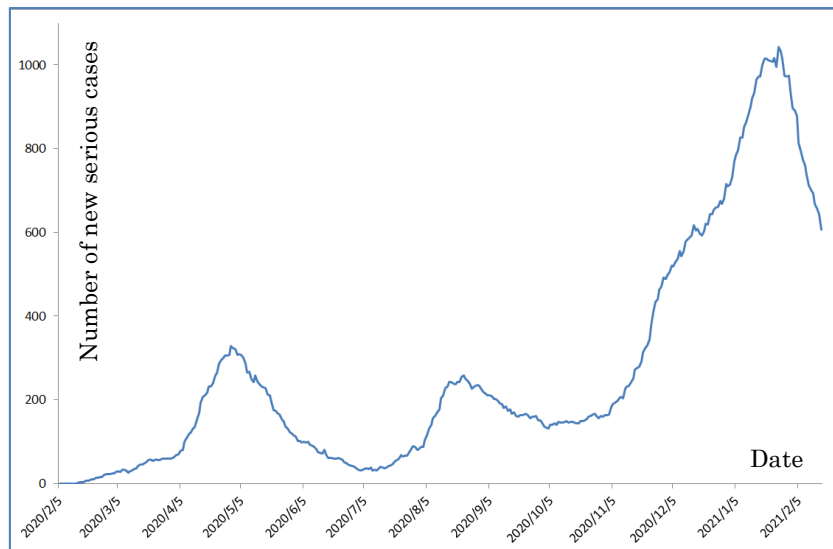
Raw data for these plots can be found on the website of the Ministry of Health, Labour and Welfare (MHLW) website (<https://www.mhlw.go.jp/stf/covid-19/open-data.html>). An Excel spreadsheet for the daily number of new cases can be obtained by clicking on the link “陽性者数別”.

## 1.2. A closer look at the data



The plot above shows the number of new cases reported each day across the entire of Japan over the last year. It was created using the data on the MHLW website above. Japan has experienced three waves of coronavirus, each of successively higher intensity. At the time of writing (February 18), the third wave of coronavirus does not appear to be completely over. There was a large spike in cases over the New Year vacation period

(late December 2020 to early January 2021) which caused great alarm. The decay of the third wave from late January onwards might be attributed to the states of emergency declared on January 13 2020 (see section 2.1).



While the third wave of new cases appears to have passed its peak, there is still plenty of reason to remain concerned. The plot above shows the number of ‘serious’ cases of COVID-19 (where the patient requires extensive hospitalisation) reported each day in Japan over the last year. This was also created from the data on the MHLW website (see the link “重症者数”). It can be seen that a considerably larger number of serious cases have emerged from the third wave compared to the previous two. Moreover, while the number of serious cases has been decreasing over the last month, it has not decreased as quickly as the number of new cases overall. While most new cases are being reported in people younger than 40 (a little over 40 % on February 10, according to the Nikkei Shimbun website), over 30 % of cases are being reported in people older than 60. The latter percentage, which hovered around 25 % over the winter vacation period, has been slowly increasing over the last several weeks. In contrast, during the second wave in August last year, people older than 60 only accounted for around 10 % of cases. The larger fraction of older coronavirus patients probably accounts for the larger number of serious cases in the third wave.

Another concerning statistic is that over 50 % of cases are of unknown origin (where it is unclear how the patient contracted the virus). While this percentage has decreased over the several weeks (it was over 65 % in early January), it still implies that Japan is not in control of the coronavirus outbreak, and cannot trace all infections to their sources.

