Investigation report on the outbreak of novel coronavirus cluster aboard the cruise ship “Costa Atlantica”

October, 2020
Nagasaki Prefecture, Nagasaki City
Introduction

Since a novel coronavirus (COVID-19) infection case was confirmed on April 20, 2020 on the cruise ship "Costa Atlantica" docked at Koyagi Plant of the Mitsubishi Heavy Industries Nagasaki Shipyard & Machinery Works in Nagasaki City, the Prefecture and City of Nagasaki had worked together to end the situation, and made effort to prevent the spread of infection onboard, provide medical care, help the crew members return to their home countries, and above all, avoid community spread of COVID-19, with the guidance and support received from the national government, Nagasaki University, and related organizations.

Although one crew member became seriously ill, he was recovered by receiving specialized medical care at Nagasaki University Hospital. As a result, the case of the Costa Atlantica closed with no deaths, no community spread, and no great impact imposed on the prefectural medical system. We believe that this achievement is the result of appropriate measures taken through the cooperation and collaboration of all concerned parties.

We would like to express our sincere gratitude to the Diet members elected from Nagasaki Prefecture who made a great contribution in coordinating with the national government; central ministries such as the Ministry of Health, Labour and Welfare, the Ministry of Land, Infrastructure, Transport and Tourism, the Ministry of Foreign Affairs, the Ministry of Defense; related organizations such as the National Institute of Infectious Diseases, Nagasaki University, the Self-Defense Forces; medical support organizations such as DMAT, Japan Heart, Peace Winds Japan, and Médecins Sans Frontières, as well as the Nagasaki Medical Association and transportation operators.

Notably, Nagasaki University, with overseas bases, has the Institute of Tropical Medicine, a research facility for tropical diseases designated by the WHO (World Health Organization), and a university hospital responsible for training specialists and providing advanced medical care. Furthermore, Nagasaki Prefecture boasts the largest number of infectious disease specialists per capita in Japan, and Nagasaki University is one of the top-class infectious disease research and medical centers nationwide. In response to the cruise ship cluster, fluorescent LAMP method, that was developed by Nagasaki University, was used to test approximately 620 crew members, and the knowledge of infectious disease experts was applied to prevent further spread of infection on board. An app developed by the university was also used for health management of a large number of crew members, thus capable of preventing the spread of infection to the community. These results are largely attributable to Nagasaki University, which has strength in the field of infectious diseases. The university has been playing an important role in the safety and security of the region.

Currently, cruise ships are not in a situation where operation is to be resumed due to the worldwide spread of COVID-19. However, in the medium to long terms, their needs are expected to expand as before.

Nagasaki Prefecture has a historical background of having prospered with sea-related industries such as shipbuilding, fisheries, and tourism. In order to revitalize the local economy by actively attracting cruise ships and serving as a repair base for these ships, it is crucial to take measures against infectious diseases assuming onboard outbreak.

This investigation report is a record of collaborative efforts made by the national government, Nagasaki Prefecture, Nagasaki City, Nagasaki University, businesses, medical personnel, etc., to tackle a large-scale cluster on a cruise ship after its arrival in Nagasaki, despite there were no set criteria for accepting cruise ships in the event of an infectious disease outbreak. In this report, many issues, such as establishment of regional medical system to deal with infection cluster outbreaks, are organized and examined, and are compiled as a “Nagasaki Model” that will be utilized for attracting and accepting cruise ships.

In closing, we would like to express our sincere gratitude again to all the related organizations and parties for providing medical support and helping crew members return home during the period starting from the cluster outbreak to the ship departure, and even after the departure.

October, 2020

(Supervisor) Katsumi Nakata, Director-General, Health & Welfare Department, Nagasaki Prefecture
# Table of contents

## Chapter 1 Response situation

1. Summary of the case of the Costa Atlantica

   1. Outline before the infection outbreak
      1. Outline of the cruise ship “Costa Atlantica”
      2. Movement of the cruise ship “Costa Atlantica”
      3. Situation of COVID-19 in Japan and Nagasaki Prefecture at the time
      4. Situation and response after the vessel arriving in port
   2. Overview of the infection outbreak
      1. Process at the time of the infection outbreak
      2. Testing of all crew members
   3. Overview until the vessel’s departure
   4. Consort ships departed ahead of schedule
   5. Handling cost

## Chapter 2 Outline of response and support by organizations

1. Nagasaki Prefecture
   1. Request for support from Nagasaki University
   2. Request for support from the national government
   3. Request for dispatch of the Self-Defense Forces
   4. Request for dispatch of DMAT (Disaster Medical Assistance Team), COVID-19 JMAT(Japan Medical Association Team), and other private organizations
   5. Establishment of DPAT (Disaster Psychiatric Assistance Team) Coordination Headquarters
   6. Dispatch of DHEAT (Disaster Health Emergency Assistance Team)
   7. Establishment of Cruise Ship Task Force in the Nagasaki Prefecture Novel Coronavirus Response Headquarters
   8. Information dissemination (Regular and extraordinary press conferences)

2. Nagasaki City

3. Nagasaki University
Support for repatriation

National government

Related ministries and agencies

Self-Defense Forces (Disaster dispatch)

DMAT, etc.

Mitsubishi Shipbuilding Co., Ltd.

Medical support at Koyagi Dock

Support for isolated life on board

Health management of shipyard workers

Explanation to local residents

Other

Others

Activities of DPAT (Disaster Psychiatric Assistance Team)

Activities of DHEAT (Disaster Health Emergency Assistance Team)

Activities of Nagasaki Pharmaceutical Association (Nagasaki-City Pharmaceutical Association)

Activities of Nagasaki Dietetic Association

Specific response to the case of the Costa Atlantica

Development of a medical care provision system

Establishment of an on-site command post and a relief station

Installation of container house

Private room management on board and introduction of health management app

Response to infected patients etc.

Testing

Process of hospitalization

Examination of facilities for accepting inpatients

Transportation for patients

Securing accommodation facilities for medical staff

Status of repatriation support

Repatriation of those tested negative

Response to those tested positive (repatriation after negative confirmation)

Support for preventing further infection on board

Infection control and disinfection work on board

Providing meals to the crew

Garbage disposal

Procurement of basic medicine

Support from citizens of Nagasaki Prefecture and City

Other

Information sharing and cooperation (video conference)
Chapter 2 Issues and Countermeasures ................................................................. 39

[Phase 1: Before arrival in port] ........................................................................ 39

1. Infectious disease countermeasures that should be always implemented ....... 39
   (1) Establishment of measures against infectious diseases on board (prevention / prevention of further spread) ........................................................................................................... 39
      ① Establishment of onboard health management system and risk management system
      ② Reviewing the lifestyle on the cruise ship
      ③ Installation of a medical isolation room on board
      ④ Building ship operator’s reporting system to infectious disease
      ⑤ Clarification of the position under the Infectious Disease Act
      ⑥ Necessity of establishing rules for expenses in case of infectious disease outbreaks
   (2) Equipment and systems required for port facilities ...................................... 42
      ① Development of countermeasures at terminals, etc. against infectious disease (hardware, software)
      ② Necessity of smooth information sharing with related organizations
   (3) Construction of extensive medical support system (roles of neighboring local governments and cooperation system) ............................................................... 44
      ① Extensive PCR testing and acceptance of infected persons at medical institutions
      ② Securing means of transportation to outside the prefecture

[Phase 2 : At arrival in port] .............................................................................. 46

1. Obtaining and sharing information on a passenger ship .................................... 46
   (1) Navigation information (port of calls) .......................................................... 46
      ① Information sharing on all routes of the ship, including information whether or not the ship visited a country experiencing an epidemic.
      ② Information provided by a shipping agency
      ③ Understanding the purpose of port call
   (2) Obtaining information on passengers and crew members .......................... 47
   (3) Construction of information sharing method ............................................... 47
      ① Share information that should be obtained by the host municipality (prefectural government, municipal government (healthcare center))
      ② System when berthing at a private dock

2. Decision on arrival / berthing in port .............................................................. 48
   (1) Establishment of grounds for decisions on berthing availability .................. 48
   (2) Establishment of handling policy for berthing (decision on acceptance) ....... 49
      ① Necessity of criteria to determine acceptance
      ② Judgment criteria for boarding and disembarkation of passengers/crew
   (3) Establishment of handling policy at the time of docking (judgment by a second port) .... 50

[Phase 3: After arrival in port (after berthing/before outbreak)] ............................. 52
1. **Obtaining and sharing information on passenger ships (after arrival in port)** ........................................... 52
   (1) Obtaining and sharing information on passenger on board (after arrival in port) .................................. 52
       ① Necessity of obtaining information on sightseeing / travel routes at ports of call and health condition
       ② Establishment of an information sharing system with related organizations
   (2) Obtaining and sharing information on crew changes .................................................................................. 53
       ① Necessity of obtaining action records and health information for crew changes
       ② Establishment of an information sharing system with related organizations

[Phase 4: After arrival in port (at the time of outbreak)] .................................................................................... 55

1. **Response at an outbreak** .......................................................................................................................... 55
   (1) Clarification of response policy for infected patients, etc. (Clarification of response responsibilities of related parties) .................................................................................................................. 55
       ① Necessity of response plan and other measures to infectious disease outbreaks
       ② Clarification of the grounds for requiring response (role division) of related organizations and ship operators
       ③ Early decision on response policy
   (2) Development of a collaborative system for related parties (contact / information sharing) ................. 56
       ① Development of a cooperative system for infectious disease response
       ② Dispatch of ship operator liaison with a certain decision-making authority
   (3) Construction of a medical support system in the prefecture ...................................................................... 57
   (4) Establishment of onboard medical care/management system .................................................................. 58
       ① Enhancing onboard medical workforce
       ② Strengthening mental care support for managing crew in private rooms
       ③ Response to private room management for passengers on board
       ④ Early disinfection and waste disposal on board
       ⑤ Meal support for private room management
   (5) Appropriate information dissemination ................................................................................................. 60
       ① Quick and easy-to-understand information dissemination
       ② Accurate information dissemination to prevent discrimination against related parties and reputational damage
   (6) Centralize the contract point for embassies (consulates) in Japan ........................................................ 61

[Phase 5: At repatriation] ................................................................................................................................. 62

1. **Repatriation support for passengers** ...................................................................................................... 62
   (1) Secure transportation means (promote the understanding of airlines and bus operators about the risk of infectious diseases) ........................................................................................................... 62
   (2) Criteria on test for negative confirmation (for positives) ............................................................................ 62
   (3) Centralized the contact point to foreign embassies (consulates) in Japan << Repost of Phase 4 >> ......................................................................................................................................................... 63
[Phase 6: At departure]

1. Support for departure

   (1) Response to those stayed on board (positives) (develop a system to accept asymptomatic positives in the prefecture)
   (2) Movement order for vessels at anchor (Measures when the movement order is refused)

[Items to be addressed for the safe acceptance of cruise ships]

In conclusion

[Name list of Investigation and Evaluation Committee]

[Reference]

- Progress related to the case of the cruise ship “Costa Atlantica” (in chronological order)
- Overall system diagram
Chapter 1 Response situation

1. Summary of the case of the Costa Atlantica

(1) Outline before the infection outbreak

① Outline of the cruise ship “Costa Atlantica”

<table>
<thead>
<tr>
<th>Ship registration</th>
<th>Italy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating company</td>
<td>Costa Crociere S.p.A. (Headquartered in Italy)¹</td>
</tr>
<tr>
<td>Gross tonnage</td>
<td>86,000 tons</td>
</tr>
<tr>
<td>Total length</td>
<td>292 meters</td>
</tr>
<tr>
<td>Width</td>
<td>32 meters</td>
</tr>
<tr>
<td>Speed</td>
<td>Maximum 22.0 knots</td>
</tr>
<tr>
<td>Passenger capacity</td>
<td>Maximum 2,680 (1,057 guest rooms)</td>
</tr>
<tr>
<td>Crew</td>
<td>897</td>
</tr>
</tbody>
</table>

According to Costa Cruises, the cruise ship Costa Atlantica, built in 2000 in Helsinki, accommodates a maximum of 2,680 passengers and operates with a crew of 897. The Costa Atlantica has operations in various parts of Asia in recent years, departing from and arriving at cities in China, mainly Shanghai.

Since the purpose of this call at Nagasaki was to repair its hull, the cruise ship carried no passengers. As of April 20, when the first case of new coronavirus infection was confirmed, 623 crew members were on board. Most of the crew were foreign nationals from 36 countries; the largest number of them came from the Philippines, followed by India, Indonesia, China, Italy, and other countries.

<Main nationalities of the crew>

¹ Costa Crociere S.p.A.: A cruise operator comprising of the brands “Costa Cruises”, “AIDA Cruises” and “Costa Asia”. For this time, we coordinated with Costa Cruises Asia (Shanghai) and Costa Cruises Japan branch office.
Movement of the cruise ship "Costa Atlantica"

According to Mitsubishi Shipbuilding Co., Ltd., they received a repair order from Costa Cruises on January 27 for the Costa Atlantica since its original plan to undergo repair in China became impossible due to the spread of the virus outbreak. Mitsubishi Shipbuilding had business with the cruise operator through passenger ship building. Costa Cruises asked the Nagasaki Shipyard & Machinery Works, which has a track record of building passenger ships, to deal with this matter by all means. So, after being quarantined at Matsugae Pier by the Nagasaki Quarantine Station on January 29, the Costa Atlantica was berthed at the Koyagi Plant East No. 3 quay of the Mitsubishi Heavy Industries Nagasaki Shipyard & Machinery Works for repairs on January 31.

In addition, other cruise ships operated by Costa Cruises arrived in Nagasaki at the same time. Their movements were as follows.

<Movements of Costa Cruise Ships (First port) etc.>

<table>
<thead>
<tr>
<th>Name</th>
<th>January</th>
<th>February</th>
<th>March</th>
<th>April</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Early</td>
<td>Middle</td>
<td>Later</td>
<td>Early</td>
</tr>
<tr>
<td><strong>Costa Atlantica</strong></td>
<td></td>
<td></td>
<td></td>
<td>Mar. 26-27</td>
</tr>
<tr>
<td></td>
<td>Mar. 30</td>
<td></td>
<td>Mar. 27</td>
<td>Matsugae</td>
</tr>
<tr>
<td></td>
<td>Mar. 27</td>
<td></td>
<td>Mar. 21</td>
<td>Koyagi</td>
</tr>
<tr>
<td></td>
<td>Apr. 1</td>
<td></td>
<td>Mar. 16-18</td>
<td>Koyagi</td>
</tr>
<tr>
<td></td>
<td>Apr. 26</td>
<td></td>
<td>Apr. 30-31</td>
<td>Koyagi</td>
</tr>
<tr>
<td><strong>Costa Venezia</strong></td>
<td></td>
<td></td>
<td></td>
<td>Mar. 26</td>
</tr>
<tr>
<td></td>
<td>Mar. 26</td>
<td></td>
<td>Mar. 20</td>
<td>Matsugae</td>
</tr>
<tr>
<td></td>
<td>Mar. 21</td>
<td></td>
<td>Mar. 15</td>
<td>Kagoshima</td>
</tr>
<tr>
<td></td>
<td>Mar. 22</td>
<td></td>
<td>Mar. 14</td>
<td>Koyagi</td>
</tr>
<tr>
<td></td>
<td>Mar. 23</td>
<td></td>
<td>Apr. 7-9</td>
<td>Matsugae</td>
</tr>
<tr>
<td></td>
<td>Mar. 10</td>
<td></td>
<td>Apr. 10</td>
<td>Koyagi</td>
</tr>
<tr>
<td><strong>Costa Serena</strong></td>
<td></td>
<td></td>
<td></td>
<td>Mar. 12</td>
</tr>
<tr>
<td></td>
<td>Mar. 26</td>
<td></td>
<td>Mar. 10</td>
<td>Matsugae</td>
</tr>
<tr>
<td></td>
<td>Mar. 11</td>
<td></td>
<td>Mar. 9-13</td>
<td>Matsugae</td>
</tr>
<tr>
<td></td>
<td>Mar. 14</td>
<td></td>
<td>Mar. 8-9</td>
<td>Koyagi</td>
</tr>
<tr>
<td></td>
<td>Mar. 15</td>
<td></td>
<td>Apr. 10</td>
<td>Matsugae</td>
</tr>
<tr>
<td></td>
<td>Apr. 16</td>
<td></td>
<td>Apr. 15</td>
<td>Koyagi</td>
</tr>
<tr>
<td></td>
<td>Apr. 26</td>
<td></td>
<td>Apr. 26</td>
<td>Matsugae</td>
</tr>
</tbody>
</table>

Situation of COVID-19 in Japan and Nagasaki Prefecture at the time

The situation surrounding COVID-19 when Mitsubishi Shipbuilding Co., Ltd. accepted the repair order for the cruise ship is as follows.

On December 31, 2019, the WHO announced that pneumonia of unknown cause had occurred in Wuhan, China. On January 9, 2020, Chinese authorities reported that the pneumonia was caused by the novel coronavirus (COVID-19), and the WHO made the same announcement. Since then, the infection has spread rapidly all over the world to this day.

In Japan, the first infected person (who has stayed in Wuhan City) was confirmed on January 15, 2020; and on January 30, the Novel Coronavirus Response Headquarters headed by the Prime Minister was established. As of January 30, 2020, the number of infections in Japan was 12 (about 7,800 globally). On February 1, 2020, COVID-19 was added as a designated infectious disease under the Infectious Disease Act and a quarantine infectious disease under the Quarantine Act (enforcement of government ordinance). From the same day, an entry ban was taken for foreigners who had stayed in Hubei Province, China (excluding those who departed abroad before midnight on the same day).

Under these circumstances, on another cruise ship "Diamond Princess" that arrived at Yokohama Port on February 3, COVID-19 cases were identified by quarantine inspection on February 5, which eventually led to a large cluster with a total of 712 positive cases. Since then, the infection has gradually spread domestically, and on March 21, the number of infections in Japan exceeded 1,000. COVID-19 infections continued to spread in Japan. On April 7, a state of emergency was declared in seven prefectures (Saitama, Chiba, Tokyo, Kanagawa, Osaka, Hyogo, and Fukuoka), and on April 16, the state of emergency was declared nationwide.

On the other hand, in Nagasaki Prefecture, the first case was confirmed in Iki City on March 14. By April 17, a total of 17 cases were confirmed (six in Iki City, six in Sasebo City, two in Isahaya City, one in Nagasaki City, one in Matsuura City, and one in Nagayo Town). No new cases were confirmed in the prefecture until July 3, the day on which the 18th case was identified.

Regarding the acceptance of cruise ships in Nagasaki Prefecture, since China suspended overseas group travels handled by travel agencies on January 27, no foreign ships made a port call in Nagasaki after one foreign ship entered in Sasebo Port on January 25. Since then, a port call with passengers onboard was made only by a Japanese vessel on February 13 and 14.
Situation and response after the vessel arriving in port
The Costa Atlantica arrived at the port of Nagasaki on January 29 to replenish supplies (Matsugae Pier under the prefecture's jurisdiction), and on January 31, berthed at the Koyagi Plant East No. 3 quay of the Mitsubishi Heavy Industries Nagasaki Shipyard & Machinery Works. The vessel then entered the dock of the shipbuilding company for repairs from February 20 to March 25.

On March 26 and 27, the cruise ship docked again at Matsugae Pier. After replenished supplies and conducted sea trial, the vessel was re-moored at the Koyagi Plant East No. 2 quay on April 1.

Costa Cruises was planning to resume the cruise business after the repair work. However, as COVID-19 infections spread not only throughout China but all over the world, and the departure destination for the vessel was not decided, Mitsubishi Shipbuilding Co., Ltd. was unable to force the vessel to depart from a humanitarian point of view. Then, the vessel continued mooring at Koyagi Dock (scheduled until the end of April).

In response to spreading coronavirus outbreak worldwide, Nagasaki Prefecture asked Costa Cruises on March 6 not to allow their crew to disembark to visit densely populated urban areas, etc., for the prevention of the infection. In addition, Nagasaki Prefecture notified Mitsubishi Shipbuilding Co., Ltd. (Mitsubishi Heavy Industries Marine Structure Co., Ltd.) that performed the repair work about the prefecture's response as the port manager, and asked to have the shipping agency and related businesses restrict the range of activities of the cruise ship passengers to quay aprons, etc. in order to avoid contact with the general public, and sought their understanding regard this matter. In response to this, Mitsubishi Shipbuilding Co., Ltd. explained the details of the notification from the prefecture to the vessel and asked them to understand the restrictions on the range of crew activities and contact with the general public.

At the Mitsubishi Heavy Industries Koyagi Plant, all employees and staff are instructed to refrain from coming to work if a fever is detected in temperature checks before work. However, from March 16, the Plant made it mandatory for them to measure body temperature and to submit a travel history and health status report to enhance the entry management. Costa Cruises reinforced conventional health checks for the crew members at embarkation/disembarkation gates, and from March 14, prohibited them from going out for sightseeing, drinking and eating in the city.

After the prefecture's request to refrain from disembarking, according to the Fukuoka Regional Immigration Bureau, about 90 crew members disembarked and about 40 crew members boarded the ship in a month from March 15 to April 15. According to Costa Cruises, a total of 33 persons boarded and disembarked between April 1 and April 20. It was found out that out of 33, 1 boarded and 28 disembarked, and 4 went out temporarily (1 visited a medical institution; 3 went shopping for necessities).

Progress
January 29, 2020: The Costa Atlantica arrived in the port of Nagasaki to replenish supplies, and then berthed at Matsugae Pier (under the prefecture's jurisdiction).
January 31: Berthed at the Koyagi Plant East No. 3 quay of the Mitsubishi Heavy Industries Nagasaki Shipyard & Machinery Works
February 20: Entered the construction dock of the Mitsubishi Heavy Industries Nagasaki Shipyard & Machinery Works Koyagi Plant (for repair)
March 6: Nagasaki Prefecture requested Costa Cruises to make the crew refrain from disembarking to visit populated urban areas.
March 9: Mitsubishi Shipbuilding Co., Ltd. explained to Nagasaki Prefecture about infection prevention measures being implemented.
March 10: Mitsubishi Shipbuilding Co., Ltd. and other organizations explained to Nagasaki City about infection prevention measures being implemented.
March 16: Health checks at entry were strengthened at Koyagi Plant of the Mitsubishi Heavy Industries Nagasaki Shipyard & Machinery Works.
March 25: Repair work completed.
March 26: The vessel moved to Matsugae Pier to replenish supplies
From March 27 (test operation at sea)
From April 1: The vessel redocked at Koyagi Plant
(2) Overview of the infection outbreak

① Process at the time of the infection outbreak
Around 17:00 on April 19, Nagasaki City Returnees and Contact Person Consultation Center was consulted by the Costa Atlantica’s onboard crew about four crew members who developed fever.

On receiving the consultation, Nagasaki City Healthcare Center decided to conduct PCR tests. On April 20, the next day of the consultation, a ship doctor collected samples from the four crew members, which were received by a person in charge from the Nagasaki City Healthcare Center at around 9:30 for PCR test at Nagasaki Municipal Public Health and Environment Laboratory. Around 16:30, one case was confirmed tested positive.

Additionally, between April 1 to 14 (the day on which the crew member who was first confirmed tested positive reported coughing and fever), a total of 34 crew members were moved to private rooms on board because they reported fever or other symptoms. It was found out that some of them later tested positive.

② Testing of all crew members
In response to the confirmed positive case on board, testing was conducted on April 21 (the next day of the day on which the first infection was confirmed) for 57 crew members who had a close contact with the infected person under the cooperation of the Institute of Tropical Medicine, Nagasaki University. On next day at around 12 midnight, 33 positive cases were confirmed.

On April 22 (the third day of the day on which the first infection was confirmed), Nagasaki Governor, Nagasaki Mayor, the Cluster Response Team of the Ministry of Health, Labour and Welfare, DMAT, and Nagasaki University officials discussed further countermeasures and other strategies and compiled a basic policy as follows: “Firstly, perform PCR tests on all crew members and classify them as positive or negative for the virus. Those who tested negative should be repatriated as soon as possible. “Those who tested positive but asymptomatic and those with minor symptoms should stay onboard for health observation. “Those with serious life-threatening symptoms should be sent to a medical institution.”

Based on this basic policy, all crew members were set to undergo testing for infection; on and after the day, tests were performed under the cooperation of Nagasaki University Hospital for 134 essential crew members followed by the remaining 428. Moreover, on the same day, a disaster-relief dispatch request was made to the Ground Self-Defense Force, and with the support of the SDF’s medical officers, samples of all 623 crew members were collected. By April 25 (the sixth day of the day on which the first infection was confirmed), a total of 148 crew members were confirmed tested positive.

In addition, one crew member (essential crew) who tested negative in the test conducted for all crew showed symptoms such as a slight fever and cough from May 2. As a result of a retest conducted on May 3, this person was confirmed tested positive, making the total number of cases 149. This crew member tested positive was moving around the vessel on duty. Six members who were identified as his/her close contacts underwent PCR tests and were confirmed negative.

[Progress]
Around 17:00 on April 19, 2020: Nagasaki City Returnees and Contact Person Consultation Center was received a consultation by the Costa Atlantica’s onboard staff about four crew members with fever.

Early morning on April 20: A ship doctor collected samples from the four.
9:30: Four samples collected from the vessel were tested via PCR

---

3 Returnees and Contact Person Consultation Center: A contact point set up in a healthcare center or other related entity to provide consultation services for people who are suspected to have been infected with the novel coronavirus.

4 PCR test: A test in which a characteristic part of a viral gene is cut out and amplified by a chain reaction. PCR is the abbreviation of polymerase chain reaction.

5 DMAT: A mobile, trained medical team capable of working in the acute phase of a disaster. DMAT is the abbreviation of Disaster Medical Assistance Team.

6 Essential crew: Crew members involved in ship administration, operation and function maintenance.
at Nagasaki Municipal Public Health and Environment Laboratory.

Around 16:30 on April 20:
The test confirmed one person tested positive.

12:00 on April 21:
Prefecture-owned X-ray examination vehicle was deployed for examination of symptomatic crew members.

19:00:
Completed sample collection of 57 close contacts (tested via fluorescent LAMP method7 at the Institute of Tropical Medicine, Nagasaki University)

Around 0:00 on April 22:
33 crew members were confirmed positive (*Cumulative total of 34)

After 15:00:
One tested positive (male in his 40s, foreign national) was transported by ambulance to a designated medical institution in Nagasaki City and was hospitalized <hospitalization (1)>

Of the essential crew members, sampling of 66 was completed (tested by the fluorescent LAMP method at the Institute of Tropical Medicine, Nagasaki University)

Around 1:00 on April 23:
14 were confirmed positive (*Cumulative total of 48)

In the morning:
Collected samples of the remaining essential crew members

In the afternoon:
Samples of other crew members were collected; a total of 208 samples were collected (tested by the fluorescent LAMP method at the Institute of Tropical Medicine, Nagasaki University).

Early morning on April 24:
43 were confirmed tested positive (*Cumulative total of 91)

Samples of the remaining 288 crew members were collected (tested by the fluorescent LAMP method at the Institute of Tropical Medicine, Nagasaki University)

Early morning on April 25:
57 were confirmed tested positive (*Cumulative total of 148)

May 3:
One person tested negative showed symptoms such as a slight fever, and was confirmed positive after taking another PCR test (*Cumulative total of 149).

[Status of PCR (LAMP) testing]

<table>
<thead>
<tr>
<th>Status of testing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of tests</td>
</tr>
<tr>
<td>April 20</td>
</tr>
<tr>
<td>21</td>
</tr>
<tr>
<td>22</td>
</tr>
<tr>
<td>23</td>
</tr>
<tr>
<td>24</td>
</tr>
<tr>
<td>Total</td>
</tr>
<tr>
<td>May 3</td>
</tr>
</tbody>
</table>

7 Fluorescent LAMP method: A test method in which a gene is amplified at a constant temperature using a nucleic acid amplification method and detect a weak light emitted by a reagent with a fluorescence detector. This method, developed jointly by Nagasaki University and Canon Medical Systems Corporation, realized testing faster than the conventional PCR testing. LAMP is the abbreviation of Loop-Mediated Isothermal Amplification.

* On April 20, PCR tests were conducted at Nagasaki Municipal Public Health and Environment Laboratory.

* From April 21 to 24, tests were conducted at the Institute of Tropical Medicine, Nagasaki University by the fluorescent LAMP method.

* All six close contacts of the crew confirmed positive on May 3 were negative.
(3) **Overview until the vessel's departure**

Following the discovery of a COVID-19 cluster on the cruise ship, related organizations took measures in cooperation.

Response situation is as described later. Crew members confirmed negative were sequentially disembarked and returned to their home countries. The Costa Atlantica departed for Manila, Philippines on May 31.

[Progress]

**Evening on May 3, 2020:** Those tested negative started disembarking and returning home.

* By May 31, a total of 495 crew members (the crew members who tested negative and those tested positive but confirmed negative later) disembarked to return home.

In addition, a total of 11 (6 positive and 5 negative) disembarked for hospitalization.

**11:45 on May 31:** The Costa Atlantica departed from the port of Nagasaki.

---

### Situation of the crew (as of May 31, at departure)

<table>
<thead>
<tr>
<th>Total number of crew</th>
<th>Those who were hospitalized</th>
<th>Those who returned home</th>
<th>At departure</th>
</tr>
</thead>
<tbody>
<tr>
<td>627</td>
<td>6</td>
<td>495</td>
<td>126</td>
</tr>
</tbody>
</table>

* The total number of crew members was 627 with 4 medical staff boarded later. (623 + 4)

---

(4) **Consort ships departed ahead of schedule**

Concurrently, the Costa neoRomantica and the Costa Serena were berthed at Koyagi Plant of the Mitsubishi Heavy Industries Nagasaki Shipyard & Machinery Works, besides the Costa Atlantica.

Costa Cruises had concluded a contract with Mitsubishi to moor these three vessels at the Koyagi Plant until the end of April. However, if infected cases are found on the two other cruise ships, they may impose a limit on the capability of the prefectural medical system to accept patients. Therefore, Nagasaki Prefecture requested the two consort ships to depart if they had no suspicious infection cases onboard.

As a result, Costa Cruises decided to advance the departure schedule of the two consort ships, and on April 26 (the seventh day of the day on which the first infection was confirmed), the two vessels departed for Manila. Thereby, we were able concentrate on dealing with the Costa Atlantica.

