

IMR Covid-19 Countermeasure Rule Book

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I Introduction

1. Why rule book ?

A rule book is not a list of prohibitions with penalties or a collection of things that should be done, but a rule that allows participants to handle situation and protect themselves to establish a game of covid-19 countermeasure. It is a promise agreed among participants that is essential to run the game.

No rules or precautions will work without the voluntary will of the participants and the flexible and appropriate ingenuity to apply them in the real places. How to conduct research and education in a pandemic situation where the new coronavirus is widespread? This rulebook is a guide for members of the Institute for Materials Research to operate research and business safely.

2. What is the current situation?

In the global pandemic of infectious diseases, the period until the fundamental solution such as vaccines and/or therapeutic agents spreads throughout society, is called Phase II. Japan is currently in the midst of Phase II. Vaccination has already begun for medical professionals and elderly persons, but it will take the whole year for the vaccination of the majority of people in Japan. The end of the world as a whole will take even longer. For this reason, it is necessary to continue the implementation of basic infection prevention measures, including securing physical distances and wearing masks.

As vaccination progresses in the coming months and the possible significant drop of the number of infected people, it will be possible to gradually relax restrictions on face-to-face activities. In the process, it is necessary to take a calm transition policy based on scientific knowledge by referring to the results of countries that finishing the vaccination. We can see the exit of the pandemic Phase II in our course. However, in order to get there, you need to move steadily so that you don't rush and fall into a crisis.

3. What we know about covid-19

There are a few important points in the covid-19 counter measure,

- 1) Prevention of droplet infection is the most important measure,
- 2) Thorough hand washing to prevent contact infection,
- 3) The difficulties are in the infections by pre-symptomatic and asymptomatic individuals.

The biggest reason why the covid-19 cannot be suppressed, despite the fact that unprecedented infection control measures are being taken, is that the infection can occur from about 2 days before the onset of symptom, and there is asymptomatic infected patients. As can be seen in the influenza pandemic report shown in Figure 1, there was no influenza pandemic this year despite 1 to 2 million people are usually infected in Japan each year. It is because of the strong infection control measures for the covid-19. On the other hand, the number of patients with the covid-19 has reached over half-million in last one year in Japan.

This fact shows that it is not enough to self-isolate after the onset of symptoms, as in conventional influenza. We need a behavioral management that avoids risky occasions and we have to change the styles of work and daily action. The major points are listed below.

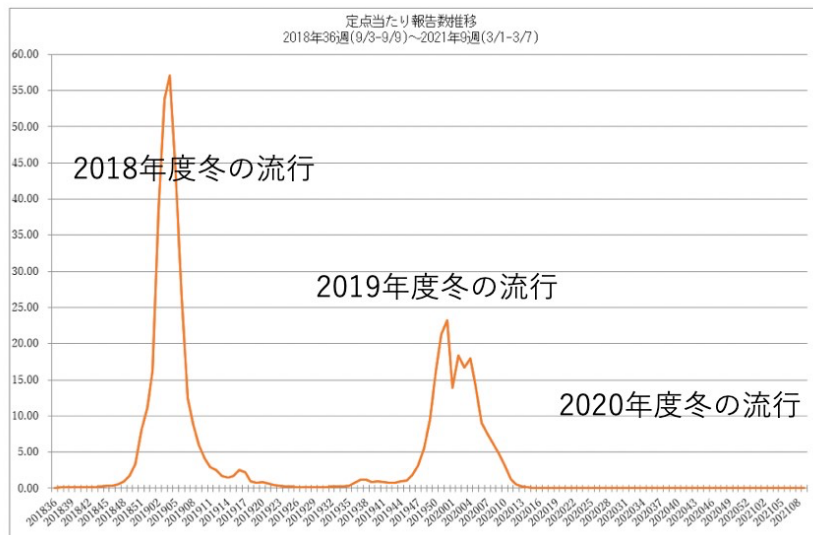


Fig. 1 Changes in weekly reports for fixed-point influenza observations. FY2020 is about 1/100 of the previous years.

- 1) Thorough behavior management and suppression of group behavior are necessary
- 2) Thoroughly keep a distance from others at work, in the city, and commuting
- 3) Minimize physical contact between different laboratories / departments, both in terms of frequency and time
- 4) Minimize contact within the laboratory / section, and avoid the close contact with the entire group by sub-grouping.
- 5) Work that can be carried out even if it is not on-site is recommended to be done by telework.
- 6) Meetings for long-term discussions will be held online.
- 7) Avoid actions that cannot prevent droplet infection, such as eating and drinking in groups, except for family members who contact on a daily basis.
- 8) Avoid entering areas where there are groups without risk management.