### 1.3. New variants of coronavirus

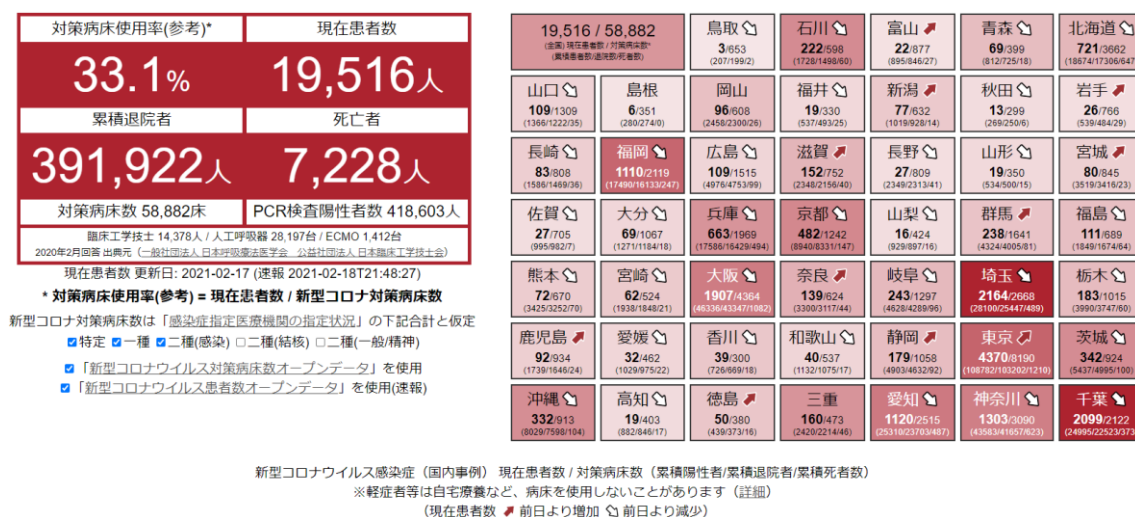
The new variant of coronavirus from England was first detected in Japan in late December 2020. Since then, new variants of coronavirus (of English, Brazilian, and South African origin) have been detected in over 90 people so far. While almost all

cases have been detected in the Kanto area, a handful of cases (including one from Kyoto) have been detected in other locations as well. In most cases, the viruses were detected in people without any history of recent overseas travel, showing that the new variants are spreading *via* community transmission. The appearance of these new variants is concerning, as they appear to be more infectious than the ordinary coronavirus.

On February 18, yet another variant of coronavirus was discovered in Tokyo. This variant has similar genetic mutations to the South African and Brazilian coronavirus variants. The extent to which this new variant has spread throughout the community is unclear at present.

#### 1.4. The current situation with the medical system (mid-February)

The Japanese medical system remains under strain. The website <https://www.stopcovid19.jp/> provides some illustrative statistics on the situation.



The above screenshot was taken from the stopcovid19 website on February 19. The percentage 34.6 % in the top left is defined as the ratio (number of patients in Japan)/(number of hospital beds reserved for coronavirus patients in Japan). While this percentage is low at present, it should be remembered that in the previous version of this guidebook (dated 13 January) it exceeded 100 %, meaning that many coronavirus patients were receiving treatment or recovering outside of hospitals only one month ago. The boxes on the right-hand side show the ratio for each prefecture. At present, the Chiba (千葉) and Saitama (埼玉) prefectures have ratios approaching 100 % (indicated by the dark red boxes), indicating that it is difficult for hospitals there to accept new coronavirus patients. The white arrows and red arrows indicate cases where the bed occupancy has respectively decreased and increased compared to the previous day.

It should be noted that the data on this website is quite volatile at the moment. For example, on February 18 (one day prior to the data shown above), the occupancy of beds in the Chiba prefecture was over 100 %, meaning that hospitals there were unable

to accept new coronavirus patients without discharging others. In the previous version of this guidebook (13 January), the occupancy of beds in the Kyoto and Osaka prefectures was over 100 % as well. Given this volatile situation, it is important to view this data over several days in order to judge the situation properly.

Since the beginning of the pandemic there has been occasional speculation about a possible ‘collapse’ in the Japan’s medical system. While such speculation became particularly rife in the media during December and January, no mainstream news outlets went as far as to openly declare a collapse. This was in spite of several reports of high-risk coronavirus patients (older people with health conditions such as diabetes) who were denied immediate admission to hospital. Japan’s medical system was therefore clearly overwhelmed during December and January. Indeed, on December 18 several hospitals in Kyoto issued a joint statement that they would face such a situation if only 30 of Kyoto’s coronavirus patients become seriously ill (Appendix 1). While the situation has undoubtedly improved since then, this information remains relevant as it shows that the capacity of Japan’s medical system is limited.

## **2. Response of the Japanese government**

### **2.1. New state of emergency declaration**

**Update (1 March 2021)**

**States of emergency have been lifted in Kyoto, Osaka, Hyogo, Aichi, and Fukuoka! A full update will be given in the next version of this guidebook.**

The government declared states of emergency in Kyoto, Osaka, Hyogo, Gifu, Aichi, and Fukuoka prefectures on January 13. States of emergency were also declared in Tokyo and neighboring prefectures on January 7. They will remain in-place until March 7.