In addition, the Costa Venezia, another cruise ship operated by Costa Cruises, had a concern about drifting due to shortage of fuel and food. So, the vessel was accepted at Matsugae Pier on April 23 on humanitarian grounds with conditions that no boarding and disembarking of the crew during the port call and no contact by the crew with workers conducting supply replenishment/waste oil discharging. However, the ship did not depart even when it passed 18:00 on the next day of the scheduled departure. Nagasaki Prefecture then urged Costa Cruises, through the national government to have the vessel depart, and issued a movement order based on the prefectural port management ordinance. As a result, the Costa Venezia departed from the port on around 23:00 on the day.

---

### Movement of consort ships

<table>
<thead>
<tr>
<th>Ship name</th>
<th>Ship movement</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Costa neoRomantica</td>
<td>From April 9: Docked at Koyagi Plant</td>
</tr>
<tr>
<td>(56,000 tons)</td>
<td>April 26, 11:00: Departed (391 crew members)</td>
</tr>
<tr>
<td>The Costa Serena</td>
<td>From February 22: Docked at Koyagi Plant</td>
</tr>
<tr>
<td>(114,000 tons)</td>
<td>April 26, 20:00: Departed (669 crew members)</td>
</tr>
<tr>
<td>The Costa Venezia</td>
<td>From April 23: Docked at Matsugae Pier</td>
</tr>
<tr>
<td>(135,000 tons)</td>
<td>April 24, 23:00: Departed (781 crew members)</td>
</tr>
</tbody>
</table>
(5) Handling cost

After the outbreak of infection on the Costa Atlantica, various measures were taken by related organizations. Costs borne by the prefecture and the city are as follows.

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount (yen)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nagasaki Prefecture</td>
<td>28,873,000</td>
</tr>
<tr>
<td>SDF activity cost</td>
<td>3,558,000</td>
</tr>
<tr>
<td>Activity expenses of medical support teams such as DMAT</td>
<td>19,544,000</td>
</tr>
<tr>
<td>Expenses of protective materials</td>
<td>1,000,000</td>
</tr>
<tr>
<td>Operating expenses of Cruise Ship Task Force</td>
<td>4,425,000</td>
</tr>
<tr>
<td>Others</td>
<td>346,000</td>
</tr>
<tr>
<td>Nagasaki City</td>
<td>24,891,000</td>
</tr>
<tr>
<td>Expenses of hospitalization and medical care services for infected crew members (6 people)</td>
<td>21,954,000</td>
</tr>
<tr>
<td>PCR test (administrative test) (630 cases)</td>
<td>2,125,000</td>
</tr>
<tr>
<td>Operating expenses of Cruise Ship Task Force</td>
<td>812,000</td>
</tr>
</tbody>
</table>

* All expenses borne by the prefecture (28,873,000 yen) have been billed to Costa Cruises, and the payment procedure is underway by the cruise operator.

Expenses borne by the city (24,891,000 yen) and the operating expenses of the Cruise Ship Task Force (812,000 yen) have been billed to Costa Cruises, and the payment procedure is underway by the cruise operator. It was confirmed by the national government that the payment of medical expenses for inpatients (21,954,000 yen) and administrative test fees (2,125,000 yen) was treated based on the Infectious Disease Act. Thus, three-fourth of the medical expenses for inpatients is to be paid by the nation and one-fourth by the city, and each pay one half of administrative test fees. However, 80% of the expenses borne by the city will be additionally budgeted by the national government to the city as a special local grant tax.

Countermeasures for the Costa Atlantica this time were implemented under the initiative of the national government in response to a request made by the Italian government, the flag state of the ship, to the Japanese government; the Nagasaki Association of City Mayors is to make the following recommendations about how to bear the expenses.

[Excerpts from the Resolution by the Nagasaki Association of City Mayors Conference (August 26, 2020)]

3. Response to the cruise ship [New]: Nagasaki City and 12 other municipalities.

As for response to the foreign cruise ship “Costa Atlantica”, on which the first COVID-19 infection was confirmed among the crew members on April 20, 2020 followed by the outbreak of cluster infections, it was determined that infected crew members should be treated as foreign tourists in the same way as infection cases occur in the city, and the healthcare center under the jurisdiction of the city where the ship arrived is primarily dealing with the matter.

However, the number of crew members and passengers on a large cruise ship could be several thousands regardless of ship registry; therefore, once an outbreak of a group infection occurs on board, it may be difficult for a local healthcare center with limited to manage. In addition, based on the Infectious Disease Act, local governments are to bear part of test fees and medical expenses for inpatients. Although there are tax allocation measures, a considerable financial burden will be imposed on municipalities.

Therefore, it is required to establish necessary laws and systems so that the national government may take actions responsibly for an outbreak of a group infection on a foreign cruise ship that arrives after completed quarantine under the Quarantine Act, and payment of expenses thereof.

[Other expenses]

<Main expenses borne by Costa Cruises>
- Expenses of hospitalization, medical services and other services for those tested negative.
- PCR test fee for the crew to return home
- Food expenses, medicine charges, expenses for the crew repatriation (chartered bus operation fee, airfare, etc.)
- Expenses for vessel disinfection; setting up an on-site command post; setting up container houses; disposal of onboard garbage

<Items provided free of charge>
- Health management apps introduced for the crew
Among the medical support teams such as DMAT, some groups’ activity expenses (DMAT secretariat, Peace Winds Japan, and Médecins Sans Frontières) Amount of expenses (*)
Outline of response and support by organizations

From the beginning of the incident, various measures were taken under the initiative of the national government, with the cooperation of a number of related organizations, mainly the national government, Nagasaki prefectural government, Nagasaki municipal government, and Nagasaki University.

If a large-scale cluster occurs and 30% of those who tested positive become seriously ill, it will cause a significant impact on the prefectural medical system. Moreover, various organizations in and outside Japan will have to work together in this particular environment, i.e., a foreign national cruise ship docked on a private quay. Based on these assumptions, Nagasaki Prefecture and Nagasaki City, after discussions, requested support from the national government soon after the incident occurred on the ground that it would be difficult for a single local government to manage.

As a result, on receiving a request for support from Nagasaki Governor and a request for cooperation from Italian government (the flag state of the cruise ship), the national government immediately dispatched officials who handled the case on the Diamond Princess from the Ministry of Health, Labour and Welfare, the Cluster Response Team members, DMAT secretariat members, officials from the Ministry of Land, Infrastructure, Transport and Tourism, and the Self-Defense Forces personnel on the grounds that international response was required as in the case of the Diamond Princess.

In addition, the Infectious Disease Act stipulates that an establisher of a healthcare center should be in charge, i.e., Nagasaki City on this case; however, since the medical systems of the entire prefecture may be stressed and cooperation with the national government is inevitable, it was decided to establish a response headquarters within the prefectural government.

Nagasaki Prefecture

Around 16:30 on April 20, the Nagasaki Prefecture Medical Policy Division received a report from Nagasaki City Healthcare Center that one of the crew members aboard the Costa Atlantica was confirmed to have tested positive for the coronavirus. Immediately after the report, those concerned from Nagasaki prefectural government, Nagasaki municipal government, Nagasaki University and Mitsubishi Shipbuilding gathered at the prefectural office to confirm the situation and share information. On the same day at 22:00, an extraordinary press conference was held jointly by the prefecture, the city, and Mitsubishi Shipbuilding, where the governor reported the occurrence of the event.

This incident, which occurred on a foreign-registered ship, required response measures that the prefecture and the city had never experienced before. These measures include; coordination with home countries of foreign crew; extensive coordination in case where hospitalization is required; and request for the SDF dispatch. Therefore, the governor asked the then Chief Cabinet Secretary Suga for support from the national government on April 21 (the next day of the day on which the first infection was confirmed).

The national government decided to dispatch official who dealt with the Diamond Princess case, and sent one official from the Ministry of Health, Labour and Welfare (MHLW), one from the National Institute of Infectious Diseases, and two from the DMAT secretariat on April 21. On April 22, persons in charge of ships and ports were dispatched from the Ministry of Land, Infrastructure, Transport and Tourism. Thus, significant support was offered from the national government.

Response policies to be taken were immediately examined by the national, prefectural, and municipal governments, the Cluster Response Team of MHLW, DMAT secretariat, and Nagasaki University.

Basic response policies determined by the related organizations (April 22)

- Conduct PCR tests for all crew members.
- Those who tested negative should repatriate as soon as possible.
- Those who tested positive with mild symptoms should stay on board to undergo health observation.
- Those who tested positive with severe symptoms should be treated in medical institutions.

Based on the basic response policy, requests were made to dispatch units from the Self-Defense Forces, DMAT in other prefectures, and other relevant organizations. Nagasaki
Prefecture sent DPAT\(^8\) and DHEAT\(^9\) teams. In addition to developing a response system in this way, a headquarters was set up in the prefectural government’s office for coordination and information sharing among related organizations, such as members of the prefectural cruise ship task force, aid personnel from the national government, Nagasaki municipal information officers, DMAT members, and the SDF personnel. Also, an on-site command post was established for DMAT team, prefectural liaison\(^10\), and the Self-Defense Forces unit.

From April 21 (the next day of the day on which the first infection was confirmed), meetings were held about twice a day in a form of television conference to coordinate and share information with related parties. These meetings had about 50 attendees at the peak, from those concerned of MHLW, Nagasaki University, Nagasaki University Hospital Infection Control and Education Center, Nagasaki University Institute of Tropical Medicine, DMAT on-site command post, the cruise ship, and Nagasaki Prefecture Response Headquarters.

\(1\) Request for support from Nagasaki University
April 20, 2020: Requested support from Nagasaki University (From this day onward, the university provided various assistance in each phase)

\(2\) Request for support from the national government
April 21, 2020 Requested the national government for its proactive support, response, and other assistance, such as dispatching experts (from Nagasaki Governor to Chief Cabinet Secretary)
On the same day, Aid personnel from the MHLW and the National Institute of Infectious Diseases visited the prefecture.
April 22 Aid personnel from the Ministry of Land, Infrastructure, Transport and Tourism visited the prefecture. (Afterward, experts visited Nagasaki)

\(3\) Request for dispatch of the Self-Defense Forces\(^11\)
April 22, 2020 Requested a disaster-relief dispatch of the Ground Self-Defense Force (first time)
April 25 Requested a disaster-relief dispatch of the Ground Self-Defense Force (second time)
April 29, 2020 Requested a disaster-relief dispatch of the Ground Self-Defense Force (third time)
May 2: Requested a disaster-relief dispatch of the Ground Self-Defense Force (vehicle mounted CT scanners)

\(4\) Request for dispatch of DMAT (Disaster Medical Assistance Team), COVID-19 JMAT\(^12\)(Japan Medical Association Team), and other private organizations
April 20, 2020 Informed the Japan DMAT Secretariat that “multiple crew members aboard the Costa Atlantica were confirmed tested positive.”

---

\(^8\) DPAT: A psychiatric team of staff who received specialized training and education to provide psychiatric care and engage in mental health activities in the event of a disaster. DPAT is the abbreviation for Disaster Psychiatric Assistance Team.

\(^9\) DHEAT: A team that provides health crisis management and public health support in the event of a disaster. DHEAT is the abbreviation for Disaster Health Emergency Assistance Team.

\(^10\) Liaison: A French word meaning “to connect”. A local information liaison who is dispatched to a disaster-hit site in the event of a disaster for information collection and provision.

\(^11\) Request for dispatch of the Self-Defense Forces: A request from Prefectural Governor, etc. to the Minister of Defense or a person designated by the Minister of Defense based on Article 83, Paragraph 1 of the Self-Defense Forces Act. This is a request issued in the event of a natural disaster or other disaster to protect human lives or properties as urgent and temporary support. In dispatching, urgency (imminent need), publicness (having validity in terms of maintaining public order), and non-substitution (there is no other appropriate means other than dispatching SDF units) should be considered.

\(^12\) JMAT: A medical team organized by the Japan Medical Association in the event of a disaster. JMAT is the abbreviation for Japan Medical Association Team.
April 21: Support Team for Local Medical System (DMAT Secretariat) was sent to Nagasaki prefecture from the Novel Coronavirus Response Headquarters of the Ministry of Health, Labour and Welfare.

April 22: Nagasaki prefectural government asked the DMAT designated hospitals in the prefecture to dispatch Nagasaki DMAT units.

On the same day, Nagasaki prefectural government asked the DMAT Secretariat to dispatch DMAT Logistic Team (under the jurisdictions of Kyushu/Okinawa block). The DMAT Logistic Team was dispatched on the day.

April 23: Nagasaki DMAT and the DMAT Logistic Team started activities.

April 25: The prefectural government requested the DMAT Secretariat to dispatch DMAT units from other prefectures (under the jurisdiction of Kyushu/Okinawa block excluding Fukuoka and Okinawa prefectures)

April 26: The prefectural government requested a dispatch of COVID-19 JMAT (Japan Heart 13)

On the same day, the prefectural government requested a dispatch of Peace Winds Japan14.

On the same day, the prefectural government requested the Nagasaki Pharmaceutical Association to supply medicines required by the crew (Nagasaki-City Pharmaceutical Association handled this matter at the request of the Nagasaki Pharmaceutical Association).

April 28: Peace Winds Japan started activities.

April 29: COVID-19 JMAT (Japan Heart) started activities.

April 30: The DMAT units of other prefectures started activities.

May 1: The prefectural government requested a dispatch of personnel to Médecins Sans Frontières15 and the Japanese Red Cross Society.

May 7: Médecins Sans Frontières started activities.

5 Establishment of DPAT (Disaster Psychiatric Assistance Team) Coordination Headquarters

April 27, 2020: DPAT Coordination Headquarters was established.

May 13: On-site activities in response to requests stated (first time).

6 Dispatch of DHEAT (Disaster Health Emergency Assistance Team)

April 28, 2020: Dispatch of personnel to the site started (first time).

7 Establishment of Cruise Ship Task Force in the Nagasaki Prefecture Novel Coronavirus Response Headquarters

13 Japan Heart: An international medical volunteer organization of Japan that operates mainly in developing countries as a non-profit organization (NPO). This time, the Japan Heart worked as JMAT.

14 Peace Winds Japan: An international cooperation NGO headquartered in Hiroshima Prefecture that supports those exposed to humanitarian or livelihood crises at home and abroad due to natural disasters or human-made factors such as conflicts and poverty.

15 Médecins Sans Frontières: A private, non-profit international NGO that provides medical and humanitarian assistance from an independent, neutral and impartial standpoint. Secretariats has been set up all over the world, and the Japan Secretariat was established in 1992.
At the beginning, the relevant section of the Department of Welfare and Public Health in the prefectural government dealt with the matter; however, in order to carry out support operations specialized for the cruise ship, Cruise Ship Task Force was set up in the Nagasaki Prefecture Novel Coronavirus Response Headquarters. Since the establishment of the team, the number of staff had been gradually increased in order to enhance the team structure; a maximum of 15 people worked in cooperation with the secretariat of the Novel Coronavirus Headquarters and the medical system maintenance team.

Information dissemination (Regular and extraordinary press conferences)
The infection cluster aboard the cruise ship occurred amid worries about the novel coronavirus of the residents of Nagasaki; thus, efforts were made to disseminate information in a prompt and accurate manner, while paying attention to reputational and other damage and taking necessary consideration for personal information.

After confirming the infected case on April 20, a three-party press conference was immediately held by Nagasaki Governor, Nagasaki Mayor, and representatives of Mitsubishi Shipbuilding, and on April 22, basic policy to be taken was announced. After that, press conferences were held every day in principle with the cooperation of the prefectural government press club to provide prompt and appropriate information to Nagasaki residents.

In addition, the Ministry of Health, Labour and Welfare decided not to count the infections on board the Costa Atlantica as cases occurred in Nagasaki prefecture when publishing infection numbers in a press release.
**Press conference related to the Costa Atlantica**

<table>
<thead>
<tr>
<th>Date and time</th>
<th>Details</th>
<th>Attendees</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-Apr Mon.</td>
<td>22:00</td>
<td>Performed PCR test for 4 crew members and 1 positive was confirmed (first case)</td>
</tr>
<tr>
<td>21-Apr Tue.</td>
<td>19:30</td>
<td>Collected 57 samples; Requested the national government for support</td>
</tr>
<tr>
<td>22-Apr Wed.</td>
<td>10:30</td>
<td>Test results of samples collected on Apr. 21 (33 positives /57); basic policy to be implemented</td>
</tr>
<tr>
<td>23-Apr Thu.</td>
<td>10:30</td>
<td>Test results of samples collected on Apr. 22 (14 positives / 66)</td>
</tr>
<tr>
<td>24-Apr Fri.</td>
<td>10:30</td>
<td>Test results of samples collected on Apr. 23 (43 positives / 268)</td>
</tr>
<tr>
<td>25-Apr Sat.</td>
<td>18:30</td>
<td>Test results of samples collected on Apr. 24 (57 positives / 286)</td>
</tr>
<tr>
<td>26-Apr Sun.</td>
<td>18:00</td>
<td>Departure of the Costa neoRomantica and the Costa Serena</td>
</tr>
<tr>
<td>27-Apr Mon.</td>
<td>15:00</td>
<td>Age classification of infected people (138 ), etc.</td>
</tr>
<tr>
<td>28-Apr Tue.</td>
<td>15:00</td>
<td>Emergency transport of 1 tested positive / hospitalization, container installation</td>
</tr>
<tr>
<td>29-Apr Wed.</td>
<td>15:00</td>
<td>Discharge of one tested negative</td>
</tr>
<tr>
<td>30-Apr Thu.</td>
<td>15:00</td>
<td>Survey results of those disembarked from the cruise ship</td>
</tr>
<tr>
<td>1-May Fri.</td>
<td>15:00</td>
<td>Request for SDF disaster relief dispatch; additional container installation</td>
</tr>
<tr>
<td>2-May Sat.</td>
<td>14:50</td>
<td>Emergency transport of 1 infected person / hospitalization</td>
</tr>
<tr>
<td>3-May Sun.</td>
<td>17:30</td>
<td>Repatriation of Indonesian nationals by charter flight</td>
</tr>
<tr>
<td>4-May Mon.</td>
<td>15:00</td>
<td>Repatriation of Indonesian nationals</td>
</tr>
<tr>
<td>5-May Tue.</td>
<td>17:00</td>
<td>Crew members scheduled to return home</td>
</tr>
<tr>
<td>6-May Wed.</td>
<td>15:00</td>
<td>Crew members scheduled to return home</td>
</tr>
<tr>
<td>7-May Thu.</td>
<td>15:00</td>
<td>Crew members scheduled to return home</td>
</tr>
<tr>
<td>8-May Fri.</td>
<td>15:00</td>
<td>Crew members scheduled to return home</td>
</tr>
<tr>
<td>9-May Sat.</td>
<td>15:00</td>
<td>Emergency transport of one tested positive / hospitalization, prospective returnees</td>
</tr>
<tr>
<td>10-May Sun.</td>
<td>15:00</td>
<td>Crew members scheduled to return home</td>
</tr>
<tr>
<td>11-May Mon.</td>
<td>15:00</td>
<td>Disposition of disembarkation for crew members scheduled to return home on this day</td>
</tr>
<tr>
<td>12-May Tue.</td>
<td>14:00</td>
<td>(Governor's regular press conference) Report on the current actions, etc.</td>
</tr>
<tr>
<td>13-May Wed.</td>
<td>15:00</td>
<td>Crew members scheduled to return home; negative confirmation of all six close contacts of a person who was confirmed tested positive on May 3.</td>
</tr>
<tr>
<td>14-May Thu.</td>
<td>15:00</td>
<td>Crew members scheduled to return home, boarding of Costa's medical staff</td>
</tr>
<tr>
<td>15-May Fri.</td>
<td>16:30</td>
<td>*No matters to report (questions and answers only)</td>
</tr>
<tr>
<td>16-May Sat.</td>
<td>15:00</td>
<td>Crew members scheduled to return home</td>
</tr>
<tr>
<td>17-May Sun.</td>
<td>15:00</td>
<td>Crew members scheduled to return home</td>
</tr>
<tr>
<td>18-May Mon.</td>
<td>15:00</td>
<td>Crew members scheduled to return home; test status of those tested positive</td>
</tr>
<tr>
<td>19-May Tue.</td>
<td>15:00</td>
<td>Crew members scheduled to return home</td>
</tr>
<tr>
<td>20-May Wed.</td>
<td>14:30</td>
<td>Crew members scheduled to return home</td>
</tr>
<tr>
<td>21-May Thu.</td>
<td>15:30</td>
<td>Crew members scheduled to return home</td>
</tr>
<tr>
<td>22-May Fri.</td>
<td>15:00</td>
<td>Test status of those tested positive (6 to zero infection on board)</td>
</tr>
<tr>
<td>23-May Sat.</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>24-May Sun.</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>25-May Mon.</td>
<td>15:00</td>
<td>Test status of those tested positive</td>
</tr>
<tr>
<td>26-May Tue.</td>
<td>15:00</td>
<td>Crew members scheduled to return home; test status of those tested positive</td>
</tr>
<tr>
<td>27-May Wed.</td>
<td>15:00</td>
<td>Test status of those tested positive</td>
</tr>
<tr>
<td>28-May Thu.</td>
<td>15:00</td>
<td>Crew members scheduled to return home and test status of those tested positive (to zero infection on board)</td>
</tr>
<tr>
<td>29-May Fri.</td>
<td>15:00</td>
<td>Crew scheduled to return home; departure at 11:00 on May 31 (Sun)</td>
</tr>
<tr>
<td>30-May Sat.</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>31-May Sun.</td>
<td>14:07</td>
<td>Departure of the Costa Atlantica</td>
</tr>
</tbody>
</table>

**Nagasaki City**

Around 17:00 on April 19, the Nagasaki City Returnees and Contact Persons Consultation Center was consulted by the cruise ship about four crew members with fever; the center made arrangements for sample collection and testing with a Japanese interpreter on board.

After the ship doctor collected samples of the four crew members on April 20, the Nagasaki City Healthcare Center staff brought the samples to the Nagasaki Municipal Public Health and Environment Laboratory to conduct a PCR test. At around 16:30 on the day, one crew member was confirmed tested positive, which was immediately reported to the prefecture and Nagasaki University.

In order to share information and consider future measures, related parties from Nagasaki Prefecture, Nagasaki City, Nagasaki University Hospital, and Mitsubishi Shipbuilding held a discussion at the prefectural office, and a joint press conference was held at 22:00 by the prefecture, the city, and the shipbuilding company, in which Nagasaki Governor and Mayor announced the occurrence of the event.

Moreover, on the same day, it was decided to test all crew members, and the Nagasaki City
Healthcare Center helped the collection, packing, and transportation of samples.

It was later found that some of the crew members had been off the vessel for the purpose of seeking medical treatment or moving to the airport; therefore, the healthcare center reinforced its workforce and established a dedicated team to check the behavioral history of the crew members. Contacts at the crew members’ drop-in destinations, which were revealed in their behavioral history survey, were confirmed through interview, and arrangements were made for their testing, health observation, and other responses, which were all completed by May 2.

Furthermore, since there was fear about the infection spreading in the city due to the crew members and the concern raised among the citizens, Nagasaki Mayor, together with a dedicated team, explained the boarding/disembaring status of the crew and other information to the local residents near Koyagi Plant of Mitsubishi Heavy Industries Nagasaki Shipyard & Machinery Works. Such information was also posted on the Nagasaki City website as needed.

From April 20, Nagasaki City officials were stationed at the response headquarters established in the prefectoral office to share information and take necessary measures promptly such as emergency transportation for crew members with personnel from the National Institute of Infectious Diseases, Nagasaki prefectural government, DMAT, the Self-Defense Forces, and medical NPOs.

1 Enhancing the system
   April 24, 2020: The number of staff was increased by 6 to check the behavioral history of the crew, to hold briefing sessions to the citizens around Koyagi Plant, and to answer telephone inquiries from the citizens.
   April 27, 2020: Three officials including a general manager (two clerical officers and one fire official) stated to station at the prefectural cruise ship task force.
   * From April 20 to 26, two staff members took shifts.

2 Survey on boarding and disembarking of the crew
   Based on the fact that a consultation from the cruise ship was made on April 19, a positive case was found on April 20, the time when the infection may influence the city was estimated, and the duration of investigation of the close contacts was determined. Then, a survey was conducted using the information provided by Costa Cruises on boarding and disembarking of the crew after April 1.
   【Survey results】
   • Since the beginning of April, 33 crew members boarded/disembarked the ship.
   • Among the total of 33, 28 disembarked from the ship to return home, 1 boarded to work on the ship, and 4 got off the vessel temporarily to go to a hospital or to buy daily necessities (one of the four returned to his/her country later).
   • It was confirmed that none of them dropped in stores around Koyagi Plant or went sightseeing.
   • For 28 citizens who were in contact with the crew members who used a taxi or a hotel at the time of boarding/disembaring the ship, PCR tests and health observation were conducted. The PCR test results were all negative. (All of them completed health observation on May 2)
   • No infection was confirmed in the city connecting this case.

3 Publication of survey results and explanation etc. to local residents
   Following the completion of the survey on boarding/disembaring of the crew, a press conference was held at the prefectoral office on April 29. In the conference, Nagasaki Mayer announced based on the survey results that it was extremely unlikely that the infection had spread from the Costa Atlantica to the city since there were no confirmed facts that the crew went out for sightseeing or other activities, and no infection cases were reported in the city at that point.
   An expert from the National Institute of Infectious Diseases, who attended the press conference, also supported the announcement, saying “we have conducted an extensive investigation and determined that the infection is not spreading in the city.”
   At the same time, he called for the citizens to prevent reputational damage caused by non-factual information such as speculations and rumors.
   In addition, as shown in the table below, explanations were given and handouts were provided to local residents living near Koyagi Plant of the Mitsubishi Heavy Industries Nagasaki Shipyard & Machinery Works to eliminate their concerns over community infection.
<table>
<thead>
<tr>
<th>Groups etc. for which explanation was given</th>
<th>Date of briefing/public notice</th>
</tr>
</thead>
<tbody>
<tr>
<td>◆ Information session held in the southern area</td>
<td>April 25 20:00-21:30</td>
</tr>
<tr>
<td>o Held an explanatory meeting to explain the situation to chairpersons etc., of the residents’ associations in the southern region (By the city and Mitsubishi)</td>
<td></td>
</tr>
<tr>
<td>[Venue] Southern Civic Center</td>
<td></td>
</tr>
<tr>
<td>[Attendees]</td>
<td></td>
</tr>
<tr>
<td>• Chairperson of Koyagi District Residents Association • Chairperson of Fukahori District Residents Association</td>
<td></td>
</tr>
<tr>
<td>• Chairperson of Doinokubi District Residents Association</td>
<td></td>
</tr>
<tr>
<td>• Representative of Iojima District (Chairperson of Nakashio Town Residents Association)</td>
<td></td>
</tr>
<tr>
<td>• Chairperson of Nomozaki District Residents Association</td>
<td></td>
</tr>
<tr>
<td>• Four chairpersons of Sanwa District (Tameshi, Kayaki, Harumidai, Kawara)</td>
<td></td>
</tr>
<tr>
<td>• Relevant city council members</td>
<td></td>
</tr>
<tr>
<td>• Mayor, relevant departments of Nagasaki City, Mitsubishi Heavy Industries, etc.</td>
<td></td>
</tr>
<tr>
<td>◆ Residents’ association-related</td>
<td>May 1-3</td>
</tr>
<tr>
<td>o Visited 12 chairpersons and other members of the residents associations in the southern region to explain the actual state and distribute handbills (By the city and Mitsubishi)</td>
<td></td>
</tr>
<tr>
<td>[Visit]</td>
<td></td>
</tr>
<tr>
<td>• Koyagi District Residents Association</td>
<td></td>
</tr>
<tr>
<td>• Iojima District Representative (Nakashio Town Residents Association)</td>
<td></td>
</tr>
<tr>
<td>• Fukahori District Residents Association</td>
<td></td>
</tr>
<tr>
<td>• Nomozaki/Kabashima Residents Association</td>
<td></td>
</tr>
<tr>
<td>• Tomachi District Residents Association</td>
<td></td>
</tr>
<tr>
<td>• Doinokubi District Residents Association</td>
<td></td>
</tr>
<tr>
<td>• Tameshimachi Elementary School District Residents Association</td>
<td></td>
</tr>
<tr>
<td>• Kayakimachi Residents Association</td>
<td></td>
</tr>
<tr>
<td>• Harumidai Residents Association</td>
<td></td>
</tr>
<tr>
<td>• Kawara District Residents Association</td>
<td></td>
</tr>
<tr>
<td>• Daiyarando Residents Association, Kogakura District Residents Association</td>
<td></td>
</tr>
<tr>
<td>◆ Residents’ association-related</td>
<td>May 29 19:00-20:00</td>
</tr>
<tr>
<td>o Held an explanatory meeting for the chairperson etc., of the Koyagi District Residents Association (by the city and Mitsubishi)</td>
<td></td>
</tr>
<tr>
<td>[Venue] Koyagi Community Hall</td>
<td></td>
</tr>
<tr>
<td>[Attendees]</td>
<td></td>
</tr>
<tr>
<td>• Chairperson of Koyagi District Union Residents Association</td>
<td></td>
</tr>
<tr>
<td>• Chairpersons of 19 Residents’ Associations in Koyagi District</td>
<td></td>
</tr>
<tr>
<td>• Relevant departments of Nagasaki City, etc.</td>
<td></td>
</tr>
<tr>
<td>◆ Medical institutions</td>
<td>May 2-3</td>
</tr>
<tr>
<td>o Visited two medical institutions in the southern area to explain the actual state (By the city and Mitsubishi)</td>
<td></td>
</tr>
<tr>
<td>• Nagasaki Memorial Hospital • Nagasaki Yuuai Hospital</td>
<td></td>
</tr>
<tr>
<td>◆ Commerce and industry association-related</td>
<td>May 1</td>
</tr>
<tr>
<td>o Distributed leaflets to 430 members of the Nagasaki Minami Chamber of Commerce</td>
<td></td>
</tr>
<tr>
<td>◆ Mitsubishi-related (approx. 5,000 employees + 64 affiliated companies)</td>
<td>May 1-6</td>
</tr>
<tr>
<td>o Delivered accurate information to approx. 5,000 employees via the company’s e-mail system (two times: on May 3 and 6)</td>
<td></td>
</tr>
<tr>
<td>o Distributed leaflets to affiliated companies (64 companies) (May 1)</td>
<td></td>
</tr>
<tr>
<td>o Mitsubishi directly explained the actual state to approx. 300 employees of Mitsubishi Heavy Industries Marine Structure (May 6)</td>
<td></td>
</tr>
<tr>
<td>Groups etc. for which explanation was given</td>
<td>Date of briefing/public notice</td>
</tr>
<tr>
<td>------------------------------------------------------------------------------------------------------------</td>
<td>-------------------------------</td>
</tr>
<tr>
<td>◆ Commercial facility-related • Explained the actual state and distributed leaflets to major commercial</td>
<td></td>
</tr>
<tr>
<td>facilities in the neighborhood.</td>
<td></td>
</tr>
<tr>
<td>◆ Elementary/junior high schools, nursery schools, kindergartens, after-school children's clubs, and children-</td>
<td></td>
</tr>
<tr>
<td>related facilities • Distributed leaflets to elementary and junior high schools in the city (May 7-8)</td>
<td></td>
</tr>
<tr>
<td>• Distributed leaflets to nursery schools in the southern area (May 1)</td>
<td>May 1-7</td>
</tr>
<tr>
<td>• Distributed leaflets to 96 after-school children's clubs in the city (May 7)</td>
<td></td>
</tr>
<tr>
<td>• Distributed leaflets to children-related facilities in the southern area of the city (May 1-7)</td>
<td></td>
</tr>
<tr>
<td>▽ Doinokubi Children's Center</td>
<td></td>
</tr>
<tr>
<td>▽ Doinokubi District Child Care Support Center “Minami”</td>
<td></td>
</tr>
<tr>
<td>▽ Sanwa District Child Care Support Center “Pippi”</td>
<td></td>
</tr>
<tr>
<td>◆ City Hall-related (posted leaflets to bulletin boards in the entire offices)</td>
<td>May 7</td>
</tr>
<tr>
<td>◆ Municipal facilities • Distributed leaflets and requested to display posters to 89 municipal facilities</td>
<td></td>
</tr>
<tr>
<td>• Facilities mainly for public use, such as Fureai Center, which was scheduled to open on May 11</td>
<td>May 8-11</td>
</tr>
<tr>
<td>Of them, major facilities in the southern area (8 facilities) were directly visited on Saturday, May 9</td>
<td></td>
</tr>
<tr>
<td>and requested to display posters)</td>
<td></td>
</tr>
<tr>
<td>◆ Welfare facilities, etc. • Distributed leaflets and explained the actual state to seven facilities including</td>
<td></td>
</tr>
<tr>
<td>Care House Liaison Nagasaki</td>
<td>May 4-5</td>
</tr>
<tr>
<td>◆ Fire department-related • Distributed leaflets and explained to the staff of the South Fire Department</td>
<td>May 4</td>
</tr>
<tr>
<td>and Koyagi branch office</td>
<td></td>
</tr>
</tbody>
</table>

* In order to avoid “Three Cs”, an explanatory meeting was held only for the chairpersons of the residents’ associations and community circles, instead of the local residents.