Take voluntary action to prevent infection and enhance cooperation, understanding and empathy. Infection prevention measures are carried out by steadily conducting basic actions. Therefore, it is necessary for everyone to take voluntary action, and it is impossible to take effective measures only by notifying and managing commands and emails.

The covid-19 can infect anyone. Therefore, the cooperation of all people is required for countermeasures. Even if one infection prevention measure is taken, there are people with various ideas. However, considering the worries and efforts of one's family when they become infected or become close contacts, everyone should act cautiously, understand the ideas of those who take thorough infection prevention measures, and cooperate. Understanding the concerns of those with older or health-risk families, empathizing with the people who support the families working in the medical and social infrastructure, understand these things as a matter of course. Isn't it the things we have to do?

II Daily activities

4. Rules of activities of each person

Rule 1-Health management

- 1) Check your body temperature every day, and if you have a cold symptom, consider that you may be infected even if it is mild, and stay at home to keep an eye on the progress.

2) If you have a fever, even if you are diagnosed as not having a covid-19 by a medical institution, (a) at least 8 days have passed since the onset, and (b) 72 hours have passed since the fever was removed without taking an antipyretic, and (c) symptoms such as cough and malaise tend to improve, the condition to return to the onsite work is to satisfy all three.

In order to make it easier to report changes in physical condition, please make sure that members of laboratory/section communicate well and protect privacy at all time.

Rule 2-Action management

- 1) Avoid crowds as much as possible to prevent infection
- 2) Even when commuting, reduce the risk of infection by using time shifting
- 3) Avoid group action.
- 4) Avoid actions that are difficult to prevent droplet infection, such as eating and drinking with a large number of people.
- 5) Make sure that the part-time job of the student has sufficient infection control measures and does not fall into any of the so-called "closed spaces", "dense places", or "close scenes" circumstances.

Rule 3-Action record

- 1) Everyone records the status of visits and close contact over the past two weeks.
- 2) The main items that cause close contact are (a) conversation for a total of 15 minutes or more per day, (b) work in the same room, (c) long-term collaborative work, (d) possible droplet infection scenes (food and drink, etc.), and (e) Participation in face-to-face meetings.
- 3) If an infected person or suspected infection occurs, the range of stay at home is determined by this action record. If you do not have a record, you will be suspended from work extensively and your family will be affected seriously, so you must have it.
- 4) When recording behavior, instead of having them present details related to privacy, such as fluctuations in body temperature and details of private behavior, it is confirmed whether or not the person has a normal fever, confirmation that recording is being performed, and infection prevention is taken. Sufficient consideration is required for sharing of record, such as listening to only the information necessary for countermeasures.

Rule 4-Admission management

- 1) In order to prevent the occurrence of clusters, we manage the locking of buildings and record the visitors by entry ID cards.
 - (a) Bring your student ID and staff ID and swipe them through the card reader at the entrance of the building.
 - (b) For unregistered faculty members and students, such as new comers, please register daily using the google form below. <https://forms.gle/HGqYJeH8ggqiB5qc6>

For visitors, see IV GIMRT Visitors, Collaborative Research, and General Visitor Acceptance Rules.

Rule 5-Weekly entry of self-inspection form (IMR faculty / students only)

- 1) Fill out the self-inspection form every week to check your implementation status and check the latest information.

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
凡例	4月30日	行動	5月1日	行動	5月2日	行動	5月3日	行動	5月4日	行動	5月5日	行動	5月6日	行動
自宅	0		0	自宅										
	1		1	自宅										
通勤・移動	2		2	自宅										
	3		3	自宅										
金研(部署内)	4		4	自宅										
	5		5	自宅										
金研(他部署)	6		6	自宅										
	7		7	通勤										
外出	8		8	金研研究室										
	9		9	金研研究室										
会合(3名以上)	10		10	金研研究室										
	11	電顕室	11	金研研究室										
	12	生協食堂	12	セブン										
職場で接触者	13		13	XXセンター										
1日合計15分以上会話	14		14	通勤										
2m以内の距離で作業	15		15	自宅										
同室で半日以上勤務	16		16	自宅										
	17	松屋、ダイソー	17	自宅										
外出での立寄り先例	18		18	スーパー										
30分以上いた飲食店	19		19	自宅										
多数の出入りする場所	20		20	自宅										
	21		21	自宅										
	22		22	自宅										
	23		23	自宅										
	24		24	自宅										
	職場での接触者		職場での接触者											
	濃厚接触者	XX先生	濃厚接触者	XX先生										
	立ち寄り先	松屋一番町 ダイソー	立ち寄り先	セブン イオン										

Fig. 2 Example of action record

5. Hygiene management, infection prevention rules

Rule 1- Prevention of droplet infection

The following four are important because droplet infections from face-to-face conversations are the most common.