The current states of emergency are less bold than the nationwide one declared in April last year. At present, the central government requests the following.

- That restaurants (excluding take-out), bars, karaoke parlors, and similar places do not operate later than 8 pm.
- That we avoid going outside of our homes or apartments unnecessarily.
- That workplaces to allow for remote work and to aim to reduce the number of people coming to the workplace by 70 %.

In addition to the above, the Kyoto prefectural government has requested that universities implement remote learning as much as possible, and to take unspecific ‘extra care’ regarding student club activities, social activities, and student dormitories. Note that in the new state of emergency, public schools and kindergartens will not be requested to close.

It is important to understand that the Japanese government has no legal power to enforce a lockdown of the type seen overseas. The legal powers that accompany a state of emergency are mainly limited to closing public schools, requesting that people stay at



home, and requesting that businesses close. In early February 2021 these legal powers were slightly extended: local governments now have the right to order business to comply with restrictions, and to fine those which do not comply with the order. The government also has the right to fine infected people who refuse requests to self-isolate in their homes or in hotels, as well as people who refuse to comply with investigations conducted by public health centers.

A good English-language article on the new states of emergency can be found at <https://www.japantimes.co.jp/news/2021/01/12/national/kansai-state-of-emergency-japan/>

Following the first nationwide state of emergency in May last year, central and local governments posted a series of recommendations about how we should conduct ourselves during the pandemic. Their recommendations, which should be fairly self-evident by now, are listed in Appendix 2.

## **2.2. Contact tracing app COCOA**

As part of their efforts to improve contact-tracing capabilities, the Ministry of Health, Labour, and Welfare released a smartphone application in June. The application is named COCOA (Contact-Confirming Application), and can be downloaded freely from Google Play and the Apple App Store.

<https://play.google.com/store/apps/details?id=jp.go.mhlw.covid19radar>

<https://apps.apple.com/jp/app/id1516764458>

An English pamphlet describing COCOA can be found in Appendix 3. It runs quietly in the background of your smartphone, and uses Bluetooth to alert you if you have been in contact with an infected person. You can also upload your own information into the application if you become infected, so that other people with whom you have been in contact can be warned. All data is encrypted to prevent the leakage of personal data.

## **2.3. Economic responses**

The central government has been actively responding to the pandemic on the economic front. Their main responses include special cash payments to all residents in May and June, as well as several support packages for struggling businesses.

A more recent attempt to invigorate the economy has been the Go To Travel campaign. This campaign, which started in July and was supposed to end in late January 2021, aims to support the hospitality industry by encouraging domestic tourism. In short, the government provides up to 50 % of the travel costs of domestic travel for those to participate in the campaign. Japanese citizens and foreign residents (but not foreign visitors) are eligible to participate. Unsurprisingly, the Go To Travel campaign has attracted controversy since its inception. In light of recent developments, all travel support has been temporarily suspended.

## 2.4. Vaccine

In late January, the Japanese government concluded a contract with the company Pfizer for a large quantity of vaccine (enough for around 72 million people, which is over half of the population). On February 14 the Pfizer vaccine was approved for use in Japan, and on the 17th large-scale administration of vaccine to frontline health workers began.

The tentative schedule for administering the vaccine is as follows.

February: Administer the vaccine to 3.7 million health workers  
Late March: Deliver a vaccine coupon to older people (aged 65 and over).  
April: Administer the vaccine to around 36 million older people.

After April, the vaccine will then be administered to people with on-going medical conditions (around 8.2 million people) and then to people who work in retirement homes (around 2 million people). The vaccine will then be administered to other people in the population according to priority. Note that the precise schedule from April onwards has not yet been announced. The vaccine will be available free for all people over the age of 16. Foreign residents in Japan will also be eligible for the vaccine, and English language versions of all documents and forms will be provided.

## 3. Can I return to Japan if I leave?

Between April and October 2020 there was a near blanket ban on the entry of all foreigners (including foreign residents and permanent residents) in Japan. Following criticism of its hardline stance, Japan eased its entry restrictions for foreign residents in November.