4 Video broadcasting on the Nagasaki City website in which experts answered citizens’ concerns and questions.
(Released on April 25)
• Cooperated by Motoi Suzuki, Director of the Infectious Disease Surveillance Center, the National Institute of Infectious Diseases
• Contents: How the infection spread on board?
  Any possibility that residents were contracted COVID-19 from crew members?
  Any possibility that the infection will spread in and outside of the vessel?

5 Emergency transportation for those tested positive, etc.
• From April 22 to May 31, a total of 11 crew members were transported to designated medical institutions for specified infectious diseases or other facilities in the city.
• For transportation, the inside of the ambulance was separated by vinyl sheets and the paramedical staff took standard precautions to prevent secondary infection.
• Since the most of the crew members were foreign nationals, a multilingual translation app “Emergency Voice Tra” was used to facilitate communication.

(3) Nagasaki University
A. Introduction
On April 20, the inspection results of the Nagasaki City Healthcare Center revealed one crew member aboard the cruise ship docked at Koyagi Plant of the Mitsubishi Heavy Industries Nagasaki Shipyards & Machinery Works had infected with the novel coronavirus, and there were several other symptomatic crew members onboard. Upon receiving this information from the healthcare center, the prefectural government required expert assistance to address the matter.
In Nagasaki Prefecture, the Institute of Tropical Medicine, which is a research facility for tropical diseases, and Nagasaki University, which has a university hospital that handles advanced infectious disease medical care, are located. Research and medical care related to infectious diseases at Nagasaki University is one of the top classes in Japan, and the cooperation of Nagasaki University was indispensable for resolving this case.

In particular, Nagasaki University made an all-out effort in its initial action to build a system for swift decision-making in order to respond to important issues in each phase, from health observation of those tested positive, negative confirmation, to support for the crew's repatriation. Specifically, President of Nagasaki University, Director of Nagasaki University Hospital Infection Control and Education Center, and Manager of Nagasaki Prefecture Welfare and Public Health Department exchanged opinions as three core members (hereinafter referred to as the “three-party talks”) as needed on issues brought up every day, while receiving support from Nagasaki University.

As a result, Nagasaki University and related medical staff were able to provide rapid support, and prevented the spread of infection onboard without death case, which led to a successful departure of the ship.

B. Support in each phase
Followings are the details of the three party talks and initial support provided by Nagasaki University to address important issues in each phase, ranging from health observation of those tested positive, negative confirmation, to support for the crew’s repatriation.

① Initial action
(A) Screening\textsuperscript{16} Testing
Receiving the report on the first infected case on April 20, the prefectural government decided to conduct testing for all 623 crew members based on the advice from the national government to grasp the whole picture at an early stage. To implement the testing, specific plans regarding how to collect samples and how to test them were required to be mapped out in a short period of time.

For this reason, infectious diseases specialists were sent from Nagasaki University. Samples were collected by the healthcare center staff as well as medical officers dispatched from the Self-Defense Forces and doctors from DMAT. Since guidance on infection prevention at sample collection was provided, no secondary infection occurred among the staff. In testing, with the cooperation of the Institute of Tropical Medicine, Nagasaki University, the fluorescent LAMP method jointly developed by Nagasaki University and Canon Medical Systems Corporation was used to operate the test 24 hours a day, including at night. In the four days between April 21 and April 24, all the remaining 619 people were able to be inspected.

April 21, 2020: Two doctors were dispatched to provide instructions on infection control measures to medical staff on board who collect nasal swab samples. LAMP tests on 57 close contacts of those who were febrile were conducted at the Institute of Tropical Medicine, Nagasaki University.
⇒ Results revealed before dawn (33 positives)

April 22: Two doctors were dispatched to collect nasal swab samples and instruct infection control measures. Among the essential crew, 66 members underwent LAMP test.
⇒ Results revealed before dawn (14 positives)

April 23: Two doctors were dispatched to collect nasal swab samples and instruct infection control measures. The remaining 68 essential crew and 140 other members (208 in total) underwent LAMP test.
⇒ Results revealed before dawn (43 positives)

April 24: Four doctors were dispatched to collect nasal swab samples and instruct infection control measures. The remaining 288 crew members underwent LAMP test.
⇒ Results revealed before dawn (57 positives)

* A total of 619 crew members underwent the test (by the LAMP method)

\textsuperscript{16} Screening: In medicine, it means to distinguish subjects who are suspected of having a target disease or who are expected to develop the disease within a target group by conducting a common test to the said group.
(B) **Construction of medical support system**

When an infected member onboard was confirmed to have developed pneumonia or other symptoms which required hospitalization, the Nagasaki Prefecture Novel Coronavirus Response Coordination Headquarters (Nagasaki University Hospital Infection Control and Education Center (Center Director)) made arrangement for medical institutions that can accept the patient. Adjustments for hospitalization were made for 11 in total: 7 patients were accepted by Nagasaki University Hospital and 4 patients by Nagasaki Harbor Medical Center. These facilities provided appropriate medical care service, accepting critically ill patients, deciding treatment policies for the inpatients, and caring for those with mental disorders.

The first case (admitted on Apr. 22) was accepted by Nagasaki University Hospital. This patient, who had severe pneumonia symptoms from the beginning, was being equipped with a respirator and managed by the ICU. After hospitalized for 79 long days, this crew member was recovered by the specialized medical care and repatriated safely.

(C) **Dispatch of infectious disease specialists (crew data collection and management, support for preventing the spread of infection)**

Health observation of the crew required a system in which the data of 623 crew members' test results and health status is appropriately managed. With the cooperation of experts from the Institute of Tropical Medicine, Nagasaki University, a database to manage all crew members was created in collaboration with staff from the Infectious Disease Surveillance Center of the National Institute of Infectious Diseases, who were dispatched from the MHLW’s Cluster Response Team. There were inconsistencies between the data provided by the cruise ship and the data provided by the shipping agency in terms of methods of entering the names of foreign nationals and handling those with dual nationality. In creating the database, these discrepancies were checked one by one.

In the database, results of PCR and fluorescence LAMP tests were updated, as well as daily temperature measurement data obtained from the health management app, which was developed jointly by the Institute of Tropical Medicine and Fujitsu. The database was used as a basis for assessing disembarkation decisions for crew member’s repatriation, evaluating risks in making important decisions, and making decisions on repatriation and ship departure.

In addition, following the guidance on infection prevention at the time of sample collection, infectious disease specialists were dispatched to the on-site command post of Koyagi Dock to take over the infectious disease specialists dispatched from the national government, and thus infection prevention guidance was provided for the ship and medical staff etc.

April 21, 2020: A specialized doctor of the Institute of Tropical Medicine was sent to the prefectural office.

* Afterward, doctors were dispatched from the Institute of Tropical Medicine every day until the cruise ship departed to create and manage database.

On the same day, asked Fujitsu’s COVID-19 control team to urgently develop a health management app for the crew.

On the night of April 21, the app was modified to be ready for operation.

April 24: Received a permission (from the ship operator) to distribute leaflets on the use of the app on board; explained the captain and the ship doctor about the app.

April 28: The health management app started operation.

April 30: All crew members’ terminals were connected to WiFi (until then, WiFi access was available only for SNS), and full-scale operation of the health management app started.

(D) **DMAT dispatch**

In response to a request from the prefecture to dispatch DMAT, Nagasaki University Hospital DMAT was immediately dispatched to provide medical support at the on-site command post, and engage in coordination work at the headquarters set up in the prefectural office.

At the headquarters, they functioned as a command center for all DMATs, playing a central role together with DMAT Secretariat of MHLW, from the occurrence of the first infection through the departure of the ship, in such areas as establishing a medical support system at the on-site command post and coordinating operations.

April 23, 2020: One doctor and two business coordinators were dispatched to the prefectural coordination headquarters.

* Dispatch of DMAT members continued until the departure of the vessel.

• Dispatch period: April 23-June 1
Actual number: 29 people
Total number: 128 people/day
Breakdown of dispatched personnel: 8 doctors, 11 nurses, 10 coordinators

2 Follow-up of those who tested positive
It was necessary to consider the criteria for those tested positive in the initial test to disembark and go home. Regarding the criteria (at that time) for the government to cancel medical treatment accommodation, the same standards for hospital discharge\(^\text{17}\) were applied for leaving the facility or having the home recuperation lifted. However, a proviso was added that if the provision of medical care for those severely ill is hampered by a system that requires those with minor symptoms in the special treatment facility or at home recuperation to undergo PCR tests, they are allowed to leave the facility or lift the home treatment when 14 days have passed from the day when they started the treatment at the facility or home.

The three-party talks concluded that a crew member may disembark and return home if he/she shows no fever or symptoms again and takes infection prevention measures such as wearing a face mask. The prefectural government, after consulting with the national government and considering the provisos, adopted a policy in which those who had symptoms may disembark and return home after 14 days have passed from the day they became asymptomatic, and those who had no symptoms may do so after 14 days have passed since the day of sample collection.

3 Negative confirmation
(A) Process until negative confirmation test
The prefecture told Costa Cruises that when formulating a return plan for foreign nationals, the above-mentioned standards for hospital discharge are considered as preconditions. The cruise operator made arrangements with countries of the crew for their repatriation. These countries required one or two negative confirmation(s) of the crew by PCR test or other test as criteria; Costa Cruises therefore demanded that all those tested positive should be confirmed as negative for COVID-19 for their repatriation.

The prefecture considered that as long as the domestic discharge criteria is observed, there is no risk of spreading the infection and thereby determined that a negative confirmation test for repatriation should not be conducted as an administrative test. However, the absence of negative test results required by these countries may cause delay in the return procedure, so the three-party talks discussed a policy on this matter.

As a result, Nagasaki University made a proposal that Nagasaki University Hospital arranges testing schedule so that the crew members can be inspected in a testing slot offered by the hospital. Then, through the mediation of the prefecture, Costa Cruises signed a contract with Nagasaki University Hospital to bear testing cost, and the university conducted tests for the negative confirmation of the crew.

(B) Test system
Nagasaki University secured personnel for sample collection and in-hospital testing system so that 143 infected cases can confirm negative results from May 12 (full-scale testing stated on May 14) to May 29.

Until May 22, samples were collected by nasal swabs at a pace of about once every three days, and then tested by the RT-PCR method at Nagasaki University Hospital.

Crew members returning to their home countries on charter flights were supposed to be 44 Indonesian nationals on May 3, 125 Philippine nationals on May 5, and 95 Indian nationals on May 28. Crew members eligible to return to Indonesia and the Philippines were those tested negative initially, while to India were those who initially tested negative as well as those who have tested positive initially but become negative later. Therefore, on May 25, Nagasaki University tested all 95 Indian crew members (excluding the essential crew) by the fluorescent LAMP method. All of them were confirmed negative and returned home.

4 Support for repatriation
It was initially assumed that all who tested positive become negative as of April 22, the day on
which their observation period (about 3 to 4 weeks) ends; however, some 30 members, which was equivalent to about 20% of the crew, tested positive although the number of virus copies was extremely low.

As for the departure of the Costa Atlantica, the receiving port required the negative confirmation of the crew members; therefore, based on the assumption that not all the crew members could be confirmed negative by the end of May, the three-party talks and relevant medical institutions considered the following options on May 25.

1. The ship should aim to depart at the end of May as scheduled so as not to prolong the impact on local healthcare services. In that case, those who tested positive at the end of May must disembark, so medical institutions to accept them must be secured.
2. The ship should depart not on the end of May but when negative test results of the crew members are confirmed. In this case, the ship will depart in and after June, which may lead to a concern over the impact on local medical care, such as prolonged impact on the admission capacity of local medical institutions.

For the case of 1, how many people can be accepted at which medical institution were examined; however, the number of positive people at the end of May would be known from the test results up to May 28. Therefore, it was decided to discuss the matter again at that point. Also, in this discussion, it was decided to use the fluorescent LAMP method, which enables faster inspection than RT-PCR test.

As a result, negative test results of all crew members were confirmed on May 27, allowing the ship to depart the port at the end of May as initially planned.

May 12, 2020: Started testing of all crew members for their repatriation and ship departure.
- Up to May 18: 142 confirmed positive by the initial screening test (out of 148 initially tested positive, 6 had been off the ship for hospital admission) and one confirmed positive on May 3 underwent tests in sequence; 105 negatives were confirmed.

* After that, retesting was conducted for those tested positive in sequence.
May 27: No positive case on board.

<table>
<thead>
<tr>
<th>Date</th>
<th>Number of test</th>
<th>Number of those tested negative</th>
<th>Number of those tested positive on board</th>
</tr>
</thead>
<tbody>
<tr>
<td>12-May</td>
<td>1</td>
<td>1</td>
<td>143</td>
</tr>
<tr>
<td>13-May</td>
<td>1</td>
<td>1</td>
<td>141</td>
</tr>
<tr>
<td>14-May</td>
<td>82</td>
<td>62</td>
<td>79</td>
</tr>
<tr>
<td>15-May</td>
<td>1</td>
<td>0</td>
<td>79</td>
</tr>
<tr>
<td>18-May</td>
<td>58</td>
<td>41</td>
<td>38</td>
</tr>
<tr>
<td>19-May</td>
<td>12</td>
<td>2</td>
<td>36</td>
</tr>
<tr>
<td>20-May</td>
<td>10</td>
<td>2</td>
<td>34</td>
</tr>
<tr>
<td>22-May</td>
<td>14</td>
<td>1</td>
<td>33</td>
</tr>
<tr>
<td>25-May</td>
<td>7</td>
<td>7</td>
<td>26</td>
</tr>
<tr>
<td>26-May</td>
<td>26</td>
<td>23</td>
<td>3</td>
</tr>
<tr>
<td>27-May</td>
<td>3</td>
<td>3</td>
<td>0</td>
</tr>
</tbody>
</table>

As of May 12, six positives were hospitalized, making the number of test subjects to 143.
In addition, crew members whose home country required two negative test results as repatriation standard are not included in the table.

(4) National government
Support provided by relevant organizations in response to the request from the prefectural government mentioned in (1) above are as follows.

① Related ministries and agencies
As for the national government, relevant officials were dispatched to Nagasaki Prefecture, and support was provided through a cooperative system among the Ministry of Health, Labour and Welfare, the Ministry of Land, Infrastructure, Transport and Tourism, and the Ministry of Foreign Affairs.

(A) Ministry of Health, Labour and Welfare (excluding DMAT Secretariat)
Immediately after the outbreak occurred, officials who dealt with the Diamond Prince case were dispatched and provided the basic direction of onboard surveys, as well as appropriate
guidance and support for onboard infection countermeasures, establishment of an appropriate medical care system, and assistance for the crew’s repatriation.

<Personnel dispatch>
- Dispatch Period: April 21 to May 22, 2020 (32 days)
- Number of personnel: 10 (95 in total /day)
  Dispatched personnel were mainly senior officials who have experienced the Diamond Prince case.
- Main activity: Support for the prefectural response headquarters, coordination with the ministries, advice on preventing the spread of infection on board.

[National Institute of Infectious Diseases]
At a request of the prefectural government for support from the Cluster Response Team of MHLW, on-site support began immediately on April 21. On-site support was provided from April 21 for about two weeks, mainly to the prefectural response headquarters, and then remote support was provided every day until May 31 when the cruise ship departed.

Firstly, they collected, organized, and confirmed data, and collated multiple lists to build a master database. Information was diverse: name lists provided by the cruise ship and Costa Cruises, data on daily body temperature measurements, results of PCR/LAMP tests conducted at Nagasaki University, specimen collection status by DMAT and other related agencies, records of medical transportation, and information from medical institutions to which patients were transported. In collaborating with the Nagasaki University Institute of Tropical Medicine Team, continual assessment of the situation and risks were conducted on a daily basis.

In addition, based on the screening test result, they marked the rooms of those tested positive and those tested negative on the inboard map. It was then found that their rooms were located on the same floor. Therefore, in order to reduce the risk of further infection, the on-site activity team provided the essential crew members with infection prevention education and guidance on how to put on and take off personal protective equipment.

In addition, to enhance the infection control system on board, guidance on how to prevent the essential crew members from coming into direct contact with the cabin crew, infection control video (English), disinfection of common areas, advice on supplies necessary for infection control were provided.

These prompt response by the on-site activity team and continuous surveillance system led to the prevention of further infection and the provision of appropriate medical care, resulting in a great achievement in minimizing risk.

<Personnel dispatch>
- Dispatch Period: April 21 to May 5, 2020 (15 days)
- Number of personnel: 3 (32 in total /day)
- Main activity: Analysis of epidemiological data, onboard survey, prevention of spread of infection

(B) Ministry of Land, Infrastructure, Transport and Tourism
Over a long period of time, from immediately after the occurrence of the incident to the departure of the cruise ship, staff in charge of ship and port relations were dispatched from the Ministry, and various advice and adjustments were offered throughout the incident, such as coordination with the prefectural response headquarters, arrangements with airliners to help those tested negative to return home, and arrangements with Costa Cruises on ship departure (Maritime Bureau of the Ministry), and coordination with bus operators in the prefecture (Kyushu Transport Bureau) for transporting crew members returning home to the airport.

<Personnel dispatch>
- Dispatch Period: April 22 to June 1, 2020 (41 days)
- Number of personnel: 12 (119 in total/day)
- Main activity: Support for the prefectural response headquarters, coordination with the Ministry, dispatch of liaison to Costa Cruises Japan branch

(C) Ministry of Foreign Affairs
In addition to responding to inquiries from foreign embassies, they held daily meetings with the
Ministry of Health, Labour and Welfare and the Ministry of Land, Infrastructure, Transport and Tourism, while coordinating and negotiating with crew members' home countries concerning the operation of charter aircrafts and the implementation of PCR testing for repatriation.

② Self-Defense Forces (Disaster dispatch)
Immediately after the outbreak occurred, the Self-Defense Forces dispatched liaison officers to the prefectural response headquarters; they attended every meeting, informed the progress of activities, and provided advice under close cooperation with relevant parties, thus offering devoted support to settle the situation.

In response to a request from the prefectural government for disaster-relief dispatch, medical officers and nurses were sent from JGSDF Western Army Medical Service Camp Kengun in Kumamoto, and they helped specimen collection for three days from April 22, and from April 25, engaged in medical care and examination outside of the vessel.

Furthermore, from May 2, a vehicle equipped with CT scanners stationed at Fuji Hospital in Shizuoka Prefecture, the only such vehicle in the nation, was dispatched, and greatly contributed to reducing the risk of aggravation of symptoms and early diagnosis on-site; thereby minimizing impact on the medical system in the prefecture.

In close coordination with Nagasaki University, DMAT, and other relevant parties, the Self-Defense Forces worked to prevent the spread of the infection, provided support for the repatriation of crew, and minimized the impact on the prefectural medical system. All these efforts led to a path to settle the incident.

<Status of disaster dispatch>
・ Period: April 22 to May 14, 2020 (23 days)
・ Number of personnel:
  The 4th Division Headquarters: 87 in total / day
  The 4th Medical Squadron: 47 in total / day
  The 4th Signal Battalion: 44 in total / day
  Western Army Medical Service: 198 in total / day
  The 16th Infantry Regiment: 89 in total / day
  JGSDF Fuji Hospital: 16 in total / day (481 in total / day)
・ Main activity: Specimen collection, medical support, CT diagnosis
  □ Specimen collection
    Specimen collection to test all crew members
    Result: Collected 505 samples in total
  □ Medical support
    Result: Examination of a total of 12 crew members
  □ Vehicle equipped with CT scanners
    A vehicle equipped with CT scanners, the only such vehicle owned by JGSDF, was dispatched from the JGSDF Fuji Hospital
    Result: 6 operations (CT diagnosis)
  □ Dispatch of liaison officials and a system team to the prefectural headquarters and the site
    Result: Approximately 25 SDF personnel / day (at peak)
(5) DMAT, etc.
(A) Nagasaki DMAT

- Period: April 23 - June 1, 2020 (40 days)
- Number of personnel: 74 (342 in total / day)

<table>
<thead>
<tr>
<th>Prefecture</th>
<th>Medical institution dispatched personnel</th>
<th>Dispatch period</th>
<th>Actual number</th>
<th>Total number</th>
<th>Breakdown of dispatched personnel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nagasaki</td>
<td>Nagasaki University Hospital</td>
<td>April 23 - June 1</td>
<td>29</td>
<td>128</td>
<td>8 doctors, 11 nurses, 10 business coordinators</td>
</tr>
<tr>
<td></td>
<td>Nagasaki Medical Center</td>
<td>April 28 - May 31</td>
<td>23</td>
<td>145</td>
<td>8 doctors, 10 nurses, 5 business coordinators</td>
</tr>
<tr>
<td></td>
<td>Nagasaki Genbaku Hospital</td>
<td>May 2 - 5</td>
<td>5</td>
<td>20</td>
<td>1 doctor, 2 nurses, 2 business coordinators</td>
</tr>
<tr>
<td></td>
<td>Nagasaki Prefecture Shimabara Hospital</td>
<td>May 10 - 30</td>
<td>4</td>
<td>21</td>
<td>3 nurses, 1 business coordinator</td>
</tr>
<tr>
<td></td>
<td>Nagasaki Kamigoto Hospital</td>
<td>May 18 - 20</td>
<td>1</td>
<td>3</td>
<td>1 doctor</td>
</tr>
<tr>
<td></td>
<td>Nagasaki Rosai Hospital</td>
<td>May 19 - 21</td>
<td>1</td>
<td>3</td>
<td>1 nurse</td>
</tr>
<tr>
<td></td>
<td>Nagasaki Harbor Medical Center</td>
<td>May 22 - 24</td>
<td>7</td>
<td>9</td>
<td>2 doctors, 3 nurses, 2 business coordinators</td>
</tr>
<tr>
<td></td>
<td>Saiseikai Nagasaki Hospital</td>
<td>May 28 - 31</td>
<td>4</td>
<td>13</td>
<td>2 nurses, 2 business coordinators</td>
</tr>
</tbody>
</table>

- Main activity:
  (Koyagi Plant on-site command post)
  ◆ Health management support for the crew
  ◆ Medical treatment, imaging test, prescription
  ◆ Transportation support to medical institutions
  ◆ Support for PCR tests, etc. (specimen collection)
  ◆ Nutrition guidance support
  ◆ Guidance on hygiene and environmental sanitation on board, risk communication to related parties
  (Coordination Headquarters)
  ◆ Management of dispatch team/arrangement of infection prevention education
  ◆ Coordination between the on-site command post and related organizations
  ◆ Arrangement for transportation from the cruise ship to medical institutions
  ◆ Securing supplies (in shortage) for the on-site command post
  ◆ Grasp information on medical institutions in the prefecture (acceptance of infected patients, inventory of materials/equipment for infectious disease response, etc.)
(B) DMAT of other prefectures
- Period: April 30 - May 9, 2020 (10 days)
- Number of personnel: 16 (48 in total / day)

<table>
<thead>
<tr>
<th>Prefecture</th>
<th>Medical institution dispatched personnel</th>
<th>Dispatch period</th>
<th>Actual number</th>
<th>Total number</th>
<th>Breakdown of dispatched personnel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kagoshima</td>
<td>Kagoshima City Hospital</td>
<td>April 30 - May 2</td>
<td>4</td>
<td>12</td>
<td>1 doctor, 2 nurses, 1 business coordinator</td>
</tr>
<tr>
<td></td>
<td>Kirishima Memorial Hospital</td>
<td>April 30 - May 2</td>
<td>1</td>
<td>3</td>
<td>1 business coordinator</td>
</tr>
<tr>
<td>Oita</td>
<td>Saganoseki Hospital</td>
<td>May 2 - 3</td>
<td>3</td>
<td>6</td>
<td>1 doctor, 2 business coordinators</td>
</tr>
<tr>
<td></td>
<td>Japanese Red Cross Oita Hospital</td>
<td>May 7- 9</td>
<td>3</td>
<td>9</td>
<td>1 doctor, 2 business coordinators</td>
</tr>
<tr>
<td>Saga</td>
<td>Yayoigaoka Kage Clinic</td>
<td>May 2 - 6</td>
<td>4</td>
<td>12</td>
<td>2 nurses, 2 business coordinators</td>
</tr>
<tr>
<td></td>
<td>Shiroishi Kyouritsu Hospital</td>
<td>May 2 - 7</td>
<td>1</td>
<td>6</td>
<td>1 nurse</td>
</tr>
</tbody>
</table>

(C) DMAT Logistic Team
- Period: April 22 - June 2, 2020 (42 days)
- Number of personnel: 3 (54 people in total / day)

<table>
<thead>
<tr>
<th>Prefecture</th>
<th>Medical institution dispatched personnel</th>
<th>Dispatch period</th>
<th>Actual number</th>
<th>Total number</th>
<th>Breakdown of dispatched personnel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kumamoto</td>
<td>Kumamoto University Hospital</td>
<td>April 22 - June 2</td>
<td>1</td>
<td>37</td>
<td>1 nurse</td>
</tr>
<tr>
<td></td>
<td>Kumamoto Red Cross Hospital</td>
<td>April 25 - May 8</td>
<td>1</td>
<td>13</td>
<td>1 nurse</td>
</tr>
<tr>
<td>Nagasaki</td>
<td>Sasebo Chuo Hospital</td>
<td>April 29 - May 2</td>
<td>1</td>
<td>4</td>
<td>1 nurse</td>
</tr>
</tbody>
</table>

(D) Support Team for Local Medical System, the Novel Coronavirus Response Headquarters of the Ministry of Health, Labour and Welfare
- Period: April 21 - June 2, 2020 (43 days)
- Number of personnel: 4 (106 people in total / day)

<table>
<thead>
<tr>
<th>Organization that dispatched personnel</th>
<th>Dispatch period</th>
<th>Actual number</th>
<th>Total number</th>
<th>Breakdown of dispatched personnel</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMAT Secretariat</td>
<td>April 21 - June 2</td>
<td>4</td>
<td>106</td>
<td>2 doctors, 2 business coordinators</td>
</tr>
</tbody>
</table>

(E) COVID-19 JMAT
- Period: April 29 - May 18, 2020 (20 days)
- Number of personnel: 21 (79 people in total / day)

<table>
<thead>
<tr>
<th>Organization</th>
<th>Dispatch period</th>
<th>Actual number</th>
<th>Total number</th>
<th>Breakdown of dispatched personnel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan Heart</td>
<td>April 29 - May 18</td>
<td>21</td>
<td>79</td>
<td>3 doctors, 10 nurses, 8 business coordinators</td>
</tr>
</tbody>
</table>

- Main activity: Support for the on-site command post
  - Health management support for the crew
  - Medical treatment, imaging test, prescription
  - Transportation support to medical institutions
  - Support for PCR tests, etc. (specimen collection)
  - Nutrition guidance support
  - Guidance on hygiene and environmental sanitation on board, risk communication to related parties
(F) Other private organizations

- Period: April 28 - May 30, 2020 (33 days)
- Number of personnel: 13 (107 people in total / day)

<table>
<thead>
<tr>
<th>Organization</th>
<th>Dispatch period</th>
<th>Actual number</th>
<th>Total number</th>
<th>Breakdown of dispatched personnel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peace Winds Japan</td>
<td>April 28 - May 7</td>
<td>9</td>
<td>39</td>
<td>2 doctors, 2 nurses, 5 business coordinators</td>
</tr>
<tr>
<td>Médecins Sans Frontières</td>
<td>May 7 - 30</td>
<td>4</td>
<td>68</td>
<td>1 doctor, 2 nurses, 1 business coordinator</td>
</tr>
</tbody>
</table>

- A request was also made to the Japanese Red Cross Society to dispatch personnel, but no one was dispatched as the necessary personnel was secured.
- Main activity: Support for the on-site command post
  - Health management support for the crew
  - Medical treatment, imaging test, prescription
  - Transportation support to medical institutions
  - Support for PCR tests, etc. (specimen collection)
  - Nutrition guidance support
  - Guidance on hygiene and environmental sanitation on board, risk communication to related parties

(6) Mitsubishi Shipbuilding Co., Ltd.,

Mitsubishi Shipbuilding received a report on April 19 that the cruise ship asked the Nagasaki City Healthcare Center to conduct PCR tests for crew members on board with a fever. On April 20, at around 9:30, the company staff guided public health nurses who visited Koyagi Plant to the East No. 2 quay where the ship was docked. In the evening of the same day, the company received a report that one of them tested positive.