- 1) Refrain from long conversations and loud vocalizations in order to suppress the generation of droplets.
- 2) Wear a surgical mask to prevent droplet infection.
- 3) Use shielding plates, glasses, face guards, etc. to prevent adhesion to the mucous membranes of the eyes.
- 4) Keep a distance at the work place and reduce the density.

Rule 2- Thorough hand washing

Viruses contained in droplets, sneezing and excretion residues may maintain infectivity on the surface of the substance for a long time. Therefore, it is necessary to wash your hands after touching common items, and do not touch your face, especially your nose or eyes, before washing your hands.

By acting with filth and cleanliness in mind, you can avoid the risk of contact infection. Please make sure that everyone is thoroughly aware of the following principles regarding hand washing and disinfection.

- 1) Wash your hands when you return from outside or other sections.
- 2) Hand wash before meals or snack.

- 3) Hand wash when entering an office room or a laboratory.
- 4) If there is contact with others, wash your hands when leaving the room after work.
- 5) Hand wash before going to other sections.

Secure a hand-washing area in each room or in an adjacent room, and prepare liquid soap, disinfectant, bar soap, and paper towels to wipe your hands. Prepare a trash to throw away paper towels, set a plastic bag, close the bag properly, and dispose of it.

Rule 3- Toilet management

Toilet is a place that everyone uses, so it needs to be managed as a point to limit contact.

- 1) By deciding which toilet to use in each section, it will be possible to isolate when an infection occurs.
- 2) There are many contact points such as door knobs, faucets, toilet paper holders, toilet seats, etc., so wash your hands thoroughly before and after use.
- 3) Close the lid when running water to prevent it from flying up.

Rule 4- Thorough ventilation

Ventilation measures in the room are important because fine droplets float in the air for a long time and become a source of infection.

- 1) Open the windows and ventilate when you start to work.
- 2) If there is no problem in opening the window all the time, open the window.
- 3) In rooms where windows cannot be opened, ventilate by constantly operating ventilation fans to ensure ventilation and, in addition, opening doors on a regular basis.
- 4) In conference rooms, etc., use an air purifier equipped with a HEPA filter to purify the air.
- 5) As a guideline for ventilation, once every two hours, such as once in the morning, once in the morning break, once in the lunch, once in the afternoon break, and at the end of work, it should be related to the routine behavior of daily work.
- 8) In the case of a meeting, use a timer to ventilate once an hour.
- 9) If a large number of people enter the room for work, etc., provide sufficient ventilation after.
- 10) If a large number of people need to work, open two directions such as windows and doors to allow air to pass through and ventilate.
- 11) In order to improve the air flow of the building, the doors of the balconies at both ends of the corridor may be opened, but entry to the balconies is prohibited. The balcony door will be closed when you return home.
- 12) Regarding the opening of windows and doors, consider theft and intrusion, lock the doors thoroughly when you are absent, and properly manage the opening and closing of windows that can be intruded from the outside.

Rule 5- Cleaning and disinfection

To prevent contact infection, the infection-cross points and equipment that many people touch should be regularly cleaned and disinfected.

- 1) Regularly disinfect doorknobs, elevator buttons, telephones, shared information terminals, etc., which form contact intersections.
- 2) Alcohol disinfectant is flammable, so put it in an appropriate container and label the contents. Avoid storage or use near fire (including electricity), and when stocking, handle according to alcohol storage rules. Spraying with a spray bottle is prohibited except for use in hand sanitizer.
- 3) Household detergents such as My Pet are easy to use and easy to manage.
- 4) When using household chlorine bleach, it is necessary to pay attention to the generation of chlorine gas, corrosion of metals, and change in concentration.