Since November 1 2020, all foreign residents possessing re-entry permission have been able to enter Japan. However, as a condition of entry, you must undergo coronavirus testing 72 hours prior to departing to Japan, and must present proof of a negative test result upon arrival in Japan. Documents of proof must be written entirely in English and signed by a doctor at the medical institution where the test was performed. In addition, a second mandatory test for coronavirus will be performed at the airport upon arrival in Japan, and you will be required to isolate in your home or a hotel for 14 days. The customs official will take your contact details, and, in may contact you during the isolation period to check that you are at the hotel. Moreover, you will not be permitted to use public transportation in order to reach your hotel from the airport. As of late December, these conditions of entry have also applied to returning Japanese citizens.

On October 30 2020, the government lowered restrictions for people returning from Australia, Brunei, China (including Hong Kong and Macau), New Zealand, South Korea, Taiwan, Thailand, and Vietnam. These restrictions were reinstated in early January 2021, and at present travelers from these countries enjoy no special privileges.

Note that, due to changes in the law in early February, people who arrive in Japan but do not comply with the mandatory isolation period following arrival risk fines or

imprisonment.

A detailed (if somewhat dated) English-language article explaining these re-entry procedures can be found at

<https://www.japantimes.co.jp/news/2020/11/05/national/social-issues/japan-re-entry-procedures-foreign-residents/>

#### 4. Response of Kyoto University

Since early April 2020, Kyoto University has permitted all staff to work from home. Staff do not need their PI's permission to work from home, however they should inform them first if they intend to do so.

In mid-April 2020, Kyoto University issued some guidelines for restricting activities to prevent the spread of coronavirus. These guidelines are to be treated as a 'bottom-line', and university departments and institutes have been encouraged to develop their own, stronger guidelines. These guidelines are divided into five levels (1, 2-, 2, 3, and 4), with successive levels representing stronger restrictions.

Since April, Kyoto University has been switching between restriction levels in response to situation. **At present, Kyoto University is operating under Level 2- restrictions.** Under Level 2- restrictions, research activities may continue "while taking all possible measures to prevent the spread of infection". These measures include

- Maintaining good ventilation in laboratories
- Wearing face masks
- Washing hands
- Minimising contact between people
- Reducing the number of non-essential researchers present in laboratories.
- Minimise face-to-face meetings. Online meetings are recommended.

Kyoto University has been operating at Level 2- since January 12 and will remain so until March 7. Details on Kyoto University's restriction levels can be found in Appendix 4.

#### 5. Summary of the iCeMS response

In early April 2020, iCeMS launched a COVID-19 Task Force Committee. This committee, which consists of four iCeMS PIs and two administrative staff, has full authority on all matters relating to iCeMS COVID-19 response.

Since its formation, this committee has produced the following documents.

- A protocol describing how people should respond to an infected person (Appendix 5)
- A checklist of things to do to in the event of a shutdown of the iCeMS buildings.
- A heat map showing the typical number of people working in different parts of the iCeMS buildings at different times of day (thus allowing people to adjust their

- schedules to avoid contacting other people).
- A more detailed version of this guidebook.

These documents are shared with all iCeMS staff *via* email and a Google Drive folder.

In addition, the COVID-19 Taskforce Committee is responsible for setting restrictions of iCeMS research activity. At present, iCeMS is operating at level 2- restrictions (the lowest level). This is identical to the Kyoto University's level 2- restriction level, but with the following additional conditions.

- The details of all visitors (including their time and locations of their visit) should be recorded.
- All visitors should be met in the lobby areas outside of the laboratories and offices, unless necessity dictates otherwise.
- Refrain from indoor gatherings of large groups
- Refrain from meetings involving food and drink (other than with family members or people you live with).
- All groups should hold meetings with sufficient measures in place to prevent the spread of infection.
- All researchers should stay in close contact with the PIs.

iCeMS has been operating at level 2- restrictions since January 12. The restriction levels at iCeMS have been adjusted occasionally over the last year in response to changes in the pandemic situation. Details of the iCeMS activity level restrictions can be found in Appendix 6

## **6. What to do if you or a family member\* feels sick?**

(\*‘family member’ refers to anybody who you live with)

**Important:** The following only describes the procedure for people living in the Kyoto prefecture. However, it is likely that similar procedures operate in other parts of Japan as well (for example, Tokyo operates a Tokyo COVID-19 Call Center, similar to the Kyoto Coronavirus Consultation Center). If you live outside of Kyoto, then please treat the following as a rough template and ask the foreign support staff at your institute for details such as hotline numbers and testing locations.