Those concerned from Mitsubishi Shipbuilding also attended a countermeasure meeting, which was held at around 18:00 on April 20 at the Nagasaki Prefectural Office by officials from the prefecture, the city, and Nagasaki University, to share information.

Since then, under the directions of medical personnel including those from prefectural task force, the municipal healthcare center, Nagasaki University, and DMAT, the company took initial responses mainly in medical support at the Koyagi Dock, support for the living of isolated crews on board, and health monitoring of shipyard workers. In addition, managerial officers were dispatched to the prefectural government office from the initial stage to participate in regular morning meetings, ensured smooth communication with related organizations.

Furthermore, as an initial response to inquiries from residents in the vicinity of the Koyagi Plant and public concerns over community infection, the company held an information session for local residents in the southern part of Nagasaki City in cooperation with the municipal government.

① Medical support at Koyagi Dock

- April 20, 2020: Prepared power supplies prior to the arrival of the prefecture-owned X-ray examination car
- April 21: Support for the first infected member to disembark to take X-rays
  - A quay crane and a gondola were used.
- April 22: Established an on-site command post, a conference room, and a medical team waiting room; prepared printers, fixtures, and communication means.
  - Zoning (red zone / green zone) on the dock
- April 23: An additional ladder was installed to separate the disembarkation route for those tested negative and for those tested positive.
- May 1: Installed power supplies for the SDF’s vehicle equipped with CT scanners.
- May 7: Started a system in which quay crane operators are available for 24 hours to prepare for an emergency

② Support for isolated life on board

The support was continued after the infection was confirmed. Daily supplies such as drinking water and medicines were loaded onboard using shipyard cranes.

- Meeting between the ship and the shipyard (at the dock)
  - Collected wastewater (bilge, sludge) discharged from the vessel’s engine room.
- April 24, 2020: Set up a delivery collection place and erected tents to start a distribution of
April 25: Resumed the ship’s sewage collection.
April 28: Nagasaki City started support for garbage collection on board
May 3: Started support for carrying out luggage of repatriating crew members.

③ Health management of shipyard workers
April 20, 2020: Confirmed all shipyard workers who worked on board were in good health condition, and had them stay at home for two weeks from the last work day on board.
(The last work day of onboard was April 8. The period of staying home was up to April 22.)

④ Explanation to local residents
April 25, 2020: Held an information session for the chairpersons etc., of the residents’ associations in the southern part of Nagasaki City.

⑤ Other
April 26, 2020: Supported the departure of the Costa Serena and the Costa neoRomantica.

(7) Others
① Activities of DPAT (Disaster Psychiatric Assistance Team)
- Period: April 27 - May 31, 2020 (35 days)
- Number of dispatch requests: 3 times (May 13, 26, and 30)
- Activity days: 4 days (May 13, 26, 30, and 31)
- Number of personnel: 1 psychiatrist, 3 business coordinators
- Main activity
  ◆ Coordination with the DMAT on-site command post: 4 times (adjustment on-site on Apr. 27, 28, May 1, 5)
  ◆ Examination by a psychiatrist (4 people in total (actual:3)), hospitalization support (2)

② Activities of DHEAT (Disaster Health Emergency Assistance Team)
- Period: April 28 - May 31, 2020 (34 days)
- Number of personnel: 1 doctor
- Main activity:
  ◆ Guidance on zoning inside and outside the vessel to prevent the spread of infection
  ◆ Instructed the crew about maintaining a hygienic environment on board.
  ◆ Dealt with crew members’ anxiety over infection risk in collaboration with the ship doctor and nurses.
  ◆ Coordinated with Nagasaki prefectural and municipal governments regarding waste disposal.
  ◆ Coordinated medical relief activities (implemented medical support that complements activities of DMAT and the SDF’s medical team)
  ◆ Instructed medical relief teams about how to take on/off protective clothing.
  ◆ Provided support for hospitalization of those in poor health (helped them prepare for hospitalization if the medical rescue team were not able to enter the vessel)

③ Activities of Nagasaki Pharmaceutical Association (Nagasaki-City Pharmaceutical Association)
- Period: April 26 - May 31, 2020 (36 days)
- Main activity: Prescribed medicines to crew members
- Number of prescription: 5

④ Activities of Nagasaki Dietetic Association
- Main activity: Responded to inquiries from the on-site DMAT command post
  ◆ Provided the crew with nutritional guidance
  ◆ Introduced catering companies
3. Specific response to the case of the Costa Atlantica

(1) Development of a medical care provision system

At the beginning of the outbreak of infection on the Costa Atlantica, only one ship doctor and two nurses were on board for crew health management (medical staff boarded later\(^ {18} \)). Therefore, a concern was raised over the treatment of infected patients, requiring the urgent establishment of a medical support system. In addition, a concern was also raised over a significant impact on the capacity of prefecture's medical system when accepting a large number of critically ill patients; an urgent development of a local medical system was required to avoid such a situation.

On April 22 (the third day after the day on which the first infection was confirmed), an on-site command post and a temporary relief station were set up on the dock where the Costa Atlantica was docked, and a system that allowed health monitoring and medical treatment 24 hours a day was established mainly by the DMAT team with the cooperation of doctors, nurses, and coordinators from the SDF and private sectors.

In addition, on April 29 (the 10th day after the day on which the first infection was confirmed), a container house was set up by Costa Cruises for the use of outboard medical support etc.

From May 2 (the 13th day after the day on which the first infection was confirmed), a vehicle equipped with CT scanners was deployed responded to the third request for the SDF’s disaster relief-dispatch, further strengthened the medical support system on the dock.

In addition, thermometers were distributed to all crew members by the support of the national government so that they can measure body temperature in their own room, and a smartphone app was introduced to grasp the crew’s health status and share information. The app, which was used to grasp the crew members’ condition remotely from the outside and to share the information among the parties concerned, helped the early detection of aggravation risk.

[Overview of Koyagi Dock]

\(^ {18} \) Boarding of medical staff: One nurse from the Costa neoRomantica boarded on April 26. Also, on May 15, one doctor and two nurses from Italy boarded the ship.
Establishment of an on-site command post and a relief station

April 21, 2020: Prefecture-owned X-ray examination car started operation
April 22: Set up an on-site command post and a relief station with used prefabricated sheds borrowed by the Mitsubishi Heavy Industries Koyagi Plant
May 2: Opened temporary medical facility under the Special Measures Law

On the day, SDF’s vehicle equipped with CT scanners started operation.

Temporary medical facility under the Special Measures Law: The Act on Special Measures for Pandemic Influenza and New Infectious Diseases Preparedness and Response stipulates in Article 48 (temporary medical facilities, etc.) that “Specified prefectural governors, when there is a shortage of hospitals and other medical institutions within the jurisdiction, and it is considered that the shortage may hinder the provision of medical care, as stipulated in the prefectural action plan, must provide medical care at a facility where medical services are offered to patients, etc., and which is temporarily opened by the specific prefectural governor.”
■ Overview of the SDF’S vehicle equipped with CT scanners

(1) From its arrival to installation

- Dispatched from JGSDF Fuji Hospital
- Power distribution with the help of Mitsubishi Shipbuilding
- Checking a wrecker passing through
- Function check

(2) CT imaging

- Function check
- SDF specialist taking X-ray pictures
- Doctor explaining to a patient
- X-ray images

② Installation of container house
April 26, 2020: At the advice of MHLW, started to discuss details about building 50 container houses on the plant premise.
April 29: Built 23 container houses on the premise of the Koyagi Plant of Mitsubishi Heavy Industries.
April 30: Operation stated at 8 containers (used for outboard medical support activities, etc.)
Built the remaining 27 container houses on the premises on the same day. A total of 50 container houses were built.

■ Overview of the container house

(1) Observation room
(2) Examination room for those test negative

(3) Container house
- Usage category: Out of 42 containers, 39 were used for accommodations, one for storage (within the blind sheets), one for medical team, and one for administrator (outside of the blind sheets)
- Conditions to start operation: After intended purpose was decided for a container, drew up plans for 1) installation of fire extinguishers, 2) installation of fire alarms, and 3) fire prevention, and made applications for relevant authorities.
Private room management on board and introduction of health management app

April 24, 2020: 100 thermometers and 5 pulse oximeters\(^{20}\) were lent out by the prefecture for health observation of the crew.

April 25: 120 thermometers were lent out by Mitsubishi for health observation of the crew.

On the same day, the Nagasaki University Institute of Tropical Medicine started distributing the health management app to the crew members.

April 27: 400 thermometers were lent out by MHLW for health observation of the crew.

April 28: The health management app started operation.

May 1: 53 pulse oximeters were lent out for health observation of the crew.

Overview of the health management app

(1) System overview

(2) Management screen

---

\(^{20}\) Pulse oximeter: A device for measuring arterial oxygen saturation (SpO2) and pulse rate through the skin.
## Response at Koyagi on-site command post

<table>
<thead>
<tr>
<th>Date</th>
<th>Diagnosis at Koyagi</th>
<th>Sex</th>
<th>Age-group</th>
<th>Date of test</th>
<th>Result of tests on Apr. 20 &amp; 24</th>
<th>Examination</th>
<th>Prescription</th>
<th>X-ray</th>
<th>CT scan (by SDP)</th>
<th>Night-time examination</th>
<th>CT scan (by non-SDP)</th>
<th>Directions on Koyagi on-site command post</th>
<th>Dispatching situation of relief teams</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Covid-19-related pneumonia</td>
<td>M</td>
<td>40s</td>
<td>2020/4/20</td>
<td>Positive</td>
<td>X-ray</td>
<td>PCR test</td>
<td>○</td>
<td>○</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Covid-19-related pneumonia, anxiety disorder</td>
<td>M</td>
<td>40s</td>
<td>2020/4/22</td>
<td>Positive</td>
<td>X-ray</td>
<td>PCR test</td>
<td>○</td>
<td>○</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Hyperpiesia</td>
<td>M</td>
<td>60s</td>
<td>2020/4/24</td>
<td>Negative</td>
<td>X-ray</td>
<td>PCR test</td>
<td>○</td>
<td>○</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Hyperpiesia</td>
<td>M</td>
<td>40s</td>
<td>2020/4/23</td>
<td>Positive</td>
<td>X-ray</td>
<td>PCR test</td>
<td>○</td>
<td>○</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Covid-19-related pneumonia, anxiety disorder</td>
<td>M</td>
<td>40s</td>
<td>2020/4/22</td>
<td>Positive</td>
<td>X-ray</td>
<td>PCR test</td>
<td>○</td>
<td>○</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Suspected psychogenic diabetes insipidus</td>
<td>M</td>
<td>30s</td>
<td>2020/4/24</td>
<td>Negative</td>
<td>X-ray</td>
<td>PCR test</td>
<td>○</td>
<td>○</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Covid-19-related pneumonia</td>
<td>F</td>
<td>50s</td>
<td>2020/4/24</td>
<td>Positive</td>
<td>X-ray</td>
<td>PCR test</td>
<td>○</td>
<td>○</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Dehydration</td>
<td>M</td>
<td>60s</td>
<td>2020/4/24</td>
<td>Positive</td>
<td>X-ray</td>
<td>PCR test</td>
<td>○</td>
<td>○</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Hyperpiesia</td>
<td>M</td>
<td>50s</td>
<td>2020/4/24</td>
<td>Negative</td>
<td>X-ray</td>
<td>PCR test</td>
<td>○</td>
<td>○</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Contact dermatitis</td>
<td>F</td>
<td>40s</td>
<td>2020/4/23</td>
<td>Negative</td>
<td>X-ray</td>
<td>PCR test</td>
<td>○</td>
<td>○</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>May 2    Covid-19-related pneumonia</td>
<td>M</td>
<td>40s</td>
<td>2020/4/24</td>
<td>Positive</td>
<td>X-ray</td>
<td>PCR test</td>
<td>○</td>
<td>○</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>May 3    Covid-19-related pneumonia</td>
<td>M</td>
<td>30s</td>
<td>2020/4/23</td>
<td>Negative</td>
<td>X-ray</td>
<td>PCR test</td>
<td>○</td>
<td>○</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>May 4    Covid-19-related pneumonia</td>
<td>M</td>
<td>50s</td>
<td>2020/4/24</td>
<td>Positive</td>
<td>X-ray</td>
<td>PCR test</td>
<td>○</td>
<td>○</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>May 10   Tested positive for Covid-19, oral aphtha</td>
<td>M</td>
<td>20s</td>
<td>2020/4/24</td>
<td>Positive</td>
<td>X-ray</td>
<td>PCR test</td>
<td>○</td>
<td>○</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>May 11   Tested positive for Covid-19, oral aphtha</td>
<td>M</td>
<td>20s</td>
<td>2020/4/24</td>
<td>Positive</td>
<td>X-ray</td>
<td>PCR test</td>
<td>○</td>
<td>○</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>May 12   Discomfort in the chest</td>
<td>M</td>
<td>40s</td>
<td>2020/4/23</td>
<td>Positive</td>
<td>X-ray</td>
<td>PCR test</td>
<td>○</td>
<td>○</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>May 13   Not diagnosed</td>
<td>M</td>
<td>20s</td>
<td>2020/4/24</td>
<td>Positive</td>
<td>X-ray</td>
<td>PCR test</td>
<td>○</td>
<td>○</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>May 14   Cough</td>
<td>M</td>
<td>30s</td>
<td>2020/4/23</td>
<td>Negative</td>
<td>X-ray</td>
<td>PCR test</td>
<td>○</td>
<td>○</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>May 16   Diabetes</td>
<td>M</td>
<td>40s</td>
<td>2020/4/21</td>
<td>Positive</td>
<td>X-ray</td>
<td>PCR test</td>
<td>○</td>
<td>○</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>May 17   Diabetes</td>
<td>M</td>
<td>40s</td>
<td>2020/4/21</td>
<td>Positive</td>
<td>X-ray</td>
<td>PCR test</td>
<td>○</td>
<td>○</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>May 20   Not diagnosed</td>
<td>F</td>
<td>40s</td>
<td>2020/4/23</td>
<td>Negative</td>
<td>X-ray</td>
<td>PCR test</td>
<td>○</td>
<td>○</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>May 26   Suspected anxiety disorder, suspected dissociative amnesia</td>
<td>M</td>
<td>20s</td>
<td>2020/4/24</td>
<td>Positive</td>
<td>X-ray</td>
<td>PCR test</td>
<td>○</td>
<td>○</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>May 26   Hemosputum, tested positive for Covid-19</td>
<td>F</td>
<td>40s</td>
<td>2020/4/21</td>
<td>Positive</td>
<td>X-ray</td>
<td>PCR test</td>
<td>○</td>
<td>○</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>May 29   Hemosputum, Covid-19 infection</td>
<td>M</td>
<td>30s</td>
<td>2020/4/21</td>
<td>Positive</td>
<td>X-ray</td>
<td>PCR test</td>
<td>○</td>
<td>○</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>May 31   Adjustment disorder (anxiety, adaptation disorder)</td>
<td>F</td>
<td>20s</td>
<td>2020/4/24</td>
<td>Positive</td>
<td>X-ray</td>
<td>PCR test</td>
<td>○</td>
<td>○</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>May 31   Adjustment disorder (anxiety, adaptation disorder)</td>
<td>F</td>
<td>30s</td>
<td>2020/4/24</td>
<td>Positive</td>
<td>X-ray</td>
<td>PCR test</td>
<td>○</td>
<td>○</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Koyagi on-site command post: Dispatching situation of relief teams

![Graph showing dispatching situation of relief teams]

-31-
The flow from medical examination, CT diagnosis, observation, to hospital transportation

(2) Response to infected patients etc.

① Testing
In response to the first positive identification on April 19, it was necessary to confirm the presence or absence of infection on board as soon as possible since there was a large number of close contacts among the crew members.

At that time, Nagasaki University Institute of Tropical Medicine developed fluorescent LAMP method that enabled quick examination with high inspection processing ability, and with their cooperation, all of the remaining 619 crew members were tested from April 21 to 24. Of which, 148 were confirmed tested positive. This early confirmation of positive and negative cases greatly contributed to the subsequent countermeasures against the infectious disease.

The support by the institute also contributed to the pre-departure testing that was required based on the arrangement between the relevant organizations and countries for the early repatriation of the crew.

② Process of hospitalization
The total number of patients admitted to designated medical institutions for infectious diseases in the prefecture was 11 (six patients at the peak). Six of them were tested positive who developed pulmonary inflammation and five were tested negative with other symptoms. Since no passengers were on board, and few elderly people who were prone to becoming severely ill among 149 positives, only a few cases required hospital admission.

Hospitalization cases of those confirmed positive occurred until May 9, but no hospital admission was reported afterward. On the other hand, since May 26, multiple crew members were hospitalized for mental instability or poor physical conditions caused by the stress of staying in a controlled private room for a long period.

③ Examination of facilities for accepting inpatients
Under the arrangement made by Nagasaki Prefecture Novel Coronavirus Response
Coordination Headquarters, patients in this incident were admitted to two designated medical institutions for infectious diseases in Nagasaki City: Nagasaki University Hospital and Nagasaki Minato Medical Center. After the first case of hospitalization on April 22, there were no crew members with symptoms that need hospital admission, but three members were transported by ambulance consecutively from the night of April 27 to the early morning of April 28.

If a large number of infected cases on board need hospitalization in medical institutions in the city, the prefectural medical system may be overwhelmed. We thus asked the national government to consider accepting patients by medical institutions outside of the prefecture. However, at that time, due to the nationwide spread of COVID-19, the state of emergency was declared for 7 regions21 on April 7, and then its target area was expanded to nationwide on April 16. The medical system throughout the nation was tight, which made it difficult for other prefectures to accept patients.

Therefore, as a measure to keep the prefectural medical system unaffected as much as possible, an on-site medical care was strengthened by building container houses that serve as medical facilities on Koyagi Dock and by operating the SDF vehicle equipped with CT scanners.

In addition, discussion started to accept infected patients in the old ward of Juko Memorial Nagasaki Hospital, which was about to be moved to a new location, in preparation for the acceptance of those with moderate symptoms. As a result, crew members required hospitalization was only 11, and none of them was admitted to the hospital.

4 Transportation for patients

Under the Infectious Diseases Control Act, a local government with a healthcare center is in charge of transportation for infectious patients. In this incident, the Nagasaki City Fire Department transported 11 crew members including those with severe symptoms at the request of the Nagasaki City Public Healthcare Center.

<Status of hospitalization>

<table>
<thead>
<tr>
<th>Date of hospitalization</th>
<th>Medical institution</th>
<th>Age</th>
<th>Sex</th>
<th>Nationality</th>
<th>Hospitalization Period</th>
<th>Date of discharge</th>
<th>Status at hospitalization</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2020/4/22</td>
<td>Nagasaki University Hospital</td>
<td>40s</td>
<td>Male</td>
<td>Foreign national</td>
<td>79</td>
<td>2020/7/9</td>
<td>Positive</td>
</tr>
<tr>
<td>2 2020/4/27</td>
<td>Nagasaki Harbor Medical Center</td>
<td>50s</td>
<td>Female</td>
<td>Foreign national</td>
<td>19</td>
<td>2020/5/15</td>
<td>Positive</td>
</tr>
<tr>
<td>3 2020/4/27</td>
<td>Nagasaki University Hospital</td>
<td>30s</td>
<td>Male</td>
<td>Foreign national</td>
<td>3</td>
<td>2020/4/29</td>
<td>Negative</td>
</tr>
<tr>
<td>4 2020/4/28</td>
<td>Nagasaki University Hospital</td>
<td>60s</td>
<td>Male</td>
<td>Foreign national</td>
<td>38</td>
<td>2020/6/4</td>
<td>Positive</td>
</tr>
<tr>
<td>5 2020/5/2</td>
<td>Nagasaki Harbor Medical Center</td>
<td>40s</td>
<td>Male</td>
<td>Foreign national</td>
<td>20</td>
<td>2020/5/21</td>
<td>Positive</td>
</tr>
<tr>
<td>6 2020/5/4</td>
<td>Nagasaki Harbor Medical Center</td>
<td>50s</td>
<td>Male</td>
<td>Foreign national</td>
<td>18</td>
<td>2020/5/21</td>
<td>Positive</td>
</tr>
<tr>
<td>7 2020/5/9</td>
<td>Nagasaki Harbor Medical Center</td>
<td>50s</td>
<td>Male</td>
<td>Foreign national</td>
<td>16</td>
<td>2020/5/24</td>
<td>Positive</td>
</tr>
<tr>
<td>8 2020/5/26</td>
<td>Nagasaki University Hospital</td>
<td>20s</td>
<td>Male</td>
<td>Foreign national</td>
<td>10</td>
<td>2020/6/4</td>
<td>Positive → negative</td>
</tr>
<tr>
<td>9 2020/5/28</td>
<td>Nagasaki University Hospital</td>
<td>40s</td>
<td>Female</td>
<td>Foreign national</td>
<td>13</td>
<td>2020/6/9</td>
<td>Positive → negative</td>
</tr>
<tr>
<td>10 2020/5/29</td>
<td>Nagasaki University Hospital</td>
<td>30s</td>
<td>Male</td>
<td>Foreign national</td>
<td>8</td>
<td>2020/6/5</td>
<td>Positive → negative</td>
</tr>
<tr>
<td>11 2020/5/31</td>
<td>Nagasaki University Hospital</td>
<td>20s</td>
<td>Female</td>
<td>Foreign national</td>
<td>5</td>
<td>2020/6/4</td>
<td>Positive → negative</td>
</tr>
</tbody>
</table>

5 Securing accommodation facilities for medical staff

The prefectural government received a request from medical institutions accepting infected crew members (Nagasaki University Hospital, Nagasaki Minato Medical Center) to secure accommodations for medical staff to address concerns over infections to their families. In response to this, the prefecture established a system in which that medical staff working in COVID-19 wards can use accommodations and work with peace of mind.

- Use of accommodation based on a contract between a medical institution and an accommodation facility (The prefecture bears the expenses using the national emergency comprehensive support grant with upper limit).

---

21 7 regions: Saitama, Chiba, Tokyo, Kanagawa, Osaka, Hyogo, and Fukuoka
At accommodation facilities, consideration should be given for medical staff not to contact with regular customers.

Estimated that about 50 staff from Nagasaki University Hospital and 20 from Nagasaki Minato Medical Center would use the accommodation facilities at peak times.

(3) Status of repatriation support

① Repatriation of those tested negative

As a policy to support the repatriation of crew members, arrangements were made to repatriate those tested negative as soon as possible (excluding essential crew) in order to prevent the infection from spreading on board and reduce the burden on local medical services.

Specifically, arrangements were made among the national government, Nagasaki prefectural and municipal governments, and Nagasaki University based on the policy of using chartered flights for a large number of crew members from the same country, and regular flights (commercial flights) for others. At the national government level, the Ministry of Foreign Affairs arranged with receiving countries about the acceptance of chartered flights, and the Ministry of Land, Infrastructure, Transport and Tourism negotiated with airliners about flight services. As a result, crew members whose negative test results were confirmed started to fly home sequentially from May 3.

Repatriating crew members aboard a cruise ship where clusters of COVID-19 occurred was an unprecedented event; it required the involvement of many organizations and the understanding and cooperation of transportation operators. The prefectural task force’s repatriation support team (Prefectural International Affairs Division) played a central role in ensuring support for smooth repatriation by establishing a collaborative system with related local organizations, sharing and coordinating information on repatriation procedures.

[Major local organizations concerned]
Costa Cruises, shipping agencies, Mitsubishi Shipbuilding, DMAT, Immigration Services Agency of Japan, customs, quarantine stations, transportation operators (bus, aviation, etc.), airport officials, related municipalities, prefectural police headquarters, etc.

For the first flight, 44 Indonesian nationals left Koyagi Plant by three chartered buses prepared by local transportation operators at the request from the prefecture. They departed from Nagasaki Airport for their home country via Haneda.

The repatriation was for the crew members whose negative test results had been confirmed; however, from the perspective of eliminating concerns of those who involved in the support service, preliminary explanation and guidance on how to take on/off protective clothing were given by experts from the National Institute of Infectious Diseases. At the same time, based on advice from the MHLW given for each stage of support operations, infection prevention measures were taken in line with the industry-specific guidelines of business operators.

In addition, when disembarking, crew members were required to wear masks and check body temperature via a thermography camera. In response to a request from the prefecture, the Nagasaki Prefectural Police implemented security measures and the relevant fire department prepared for an emergency when the crew members were transported by bus from Koyagi Plant to the airport.

Response to those tested positive (repatriation after negative confirmation)

Regarding crew members who tested positive, airlines providing repatriation flights and the destination country of the ship after departing Nagasaki required Costa Cruises to present negative confirmation of these crew. Therefore, Costa Cruises and Nagasaki University Hospital carried out PCR tests (LAMP method) from May 12 based on a contract concluded between the two parties, and after repeated tests, no infection was observed on board by May 27.

Due to the diverse nationalities of the crew, the criteria for negative judgment regarding acceptance in each country differed. Some countries required two negative confirmations, while others required a one-week test interval between two negative confirmations. Thus, there was a need for country-specific measures. Airline companies also requested negative confirmations of the crew within one week prior to their boarding date. Thus, a number of tests were performed for negative confirmation (certification), resulting in a heavy burden on the medical institution.

Securing return flights was extremely difficult due to urban lockdowns, airport closures, and reduced regular flights amid the global COVID-19 pandemic; however, with the support from concerned parties, especially from the Ministry of Foreign Affairs, crew members were able to go home sequentially by chartered or regular flights, totaling 24 flights between the first flight on May 3 to the ship departure on May 31. The total number of repatriated crew members was 495 (of them, 120 were those initially tested positive then confirmed negative later).

<Repatriation status>

<table>
<thead>
<tr>
<th>Date of disembarkation</th>
<th>(Number of people)</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 3</td>
<td>44</td>
</tr>
<tr>
<td>May 4</td>
<td>7</td>
</tr>
<tr>
<td>May 5</td>
<td>130</td>
</tr>
<tr>
<td>May 6</td>
<td>19</td>
</tr>
<tr>
<td>May 7</td>
<td>17</td>
</tr>
<tr>
<td>May 8</td>
<td>5</td>
</tr>
<tr>
<td>May 10</td>
<td>2</td>
</tr>
<tr>
<td>May 13</td>
<td>61</td>
</tr>
<tr>
<td>May 14</td>
<td>2</td>
</tr>
<tr>
<td>May 15</td>
<td>1</td>
</tr>
<tr>
<td>May 17</td>
<td>11</td>
</tr>
<tr>
<td>May 18</td>
<td>4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Date of disembarkation</th>
<th>(Number of people)</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 19</td>
<td>1</td>
</tr>
<tr>
<td>May 20</td>
<td>2</td>
</tr>
<tr>
<td>May 21</td>
<td>21</td>
</tr>
<tr>
<td>May 22</td>
<td>5</td>
</tr>
<tr>
<td>May 23</td>
<td>1</td>
</tr>
<tr>
<td>May 24</td>
<td>4</td>
</tr>
<tr>
<td>May 25</td>
<td>1</td>
</tr>
<tr>
<td>May 27</td>
<td>27</td>
</tr>
<tr>
<td>May 28</td>
<td>95</td>
</tr>
<tr>
<td>May 29</td>
<td>18</td>
</tr>
<tr>
<td>May 30</td>
<td>3</td>
</tr>
<tr>
<td>May 31</td>
<td>14</td>
</tr>
</tbody>
</table>

(Major repatriation)
- May 3: Chartered flight to Indonesia (44 crew members returned home)
- May 5: Chartered flight to the Philippines (125 crew members returned home)
  * Five out of 130 crew members who disembarked on May 5 took regular passenger flights
- May 28: Chartered flight to India (95 returned home)
(4) Support for preventing further infection on board

① Infection control and disinfection work on board

All crew members were moved to cabins with windows under the direction of the ship manager on April 19; except for the essential crew, the crew in private cabins were managed thoroughly. However, after the testing of all crew members, some of the rooms of those tested positive and negative were found to be located on the same floor; therefore, an onboard investigation was carried out by experts from the National Institute of Infectious Diseases (on April 24, 26, and 27).

Based on the interviews with crew members and the result of on-board inspection, following proposals were made regarding:

- How to deal with those tested positive and negative (isolation, health observation)
- Social distance\(^{23}\)
- Supplies necessary for infection control
- Sanitary management of the onboard environment (improvement of living environment, environmental arrangement for infection control)
- Health status of medical staff

were made based on expert knowledge.

Based on the proposal, infection control system on board was established by providing infection prevention education and infection control video broadcasting (English) for the essential crew, and loading disinfectants and other supplies necessary for infection control by the prefecture.

In addition, under the instruction of infectious disease specialists, disinfection was conducted on April 30, May 1 and 3 for the following areas by specialized operators who made agreement with Costa Cruises: the wheelhouse, dining rooms, medical office, engine room, waste disposal rooms, stairs located in the center of the hull, main entrance and elevators.

② Providing meals to the crew

Normally, meals for the crew are prepared by the cooking staff on board, but after the infected case was confirmed, cooking on board became difficult; therefore, Costa Cruises asked local operators for meal delivery service, not only regular meals, but also vegetarian and special foods (without certain ingredients), through the shipping agency. In addition, since the life on board was prolonged and some crew members were not familiar with Japanese food, meal menu was prepared with consideration.

Social distance: To prevent the infection from spreading from person to person, keep a wide space from others to reduce crowdedness.
③ Garbage disposal
Waste disposal on board is usually outsourced to waste disposal operators, but after the outbreak of the infection, securing operators became difficult due to concerns over the spread of infections and reputation damage. Therefore, the disposal work was handled by the municipal government after the shipping agency completed notification to the Animal Quarantine Service and other organizations.