6. Research and business rules

Rule 1- Minimize contact within the department in research and business

The most distinctive feature of the covid-19 is pre-symptomatic infection and infection from asymptomatic individuals. For this reason, preventive activities centered on thorough contact reduction are the basis of infection prevention measures.

At working place

- 1) In the laboratory / department, arrange to avoid crowding by securing a distance of 2 m. Avoid placing desks facing each other, and if unavoidable, place partition boards, etc.
- 2) When working with multiple people, fix the pair as much as possible to reduce the contact.
- 3) If on-site collaboration is required, keep it to 3 people or less and minimize the time.
- 4) In BCP3 and 4, witnessing for safety is indirectly performed using a camera or the like.
- 5) In BCP4, the number of people who can enter one room during work is one or less (in principle, one person per room).

In the case of a large room, a large number of devices will be installed, and if this standard is not appropriate, it shall be less than 1 person in 25 m².

About telework and commuting

- 1) In BCP3, work that does not need to be performed on-site, such as documentation and data analysis, is recommended to be performed by making full use of telework. Not to stay unnecessarily for a long time in the office room.
- 2) In BCP3, the telework rate for office work shall be 30-50%, and a minimum of 30% shall be secured.
- 3) Those who use public transportation is recommended to commute with time shifting.
- 4) The telework rate in BCP4 shall be 70% except for special work.

Rule 2- Minimize direct contact between laboratories / sections.

Minimize direct contact between laboratories and sections so that even if an infection occurs, it will not spread to the entire laboratory.

- 1) Thoroughly deliver documents and goods by an indirect method.
- 2) Do not create points where a large number of people come into contact and gather.
- 3) Do not enter common sections as much as possible, also other sections and/or other laboratories.
- 4) When using common equipment in the facility, make sure to avoid contact between users.
- 5) When entering each section for services, etc., thoroughly prevent infection by wearing a mask.
- 6) The number of people in the elevator should be 3 or less, and keep quiet while riding. Use the stairs between 3 floors and below.

Rule 3- Business plan, working shift plan

- 1) In BCP3, the person in charge of each section decides the business plan and gives instructions according to the notification of the covid-19 countermeasure team.
- 2) In BCP4, the business plan will be submitted to the covid-19 countermeasure team and will be implemented with approval.

III Rules for illness, suspicion, infection and their reports

7. Reporting / contact rules

Rule 1- Contact the covid-19 control team

In the following cases, please contact the covid-19 countermeasure team immediately from the section manager or the person without making a self-judgment or waiting. We will protect your privacy, so please do not hide it. Please report it without hesitation.

- 1) When a fever or cold symptom that may be a covid-19 related
- 2) Regarding 1), if you contact the call center for consultation or if you visit a hospital

- 3) If you are in poor physical condition and receive a PCR test instruction from a call center or a doctor
- 4) If you are in poor physical condition and perform a PCR test and the result is negative
- 5) If you are in poor physical condition and perform a PCR test and the result is positive
- 6) When contact with an “close contact person” is found, even if you are not identified as “close contact person”
- 7) If you become a close contact with an infected person, or if you are instructed to perform a PCR test
- 8) When a co-resident is the target of PCR test
- 9) When notified by COCOA

Contact method:

1. Email 2020covid19@imr.tohoku.ac.jp
2. If you cannot contact, call the General Affairs Section 022-215-2181 (weekdays) or the Entrance Office 022-215-2119 (holiday) to contact the General Affairs Section.
3. Report to the university headquarters will be made from the office.
4. Since the university will disseminate information externally, each person will not disseminate information about infected persons outside the institute.

IV Business trip

8. Business trip rules

All business trips under BCP3, 4 need the director permission and meet following conditions

- 1) The urgency and necessity of business trips are clear,
- 2) Sufficient infection prevention measures can be taken
- 3) The number of personnel is narrowed down to the minimum required
- 4) After returning, perform telework or non-contact activities for one week. After a business trip to an area where mutant strains are widespread, absolutely telework at home.
- 5) Do not participate in face-to-face events such as lectures and seminars
- 6) In addition, respond and stop, if needed, to the development of situations.

A part of business trips under BCP 1 and 2 are subject to approval or confirmation by the director, depending on the infection situation of the visiting area.

- 1) Areas that are in Stage III or IV and have a state of emergency and similar measures is defined as IMR Classification Area 1.
- 2) Areas that are in a stage III state and have not been declared a state of emergency and no equivalent measures have been taken, or areas that are in the transition from a state of emergency even if they are stage II or lower is IMR classification Area 2.
- 3) Areas in Stage II or lower are classified into areas 3, 4, and 5 according to the number of newly infected persons per 100,000 people per week, and measures are taken according to the infection level.