### ***6.1. Stay at home!***

You are strongly requested to stay at your home, even if suspect that you or your family member only has an ordinary cold or allergy. Visiting your lab under such circumstances would be plainly irresponsible.

You should first briefly inform your PI or secretary of your situation. They will enact a response within your group and also fill in the required reporting forms for the university. After that, place your priorities on yourself and follow the following steps.

### ***6.2. Contact the Kyoto Coronavirus Consultation Center***

Monitor your (or your family member's) physical condition carefully. If

- you start to experience difficulty breathing, serious fatigue, or develop a high fever,

OR

- if you develop a mild fever lasting for more than four days,

OR

- if you have on-going medical condition (including pregnancy or old age) and have mild cold-like symptoms with fever,

you should immediately contact the Kyoto Coronavirus Consultation Center hotline at

075-414-5487

This number is available 24 hours per day, and offers simultaneous translation in English, Chinese, Korean, Portuguese, Spanish, and Vietnamese.

In the case of small children with symptoms, you are requested to take them directly to a children's clinic. If necessary, your group's secretary can help you make an appointment with a clinic.

### ***6.3. Explain your situation over the hotline***

Once connected to the hotline, the operator will ask you about your symptoms. If the operator suspects coronavirus, they will give you directions to local hospital which can test for coronavirus. You will need to make your own way to the hospital, taking the utmost caution to avoid close contacts with other people. If you own a car, you may be directed to a drive-through testing facility.

Note that you are not restricted to the hospitals referred to you by the hotline operator. You can choose your hospital freely, providing that they can test for coronavirus. See section 6.5. for a list of hospitals in Kyoto with English support.

Furthermore, most hospitals will forbid suspect coronavirus patients from approaching the front desks or entering the main doors. Before entering the hospital, confirm the correct location where suspect coronavirus cases are to be received.

There is chance that the hotline operator will ask you to stay at home and not go to the hospital. Even if you are referred to the hospital, there is a chance that the hospital itself may refuse the test and ask you to stay at home. In such a case, monitor your symptoms from home and if the situation worsens, call the hotline or hospital again. The chance of refusal may be high if the number of available beds in the hospital is low. You might

like to confirm the situation with the hospital prior to arrival.

#### **6.4. Support from the Overseas Researcher Support Office (ORSO)**

iCeMS (and ASHBi) has a dedicated office known as ORSO for supporting foreign staff. The staff there can identify convenient hospitals for foreign staff and contact the hospitals on their behalf. They can also confirm the correct procedure for receiving suspect coronavirus patients. Other WPI institutes will have their own staff for assisting foreign researchers, and you are encouraged to learn who they are in case you are unsure.

#### **6.5. List of hospitals with English support**

The following link contains a comprehensive list of the hospitals in Kyoto with English speaking staff

[https://www.kcif.or.jp/web/assets/pdf/en\\_hospital\\_list19.pdf](https://www.kcif.or.jp/web/assets/pdf/en_hospital_list19.pdf)

Some hospitals with good reputations with foreign residents are

Kyoto University Hospital\*

<https://www.kuhp.kyoto-u.ac.jp/english/>

\* Note that Kyoto University only deals with serious cases of coronavirus and is unlikely to respond to ordinary inquiries.

Kyoto City Hospital

<https://www.kch-org.jp/english/about>

University Hospital Kyoto Prefectural University

<https://www.h.kpu-m.ac.jp/en/index.html>

Sakabe Internatinal Clinic

<http://www.sakabeclinic.com/english/>

Kyoto Takeda Hospital

<https://www.kyototakeda.jp/english/index.html>

Higashiyama Kawaguchi Clinic

<https://www.hkc5311970.com/>

Koseikai Takeda Hospital

<https://www.takedahp.or.jp/koseikai/english/outpatient/>

Baptist Medical Hospital

<https://www.jbh.or.jp/english.html>

If you have been referred to a hospital for testing, then you can contact one of the above hospitals to confirm whether they can perform the testing. Their contact details can be

found on their websites.

**6.6. Respond to contact from your PI or secretary**

Providing that your PI or secretary is aware of your situation, they will contact you periodically to check on your situation and hear about the results of any tests. **If you test positive for COVID-19, then you should inform your PI or secretary of the people with whom you were in contact with since 24 hours prior to the onset of symptoms** (e.g., if you started to feel sick on Saturday morning, then you should list all of the people who you have been in contact with since Friday morning). If any of these people are university staff, then they will be followed up.