④ Procurement of basic medicine
As for prescription drugs for the crew, drugs which were difficult to obtain on board were provided with the cooperation of the Nagasaki-City Pharmaceutical Association based on the prescription of the doctor stationed at Koyagi Dock.
Support from citizens of Nagasaki Prefecture and City
To encourage the cruise ship crew, folded cranes and banners, which were gathered from inside and outside the prefecture at the request of Nagasaki citizen volunteers, were delivered through the shipping agency, along with heartfelt letters and gifts from the citizens.

Other
Two liaisons were dispatched daily from the prefectural response headquarters to the on-site command post to collect information and grasp needs; they supported for delivering medical supplies such as masks, protective clothing, and disinfectants.

Information sharing and cooperation (video conference)
To resolve the incident, sharing response policies and confirming the division of roles were necessary among the national government, the prefecture, the city, and related organizations. Therefore, video conferences were held every morning and evening with the cruise ship and related organizations to share information provided by each organization, and to discuss measures for issues in each phase, thus enhancing information sharing and cooperation for solution.

Prescription flow
- A doctor prepares a prescription after examination at the first aid station (Koyagi).
- Send the prescription to the Nagasaki-City Pharmaceutical Association (Chairman) (Send photo data by email)
- The Nagasaki-City Pharmaceutical Association selects a pharmacy that can handle the prescription and requests a prescription.
- Content audit by the corresponding pharmacy (inquiry to the prescribing doctor if necessary); dispensing
- Deliver prescribed drug from the pharmacy to Koyagi by motorcycle courier (by the evening of the day)
- Pick up on site ⇒ Onboard
Chapter 2 Issues and Countermeasures
On the case of the Costa Atlantica, we have sorted out issues based on the response measures taken so far, and examined the measures in six phases: “Before arrival in port”, “At arrival in port”, “After arrival in port (before outbreak)”, “After arrival in port (at the time of outbreak)”, “At repatriation”, and “At departure”.

Furthermore, opinions of related parties and experts involved in resolving the situation were collected and reflected in the examination.

Main issues and action policies that may be necessary for accepting cruise ships are described on pages 73-78. These measures are not possible without cooperation and support of related organizations. In order to improve the environment for accepting cruise ships in the prefecture and other parts of the country, the national government and related organizations should review the various issues that have surfaced this time, as shown in the action policies, take prompt action for solution in their respective roles.

In addition, it is necessary to examine measures to be taken based on the recognition that, to promote regional development by making the best use of cruise ship calls is to assume responsibility in the event of an emergency. Regional promotion measures should be proceeded with the understanding of the residents in Nagasaki by thoroughly explaining about economic ripple effect by accepting cruise ships, as well as risks and risk response measures.

[Phase 1: Before arrival in port]
When accepting cruise ships, boarder control measures are mainly taken for immigration control and infectious disease control including epidemic prevention under the jurisdiction of the national government in principle.

At the port of entry, there had not been sufficient discussion regarding response measures in a case when an outbreak of infectious disease is confirmed on board after a ship arrived in port, and no specific guidelines have been provided. This was the first case for many concerned parties.

The study results identified following issues that had to be addressed as infectious disease prevention measures before the ship arrived in the port.

1. Infectious disease countermeasures that should be always implemented
(1) Establishment of measures against infectious diseases on board (prevention / prevention of further spread)
   ① Establishment of onboard health management system and risk management system

Medical staff such as doctors and nurses are usually aboard cruise ships, and health counseling and emergency response system is in place for passengers and crew, but such system cannot cope with a number of patients in a case when an infection cluster occurs. In the case of the Costa Atlantica, only one doctor and two nurses were on board when the initial infection was confirmed.

On this incident, an emergency medical manual on COVID-19 had been prepared by the ship operator, and under the direction of its administrator, measures were taken such as isolating those with fever on board. However, it is considered indispensable that every cruise ship should have prepared in advance to address the risk of infectious diseases, not only preparing manuals for the outbreak of infectious diseases, but also establishing a testing system to grasp infection status, and equipping the necessary protective equipment, masks, gloves, etc.

In addition, policies such as whether those infected should disembark or should be isolated on board for medical treatment have not been determined, thus guidelines are required based on domestic and foreign knowledge.

A new unknown infectious disease could emerge anywhere in the world in the future. Since cruise ships call at ports in various countries, they are required to prepare infectious disease prevention manuals based on the latest information so that they can deal with a new infectious disease such as COVID-19.

Furthermore on this case, infectious disease experts embarked on the ship soon after the first infected case was confirmed and provided infection prevention education and disinfection guidance to the crew, thus avoiding the further spread to the essential crew (only one essential crew member was infected). However, in the case of the Diamond Princess, several inappropriate uses of face mask were reported. It is thus important that not just preparing manuals, but providing infectious disease prevention education for the crew including proper use of protective equipment and masks as preparedness for the outbreak of infection on board.
In addition, manuals should incorporate countermeasures on the assumption that an irreplaceable essential crew is infected on board (e.g., replacement of essential crew from outside of the ship).

New certification systems for the prevention of COVID-19 are being formulated by ship-class certification bodies in various countries; in Japan as well, the Nippon Kaiji Kyokai is proceeding with the establishment of “Bio Safety Management System” that regulates the safety management system for infectious disease control.

It is advisable to make such certification on infectious disease as a condition for port call permission when accepting cruise ships in the prefecture.

2. **Reviewing the lifestyle on the cruise ship**

A cruise ship is a closed space where as many as thousands of passengers and crew are on board when highest; meals are served at a buffet-style restaurant, and entertainment shows and dance parties attended by many guests are held on a daily basis. It can be said that the inboard environment is prone to bring out three Cs (closed space, crowded place, and close-contact setting), probable high risk factors leading to spread of infection.

Therefore, how to serve meals should be reviewed to minimize infection risks as much as possible; for example, dishing out meals by service staff and encouraging mask wearing and frequent hand disinfection to passengers at every event. In addition, it is considered effective to produce a new lifestyle on board, which does not create three Cs settings by improving the crew's living environment.

3. **Installation of a medical isolation room on board**

It may be necessary to take measures to reduce the passenger capacity in order to establish medical isolation rooms on board for a certain percentage of the capacity. For newly built or renovated ships, the medical isolation room should be located adjacent to the medical center, and designed to serve as a negative pressure room with openable windows.

4. **Building ship operator’s reporting system to infectious disease**

In the case of the Costa Atlantica, the first infected crew member was reported to the Nagasaki City Returnees and Contact Persons Consultation Center (Nagasaki City Healthcare Center) on April 19.

However, this crew member complained of coughing and fever from April 14, days before the date of the report. It was found out that a total of 34 people had been transferred to private cabins since April 1 due to fever or other symptoms.

Considering this situation aboard the ship and the situation of the nationwide spread of the infection, it is highly likely that if the report was made earlier, it may lead to early detection of the infection outbreak on board.

Therefore, ship operators are required to establish a reporting communication system (point of contact), based on the infectious disease response system in Japan, for making an early notification when an outbreak of infectious disease is suspected. On the other hand, each receiving port should develop a list of emergency contact information of relevant local organizations in advance and present it to a vessel entering a port.

In particular, when the crew stays on board for a long time for a vessel repair, etc., it is required to establish a reporting and communication system that allows early detection of abnormalities and communication (cooperation) between related parties.

5. **Clarification of the position under the Infectious Disease Act**

According to the current Infectious Diseases Act, authority to prevent infectious diseases and spread of diseases after quarantine is mainly vested in an administrative agency establishing a healthcare center (Governor, or Mayor of a city operating a healthcare center).

The Costa Atlantica was docked at a port facility located in Nagasaki City after quarantine, which means, under the Infectious Diseases Act, that the ship was under the jurisdiction of Nagasaki City where a healthcare center is located; the city and the national government bear the expenses for administrative testing conducted to grasp the infection status and the expenses for hospitalization and medical care for infectious disease treatment. (In the case of the Diamond Princess, while the ship was on the way to Yokohama after a provisional quarantine certificate was issued at Naha Port, a passenger who disembarked the ship at Hong Kong was confirmed tested positive for COVID-19. Thereby the quarantine certificate became
invalid and the ship needed to be quarantined again off the Yokohama Port; the national government responded to this matter based on the Quarantine Act.)

If appropriate measures are not taken against infectious diseases on cruise ships, it is highly likely that a large-scale cluster that far exceeds the size of clusters on land will occur, and that international response is required to deal with a case. There is a limit to what a local government can do. The idea of entrusting authority uniformly to an administrative agency that operates a healthcare center is not effective in terms of preventing the spread of infection; in addition, there is a limit to the current provisions of the Infectious Disease Act. Therefore, in preparation for an outbreak of an infectious disease aboard foreign cruise ships, etc., it is considered necessary to establish a system that allows the active involvement of the national government and to clarify operational rules of the system.

Incidentally, crew members aboard a passenger vessel are not treated as entrants under the Immigration Control Act, therefore it is necessary to examine legally whether a local government should deal with such an infection outbreak under the Infectious Diseases Act.

6 Necessity of establishing rules for expenses in case of infectious disease outbreaks
Following the confirmation of infected cases for COVID-19 aboard the ship, administrative tests (PCR test, LAMP test) were conducted on all 623 crew members, and a total of 11 people including 6 positive patients were admitted to designated medical institutions for specified infectious diseases.

These responses were implemented by Nagasaki City based on the provisions of the Infectious Diseases Act through consultation and guidance with the national and prefectural governments to prevent the community spread of the novel coronavirus infection. Based on the provision of the Infectious Diseases Act, one half of the administrative testing costs and 1/4 of hospital costs are borne by the city, and the rest is by the national government. Burden of expenses on the local government could be reduced if the patients were Japanese nationals because medical expense deduction by health insurance is applicable (about 70%); however, it was not applicable on this incident, Nagasaki City had to bear the cost.

In addition, the prefectural government installed temporary medical facilities on the dock to offer medical support as a special measure, and the cost should be originally borne by the ship operator as the responsible entity for the healthcare management of the crew. Therefore, the prefecture had to have an independent consultation on the matter with the ship operator. It will be necessary to examine how to deal with payment of expenses in the event of a similar incident.

Considering these matters as issues, we should sort out basic policies on payment to proceed with response measures more smoothly, and create rules so that ships can be accepted under the agreement between two parties: the ship arriving in port and the port receiving the ship. For example, the followings are required: establishment of an insurance system that ensures payment of expenditures associated with infectious disease control; a mechanism that obliges cruise ships to obtain such insurance as a condition of port entry; and exchange of written confirmations on the payment of expenditures in advance.

The law of a country of a registry (flag state) applies to a ship on the sea including the territorial waters, and the law of the country where the port of call is located applies to a ship anchored in the port or bay; thus, a country where the port of call is located has to bear responsibility and a significant burden. In the case of the Costa Atlantica, too, the responsibilities and burdens of the ship operator and the Japanese side remained unclear. International rules are considered necessary to continue to accept cruise ships.

In the light of the lessons learned from the cluster on the Diamond Princess, the national government has been also working to formulate international rules that stipulate the responsibilities of a flag state, ship operator, and ports of call in the international laws on infectious disease control.

<Opinion (issue) from related parties>
・Thorough practice of good hygiene and health management aboard the cruise ship are required.
・It is difficult for a local government to deal with infectious diseases single-handedly on a cruise ship.
<Countermeasure>
- Strengthen measures against infectious diseases on cruise ships
  - Create new guidelines for infectious disease control on cruise ships (ship operator, industry groups)
  - Obtain a certification for infectious disease control (ship operator)
- Establish an emergency contact system in case of an infectious disease outbreak (relevant local organizations such as prefecture/city)
- Review the system that was designed based on the assumption of an infectious disease outbreak on cruise ships (national government)
- Create international rules for accepting cruise ships (national government)

(2) Equipment and systems required for port facilities

① Development of countermeasures at terminals, etc. against infectious disease (hardware, software)
Currently at the terminals used by cruise ship passengers and crew, infectious disease prevention measures are being implemented by disinfecting chairs, tables, handrails, etc. in the facility.
In order to prevent infectious diseases from being brought into the cruise ship, all businesses related to the cruise ship need to take infection prevention measures.

<Main parties concerned>
- Those aboard the ship: pilots, quarantine officers, shipping agency staff, maintenance company staff
- Contacts outside of the ship: CIQ\(^2\), local tour-related operators (bus, taxi) \(^1\) CIQ: A general term for organizations of Customs, Immigration (immigration control), and Quarantine
  - Restaurants, souvenir shops, etc.

In addition, on the case of the Costa Atlantica, response measures were taken on-site for the outbreak of infectious disease aboard the ship docked at the private pier in Koyagi Plant of Mitsubishi Heavy Industries Nagasaki Shipyard & Machinery Works; however, if an infection is confirmed on a cruise ship docked at a public quay, the port terminal is assumed to be a base for on-site support. Therefore, in order for a port terminal to respond to such situation, it is necessary to consider the formulation of Emergency Response Plan (tentative name) focusing on the establishment of an on-site command post and an on-site medical care system. In the plan, deployment of face masks, disinfector, and protective clothing etc. should also be considered.
At the same time, it is necessary to examine how to secure accommodations for asymptomatic individuals and how to develop a transport ion system for infected patients.

② Necessity of smooth information sharing with related organizations
After the infections occurred aboard the Costa Atlantica, the prefectural office set up a response headquarters, where related organizations shared goals under the guidance of the national government and played their respective role, bringing the situation to the settlement. However, when the response headquarters stated its operation, there were some confusions regarding responsibility sharing and information sharing (in video conference and media handling).
In the future, in order to manage a similar crisis aboard cruise ships promptly and appropriately, it is necessary to build a mechanism that allows related organizations to share information smoothly on a daily basis, and a system that enables all related parties, including the national government, the prefectural government (port manager/department in charge of infectious disease), the municipal government (healthcare center), and shipping agencies to cooperate in the event of an infection.
It is also necessary for related organizations to cooperate with each other even in ordinary times and carry out training based on the emergency response plan (tentative name)
mentioned in (1) above.

<Opinion (issue) from related parties>
• Prevent infection for related organizations at the terminal (e.g., at customs check)
• Lack of response plans designed for a large number of passengers and crew in the event of an infection outbreak or an accident (securing accommodations on the ground, etc.)
• Information had not been shared among the related organizations.
• Epidemiological survey forms were not prepared in multilingual.

<Countermeasure>
• Strengthen measures against infectious diseases at terminals, etc. (all related organizations and businesses)
• Develop Emergency Response Plan (tentative name) in the event of a cluster of infectious cases (prefectural government, municipal government, CIQ, related local organizations such as shipping agencies)
• Secure medical institutions in preparation for symptomatic cases; securing a place for those asymptomatic individuals to stay (accommodation facilities, etc.) (prefectural government)
• Request for cooperation from related businesses that own accommodation facilities or transportation vehicles (prefectural government)
• Establish a communication system with related organizations operating even in ordinary times and develop a cooperative structure preparing for an emergency (prefectural government, municipal government, CIQ, related local organizations such as shipping agencies)
• Implement joint training sessions with related organizations such as training using a map in accordance with the above-mentioned plan (prefectural government, municipal government, CIQ, related local organizations such as shipping agencies)
• Stock face masks, disinfectants, protective clothing, etc. (prefectural government)
• Classify contact persons’ symptom survey forms and health observation forms to determine whether they need multilingual version or not (respective healthcare center)
• Public relations to gain the understanding of the residents of Nagasaki Prefecture/City regarding the acceptance of cruise ships (prefectural and municipal governments)

[Details of Emergency Response Plan (tentative name)]
• Initial response system: Clarify a command system and a decision-making mechanism by promptly establishing a response headquarters and medical coordination headquarters under the response headquarters.
• Safety management: Appropriate zoning to prevent the spread of infection
• Liaison function: Setting up a place where various issues can be examined across organizations
• Information sharing: Information sharing and thorough information management among the related organizations and related parties
• Place of activity: Secure a site for a command post and a place for safe provision of medical services (information communication environment to terminals, etc.; establishment of ventilation equipment = utilized as a relief station in the event of emergency)
• Medical system: Secure and allocate medical staff
• Inspection system: Securing inspection agencies capable of handling a large number of infection tests Introduce and utilize a vehicle equipped with CT scanners
• Materials and equipment: Stock materials and equipment at the place of activity (disinfectants, protective equipment, etc.)
• Medical institution receiving patients: Chose medical institutions accepting patients according to severity
• Transportation system: Transportation that exceeds the capacity of the healthcare center are arranged with fire departments and medical institutions that own emergency vehicles.
• Multilingual support: Request for the provision of translation tools and dispatch of
volunteer interpreters at medical institutions accepting patients, on-site command posts, and relief stations.

- Mental support: Support by DPAT

(3) Construction of extensive medical support system (roles of neighboring local governments and cooperation system)

① Extensive PCR testing and acceptance of infected persons at medical institutions

In handling cluster infections aboard cruise ships, the acceptance and response capacity in the area where the infection occurred could be exceed its limit; therefore, establishing a nationwide medical support system is required.

Provisions of the Infectious Diseases Act stipulate that necessary cooperation may be obtained from other prefectures and the nation when it is deemed necessary, specially in conducting specimen collection and testing; it should be kept in mind to make the best use of these provisions.

However, sufficient human and physical support will not be obtained from the national government and other prefectures if an infection spreads nationwide, like the novel coronavirus this time; so, it is considered essential to enhance the inspection system in the prefecture, construct a support system in case of infection outbreak, and secure stockpiled materials even in normal times.

In terms of strengthening the regional medical system, it may be an idea to collaborate with Nagasaki University, a university that took the leading role in the case of the Costa Atlantica, and boasts a nationwide track record in the treatment and research of infectious diseases, with the aim of developing a center for human resources, research, and testing system on infectious diseases.

In addition, the prefecture alone has a limit in establishing a system to designate infectious disease medical institutions in the prefecture; if an excessive system is established, it will lead to an inefficient welfare and health administration due to redundancy in normal times. As for inpatient medical care, there is no provisions on requests for cooperation beyond prefectural boarders. Therefore, it is considered necessary for the national government to introduce a system in which hospitalization can be coordinated extensively.

Specifically, it is considered necessary to establish a mechanism which allows individuals who need hospitalization to disembark at a port of departure/arrival, but be accepted in medical institutions outside of the prefecture where the port is located.

It is also necessary to establish a central medical system that accepts infected patients nationwide and a system in which domestic specialists of infectious diseases are registered and dispatched promptly when needed.

② Securing means of transportation to outside the prefecture

As for transportation to the outside the prefecture, it is necessary to hold talks with the prefectural fire-fighting organs, emergency transportation companies, medical institutions, transportation operators since transportation of a large number of passengers and crew members will be required.

It is also necessary to consider the possibility of requesting SDF disaster-relief dispatch (transportation, etc.) as needed.

<table>
<thead>
<tr>
<th>Opinion (issue) from related parties</th>
</tr>
</thead>
</table>
|Need to consider a system to accept infected individuals who need hospitalization beyond prefectural borders.

<table>
<thead>
<tr>
<th>Countermeasure</th>
</tr>
</thead>
<tbody>
<tr>
<td>In collaboration with Nagasaki University, consider establishing a center for human resource development, research, and inspection systems on infectious diseases (prefectural government)</td>
</tr>
<tr>
<td>Establish a system to accept infected patients who need hospitalization in areas beyond prefectural borders in the event of a large-scale cluster infection (national government)</td>
</tr>
<tr>
<td>Improve central medical institutions across the nation to accept infected patients; establish a system where specialists of infectious diseases nationwide are registered and dispatched promptly when needed. (national government)</td>
</tr>
</tbody>
</table>
[Phase 2 : At arrival in port]

Nagasaki Port was the first port of call for the cruise ship after being quarantined. Regarding the acceptance of cruise ships in Japan at that time, it was not foreseen that a large-scale cluster of infections, such as a case of novel coronavirus infection clusters on Diamond Princess that was discovered at a later date, would occur, and related parties as well as the prefectural government were not fully aware of a risk of serious infectious diseases brought by accepted cruise ships; thus, no request was made to cruise ships for specific measures regarding infectious diseases, and cruise ships were accepted as usual.

The results of examining infection response measures taken when the ship arrived in port identified the following issues.

1. Obtaining and sharing information on a passenger ship
   (1) Navigation information (port of calls)
   ① Information sharing on all routes of the ship, including information whether or not the ship visited a country experiencing an epidemic.
   When a vessel arriving from a foreign country enters a port in Japan, its information is reported in advance to related organizations such as CIQ, a port manager, and a Japan Coast Guard department; in addition, various applications are required for the vessel including a port entry notification specified by related organizations. However, the port manager is not informed on which country/port cruise ships had sailed through. However, vessels are required to declare on a statement to submit to the quarantine station whether or not they have visited an area where the World Health Organization (WHO) declared as an infected area.

   In a situation where COVID-19 has spread worldwide, it is considered effective to grasp a risk of infection outbreak in advance, such as whether the vessel made a port call at a country experiencing an epidemic, when making decisions on countermeasures. It is necessary to build a mechanism that allows related organizations at domestic ports to share information on quarantine including the entire sailing routes of the ship.

   ② Information provided by a shipping agency
   Various information from the ships will be collected by the ship agency handling the port entry procedures for applications to related organizations.

   Therefore, as for information sharing among related organizations, responsible participation of the shipping agencies should be called for, and a mechanism in which the shipping agency informs the port manager regularly on guideline compliance status during a port call should be created. At present, such information is required for the shipping agency to proceed with application procedures or supply procurement that are conducted based on a direct/indirect contract with the ship operator; the shipping agency has no obligation (is not allowed) to actively provide information to related organizations. Therefore, an approval should be obtained in advance from the ship operator as for information disclosure to related organizations.

   ③ Understanding the purpose of port call
   Currently, when a vessel uses a private pier, the prefectural government has no grasp of the purpose of port call. According to the Nagasaki Prefecture Port Management Ordinance (Article 42, Paragraph 2), the prefecture may commission a large vessel (500 tons or more) that is docked at facilities other than those managed by the prefecture or that uses private docks or slipways to give a notification of purpose of use. Making use of this ordinance, it is necessary to ask private dock owners to participate in creating an information sharing mechanism as necessary.

---

<Opinion (issue) from related parties>
- Information on cruise ships entering the port is insufficient.

<Countermeasure>
- Share information on quarantine, etc. at the first port (national government)
- 《Repost》 Build a reporting system with related organizations (prefectural government, municipal government, CIQ, related local organizations such as shipping agencies)
(2) Obtaining information on passengers and crew members
Port managers are allowed to obtain information on age and nationality of passengers and crew on board for security purpose based on the SOLAS Convention, but have no access to information such as presence or absence of infection outbreak on board; therefore, they cannot make a decision on whether permission will be granted for a vessel to use a dock by considering infection risk.

In examining the risk of infection, the following information must be obtained at least.

- Nationality, country of embarkation, date of embarkation, age, medical history / previous disease of passengers/crew
- Presence or absence of infected cases
- Health management information

Maritime Declaration of Health, a document that a ship submits to the quarantine station at the first port of call, requires information on the presence or absence of a patient suspected of having an infectious disease; however, as a rule, this document is submitted to the quarantine station on the day of arrival in port. Therefore, it is necessary to create a mechanism to obtain the information in advance so that permission to use (berthing) can be determined based on infection status.

<Opinion (issue) from related parties>
- Information on cruise ships entering the port is insufficient.
- Provision of health management information is insufficient.
- There is no system for contacting and sharing information with vessels.

<Countermeasure>
- Create a system that allows ships (or shipping agencies) and each port of call to collect information and have a dialogue in a timely manner (national government)
- A system to provide information on crew’s health in the past two weeks before the ship’s arrival in port (ship operator)
- A system to provide information on passengers’ health after their embarkation or in the past two weeks before the ship’s arrival in port (ship operator)
- Determine which departments are capable of exchanging necessary information even in normal times (prefectural and municipal governments)

(3) Construction of information sharing method

① Share information that should be obtained by the host municipality (prefectural government, municipal government (healthcare center))
As previously mentioned in "Phase 1: Before arrival in port" (see page 47), to establish a cooperative system for smooth information sharing with related organizations is an issue. This section reviews once again about how to share information on cruise ships at the time of arrival that was obtained by related organizations.

When accepting cruise ships, each section in charge, such as CIQ and a port manager, used to obtain information necessary for their respective internal management. However, in handling COVID-19 cluster outbreaks aboard the ship, the importance of sharing information with related organizations has become obvious again. Furthermore, there was a lack of cooperation between the prefectural port management department and the prefectural infectious disease control department, not to mention between the prefectural and municipal governments.

For accepting cruise ships in the future, it is necessary to build a system that allows related organizations to appropriately share the information obtained by each organization and to use such information for infectious disease control etc. Specifically, what is necessary is to organize the details of information obtained by each organization, and to determine which organization should collect which information if there is a shortage of information. It is also necessary for prefectural and municipal governments to decide which department functions as external contact points.

② System when berthing at a private dock
This incident took place at Koyagi Dock of Mitsubishi Heavy Industries Nagasaki Shipyard & Machinery Works; a vessel berthed at a private dock is beyond the scope of authority of the prefecture serving as a port manager.
Even for a cruise ship that uses a private dock for repair or other work, information on its purpose of entry and passengers should be grasped, and a mechanism to share information as mentioned above is necessary. For this mechanism, regulations are required on the provision of information with consideration given to the handling of corporate information.

<Opinion (issue) from related parties>
- There is no mechanism to share information among related organizations

<Countermeasure>
-《Repost》Building a reporting system with related organizations (prefectural government, municipal government, CIQ, related local organizations such as shipping agencies) *
- Participation of the private quay manager

2. Decision on arrival / berthing in port
(1) Establishment of grounds for decisions on berthing availability

In relation to COVID-19, the national government refused the landing of foreign nationals aboard the cruise ship Westerdam that departed from Hong Kong, by issuing a cabinet decision based on Article 5, Paragraph 1, Item 14 of the Immigration Control and Refugee Recognition Act.

Nagasaki Prefecture grants permission to use the quays based on Articles 5 and 6 of the Nagasaki Prefecture Port Management Ordinance, but the permission criteria for regular use stipulate that permission must be granted with exceptions. In the current handling, the prefectoral government has no authority to refuse the entry and berthing of vessels on the ground of a risk of the spread of infectious disease.

As a special case, the prefectoral government asked the Costa Venezia, another cruise ship headed for Nagasaki, to cancel the port call through the ship agency since a state of emergency was issued nationwide, and COVID-19 infections were confirmed aboard the Costa Atlantica moored at the Koyagi Dock of Mitsubishi Heavy Industries Nagasaki Shipyard & Machinery Works. However, it strongly requested the port call due to urgent needs for fuel and food supply, the vessel was accepted from humanitarian grounds. For the port call, the prefectoral government took extremely special measures at its own discretion, imposing a condition that “boarding and disembarking are not allowed.”

Based on these cases, the port management ordinance should be overhauled, such as adding a provision to prohibit ships from using ports if there is a particularly strong probability that may impair the safety of the lives, bodies and property of the residents of the prefecture, e.g., large-scale clusters may occur aboard a ship where appropriate measures are not taken. In addition, it is considered necessary that the national government arrange ports of entry nationwide taking local medical systems and other factors into consideration.

<Opinion (issue) from related parties>
- There is no ground for refusing vessels making a port call
- Not capable of coordinating ports of entry over wider areas.

<Countermeasure>
- Revise Nagasaki Prefecture Port Management Ordinance (prefectural government)
- Coordinate ports of call in the event of an emergency (national government)

<Reference>

Westerdam: Dutch-flagged cruise ship The Westerdam departed Hong Kong on February 1 (more than 2,200 passengers and crew on board), but after being refused entry to Manila, the Philippines, the vessel called at Kaohsiung, Taiwan on February 4, one day ahead of schedule. In Taiwan, 38 passengers aboard the ship showed symptoms of fever and cough, but they were permitted to disembark because they have no traveling history to mainland China. However, Taiwan's health department banned symptomatic individuals from disembarking on the night of February 4, and the ship left Kaohsiung on the afternoon of February 5, cancelled the schedule to call at Keelung in eastern Taiwan, and headed for Naha Port in Okinawa.

Initially, it was scheduled to call at Hakata Port before arriving in Yokohama Port, its final destination, on February 15, but the Japanese government banned her entry. The vessel was also refused entry to Guam and Thailand, and was finally accepted by Cambodia on February 13.
(2) Establishment of handling policy for berthing (decision on acceptance)

1. Necessity of criteria to determine acceptance
   As described in (1) above, if a provision that vessels may not be permitted to use port facilities is added to the Port Management Ordinance, it will have a great impact on shipping plans of the cruise ship operators. It is thus necessary to clearly show the grounds in advance for situations where a refusal is ordered.

   For example, it is considered necessary to examine criteria for determining whether or not to accept a cruise ship in light of infection control system on board, epidemic situation of local areas, and pressure on medical system. In addition, as for port facilities, there are facilities managed by private sectors as well as managed by local governments; therefore, it is considered necessary to examine a mechanism to request private businesses to refrain from entering the port.

   Since there are some cases where port managers in other prefectures have established grounds for judgment on this matter, it is necessary for Nagasaki Prefecture to consider revising the ordinances, etc., taking these cases into consideration. In addition, when considering the revision of ordinances, it is necessary to carry out a simulation to determine in which situation a ship should be accepted in light of local medical systems, and to take into consideration the understanding of the citizens regarding risks related to the acceptance.

2. Judgment criteria for boarding and disembarkation of passengers/crew
   In the case of the Costa Atlantica, it was unclear about the criteria and grounds for restricting the boarding and disembarking of crew members; the prefectural government requested the ship operator and the shipping agency to impose a voluntary ban on the boarding and disembarking of the crew, but it was not mandatory.

   The prefecture also notified to that effect to the Mitsubishi Heavy Industries Marine
Structure (as of March 6); however, since the cruise ship was moored at the private quay, the prefecture only informed the company about its handling policy as the port manager at a public pier as a reference.

The document dated March 6 used “request” as a measure to prevent the outbreak of infection; however, in the case of the Costa Venezia, which arrived in the port on April 23, after the outbreak of the infectious disease aboard the Costa Atlantica was confirmed, the government permitted the vessel to use the port with a condition “All boarding and disembarking of the passenger/crew is prohibited”.