Private trips are not subject to permission or notification by director, but should be carried out in accordance with business trip standards.

V Visitor, user and contractor

9. Rules for construction / maintenance / delivery of large items

Rule 1- Pre-registration and permission are required for all construction, maintenance, and delivery of large items under BCP3 and 4, regardless of region.

- 1) It is premised that construction, maintenance, and delivery of large items can be performed without close contact.
- 2) Minimize the number of respondents and avoid contact with other parties of IMR.

- 3) If contact for a certain period of time is unavoidable, the responder shall be performed non-contact work for one week after the event.
- 4) If the visitor is from Areas 1 and 2 of the IMR classification, the director approval is needed.
- 5) Meetings will be held online.

Rule 2- Construction, maintenance, and delivery of large items under BCP2, 1 shall be permitted, confirmed, and notified depending on the region.

- 1) If the visitor is from Areas 1 and 2 of the IMR classification, the director will approve, and it is assumed that construction, maintenance, and delivery of large items can be done without close contact.
- 2) Construction and maintenance carried out by contractors from Miyagi prefecture should submit visit registration (google form for construction, large-scale delivery, maintenance, etc.) and will be carried out under the control of each section.
- 3) Construction and maintenance carried out by contractors outside the Miyagi prefecture will be carried out after pre-registration by visit registration form (construction, large-scale delivery, maintenance, etc.) and confirmation by the covid-19 countermeasure team.

10. Facility and center user rules

Rule 3- All users under BCP3 and 4 shall be permitted regardless of the region and shall meet the following conditions.

- 1) The urgency and necessity of implementation is clear
- 2) The person in charge of the user institute has permitted the visit in the current situation.
- 3) To carry out without contact and without the support of the host faculty member.
- 4) For the two-week period before coming to the IMR, there are no risky behaviors such as business trips to highly infected areas and group eating and drinking, and action management is performed.
- 5) When you come to the IMR, understand that you will not stand in any place other than the hotel and IMR and the minimum shopping places.
- 6) There is no problem with your health
- 7) If deemed necessary, we may ask for cooperation in PCR testing.
- 8) Notification should be made at least 2 weeks in advance by submission form.

Rule 4- User from highly infected areas under BCP1 and 2 is permitted with following conditions.

- 1) If the visitor from Areas 1 and 2 of the IMR, the director will approve it, provided that it can be implemented in accordance with the standards of BCP3 and 4.
- 2) Notification should be made at least 2 weeks in advance by submission form.
- 3) For user within the Miyagi prefecture and from the campus, confirm the user visit notification and implement it under the control of the user department.

11. General joint research and visit rules

Rule 5- For general joint research and visitors, follow the criteria of the above.

- 1) Visitors conducting experiments are required to have insurance for injuries and accidents, liability insurance, and safety education.
- 2) Due to the high mortality rate of the elderly, access to the elderly may be restricted at BCP3 and above.

12. Delivery rules

Rule 6- Delivery location is determined according to BCP level.

- 1) In BCP4, delivery shall be made at a designated place such as a delivery room, and confirmation shall be made by an indirect method as much as possible.
- 2) In BCP3, delivery shall be at a designated place such as a delivery room.

- 3) Chemicals, etc. that cannot be received at the delivery inspection room will be delivered at the entrance of the building.
- 4) In BCP2 and 1, in addition to the delivery inspection room, a contractor with an admission card can deliver to the laboratory with the permission of the laboratory.

VI When other large-scale disasters such as earthquakes and fires occur

Rule 1- In the event of another disaster such as an earthquake or a fire, evacuation and ensuring safety are the highest priorities, so infection prevention will not be a priority until evacuation is completed and safety is confirmed.

- 1) The evacuation site will be the designated location-parking place as planned, but after gathering, keep the distance between the groups as much as possible and keep quiet without having unnecessary conversations.
- 2) Immediately put on the mask.
- 3) If safety is confirmed and you continue to wait outside the office, the command and control team will instruct you to disperse the evacuation sites.
- 4) In the case of a large-scale earthquake, etc., we will try to prevent infection by returning unnecessary personnel to the home and reducing the density.
- 5) When opening evacuation shelters and command and control stations, reduce the density in consideration of infection prevention.