Regarding boarding and disembarking after berthing (i.e., immigration), the Immigration Bureau of Japan is in charge of the affairs based on the Immigration Control and Refugee Recognition Act. According to the Act, landing may be refused for patients with Class I Infectious Disease, Class II Infectious Disease, Novel Influenza Infection, designated infectious diseases, those with symptoms of a novel infectious disease, and those who have sufficient reason for the Ministry of Justice to admit that they may act to harm the interests or public security of Japan.

The Act also stipulates the relationship among related administrative agencies in carrying out immigration affairs; thus, boarding/disembarking management requires close cooperation with related agencies.

It is considered necessary to further examine what kind of effective method is available for the boarding and disembarkation management of passengers and crew on both public and private quays, including the development of role-sharing. Careful handling is also required to operate the management system.

<Opinion (issue) from related parties>
- There is no standard to determine whether or not to allow port entry (both public and private quays)
- There are no criteria to restrict passengers and crew from boarding and disembarking

<Countermeasure>
- Set up criteria, etc. with regulations and rules (prefectural government)
- Cooperate with related organizations in accordance with Immigration Control Act and other acts (national government)

<Reference>

<table>
<thead>
<tr>
<th>Immigration Control and Refugee Recognition Act</th>
</tr>
</thead>
<tbody>
<tr>
<td>Article 5 Foreign nationals who fall under any of the following items cannot land in Japan.</td>
</tr>
<tr>
<td>1. Patients with a Class I Infectious Disease, a Class II Infectious Disease, or a Novel Influenza Infection etc. or patients with designated infectious diseases, or a person with symptoms of a New Infectious Disease, as stipulated in Act on the Prevention of Infectious Diseases and Medical Care for Patients with Infectious Diseases.</td>
</tr>
<tr>
<td>14. In addition to the persons listed in the preceding items, those who have a sufficient reason for the Minister of Justice to admit that there is a risk of committing an act that harms the interests or public security of Japan.</td>
</tr>
</tbody>
</table>

(3) Establishment of handling policy at the time of docking (judgment by a second port)
The case of the Costa Atlantica took place on Nagasaki Port, which was the first port for the ship. Normally, after the quarantine at the first port is completed and the provisional quarantine certificate is issued, no quarantine will be carried out at the second and succeeding ports unless an infected person is found in a certain period of time (14 days in the case of COVID-19). When a suspicious
case of an infectious disease is detected on board after arrival, cooperation between the (planned) ports of call will be crucial; therefore, a system that allows the ports of call nationwide to share information through quarantine stations is inevitable. For example, flexible operation of the existing systems, such as making use of information obtained by the NACCS\textsuperscript{26} for procedures of customs, immigration, and quarantine, should be considered.

It is also considered necessary for the national government to consider effective measures to enhance quarantine practices at the second and succeeding ports as a border control strategy.

<table>
<thead>
<tr>
<th>&lt;Opinion (issue) from related parties&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>・ Thorough quarantine at arrival (strengthen quarantine practices at the second and succeeding ports)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>&lt;Countermeasure&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>・ 《Repost》 Share information on quarantine, etc. at the first port (national government)</td>
</tr>
<tr>
<td>・ Consider conducting on-board quarantine at the second and succeeding ports (national government)</td>
</tr>
</tbody>
</table>

\textsuperscript{26} NACCS (Nippon Automated Cargo and Port Consolidated System) A system in which procedures for customs, other related administrative agencies and related civil operations are centrally processed online for ships/aircrafts entering and leaving ports and imported/exported cargos.
[Phase 3: After arrival in port (after berthing/before outbreak)]

The Costa Atlantica berthed at Matsugae Pier of Nagasaki Port on January 29; and after being quarantined and replenished supplies, moored at the quay of Koyagi Plant of Mitsubishi Heavy Industries Nagasaki Shipyards & Machinery Works for repair work.

After anchoring, the prefecture issued a notice on March 6 regarding a voluntary van on the disembarkation of crew members due to the nationwide spread of the novel coronavirus infection; in response to this, Mitsubishi Shipbuilding Co., Ltd. explained the details of the notice from the prefecture to the Costa Atlantica and asked for their understanding of limiting the scope of activities for the crew and blocking their contact with the general public.

On the other hand, on March 14, the first infected person in the prefecture was confirmed in Iki City. At Koyagi Plant of the Mitsubishi Heavy Industries Nagasaki Shipyards & Machinery Works, all employees and workers had been instructed not to come to work if a fever is detected at temperature measurement before work; from March 16, it was made mandatory for all workers and employees to measure body temperature and submit a declaration of travel history and health condition at the plant entrance to enhance entry management. Costa Cruises strengthened health check of the crew at the boarding and disembarking gates, which had been conventionally carried out, and from March 14, prohibited the crew members from going out for sightseeing, eating or drinking in the city.

Regarding the boarding and disembarking of the crew, it was initially said that no crew boarded or disembarked from the ship from March 14 to April 20, the day on which the person who was later confirmed COVID-19 positive complained of coughing and fever, a total of 34 people were isolated in private rooms on board due to symptoms such as fever. It was later found that some of them were positive for the coronavirus. In light of this fact, it was possible to expect the occurrence of infection prior to April 19, the day on which the Nagasaki City Healthcare Center received the first consultation from the ship; it is considered that the ship should have made early consultation to the healthcare center or other related organizations.

Clusters tend to occur aboard a cruise ship if appropriate measures are not taken. It is also expected that infection would spread through boarding and disembarking of passengers and crew after arriving in port. Therefore, in order to prevent community spread of infection, it is important for the ship operator to responsibly conduct health checks for all passengers and crew on a regular basis. In this regard, a health management app used this time, to which the crew members themselves could input their body temperatures and symptoms such as a cough, was effective for the limited number of medical staff on board to promptly obtain health information and share the information with related parties. Cruise ships are in ports of call for a short period of time, while vessels docked for maintenance or other work stay for a long period; so, a health management system that enables long-term support is necessary. For these reasons, it is also necessary to request the ship to actively utilize these technical tools or to consider establishing a mechanism that allows outsourcing health observation of crew.

In addition, when an infection is confirmed, identifying close contacts and infection routes are especially important to prevent the community spread of infection.

It is required to consider creating a mechanism in which ships provide information in advance on their sightseeing tour routes in ports of call. At the same time, passenger and crew should be registered to an app such as COCOA, a domestic version of COVID-19 Contact-Confirming Application that has stated operation, as risk measures.

Incidentally, it is necessary to obtain the understanding of the passengers about the purpose of using the app while paying full consideration to securing their privacy.
② Establishment of an information sharing system with related organizations
In particular, information on passengers’ health condition is very important for early detection of infection, and such information should be promptly shared with related organizations including community healthcare centers that have jurisdiction over infectious disease control. This is important from the perspective of preventing the occurrence of clusters and aggravation of symptoms; it is also necessary to clarify communication system.

<table>
<thead>
<tr>
<th>&lt;Opinion (issue) from related parties&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>• No access to information on the physical condition/movement of passengers and crew (confirmation of those with a fever or symptomatic; action record)</td>
</tr>
<tr>
<td>• Need to create a mechanism for early detection of those suspected of being infected.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>&lt;Countermeasure&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Aggregate data using apps or other tools and provide information on those suspected of being infected to local governments (ship operator)</td>
</tr>
<tr>
<td>* Health conditions and action record</td>
</tr>
<tr>
<td>• 《Repost》 Create a system that allows ships (or shipping agencies) and each port of call to collect information and have a dialogue in a timely manner (national government)</td>
</tr>
</tbody>
</table>

(2) Obtaining and sharing information on crew changes
① Necessity of obtaining action records and health information for crew changes
In the case of the Costa Atlantica, infection route was unknown, so there was a concern over the community spread of infection due to crew members boarding/disembarking from the ship for a crew change or supply replenishment.

Initially, after receiving a reply from Costa Cruises that “no crew member boarded/disembarked from the ship on and after March 14,” Mitsubishi Shipbuilding Co., Ltd. announced that information at a press conference; however in reality, some crew had boarded/disembarked from the ship for hospital visits, supply replenishment, or crew changes that were conducted as an inevitable part of ship operation associating with crew members having different contract periods. Thus, the two companies seem to have had a different awareness about the boarding/disembarking of crew.

As in this case of the Costa Atlantica, one of the risks for a ship that has passed the quarantine in the first port is a crew change since infectious diseases could be brought in by newly boarded members from a foreign country hit by pandemic.

As an example, 16 crew members arrived at the Kansai International Airport as replacements for a cargo ship moored at Sasebo Port in June 2020 and underwent PCR tests; they were then allowed to head for Sasebo City by chartered bus before obtaining test results. A few hours after their departure, one was confirmed tested positive and made a return for hospitalization.

Currently, the Ministry of Health, Labour and Welfare (Quarantine Station) requires all those entering Japan to stay at a designated place (home, etc.) for 14 days (starting from the next day of the day on which they arrived in Japan), and those from the restricted areas are required to stay in a quarantine station or a designated hotel until they take a PCR test and receive the test result. Those who are asymptomatic are allowed to go home without using public transportation and stay at home. In the case of the Costa Atlantica, the quarantine station determined that “the ship is comparable to home” and allowed the crew members’ movement.

The local government (prefecture or city (Sasebo City for this case)) where the ship was moored was not informed of such permission on crew members’ movement, and the city discovered the fact only after infected crew members were found and the quarantine station asked a medical institute in the prefecture to accept them. It could lead to community spread of infection in Sasebo City depending on circumstances.

In light of this fact, the national government should implement thorough border control and examine whether a local government should respond to such a case based on the Infectious Disease Act; however, since local medical institutions may provide support in some cases, it is necessary to consider a mechanism to share information with local governments. For example, in addition to a list of crew changes at the port of call, which is submitted for immigration inspection at a first port, a mechanism to share the itinerary information of crew until boarding is required among related organizations.
Establishment of an information sharing system with related organizations

The necessity of information sharing is as described in (1) above. Since new crew members would board a ship via international airports in Japan, it is necessary to have a cooperative system that allows information sharing not only with shipping agencies and concerned parties in the prefecture, but also with quarantine stations nationwide. For example, following information should be shared by related organizations.

- Whether or not to conduct a crew change (ship operator / shipping agency)
- Movement route until boarding/disembarking (ship operator / shipping agency, CIQ)
- Sharing information that was dealt with CIQ (ship operator / shipping agencies, CIQ)

<table>
<thead>
<tr>
<th>Opinion (issue) from related parties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conduct thorough quarantine (at the time of crew change)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Countermeasure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strengthen quarantine practices (at the time of crew change) (national government)</td>
</tr>
<tr>
<td>{Repost} Build a reporting system with related organizations (prefectural government, municipal government, CIQ, related local organizations such as shipping agencies)</td>
</tr>
</tbody>
</table>
After April 20, the day on which the first infected person was confirmed, PCR tests were promptly conducted on all 623 crew members, and 148 positives were confirmed by April 25. Concurrently, a cruise ship task force was set up in the prefectural office with the help of experts dispatched from the national government, and various actions were decided to be taken by the cooperation of the national government, the prefecture, the city, Nagasaki University and other related organizations.

On the other hand, it was initially reported that no crew had boarded or disembarked after March 14, but at a press conference held on April 22, the day on which 33 more positives on board were announced (Cumulative total of 34), it was turned out that about 90 people disembarked and about 40 people boarded (according to the Fukuoka Regional Immigration Bureau), raising public anxiety about the community spread of infection.

The prefecture’s new coronavirus general consultation desk, opened on April 21, was flooded by inquiries from citizens worrying community spread of infection on April 22, the day on which the above-mentioned boarding/dismounting were revealed.

After examining the infection response measures for the ship after arrival in port (at the time of outbreak), the following issues were raised.

1. **Response at an outbreak**

   (1) **Clarification of response policy for infected patients, etc. (Clarification of response responsibilities of related parties)**

   ① **Necessity of response plan and other measures to infectious disease outbreaks**

   If an infectious disease outbreaks on a berthing ship, it will be necessary to carry out a large number of tests and secure a medical system in a short period of time. Primarily, ship operators have to deal with these affairs; so, it is necessary to formulate guidelines of what businesses should do.

   In addition, it is necessary to consider establishing a system that allows local stakeholders to cooperate regularly and respond promptly, by conducting simulations and training based on a scenario that an infectious disease outbreaks aboard a cruise ship.

   An outbreak of infection cluster on a cruise ship requires various response measures as specifically described in “Chapter 1 Response situation”. In light of this, what is needed to accept cruise ships in the future is, keeping in mind that there is a certain risk of infection, formulate a response plan in advance in case of an infection outbreak with related organizations including prefecture, city (healthcare center, fire department), CIQ, and shipping agencies, and conduct regular training on various scenarios according to the response plan. In formulating guidelines and a response plan, it is necessary to develop them separately for short-term cruise ship calls with ordinary passengers and for long-term port calls without passengers for repair etc.

   ② **Clarification of the grounds for requiring response (role division) of related organizations and ship operators**

   In principle, vessels entering Japan are quarantined under the responsibility of the national government, and if an infectious disease is confirmed during the quarantine, the national government is responsible for the handling.

   However, the case of the Costa Atlantica occurred after the quarantine. The Infectious Disease Act currently in force stipulates that an administrative agency operating a healthcare center shall be responsible for the case (either Governor or Mayor of a city operating a healthcare center). In formulating the response plan mentioned in (1) above, it is necessary to determine an institution that is uniquely responsible for each port of entry, and then define its position and role in the plan so that the institution can take the initiative in response. But as in the case of the Costa Atlantica, there are matters that are difficult for a local government alone to deal with, such as large-scale clusters or operation involving foreign countries. With positioning an outbreak of infectious diseases aboard a cruise ship as a special case, we need to review the responsibilities of the national government and other related organizations.

   In addition, while the law of the country of registration (flag state) is applied to vessels on the sea including the territorial waters, the law of the country of a port of call is applied to vessels anchoring in a port or bay; thereby, a country where the port is located bears a heavy burden and responsibility. In the case of the Costa Atlantia as well, the responsibilities and liabilities of the flag-state and the Japanese side remained unclear; international rules are required hereafter to accept cruise ships. (See page 45)
Early decision on response policy

For the case of the Costa Atlantia, a basic response policy was promptly decided, on which various measures were taken. By setting a common goal at an early stage among related organizations, each organization will be able to work toward the goal under the appropriate division of roles. Furthermore, a rough schedule should be set as soon as possible.

<table>
<thead>
<tr>
<th>Opinion (issue) from related parties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Which institution should take primary responsibility was ambiguous.</td>
</tr>
<tr>
<td>* It is a healthcare center that should be in charge based on the Infectious Disease Act; related parties should have handled the case with the understanding.</td>
</tr>
<tr>
<td>A number of passengers from various countries may be on board when an infection occurs on board. It was difficult for a local government (healthcare center) to handle the matter single-handedly.</td>
</tr>
<tr>
<td>Emergency response team should be set up.</td>
</tr>
<tr>
<td>Where to set a goal should have been decided at an early stage.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Countermeasure</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Repost</strong> Formulate an emergency response plan (tentative name) in preparation for cluster infections (prefecture, city, CIQ, shipping agency, etc.)</td>
</tr>
<tr>
<td>⇒ Specify primary responsible organizations; stipulate that a countermeasures headquarters and a task force shall be established in a rapid manner.</td>
</tr>
<tr>
<td><strong>Repost</strong> Review the Infectious Disease Act in preparation for a possible outbreak of infectious diseases on cruise ships (national government)</td>
</tr>
<tr>
<td><strong>Repost</strong> Create international rules for accepting cruise ships (national government)</td>
</tr>
<tr>
<td><strong>Repost</strong> Formulate a basic response policy and a rough schedule</td>
</tr>
</tbody>
</table>

(2) Development of a collaborative system for related parties (contact / information sharing)

Development of a cooperative system for infectious disease response

It is necessary to hold a collaborative meeting for information sharing in normal times, and set up a response headquarters in the event of an emergency such as outbreak of infectious diseases; a mechanism to flexibly respond to various cases should be necessary.

In the case of the Costa Atlantica, response headquarters was immediately set up, and under which medical relief teams were organized. As a general rule, meetings were held every morning and evening by related parties such as the response headquarters, the cruise ship, the on-site command post, Nagasaki University Hospital and the national government to share information and examine response measures. However, following cases are reported: information from the headquarters was not communicated to the on-site command post; the cruise ship and the on-site command post had direct communication frequently, but such information was not communicated to the headquarters; the details of talks between the ship operator and the disinfectant operator were not communicated to the headquarters.

In order to facilitate effective information sharing and swift decision-making on-site, it shall be necessary to station officials with certain responsibility from the headquarters who can act as liaison with the office.

In addition, it was crucial to establish communication with the ship doctor at an early stage regarding the data provision app. In the event of an emergency, communication with a vessel will become an issue; therefore, we need to establish an early communication with the ship manager and the doctor conducting medical activities on board to build a relationship of trust. In the case of the Costa Atlantica, a Japanese employee who happened to be on board served effectively as an interpreter. It is desirable for cruise ships to improve their operational system such as having a Japanese interpreter always on board.

Furthermore, legal procedures related to CIQ were necessary for medical support teams regarding access permission to a vessel, details of activity, and confirmation of items brought inboard, although these procedures may differ depending on a place of action. In the case of the Costa Atlantica, medical staff in action were not aware of these procedures, and they proceeded the matter after CIQ pointed out. It is considered effective to establish a department (team) specializing in legal procedures in the response headquarters, under the cooperation of related officials from CIQ.
② Dispatch of ship operator liaison with a certain decision-making authority

A Japanese branch office of a foreign ship operator is usually positioned as its sales base. Therefore, in the event of an emergency, such as the case of the Diamond Princess, a specialized team was dispatched from the operator’s head office. In the case of the Costa Atlantica, the Costa Cruises Japan branch office did not have the authority to make decisions, and the specialized team could not come to Japan due to overseas travel restrictions. Therefore, although prompt decision-making was required on the site, confirmation work with Costa Cruises’ head office took time, leaving it an issue to be addressed.

<Opinion (issue) from related parties>

- Cooperation between responding relevant organizations (including civil agencies) and information sharing on the infection situation etc. are problem.
- Need to gather accurate information and manage information at an early stage.
- Information was shared via video conferencing every day, but some information were not transmitted to the on-site command post.
- Procedures regarding customs, etc. should have been confirmed.
- The specialized team of the ship operator was not able to visit Japan
- Since one of the crew aboard the Costa Atlantica was a Japanese interpreter who are in position with access to senior officers of the ship operator, smooth communication with foreign staff was possible; however, it is difficult for staff of a local government alone to do so.

<Countermeasure>

- Formulate an emergency response plan (tentative name) in preparation for a cluster (prefecture, city, CIQ, shipping agency, etc.) ⇒ Stipulate the importance of sharing information with related organizations
- Dispatch staff who can make decisions to some degree to the site (dispatched from an organization holding a primary responsibility)
- Flexible response for entry to Japan for a ship operator’s staff (national government)
- Japanese interpreter on board (staff who can communicate with the operation manager of a vessel) (ship operator)

(3) Construction of a medical support system in the prefecture

This port of call by the Costa Atlantica was intended for repairs, and no passengers were on board; so, management (isolation) making use of private guest cabins was possible. In addition, many of the crew members were relatively young with lower risk of aggravation. Cruise ships usually carry about 3,000 passengers alone, many of them are elderly. If an infectious disease is confirmed on board, many positives may become seriously ill.

In light of this, it is necessary to prepare as many medical institutions as possible to deal with infectious diseases. However, once a large-scale cluster occurs, the prefecture's medical system is expected to be overwhelmed. Through coordination with related organizations, asymptomatic and mildly ill persons should be isolated in private rooms on board in principle; in addition, a system to minimize stress imposed on the local medical system is required. This system should incorporate the followings: building temporary relief stations and deploying a vehicle equipped with CT scanners near the quay, and providing medical care in outboard private rooms or remotely (mobile hospital) by making use of container sheds, and accommodation facilities. We need to conduct multiple simulations based on various scenarios.

Medical services were provided by DMAT this time. However, infectious disease designated medical institutions and DMAT designated medical institutions often overlap, making it difficult to dispatch personnel at a phase of widespread infections in the prefecture at times. For this reason, we need to formulate rules regarding dispatching in advance, as well as labor management, expense payments, etc.

Additionally, we need to consider building a prefectural support system of a specialized medical team (DICT: Disaster Infection Control Team) on normal times, an expert group of infectious disease

---

27 Specialized team of a foreign ship operator: For the Diamond Princess, specialized teams from the head offices from the United States and Australia visited Japan.
countermeasures.

In the case of the Costa Atlantica, the full cooperation of Nagasaki University was obtained for testing and infection prevention measures; we also need to consider compensations for medical workers in case of emergency.

**<Opinion (issue) from related parties>**

- Secure facilities to isolate positives
- The container houses were rarely made use of. (By preparing these houses, a sense of security was promoted.)
- Since the number of infectious disease specialists is limited, it is necessary to secure personnel who can provide education on infectious disease management and actually work on site.
- Infectious disease designated (cooperation) medical institutions overlapped with DMAT designated medical institutions, making it difficult to dispatch personnel in some cases.
- A vehicle conducting infection testing would be useful. The SDF’s vehicle equipped with CT scanners was very useful in conducting triage.

**<Countermeasure>**

- Formulate an emergency response plan (tentative name) in preparation for cluster infections (prefecture, city, CIQ, shipping agency, etc.) ⇒ Stipulate the establishment of a system to minimize stress on the medical system in the prefecture.
- Secure isolation facilities (systematic preparation for container houses, accommodation facilities and other resources)
- Pre-arrangement on infectious disease response, revision of procedures, and implementation of training intended for DMAT designated medical institutions (prefectural government)
- Foster DICT (Disaster Infection Control Team) (prefectural government)
- Introduction of a vehicle equipped with CT scanners (prefectural government)

(4) Establishment of onboard medical care/management system

**① Enhancing onboard medical workforce**

In the case of the Costa Atlantica, two consort ships happened to be berthed at Koyagi Dock, and on April 26, the sixth day from the day on which an infected case was confirmed, one nurse was transferred from one of the consort ships. However, medical staff was set to be sent from a foreign country, it took a long time for them to arrive the ship due to restrictions on movement among countries (one doctor and two nurses boarded on May 15. They were isolated for two weeks in private cabins on board).

Ship operators are required to take risk response actions, such as making an agreement for staffing service in case of an emergency with medical institutions of a country where the ship make periodic calls in, and develop a remote medical care system as an emergency measure.

**② Strengthening mental care support for managing crew in private rooms**

In the case of the Costa Atlantica, all crew members were managed (isolated) in private rooms, except for the essential crew members, in order to prevent further infections.

Crew members who initially tested negative disembarked as needed after being quarantined for 14 days to go home; however, due to airport closures and lockdowns in their home countries, some members had to stay in isolated private rooms for a long period of time. Some began to feel sick from a cause other than COVID-19, and in serious cases, even suggested “suicide attempt” when having medical examination on board.

In the case of the Costa Atlantica, DPAT was dispatched at an early stage based on the lessons learned from the Diamond Princes, providing mental care support (4 cases in total). At the last minute of departure, two members were hospitalized due to mental disorder after being examined by DPAT.

When managing isolated rooms on board, isolation is expected to continue for a long period of time. This time, DPAT dispatches were made only four times. But for a vessel with many passengers including elderlies, DPAT may be frequently asked for dispatching. Therefore, it is necessary to develop a support system that can cope with a large number of consultations.
Response to private room management for passengers on board
In the case of the Costa Atlantica, since no passengers were on board, it was possible to manage (isolate) the crew by using private guest rooms; however, as in the case of the Diamond Princess, a number of passengers, thousands by passengers alone, are aboard cruise ships.

It is thus impossible to isolate and manage all passengers and crew on board by allocating private rooms to all of them. Therefore, measures in accordance with the situation are required such as; separating positives and negatives on board by testing; having those tested negative disembark according to age, presence of illness, or other factors to isolate them in accommodation facilities etc.; having those tested positive isolate on board or hospitalize in a designated medical institution.

Early disinfection and waste disposal on board
In the case of the Costa Atlantica, with the cooperation of the National Institute of Infectious Diseases, infectious disease experts were immediately dispatched to the vessel and provided the essential crew with infection prevention education, guidance on how to put on and take off personal protective equipment, as well as instructions on disinfection of the common space on board where they work.

Disinfection work should have been carried out on board as soon as possible, from the perspective of managing passengers and crew, to prevent the spread of infection to the essential crew and to smoothly carry out onboard support activities from outside the vessel. However, on the case of the Costa Atlantica, it took long time to select disinfection operators.

Ship operators and shipping agencies should make an arrangement with disinfection operators in preparedness for a possible outbreak of infectious disease on board so that disinfection can be carried out immediately in case of emergency.

Additionally, after the outbreak of infectious disease on board, concerns were raised among private waste disposal operators over infection spread and damage reputation; therefore, waste disposal was not outsourced to them, but conducted by Nagasaki city instead.

Ship operators and shipping agencies should make an arrangement with waste disposal operators, in addition to disinfection operators. Concurrently, it is necessary to map out what an administrative agency should do.

Meal support for private room management
When an infectious disease occurs and crew management (isolation) in private rooms is conducted, the number of essential crew members working around on board should be minimized to prevent further infections. Therefore, procurement of meals from outside, instead of cooking on board, is effective in reducing the number of crew involved in meal service.

However, passengers and crew on board come from various countries, with various principles and tastes, requiring meal options such as vegetarian, halal, allergies-free. Therefore, it is required to make an arrangement with local meal providers about meal orders.

<Opinion (issue) from related parties>
- There were only a few doctors, nurses, and interpreters on board; a heavy workload was imposed on them.
- Stress associated with prolonged stay on board increased among the crew; therefore, consultation should have been provided at an earlier stage in their native languages, but it was difficult to respond to their language demand.
- Grasp information about the progress of disinfection work on board by the operators hired by the ship operator.
- Due to concerns about reputation damage, operators who collect waste generated on board were not secured.
- Most of those on board are foreign nationals; considerations should be given for their meals.

<Countermeasure>
- Strengthening DPAT that respond to those who complains of mental disorders (prefectural
government)
* For consultation only cases, consider asking volunteers fluent in languages or establishing a telephone consultation system.

- Thorough information sharing with ship operators
- Secure medical staff, disinfection operator, waste disposal operator, and meal provider who can cope with food request from foreign nationals in the event of emergency situations (ship operator).

(5) Appropriate information dissemination

① Quick and easy-to-understand information dissemination
To disseminate information promptly and appropriately, sorting out facts is necessary more than anything. For this purpose, as mentioned above, a system to share information on a daily basis with vessels and shipping agencies should be established.

Related organizations will sort out facts without delay and decide a response policy; if multiple organizations are involved, roles of each organization should be clarified in advance.

In addition, in the early stage of an outbreak, information is provided by different routes from multiple institutions, and information congestion may occur. Therefore, the contact point for external bodies for sorting information should be unified, and a manager responsible for information management should be immediately assigned.

Regarding information dissemination, it is necessary to open information widely through press conference or other means with the cooperation of the press club and news organizations; at the same time, information should be offered on the official homepage in a rapid manner.

Information should contain details from the perspective of the residents in the prefecture.

② Accurate information dissemination to prevent discrimination against related parties and reputational damage
Since the outbreak of novel coronavirus infection in Japan, news media have been covering various reports on the virus, not just on the cases of cruise ships. While these reports led to people's calm behavior, some people showed excessive reactions for the medical professionals and other related parties.

In order to prevent such discrimination and reputational damage, information on policies and countermeasures should be delivered as accurate and easy-to-understand way as possible.

In the case of the Costa Atlantica, basic policy was discussed under the initiative of the national government, and two days after the confirmation of infection, a response policy and countermeasures were announced regarding private room management on board, early disembarkation and repatriation; however, if an early disclosure of information on rough schedules is possible, it will lead to the peace of mind, understanding and cooperation of the residents of the prefecture, passengers, and crew.

What's more, at the beginning of the outbreak, wrong information was sent about the movement history of crew members on boarding/disembarking etc., leading to a growing anxiety among the prefecture's residents. It is necessary to keep in mind that accurate information transmission is a foundation, along with prompt response.

<Opinion (issue) from related parties>
- Immediate and effective dissemination of information about the infection situation was required.
- The outbreak of infection clusters caused rumors about neighboring residents.

<Countermeasure>
- Prepare public relations manuals for crisis response (assignment of information manager, etc.)
- Disseminate updated information on the website or SNS in cooperation with related organizations
- Provide proper information to local residents without delay regarding infection routes, movement history of infected persons, countermeasures, etc.
(6) **Centralize the contract point for embassies (consulates) in Japan**

In the case of the Costa Atlantica, embassies of various countries in Japan requested to provide personal information of crew members, and we were swamped in responding to their inquiries. Such information was also provided to the national government to support the repatriation of the crew. It is desirable that such information be centrally dealt with single-handedly by the national government based on international information provision rules.

<table>
<thead>
<tr>
<th>&lt;Opinion (issue) from related parties&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>* Initially, a contact point dealing with these matters was not clear, so the prefecture where the press conference was held was flooded with inquiries from the embassies of crew members' countries in Japan.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>&lt;Countermeasure&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>* Centralize the contact point for inquiries from foreign embassies (national government)</td>
</tr>
</tbody>
</table>
[Phase 5: At repatriation]
On April 22, a basic policy “those tested negative should be repatriated as soon as possible” was
determined among related organizations; therefore, in order to realize the repatriation by chartered
or commercial flights (regular flights) from May 3, the last day of the 14 days health observation
period in private rooms (isolation) started from April 19, various efforts were made to realize the
operation.
In addition, on and after May 14, the crew members who initially tested positive but confirmed
negative after retesting also started to return home in sequence. On the other hand, due to
COVID-19 pandemic in their home countries, repatriation by aircraft was not possible for some crew
members, who then returned home aboard the cruise ship. (See page 39)

The following issues are identified by examining the repatriation measures.

1. Repatriation support for passengers
(1) Secure transportation means (promote the understanding of airlines and bus operators
about the risk of infectious diseases)
In supporting the repatriation of the crew who tested negative, it was difficult to secure
transportation means because chartered and regular flights were reduced in number due to
cross-country movement restrictions amid the infection spread worldwide. However, airliners made
every effort in coordinating, and with their cooperation, those crew were able to return home.
In addition, as for transportation from the port to the airport, securing bus operators was
expected to be difficult because it was for crew members from the cruise ship where an
unprecedented novel coronavirus infection cluster occurred. The prefecture explained the risk of
infectious diseases and preventive measures to the businesses and workers in advance, and
implemented the operation smoothly with the cooperation of multiple bus operators and the
understanding of drivers and workers.
Hereafter, transportation will be operated in accordance with “Guidelines for Preventing the
Spread of New Coronavirus Infection in the Aviation Field” developed by the Scheduled Airlines
Association and the All Japan Airport Terminal Association and “Guidelines for COVID-19 Response
in Chartered Buses” developed by the Chartered Bus Tour Liaison Committee. It is necessary to
once again promote the understanding of the risk of infectious diseases to bus operators, while
discussing on the matters relating to transportation of infected individuals.

<table>
<thead>
<tr>
<th>&lt;Opinion (issue) from related parties&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Securing domestic transportation was difficult.</td>
</tr>
</tbody>
</table>
| • Information from Costa Cruises sometimes came at the very last minute (information on the
  number of passengers, departure time, etc.); and sudden cancellations also made the
  arrangement difficult. |
| • It was difficult to secure repatriation means to overseas countries. |

<table>
<thead>
<tr>
<th>&lt;Countermeasure&gt;</th>
</tr>
</thead>
</table>
| • Provide information on infection risks to bus operators and cooperate with them (ship
  operators, transport operators, prefectural government) |
| • Prepare a system in which information is shared among related organizations and sudden
  changes can be dealt with. |
| • Secure chartered aircrafts by the national government through negotiations with other
  countries (ship operator, national government (Ministry of Foreign Affairs)) |

(2) Criteria on test for negative confirmation (for positives)
In supporting the repatriation of the crew, it was found that criteria on confirmation test for entry
differed depending on a receiving country.
For example, some countries required two negative confirmations, while other required a
second test one-week after the first test that confirmed negative; thus, these differences in
requirements made repatriate management complicated. Furthermore, some countries did not
accept LAMP test results used by Nagasaki Prefecture, and required PCR tests instead. These
requirements took time to cope with and increased the workload of the on-site managers and
medical personnel. It is considered necessary to establish international inspection rules by the WHO
or other organization.
<Opinion (issue) from related parties>
- Acceptance conditions of each country were unclear.
- Need to coordinate with PCR testing organizations before repatriation.

<Countermeasure>
- Obtain cooperation from the Ministry of Foreign Affairs in coordinating with relevant countries (national government)

(3) Centralized the contact point to foreign embassies (consulates) in Japan << Repost of Phase 4 >>
In the case of the Costa Atlantica, embassies of various countries in Japan requested to provide personal information of crew members, and we were swamped in responding to their inquiries. Such information was also provided to the national government to support the repatriation of the crew. It is desirable that such information be centrally dealt with single-handedly by the national government based on international information provision rules.

<Opinion (issue) from related parties>
- Initially, a contact point dealing with these matters was not clear, so the prefecture where the press conference was held was flooded with inquiries from the embassies of crew members’ countries in Japan.

<Countermeasure>
- Centralize the contact point for inquiries from foreign embassies (national government)
[Phase 6: At departure]

Although the departure of the Costa Atlantica was uncertain because of the situation of infected patients on board and arrangements with receiving ports (countries), the concerned parties had been discussing the matter by setting its departure by the end of May. The destination country of the vessel set a condition that it cannot accept a vessel with positive persons on board. Therefore, it had to be decided whether the positives should be disembarked and accepted medical institutions in the prefecture, or whether the ship departure should be postponed until all positives confirmed to be negative.

The following issues are identified by examining the response measures at departure.

1. Support for departure
   (1) Response to those stayed on board (positives) (develop a system to accept asymptomatic positives in the prefecture)

In the case of the Costa Atlantica, all crew members except those hospitalized were confirmed tested negative by the time of the ship’s departure, consequently no positives remained after the departure. However, if those tested positive are not confirmed negative and repatriation is not allowed, they will continue to stay in Japan and should be accepted by a medical institution designated for infectious diseases or an accommodation facility in the prefecture.

In order to improve a system of accepting cruise ships, it will be necessary to ensure the securing of accommodation facilities in preparing for the spread of infectious diseases in the prefecture. Those tested negative who cannot secure a return flight have to stay on board for a long period of time, and as mentioned on page 64 above, there are concerns over mental care. It should be considered, in light of reducing stress on the onboard medical system, to review the immigration law so that passengers can be disembarked and accepted in a facility for those waiting entry permission or an accommodation facility for treatment located in city where an international airport is located or its surrounding municipalities.

---

<Opinion (issue) from related parties>
- Several crew members were hospitalized with mental health problems caused by long-term stay on board.
- Secure domestic transportation means and landing permit (immigration requirements should have been relaxed?)

<Countermeasure>
- Secure a system for acceptance at medical institutions and accommodation facilities designated by the prefecture (prefectural government)
- Consider relaxing immigration control requirements for departure (national government)

<Reference>

<table>
<thead>
<tr>
<th>Immigration Control and Refugee Recognition Act (Definition)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Article 2</td>
</tr>
<tr>
<td>(1)</td>
</tr>
<tr>
<td>(2)</td>
</tr>
<tr>
<td>(3)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Crew member landing permission) * Applicable only to crew: 7 days or 15 days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Article 16</td>
</tr>
</tbody>
</table>

Ordinance for Enforcement of the Immigration Control and Refugee Recognition Act

---

-64-
(Crew member landing permission)

Article 15

3. The landing period, scope of action and other restrictions pursuant to the provisions of Article 16, Paragraph 5 of the Act shall be in accordance with the following items.

(I) The landing period shall be determined by the immigration inspector according to the following categories.

(a) Where landing in the vicinity of one port of entry/departure is permitted: Within 7 days;
(b) When landing in the vicinity of one port of entry/departure is permitted and the immigration inspector finds that there is a special reason: Within 15 days;
(c) When landing in the vicinity of two or more ports of entry/departure is permitted: Within 15 days;
(d) When landing is permitted in order to transfer to another vessel or aircraft located at the port of entry/departure at which the vessel or aircraft that the crew member boarded arrived: Within 7 days;
(e) In the event that the landing is permitted in order to transfer to another vessel or aircraft located at another port of entry/departure: Within 15 days;

(ii) The area of movement is within the area of the municipality where the port of entry/departure at which the crew member arrived is located, except for cases where the immigration inspector finds that there is a special reason and decides otherwise; Provided, however, that the route to be followed while in transit where landing is permitted in order to allow a foreign national to transfer to another vessel or aircraft located at another port of entry/departure is determined according to the route to the port of entry/departure where the vessel or aircraft to which the foreign national intends to transfer is located;

(2) Movement order for vessels at anchor (Measures when the movement order is refused)

In the case of the Costa Atlantica, a move order was not issued. In contrast, the Costa Venezia, which was accepted from a humanitarian perspective for supply and fuel replenishment under the condition of no crew disembarkation, delayed its departure well beyond its schedule.

If the ship continued mooring, the crew should be allowed landing on humanitarian grounds, which may lead to a risk of infection outbreak or impact on medical institutions in the city; From this viewpoint, the prefectural government took it seriously and issued a move order to the Costa Venezia based on Article 21 of the Port Management Ordinance (Movement Order to Anchored Vessels, etc.). However, noncompliance penalty for this order is relatively minor. This punitive clause has to be examined to make it more effective, including evaluation of its actual effectiveness to non-complying vessels.

<Opinion (issue) from related parties>
- How to deal with the Costa Venezia, which did not depart as scheduled, was a problem.

.Countermeasure>
- Examine effective ship movement orders, including revision of the prefectural port management regulations (prefectural government)

<Reference>

Nagasaki Port Management Ordinance
(Movement order for vessels and ships at anchor)

Article 21 The Governor may order the movement of berthed vessels etc., when he/she finds it necessary to promote the use of the port.

(Penalty)
Article 45 A fine of 50,000 yen or less shall be imposed on persons who fall under any of the following items.

(4) Persons who did not comply with the Governor’s order based on the provisions of Article 21, Article 23 or Article 24

-65-
[Items to be addressed for the safe acceptance of cruise ships]

The followings are “major items to be addressed,” which were extracted from the six phases, and classified again by category.

These response measures cannot be implemented without cooperation and support of related organizations. In order to improve an environment for accepting cruise ships in ports in Nagasaki and other areas, the national government, ship operators, and related organizations should make an effort to take swift countermeasures according to their respective roles.

<table>
<thead>
<tr>
<th>Item</th>
<th>Task</th>
<th>Countermeasure</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Clarification of responsibilities and respective roles regarding infection prevention</td>
<td>(1) Positioning under the Infectious Disease Act and clarification of international rules</td>
<td>According to the Infectious Diseases Act, it is under the jurisdiction of the local government (in this case, Nagasaki City establishing a healthcare center); but as for large-scale infections on cruise ships, etc., what a local government can handle is limited. Costs for administration inspection, medical care for hospitalization are borne by the national and local governments. A local government alone cannot handle large-scale clusters on cruise ships. The scope of responsibility of the flag state, a ship owner, and a ship operator (operating company) is unclear.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[Recommendations to the national government]</td>
</tr>
<tr>
<td></td>
<td></td>
<td>・The case of the Costa Atlantica was settled by prompt actions taken by the national government responding to a request by Nagasaki Prefecture; still, a system should be developed in which the national government can take initiatives even after quarantine if an infectious disease is confirmed, and its operational rules should be clarified.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>・Clarifying the scope of responsibility of a flag state, a ship owner, and a ship operator (operating company)</td>
</tr>
<tr>
<td></td>
<td>(2) Compliance with guidelines; thorough implementation of guidelines</td>
<td>Infection prevention measures on cruise ships should be enhanced.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[Recommendations to the national government]</td>
</tr>
<tr>
<td></td>
<td></td>
<td>・Reflecting the results of this investigation, such as reviewing lifestyles on board, to cruise ship operation guidelines prepared by the national government and related organizations.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[Response by the prefecture]</td>
</tr>
<tr>
<td></td>
<td></td>
<td>・Making sure to notify cruise ship operation guidelines to industry groups in the prefecture to thoroughly implement infection prevention measures.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>・For cruise ships entering the port, confirm in advance that the guidelines are being observed as a requirement for entry.</td>
</tr>
<tr>
<td></td>
<td>(3) Response action as a port manager of the public and private sectors</td>
<td>Need specific operational policies in deciding whether or not to accept a cruise ship, in terms of infection control system on board, epidemic situation of a region, the tightness of the medical system, etc. Need a mechanism that can issue a request to a cruise ship docked in port to move to other areas depending on a regional pandemic situation.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[Recommendations to the national government]</td>
</tr>
<tr>
<td></td>
<td></td>
<td>・Creating a mechanism to organize receiving ports across the nation.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[Response by the prefecture]</td>
</tr>
<tr>
<td></td>
<td></td>
<td>・Creating a specific operation policy for accepting a cruise ship or for requesting a ship docked in port to move, according to indicators of infection control system on board, local epidemic situation, and stress levels on the medical system.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>・Consider revising the prefectural port management ordinance so that effective measures can be taken to port managers in the public and private sectors.</td>
</tr>
<tr>
<td>Item</td>
<td>Task</td>
<td>Countermeasure</td>
</tr>
<tr>
<td>------</td>
<td>------</td>
<td>----------------</td>
</tr>
</tbody>
</table>
| 2. Development of a collaborative system | (1) Establish an information sharing system | • In order to prevent the infection from spreading in the community, shipping companies (ship operator) should take responsibility for conducting health observation of passengers and crew and information sharing.  
• Information on crew change that are obtained by shipping companies (ship operator), quarantine station that has jurisdiction over the airport of entry, etc., the Immigration Services Agency of Japan, and the customs should be shared.  
[Recommendations to the national government]  
• Creating a system for sharing information with related local governments regarding the health status of passengers and crew change.  
[Response by the prefecture]  
• Launching a new organization, “Cruise Ship Acceptance Liaison Council (tentative name),” by all relevant bodies and industries relating to accepting cruise ships, and formulating “Emergency Response Plan (tentative name)” and other strategies for concerned parties to share information and work in partnership in the event of an emergency. |
| | (2) Enhancement of medical system | • In the event of an infection cluster outbreak, testing is needed for a large number of people and a medical system should be secured in a short period of time.  
[Recommendations to the national government]  
• Developing a structure of hospitalization that can accept patients broadly in the event of an infection cluster outbreak, establish a core medical system for treating infected patients in medical institutions nationwide, and construct a mechanism in which registered specialists in infectious disease nationwide are dispatched promptly as necessary.  
[Response by the prefecture]  
• Further enhancing prefectural medical system  
• Implementing regular simulations and training in case of large scale cluster, establish a system so that concerned parties can act quickly.  
• Collaborating with Nagasaki University, which has a national reputation in the field of infectious disease treatment and research, and played a major role for this matter, to be a national hub specializing in infectious diseases for human resource development, research, and testing systems. |
### Reference: Major issues sorted out by phase, direction of countermeasures, and action policy

<table>
<thead>
<tr>
<th>Phase</th>
<th>Item Issue</th>
<th>Direction of response measures</th>
<th>Initiative policy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before arrival in port</td>
<td>Need thorough practice of good hygiene and health management on board</td>
<td>Enhance measures against infectious diseases on board</td>
<td>• Request ship operators to work in accordance with the cruise ship operation guidelines, etc. provided by the national government and industry groups, and encourage the enhancement of guidelines (specific measures in the event of an infectious disease).</td>
</tr>
<tr>
<td></td>
<td>Insufficient preparation in case of infectious disease on board</td>
<td>• Prepare infectious disease response manuals (prevention of infection/prevention of further spread) and stock protective equipment, masks, gloves, etc. (formulation of infectious disease guidelines by industry groups)</td>
<td>• Closely monitor the trends of new certification systems for infection prevention in Japan and other nations, and proceed with research for making the receipt of certifications a condition for permitting port calls as needed basis.</td>
</tr>
<tr>
<td></td>
<td>Need to establish an early notification system to related organizations when an infectious disease occurs.</td>
<td>• Implement infectious disease prevention education for crew members</td>
<td>• “Cruise Ship Acceptance Liaison Council (tentative name),” which is planned to be launched, creates emergency call contact lists.</td>
</tr>
<tr>
<td></td>
<td>Local governments alone cannot handle large-scale clusters on cruise ships.</td>
<td>• Review the system designed on the assumption of occurrence of an infectious disease on cruise ships (national government)</td>
<td>Encourage the national government to review and clarify the system regarding the responsibilities (roles) and burdens of the nation, prefecture, and city when a large-scale cluster occurs on a cruise ship.</td>
</tr>
<tr>
<td></td>
<td>A large amount of financial burden will be incurred due to the implementation of infectious disease countermeasures, etc., and need to negotiate with a ship operator regarding the cost of special medical support.</td>
<td>Create international rules (including payment of cost) when an infectious disease occurs on a cruise ship</td>
<td>Establish a new organization “Cruise Ship Acceptance Liaison Council (tentative name)” by all related organizations and industries involved in the acceptance of cruise ships, and hold discussions to resolve issues.</td>
</tr>
<tr>
<td></td>
<td>Need preparations (hard, soft) in case of an infectious disease outbreak on a public quay</td>
<td>Enhance measures against infectious diseases by related organizations and businesses at terminals, etc. (Measures to prevent infectious diseases from being brought on board)</td>
<td>Establish a new organization “Cruise Ship Acceptance Liaison Council (tentative name)” by all related organizations and industries involved in the acceptance of cruise ships, and hold discussions to resolve issues.</td>
</tr>
<tr>
<td></td>
<td>Equipment and systems required for the port facilities</td>
<td>Formulate Emergency Response Plan (tentative name) in the event of an infectious disease (and conduct training at related organizations)</td>
<td>Establish a new organization “Cruise Ship Acceptance Liaison Council (tentative name)” by all related organizations and industries involved in the acceptance of cruise ships, and hold discussions to resolve issues.</td>
</tr>
<tr>
<td></td>
<td>Need to establish an early notification system to related organizations when an infectious disease occurs.</td>
<td>Construct a communication system with related organizations that operates from normal times and a cooperation system in case of an emergency</td>
<td>Establish a new organization “Cruise Ship Acceptance Liaison Council (tentative name)” by all related organizations and industries involved in the acceptance of cruise ships, and hold discussions to resolve issues.</td>
</tr>
<tr>
<td></td>
<td>Medical support system covering a broad area</td>
<td>Establish medical support system that covers a broad area</td>
<td>Encourage the national government to build a system for accepting infected patients extensively and for dispatching specialists.</td>
</tr>
<tr>
<td>Phase</td>
<td>Item</td>
<td>Issue</td>
<td>Direction of response measures</td>
</tr>
<tr>
<td>------------</td>
<td>----------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>2. At arrival in port</td>
<td>Need information (voyage route, health status of crew and passengers) so that port managers can grasp the risk of infection in advance.</td>
<td>Share quarantine information at First port (quarantine station ⇒ all domestic ports of call)</td>
<td>Consider creating a system to obtain information required by port managers and work with the national government.</td>
</tr>
<tr>
<td></td>
<td>Need a mechanism to appropriately share the information that the host municipality should grasp</td>
<td>Create a system that allows ships (or shipping agencies) and each port of call to collect information and communicate in a timely manner (national government)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>There are no grounds for refusing port entry of a ship where the outbreak of a new coronavirus infection is suspected.</td>
<td>Create grounds for decisions on refusal of port entry when a infectious disease outbreak is suspected (revision of prefectural port management regulations, enforcement regulations, etc.)</td>
<td>Proceed with studies to revise the Port Management Ordinance, etc., and work on the national government to create a mechanism to extensively coordinate ports of calls for cruise ships.</td>
</tr>
<tr>
<td></td>
<td>Need to create a mechanism for sharing information when an infectious disease outbreak is suspected after the second port.</td>
<td>Share quarantine information</td>
<td>Consider creating a system to obtain information required by port managers and work with the national government.</td>
</tr>
<tr>
<td>3. After arrival in port (before outbreak)</td>
<td>Need to grasp the health information of crew and passengers and their sightseeing/ action route of the port of call in order to detect an abnormality on board at an early stage and identify close contacts.</td>
<td>Collect passenger health status information and behavior records using an app and provide information to the receiving municipality as needed</td>
<td>Encourage industry groups and ship operators to include these items in infectious disease guidelines.</td>
</tr>
<tr>
<td></td>
<td>Need to have a mechanism for sharing passengers’ health information (in the event of an accident) with related organizations in the receiving port.</td>
<td>&lt;&lt; Repost &gt;&gt; Create a system that allows ships (or shipping agencies) and each port of call to collect information and communicate in a timely manner</td>
<td>Consider creating a system to obtain information required by port managers and work with the national government.</td>
</tr>
<tr>
<td></td>
<td>For crew change, thorough national border control by the national government is important.</td>
<td>Strengthen quarantine practices (at the time of crew change)</td>
<td>Work on the national government to implement thorough border control measures, and to consider creating a system to obtain information required by port managers</td>
</tr>
<tr>
<td></td>
<td>Need a mechanism to share crew change information with port managers, etc.</td>
<td>Share information on the boarding/discharging of crew such as crew changes</td>
<td></td>
</tr>
<tr>
<td>Phase</td>
<td>Item</td>
<td>Issue</td>
<td>Direction of response measures</td>
</tr>
<tr>
<td>-------</td>
<td>------</td>
<td>-------</td>
<td>---------------------------------</td>
</tr>
<tr>
<td>After arrival in port  (At the time of outbreak)</td>
<td>Early response policy</td>
<td>In the event of a cluster outbreak, it will be necessary to carry out tests for a large number of people and secure a medical system in a short period of time; a cooperative system of related parties such as the government, medical institutions, and shipping companies is required.</td>
<td><strong>&lt;&lt; Repost &gt;&gt;</strong> Formulate Emergency Response Plan (tentative name) in the event of an infectious disease  * Points to note when formulating Emergency Response Plan (tentative name) (items need to be included)  * Clarify the roles of the organization that is primarily responsible and related organizations  * Set up a countermeasure headquarters and each task force without delay  * Setting of a basic response policy and a rough schedule without delay  * Share information among related organizations  * Dispatch staff who can make certain decisions on-site (from the primary responsible organization)</td>
</tr>
<tr>
<td></td>
<td>Response by ship operators</td>
<td>Overseas ship operators are required to have specialized teams that can make quick decisions.</td>
<td>Flexible handling for ship operator’s staff entering Japan (national government)</td>
</tr>
<tr>
<td></td>
<td>Establish onboard medical care/management system</td>
<td>If an infectious disease occurs on board, it is necessary to create a mechanism to minimize the impact imposed on community medical system.</td>
<td><strong>&lt;&lt; Repost &gt;&gt;</strong> Secure a place to stay for asymptomatic individuals and improve the transportation system for infected individuals.</td>
</tr>
<tr>
<td></td>
<td>Establish onboard medical care/management system</td>
<td>Need to secure related businesses that can respond in the event of an emergency</td>
<td>Secure various related businesses in preparation for a crisis  * Consider the following as preparation  * Pre-arrangement on infectious disease response, revision of procedures, and implementation of training for DMAT designated medical institutions  * Developing DICT (Disaster Infection Control Team)  * Introducing CT scanners equipped vehicles  * Strengthening DPAT, etc. assuming mental disorders</td>
</tr>
<tr>
<td></td>
<td>Appropriate information dissemination</td>
<td>Need to send accurate and prompt information to the residents of the prefecture.</td>
<td>Prepare public relations manuals for crisis response (assignment of information manager, etc.)</td>
</tr>
<tr>
<td>Phase 4</td>
<td>After arrival in port</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phase</td>
<td>Item</td>
<td>Issue</td>
<td>Direction of response measures</td>
</tr>
<tr>
<td>-------</td>
<td>------</td>
<td>-------</td>
<td>--------------------------------</td>
</tr>
<tr>
<td>5</td>
<td>At repatriation</td>
<td>Difficult to secure transportation means for crew and passengers aboard a ship where infectious disease clusters occurred to move in the prefecture (from the port to the airport)</td>
<td>Secure transportation means within the prefecture (coordinate with bus operators in the prefecture in advance)</td>
</tr>
<tr>
<td></td>
<td>Secure transportation means within the prefecture</td>
<td>Secure charter aircrafts through consultation with airlines and coordinate with host countries</td>
<td>Request the national government to cooperate in arrangement with receiving countries to secure charter aircrafts.</td>
</tr>
<tr>
<td></td>
<td>Difficult to secure return flights for crew and passengers aboard the ship where infectious disease clusters occurred.</td>
<td>Secure charter aircrafts through consultation with airlines and coordinate with host countries</td>
<td>Request the national government to cooperate in arrangement with receiving countries to secure charter aircrafts.</td>
</tr>
<tr>
<td></td>
<td>Secure charter aircrafts through consultation with airlines and coordinate with host countries</td>
<td>Secure charter aircrafts through consultation with airlines and coordinate with host countries</td>
<td>Request the national government to cooperate in coordinating acceptance conditions with each country.</td>
</tr>
<tr>
<td>6</td>
<td>At departure</td>
<td>Negative confirmation test standards differed in receiving countries, making management of those scheduled to return home complicated</td>
<td>Coordinate acceptance conditions with each country (establishment of international inspection rules)</td>
</tr>
<tr>
<td></td>
<td>A positive person who are not confirmed test negative has to be isolated in Japan, therefore it is necessary to secure accommodation facilities etc.</td>
<td>&lt;&lt; Repost &gt;&gt; Secure a place to stay for asymptomatic individuals and improve the transportation system for infected individuals.</td>
<td>Proceed with discussions while formulating &quot;Emergency Response Plan (tentative name)&quot;.</td>
</tr>
<tr>
<td></td>
<td>Those tested negatives who could not secure a return flight were not allowed to disembark and were forced to stay on board for a long period of time.</td>
<td>Relaxation of landing permit until return flight is secured</td>
<td>Work on the national government to flexibly operate immigration control in an emergency.</td>
</tr>
<tr>
<td></td>
<td>Need effective movement order for vessels that do not depart</td>
<td>Examine effective ship movement orders (e.g., revision of the prefectural port management regulations)</td>
<td>Investigate the situation in other prefectures and proceed with consideration to revise the port management regulations.</td>
</tr>
</tbody>
</table>
In conclusion

We would like to express our sincere gratitude to all the members of the Investigation and Evaluation Committee and all those concerned who provided us with advice and guidance from a professional perspective on issues and countermeasures.

The large-scale coronavirus cluster outbreak on the Costa Atlantica was the second such case in Japan following the Diamond Princess. At present, there are some strict views on the so-called three-Cs travel style in which a large number of passengers are gathered at one time. However, to promote the acceptance and attraction of cruise ships by the entire country, taking measures against infectious diseases is an issue that cannot be avoided.

The case of the Costa Atlantica required a series of responses that Nagasaki Prefecture and Nagasaki City had never experienced before. Compiling this investigation report was important for the parties concerned, including the prefectural and municipal governments, to make use of the lesson learned from this case.

In particular, the national government established a collaborative system with related ministries and agencies at the request of the prefecture, and took various measures under its initiative in a rapid and accurate manner, helping to bring the incident to a successful conclusion. In preparation for a case like, we would like the national government to consider institutionalizing a system that allows the active involvement of the national government, rather than taking a temporary response.

From now on, while following up on the contents summarized in this investigation report at the related departments of the prefectural/municipal governments, we will utilize this report for the development of concrete measures and actions to enhance and strengthen measures for the acceptance of cruise ships, and also make updates consistently in preparation for an emergency.

In addition, infectious disease response relating to cruise ships requires a unified effort not only by the prefecture and the municipality, but also by the national government and related organizations working according to their respective roles. Nagasaki Prefecture and Nagasaki City will continue effort to create a system that enables closer cooperation and information sharing by related organizations.
Investigation and Evaluation Committee on the outbreak of novel coronavirus cluster aboard the cruise ship “Costa Atlantica”

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Field</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shigeru Kohno</td>
<td>President, Nagasaki University</td>
<td>Chair</td>
</tr>
<tr>
<td>Motoi Suzuki</td>
<td>Director, the Infectious Diseases Surveillance Center, the National Institute of Infectious Diseases</td>
<td></td>
</tr>
<tr>
<td>Koichi Izumikawa</td>
<td>Professor, Department of Infectious Disease, Nagasaki University</td>
<td>Academic</td>
</tr>
<tr>
<td></td>
<td>Graduate School of Biomedical Sciences</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Director, Nagasaki University Hospital Infection Control and Education Center</td>
<td></td>
</tr>
<tr>
<td>Hayato Takayama</td>
<td>Vice Director, Regional Medical Support Center, Nagasaki University Hospital</td>
<td></td>
</tr>
<tr>
<td>Nobuo Akai</td>
<td>Professor, Osaka School of International Public Policy</td>
<td>Legal</td>
</tr>
<tr>
<td></td>
<td>Auditor, The Academic Society for Cruise &amp; Ferry, Japan</td>
<td></td>
</tr>
<tr>
<td>Yutaka Yamamoto</td>
<td>Professor, Graduate School of Regional Design and Creation, University of Nagasaki</td>
<td></td>
</tr>
<tr>
<td>Hirohisa Fukuda</td>
<td>Representative lawyer, Attorney at Law FUKUDA &amp; KINOSHITA</td>
<td></td>
</tr>
<tr>
<td>Katumi Nakata</td>
<td>Director-General, Nagasaki Prefecture Health &amp; Welfare Department</td>
<td>Administration</td>
</tr>
<tr>
<td>Hideki Okuda</td>
<td>Director-General, Nagasaki Prefecture Public Works Department</td>
<td></td>
</tr>
<tr>
<td>Hiroshi Tanabe</td>
<td>Director, Community Health Department, Nagasaki City</td>
<td></td>
</tr>
<tr>
<td>Katsuaki Motomura</td>
<td>Director, Public Health Center, Nagasaki City</td>
<td></td>
</tr>
</tbody>
</table>
[Reference]
<table>
<thead>
<tr>
<th>Date</th>
<th>Movement of the cruise ship, outbreak of COVID-19 infection, etc.</th>
<th>Response of related organizations, etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan. 27, 2020</td>
<td>Inquiry from Costa Cruises to Mitsubishi Shipbuilding about the availability of repair works for the cruise ship</td>
<td></td>
</tr>
<tr>
<td>Jan. 29, 2020</td>
<td>The Costa Atlantica entered Nagasaki Port to replenish supplies, then berthed at Matsugae Pier.</td>
<td></td>
</tr>
<tr>
<td>Jan. 31, 2020</td>
<td>The Costa Atlantica berthed at Koyagi Plant East No. 3 Dock of Mitsubishi Heavy Industries Nagasaki Shipyard &amp; Machinery Works.</td>
<td></td>
</tr>
<tr>
<td>Mar. 6, 2020</td>
<td></td>
<td>Nagasaki prefectural government asked the concerned cruise ship operator via the shipping agency to discourage their crew to disembark for a visit to densely populated urban areas. In addition, the prefecture notified Mitsubishi Heavy Industries Marine Structure about response measures that the prefectural government will take at Koyagi Dock as the port manager to prevent the spread of infection, and asked for the company’s understanding on this matter.</td>
</tr>
<tr>
<td>From Mar. 16, 2020</td>
<td></td>
<td>Mitsubishi Heavy Industries Nagasaki Shipyard &amp; Machinery Works strengthened health checks of workers at the plant entrance.</td>
</tr>
<tr>
<td>Mar. 20, 2020</td>
<td>Repair work completed</td>
<td></td>
</tr>
<tr>
<td>Mar. 26, 2020</td>
<td>The vessel moved to Matsugae Pier for supply replenishment.</td>
<td></td>
</tr>
<tr>
<td>From Mar. 27, 2020</td>
<td>(Test operation at sea)</td>
<td></td>
</tr>
<tr>
<td>From Apr. 1, 2020</td>
<td>Docked again at Koyagi Plant</td>
<td></td>
</tr>
<tr>
<td>Apr. 19, 2020</td>
<td>Around 17:00: Nagasaki City Returnees and Contact Persons Consultation Center was consulted by the Costa Atlantica about four crew members with fever.</td>
<td>At the discretion of the ship manager, they were isolated and observed in private rooms on board.</td>
</tr>
<tr>
<td>Apr. 20, 2020</td>
<td>The ship doctor collected samples from the four.</td>
<td>19:00: Nagasaki prefectural government, Nagasaki municipal government, Mitsubishi Shipbuilding, and Nagasaki University checked the ongoing situation and share information.</td>
</tr>
<tr>
<td></td>
<td>9:30: Received the four samples from the vessel, which underwent PCR testing at Nagasaki Municipal Public Health and Environment Laboratory.</td>
<td>22:00: Press conference Nagasaki Governor, Nagasaki Mayor, Managing Executive Officer of Mitsubishi Shipbuilding Co., Ltd. Director-General of Nagasaki Prefecture Health &amp; Welfare Department, Director of the Nagasaki City Public Health Center “PCR tests were conducted on four crew members and one was confirmed positive for COVID-19 (first case).”</td>
</tr>
<tr>
<td></td>
<td>Around 16:30: One was confirmed tested positive.</td>
<td></td>
</tr>
<tr>
<td>Date</td>
<td>Movement of the cruise ship, outbreak of COVID-19 infection, etc.</td>
<td>Response of related organizations, etc.</td>
</tr>
<tr>
<td>------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| Apr. 21, 2020 | 19:00: Completed sample collection of 57 crew members. Samples underwent testing by fluorescent LAMP method at the Institute of Tropical Medicine, Nagasaki University | 10:00: Nagasaki government asked the national government for active support and response, such as dispatching experts (Nagasaki Governor → Chief Cabinet Secretary Suga)  
13:30: Two DMAT secretariat staff member dispatched from the Ministry of Health, Labour, and Welfare (MHLW) arrived in Nagasaki  
16:00: One Cluster Response Team member dispatched from MHLW arrived in Nagasaki  
17:00 p.m.: Video conference Nagasaki prefecture, Nagasaki city, Mitsubishi Shipbuilding, and the Costa Atlantica  
19:00: One liaison dispatched from MHLW arrived in Nagasaki  
19:30: Press conference Nagasaki Governor, Manager of Nagasaki municipal department of citizen’s health, Director-General of Nagasaki Prefecture Health & Welfare Department  
“Collected samples of 57 crew members, requested support from the national government”  
21:00: Video conference Nagasaki Prefecture Response Headquarter, MHLW “Information sharing of current status and future measures etc.”  
• The prefecture dispatched a X-ray car and radiological technologists to Koyagi Dock.  
In collaboration with Nagasaki University, examined one person who tested positive on Apr. 20. |
|            |                                                                                                                                                                                      |                                                                                                                                                                                                                                       |
| Apr. 22, 2020 | Around 0:00: 33 members were confirmed tested positive (*Cumulative total of 34)                                                                                                         | 8:10: Video conference MHLW, Nagasaki Prefecture Response Headquarters, Nagasaki City, Nagasaki University, Mitsubishi Shipbuilding, DMAT Team  
“Regarding basic policy to be taken”  
10:30: Press conference Nagasaki Governor, Nagasaki Mayor, Director of the National Institute of Infectious Diseases  
Managing Executive Officer of Mitsubishi Shipbuilding Co., Ltd.  
“Test results of samples collected on Apr. 21 (33 positives/57 people); basic policy to be taken.” |
<p>|            | After 15:00: One tested positive (male in his 40s, foreign national) was transported by ambulance to a designated medical institution in Nagasaki City and was hospitalized &lt;hospitalization (1)&gt; |                                                                                                                                                                                                                                       |</p>
<table>
<thead>
<tr>
<th>Date</th>
<th>Movement of the cruise ship, outbreak of COVID-19 infection, etc.</th>
<th>Response of related organizations, etc.</th>
</tr>
</thead>
</table>
| (Apr. 22, 2020) | • Completed sample collection of 66 essential crew members.  
Samples underwent testing by fluorescent LAMP method at the Institute of Tropical Medicine, Nagasaki University | 14:00: A expert of ships and vessels dispatched from the Ministry of Land, Infrastructure, Transport and Tourism (MLITT) arrives in Nagasaki  
16:30: Press conference  
Director-General of Nagasaki Prefecture Health & Welfare Department “Emergency transportation and hospitalization of one tested positive”  
20:00: Requested the SDF’s disaster-relief dispatch (first time) |
|              | [Conference rooms (302-305) on the 3rd floor were intensively used for cruise ship response.] | 9:30: Video conference (information sharing and handling issues with related organizations)  
Nagasaki Prefecture Response Headquarters, Nagasaki City, MHLW, Nagasaki University, The Costa Atlantica, Koyagi Dock (DMAT)  
10:30: Press conference  
Director-General of Nagasaki Prefecture Health & Welfare Department “Test results of samples collected on Apr. 22 (14 positives / 66 people)”  
• DMAT dispatch Nagasaki University Hospital, MHLW DMAT Secretariat, Kumamoto University Hospital |
| Apr. 23, 2020 | Around 1:00: 14 were confirmed tested positive (*Cumulative total of 48)  
• Collected samples of the remaining essential crews in the morning and of others in the afternoon. A total of 208 samples were collected.  
Samples underwent testing by fluorescent LAMP method at the Institute of Tropical Medicine, Nagasaki University | 9:30: Video conference (information sharing and handling issues with related organizations)  
Nagasaki Prefecture Response Headquarters, Nagasaki City, MHLW, Nagasaki University, The Costa Atlantica, Koyagi Dock (DMAT)  
10:30: Press conference  
Director-General of Nagasaki Prefecture Health & Welfare Department “Test results of samples collected on Apr. 22 (14 positives / 66 people)”  
• DMAT dispatch Nagasaki University Hospital, MHLW DMAT Secretariat, Kumamoto University Hospital |
| Apr. 24, 2020 | • Before dawn, 43 members were confirmed tested positive (*Cumulative total of 91)  
• Collected samples of the remaining 288 crew members  
Samples underwent testing by fluorescent LAMP method at the Institute of Tropical Medicine, Nagasaki University | 9:30: Video conference (information sharing and handling issues with related organizations)  
Nagasaki Prefecture Response Headquarters, Nagasaki City, MHLW, Nagasaki University, The Costa Atlantica, Koyagi Dock (DMAT)  
10:30: Press conference  
Director-General of Nagasaki Prefecture Health & Welfare Department “Test results of samples collected on Apr.23 (43 positives / 208 people)”  
21:00: Video conference  
Nagasaki Prefecture Response Headquarters, Nagasaki City, MHLW “Regarding measures to be taken” |
<table>
<thead>
<tr>
<th>Date</th>
<th>Movement of the cruise ship, outbreak of COVID-19 infection, etc.</th>
<th>Response of related organizations, etc.</th>
</tr>
</thead>
</table>
| (Apr. 24, 2020) | * Conducted onboard surveys by infectious disease experts  
* DMAT dispatch  
Kumamoto Red Cross Hospital  
* Started using meal delivery services from the outside, starting from dinner of this day. | 9:30: Video conference (information sharing and handling issues with related organizations)  
Nagasaki Prefecture Response Headquarters, Nagasaki City, MHLW, Nagasaki University, The Costa Atlantica, Koyagi Dock (DMAT)  
13:00: Requested the SDF’S disaster-relief dispatch (second time)  
Activity: Outboard medical support  
18:30: Press conference  
Director-General of Nagasaki Prefecture Health & Welfare Department  
“Test results of sample collected on Apr. 24 (57 positives / 288 people)”  
20:00: Video conference  
MHLW, Nagasaki Prefecture Response Headquarters, Nagasaki City  
“Regarding measures to be taken” |
| Apr. 25, 2020 | * Before dawn, 57 members were confirmed tested positive (*Cumulative total of 148)  
20:00: Video conference  
MHLW, Nagasaki Prefecture Response Headquarters, Nagasaki City  
“Regarding measures to be taken”  
* Nagasaki City held an information session in the southern area (municipal government/ Mitsubishi)  
(Chairperson of Koyagi District Resident Association, Chairperson of Fukahori District Resident Association, Chairperson of Doinokubi District Resident Association, Representative of Jojima District (Chairperson of Nakashio Town Resident Association), Chairperson of Nomozaki District Resident Association, four chairpersons of Sanwa District (Tameshi, Kayaki, Harumidai, Kawara), related lawmakers, Mayor, related municipal departments, Mitsubishi Heavy Industries, etc.)  
“Mitsubishi Heavy Industries explained the development so far and the current situation”  
“Nagasaki Mayor explained about the provision of correct information in response to citizens’ anxiety.” |
<table>
<thead>
<tr>
<th>Date</th>
<th>Movement of the cruise ship, outbreak of COVID-19 infection, etc.</th>
<th>Response of related organizations, etc.</th>
</tr>
</thead>
</table>
| Apr. 26, 2020 | In the morning: The Costa neoRomantica departed Nagasaki Port (Koyagi)  
               In the afternoon: The Costa Serena departed Nagasaki Port (Koyagi)  
               • One foreign nurse transferred from the Costa neoRomantica to the Costa Atlantica | 9:30: Video conference (information sharing and handling issues with related organizations)  
               Nagasaki Prefecture Response Headquarters, Nagasaki City,  
               MHLW, Nagasaki University,  
               The Costa Atlantica, Koyagi Dock (DMAT)  
               16:30: Press conference  
               Director-General of Nagasaki Prefecture Health & Welfare Department  
               “Departure of the Costa neoRomantica and the Costa Serena”  
               18:00: Video conference  
               MHLW, Nagasaki Prefecture Response Headquarters, Nagasaki City  
               “Regarding policies to be taken” |
|            |                                                              | 9:30: Video conference (information sharing and handling issues with related organizations)  
               Nagasaki Prefecture Response Headquarters, Nagasaki City,  
               MHLW, Nagasaki University,  
               The Costa Atlantica, Koyagi Dock (DMAT)  
               15:00 Press conference  
               Director-General of Nagasaki Prefecture Health & Welfare Department  
               “Classification of those infected by age (128 people)”  
               19:00 Video conference  
               MHLW, Nagasaki Prefecture Response Headquarters, Nagasaki City  
               “Regarding measures to be taken”  
               23:00 Press conference  
               Director-General of Nagasaki Prefecture Health & Welfare Department  
               “Emergency transportation / hospitalization for one tested positive and one tested negative”  
               • DPAT (1 psychiatrist, 1 coordinator) were dispatched |
| Apr. 27, 2020 | 20:30: One confirmed tested positive (female in her 50s, foreign national) was transported by ambulance to a designated medical institution in Nagasaki City and was hospitalized <hospitalization (2)> | |
|            | 23:00: One confirmed tested positive (male in his 30s, foreign national) was transported by ambulance to a designated medical institution in Nagasaki City and was hospitalized <hospitalization (3)> | |
|            |                                                              | 9:30: Video conference (information sharing and handling issues with related organizations)  
               Nagasaki Prefecture Response Headquarters, Nagasaki City,  
               MHLW, Nagasaki University,  
               The Costa Atlantica, Koyagi Dock (DMAT)  
               15:00 Press conference  
               Director-General of Nagasaki Prefecture Health & Welfare Department  
               “Classification of those infected by age (128 people)”  
               19:00 Video conference  
               MHLW, Nagasaki Prefecture Response Headquarters, Nagasaki City  
               “Regarding measures to be taken”  
               23:00 Press conference  
               Director-General of Nagasaki Prefecture Health & Welfare Department  
               “Emergency transportation / hospitalization for one tested positive and one tested negative”  
               • DPAT (1 psychiatrist, 1 coordinator) were dispatched |
<table>
<thead>
<tr>
<th>Date</th>
<th>Movement of the cruise ship, outbreak of COVID-19 infection, etc.</th>
<th>Response of related organizations, etc.</th>
</tr>
</thead>
</table>
| Apr. 28, 2020 | 1:40: One confirmed tested positive (male in his 60s, foreign national) was transported by ambulance to a designated medical institution in Nagasaki City and was hospitalized <hospitalization (4) >                                                                                                                                 | 9:30: Video conference (information sharing and handling issues with related organizations)  
Nagasaki Prefecture Response Headquarters, Nagasaki City, MHLW, Nagasaki University, The Costa Atlantica, Koyagi Dock (DMAT)  
15:00 Press conference  
Director-General of Nagasaki Prefecture Health & Welfare Department  
“Emergency transportation / hospitalization of one positive; installation of containers”  
19:00: Video conference  
MHLW, Nagasaki Prefecture Response Headquarters, Nagasaki City  
“Regarding measures to be taken”  
- DMAT dispatch  
- NGO Peace Winds Japan arrived in Nagasaki (Koyagi) |
| Apr. 29, 2020 | 13:30: One negative hospitalized on Apr. 27 (hospitalization (3)) was discharged and boarded the ship.                                                                                                                                                                                                             | 9:30: Video conference (information sharing and handling issues with related organizations)  
Nagasaki Prefecture Response Headquarters, Nagasaki City, MHLW, Nagasaki University, The Costa Atlantica, Koyagi Dock (DMAT)  
15:00 Press conference  
Director-General of Nagasaki Prefecture Health & Welfare Department  
“Discharge of one negative”  
15:25: Press conference  
Nagasaki Mayor, Managing Executive Officer of Mitsubishi Shipbuilding, Director of the Nagasaki City Public Health Center  
The National Institute of Infectious Diseases  
“Survey results on those disembarked from the cruise ship”  
17:00: Request for the SDF’s disaster-relief dispatch (3rd time)  
Activity: One vehicle equipped with CT scanners was dispatched (May 2-14).  
17:45: Video conference  
MHLW, Nagasaki Prefecture Response Headquarters, Nagasaki City  
“Regarding measures to be taken”  
- NPO Japan Heart arrived in Nagasaki (Koyagi)  
- 23 containers were installed on Koyagi dock |
<table>
<thead>
<tr>
<th>Date</th>
<th>Movement of the cruise ship, outbreak of COVID-19 infection, etc.</th>
<th>Response of related organizations, etc.</th>
</tr>
</thead>
</table>
| Apr.30, 2020 | 9:30: Video conference (information sharing and problem handling with related organizations)  
Nagasaki Prefecture Response Headquarters, Nagasaki City, MHLW, Nagasaki University,  
The Costa Atlantica, Koyagi Dock (DMAT)  
15:00 Press conference  
Director-General of Nagasaki Prefecture Health & Welfare Department  
“Request of disaster-relief dispatch by SDF; installation of additional containers”  
18:00: Video conference  
MHLW, Nagasaki Prefecture Response Headquarters, Nagasaki City  
“Regarding measures to be taken”  
* 27 containers installed on Koyagi Dock (* 50 in total)  
* DMAT dispatch  
Kagoshima City Hospital, Kirishima Memorial Hospital |
| May 1, 2020 | 9:30: Video conference (information sharing and problem handling with related organizations)  
Nagasaki Prefecture Response Headquarters, Nagasaki City, MHLW, Nagasaki University,  
The Costa Atlantica, Koyagi Dock (DMAT)  
15:00 Press conference  
Director-General of Nagasaki Prefecture Health & Welfare Department  
“*No matters to report (questions and answers only)”  
15:15: The JGSDF’s vehicle equipped with CT scanners arrived at Koyagi.  
18:00: Video conference  
MHLW, Nagasaki Prefecture Response Headquarters, Nagasaki City  
“Regarding measures to be taken”  
* Nagasaki City officials made an individual visit to chairpersons etc. of residents’ associations in the Southern District to explain.  
(Koyagi District Resident Association, Iojima District, Fukahori District Resident Association, Kawara District Residents Association, Nomozaki/Kabashima Residents Association)  
“Results and other information of surveys on boarding and disembarking of Costa Atlantica crew members” |
<table>
<thead>
<tr>
<th>Date</th>
<th>Movement of the cruise ship, outbreak of COVID-19 infection, etc.</th>
<th>Response of related organizations, etc.</th>
</tr>
</thead>
</table>
| May 2, 2020  | 13:45: One confirmed tested positive (male in his 40s, foreign national) was transported by ambulance to a designated medical institution in Nagasaki City and was hospitalized.                                                                                       | 9:30: Video conference (information sharing and handling issues with related organizations)  
Nagasaki Prefecture Response Headquarters, Nagasaki City, MHLW, Nagasaki University,  
The Costa Atlantica, Koyagi Dock (DMAT)  
14:00 Press conference  
Director-General of Nagasaki Prefecture Health & Welfare Department  
“Emergency transport / hospitalization of one positive”  
17:00 p.m.: Video conference  
MHLSW, Nagasaki Prefecture Response Headquarters  
“Regarding measures to be taken”  
17:30: Press conference  
Director-General of Nagasaki Prefecture Health & Welfare Department  
“Indonesian crew members returned to their home country by a chartered plane”  
+ Operation of the JGSDF’s vehicle equipped with CT scanners started (up to May 14).  
+ DMAT dispatch  
Saganoseki Hospital, Nagasaki Genbaku Hospital, Yayoigaoka Kage Clinic, Shiroishi Kyoritsu Hospital  
+ Nagasaki City officials made an individual visit to chairpersons etc. of residents’ associations in the Southern District to explain. (Tomachi District Residents’ Association, Doinokubi District Residents’ Association, Tameshimachi Elementary School District Residents’ Association, Kayakimachi Residents’ Association, Harumidai Residents’ Association)  
“Results and other information of surveys on boarding and disembarking of Costa Atlantica crew members” |
<table>
<thead>
<tr>
<th>Date</th>
<th>Movement of the cruise ship, outbreak of COVID-19 infection, etc.</th>
<th>Response of related organizations, etc.</th>
</tr>
</thead>
</table>
| May 3, 2020  | - Forty-four Indonesian nationals who had tested negative and completed observation period disembarked and returned home by a chartered flight.                                                                                                                          | 9:30: Video conference (information sharing and problem handling with related organizations) Nagasaki Prefecture Response Headquarters, Nagasaki City, MHLW, Nagasaki University, The Costa Atlantica, Koyagi Dock (DMAT)  

15:00 Press conference  
Director-General of Nagasaki Prefecture Health & Welfare Department  
“Repatriation of 44 Indonesian nationals”  

17:00 p.m.: Video conference  
MHLW, Nagasaki Prefecture Response Headquarters, Nagasaki City  
“Regarding measures to be taken”  

• Nagasaki City officials made an individual visit to chairpersons etc. of residents’ associations in the Southern District to explain. (Daiyarando Residents Association, Kogakura District Residents Association)  

“Results and other information of surveys on boarding and disembarking of Costa Atlantica crew members”  

May 4, 2020 | - Seven foreign nationals who had tested negative and completed their observation period disembarked and returned home by regular flight (*Cumulative total of 51)  

17:00: One tested positive (male in his 50s, foreign national) was transported by ambulance to a designated medical institution in Nagasaki City and was hospitalized <hospitalization (6) >  

9:00: Press conference  
Director-General of Nagasaki Prefecture Health & Welfare Department  
“One infection was newly found; crew members scheduled to return home”  

9:30: Video conference (information sharing and problem handling with related organizations)  
Nagasaki Prefecture Response Headquarters, Nagasaki City, MHLW, Nagasaki University, The Costa Atlantica, Koyagi Dock (DMAT)  

16:00: Video conference  
MHLSW, Nagasaki Prefecture Response Headquarters  
“Regarding measures to be taken”  

21:00: Press conference  
Director-General of Nagasaki Prefecture Health & Welfare Department  
“Repatriation of 130 Filipino nationals and others; hospitalization of 1 positive; test results of close contacts” |
<table>
<thead>
<tr>
<th>Date</th>
<th>Movement of the cruise ship, outbreak of COVID-19 infection, etc.</th>
<th>Response of related organizations, etc.</th>
</tr>
</thead>
</table>
| May 5, 2020| • 125 Filipino nationals who had tested negative and completed their observation period disembarked and returned home by a chartered flight (*Cumulative total of 176 people)  
• In addition, 5 foreign nationals who had tested negative and completed their observation period disembarked and returned home by a regular flight (*Cumulative total of 181 people). | 9:30: Video conference (information sharing and problem handling with related organizations)  
Nagasaki Prefecture Response Headquarters, Nagasaki City, MHLW, Nagasaki University, The Costa Atlantica, Koyagi Dock (DMAT)  
17:00: Press conference  
Director-General of Nagasaki Prefecture Health & Welfare Department “Crew members scheduled to return home”  
17:35: Video conference  
MHLW, Nagasaki Prefecture Response Headquarters, Nagasaki City “Regarding measures to be taken” |
| May 6, 2020| • 19 foreign nationals who had tested negative and completed their observation period disembarked and returned home by a regular flight (*Cumulative total of 200)                                                                                                            | 9:30: Video conference (information sharing and handling issues with related organizations)  
Nagasaki Prefecture Response Headquarters, Nagasaki City, MHLW, Nagasaki University, The Costa Atlantica, Koyagi Dock (DMAT)  
15:00: Press conference  
Director-General of Nagasaki Prefecture Health & Welfare Department “Crew members scheduled to return home”  
16:00: Video conference  
MHLW, Nagasaki Prefecture Response Headquarters, Nagasaki City “Regarding measures to be taken” |
| May 7, 2020| • 17 foreign nationals who had tested negative and completed their observation period disembarked and returned home by a regular flight (*Cumulative total of 217)                                                                                                            | 9:30: Video conference (information sharing and handling issues with related organizations)  
Nagasaki Prefecture Response Headquarters, Nagasaki City, MHLW, Nagasaki University, The Costa Atlantica, Koyagi Dock (DMAT)  
15:00: Press conference  
Director-General of Nagasaki Prefecture Health & Welfare Department “Crew members scheduled to return home”  
18:00: Video conference  
MHLW, Nagasaki Prefecture Response Headquarters, Nagasaki City “Regarding measures to be taken” |

- DMAT dispatch  
Japanese Red Cross Oita Hospital  
- NGO Médecins Sans Frontières arrived in Nagasaki (Koyagi)
<table>
<thead>
<tr>
<th>Date</th>
<th>Movement of the cruise ship, outbreak of COVID-19 infection, etc.</th>
<th>Response of related organizations, etc.</th>
</tr>
</thead>
</table>
| May 8, 2020 | • Five foreign nationals who had tested negative and completed their observation period disembarked and returned home by a regular flight (*Cumulative total of 222*)                                                                                                                                          | 9:30: Video conference (information sharing and handling issues with related organizations) Nagasaki Prefecture Response Headquarters, Nagasaki City, MHLW, Nagasaki University, The Costa Atlantica, Koyagi Dock (DMAT)  
15:00 Press conference Director-General of Nagasaki Prefecture Health & Welfare Department “No matters to report (questions and answers only)”  
18:00: Video conference MHLW, Nagasaki Prefecture Response Headquarters, Nagasaki City “Regarding measures to be taken”                                                                                                               |
|           |                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                   |
| May 9, 2020 | 14:20: One tested positive (male in his 50s, foreign national) was transported by ambulance to a designated medical institution in Nagasaki City and was hospitalized <hospitalization (7)>                                                                                                                                                                    | 9:30: Video conference (information sharing and handling issues with related organizations) Nagasaki Prefecture Response Headquarters, Nagasaki City, MHLW, Nagasaki University, The Costa Atlantica, Koyagi Dock (DMAT)  
15:00 Press conference Director-General of Nagasaki Prefecture Health & Welfare Department “Emergency transport / hospitalization of one positive; crew members scheduled to return home”                                                                 |
|           |                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                   |
| May 10, 2020 | • Two foreign nationals who had tested negative and completed their observation period disembarked and returned home by a regular flight (*Cumulative total of 224*)                                                                                                                                          | 9:30: Video conference (information sharing and handling issues with related organizations) Nagasaki Prefecture Response Headquarters, MHLW, Nagasaki University, The Costa Atlantica, Koyagi Dock (DMAT)  
12:00: The SDF’s disaster-relief dispatch (medical support) withdrew  
15:00 Press conference Director-General of Nagasaki Prefecture Health & Welfare Department “Crew members scheduled to return home”  
⇒ Postponed disembarkation due to suspension of return flights  
18:00: Video conference MHLW, Nagasaki Prefecture Response Headquarters, Nagasaki City “Regarding measures to be taken”                                                                                                              |
<p>| | | |
|           |                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                   |
|           |                                                                                                                                                                                                                                                                                                                                                                  | • DMAT dispatch Nagasaki Prefecture Shimabara Hospital                                                                                                                                                                                                                                             |</p>
<table>
<thead>
<tr>
<th>Date</th>
<th>Movement of the cruise ship, outbreak of COVID-19 infection, etc.</th>
<th>Response of related organizations, etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 11, 2020</td>
<td>9:30: Video conference (information sharing and handling issues with related organizations)</td>
<td>9:30: Video conference (information sharing and handling issues with related organizations)</td>
</tr>
<tr>
<td></td>
<td>Nagasaki Prefecture Response Headquarters, Nagasaki City, MHLW, Nagasaki University, The Costa Atlantica, Koyagi Dock (DMAT)</td>
<td>Nagasaki Prefecture Response Headquarters, Nagasaki City, MHLW, Nagasaki University, The Costa Atlantica, Koyagi Dock (DMAT)</td>
</tr>
<tr>
<td></td>
<td>15:00 Press conference</td>
<td>15:00 Press conference</td>
</tr>
<tr>
<td></td>
<td>Director-General of Nagasaki Prefecture Health &amp; Welfare Department “Postponement of disembarkation for those who were scheduled to return home today”</td>
<td>Director-General of Nagasaki Prefecture Health &amp; Welfare Department “Postponement of disembarkation for those who were scheduled to return home today”</td>
</tr>
<tr>
<td></td>
<td>18:00 Video conference</td>
<td>18:00 Video conference</td>
</tr>
<tr>
<td></td>
<td>MHLW, Nagasaki Prefecture Response Headquarters, Nagasaki City “Regarding measures to be taken”</td>
<td>MHLW, Nagasaki Prefecture Response Headquarters, Nagasaki City “Regarding measures to be taken”</td>
</tr>
<tr>
<td>May 12, 2020</td>
<td>9:30: Video conference (information sharing and handling issues with related organizations)</td>
<td>9:30: Video conference (information sharing and handling issues with related organizations)</td>
</tr>
<tr>
<td></td>
<td>Nagasaki Prefecture Response Headquarters, Nagasaki City, MHLW, Nagasaki University, The Costa Atlantica, Koyagi Dock (DMAT)</td>
<td>Nagasaki Prefecture Response Headquarters, Nagasaki City, MHLW, Nagasaki University, The Costa Atlantica, Koyagi Dock (DMAT)</td>
</tr>
<tr>
<td></td>
<td>14:00 Regular press conference by Nagasaki Governor “Report on the current measures and responses relating to the cruise ship”</td>
<td>14:00 Regular press conference by Nagasaki Governor “Report on the current measures and responses relating to the cruise ship”</td>
</tr>
<tr>
<td></td>
<td>15:00 Press conference</td>
<td>15:00 Press conference</td>
</tr>
<tr>
<td></td>
<td>Director-General of Nagasaki Prefecture Health &amp; Welfare Department “Those planned to return home; six close contacts of those confirmed positive on May 3 all tested negative.”</td>
<td>Director-General of Nagasaki Prefecture Health &amp; Welfare Department “Those planned to return home; six close contacts of those confirmed positive on May 3 all tested negative.”</td>
</tr>
<tr>
<td></td>
<td>16:30 Video conference</td>
<td>16:30 Video conference</td>
</tr>
<tr>
<td></td>
<td>MHLW, Nagasaki Prefecture Response Headquarters, Nagasaki City “Regarding measures to be taken”</td>
<td>MHLW, Nagasaki Prefecture Response Headquarters, Nagasaki City “Regarding measures to be taken”</td>
</tr>
<tr>
<td>May 13, 2020</td>
<td>9:30: Video conference (information sharing and handling issues with related organizations)</td>
<td>9:30: Video conference (information sharing and handling issues with related organizations)</td>
</tr>
<tr>
<td></td>
<td>Nagasaki Prefecture Response Headquarters, Nagasaki City, MHLW, Nagasaki University, The Costa Atlantica, Koyagi Dock (DMAT)</td>
<td>Nagasaki Prefecture Response Headquarters, Nagasaki City, MHLW, Nagasaki University, The Costa Atlantica, Koyagi Dock (DMAT)</td>
</tr>
<tr>
<td></td>
<td>15:00 Press conference</td>
<td>15:00 Press conference</td>
</tr>
<tr>
<td></td>
<td>Director-General of Nagasaki Prefecture Health &amp; Welfare Department “Sending off the SDF personnel withdrawing after the completion of relief activities”</td>
<td>Director-General of Nagasaki Prefecture Health &amp; Welfare Department “Sending off the SDF personnel withdrawing after the completion of relief activities”</td>
</tr>
<tr>
<td></td>
<td>18:00 Video conference</td>
<td>18:00 Video conference</td>
</tr>
<tr>
<td></td>
<td>MHLW, Nagasaki Prefecture Response Headquarters, Nagasaki City “Regarding measures to be taken”</td>
<td>MHLW, Nagasaki Prefecture Response Headquarters, Nagasaki City “Regarding measures to be taken”</td>
</tr>
<tr>
<td></td>
<td>61 foreign nationals who had tested negative and completed their observation period disembarked and returned home by a regular flight (*Cumulative total of 285)</td>
<td>61 foreign nationals who had tested negative and completed their observation period disembarked and returned home by a regular flight (*Cumulative total of 285)</td>
</tr>
<tr>
<td>Date</td>
<td>Movement of the cruise ship, outbreak of COVID-19 infection, etc.</td>
<td>Response of related organizations, etc.</td>
</tr>
<tr>
<td>------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>May 14, 2020</td>
<td>• One foreign national who had tested negative and completed his/her observation period, and another foreign national who had tested positive but then confirmed negative disembarked and returned home by regular flights (*Cumulative total of 287. The first repatriation for those who had initially tested positive.)</td>
<td>9:30: Video conference (information sharing and handling issues with related organizations) Nagasaki Prefecture Response Headquarters, Nagasaki City, MHLW, Nagasaki University, The Costa Atlantica, Koyagi Dock (DMAT)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15:00 Press conference Director-General of Nagasaki Prefecture Health &amp; Welfare Department “Crew members scheduled to return home; boarding of medical staff from Costa Cruises”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>18:00: Video conference MHLW, Nagasaki Prefecture Response Headquarters, Nagasaki City “Regarding measures to be taken”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>24:00: Operation of the SDF’s vehicle equipped with CT scanners terminated.</td>
</tr>
<tr>
<td></td>
<td>• Costa Cruises announced on its website that the cruise ship aims to depart Nagasaki Port by the end of May 2020.</td>
<td></td>
</tr>
<tr>
<td>May 15, 2020</td>
<td>• Those who were hospitalized on Apr. 27 after confirmed positive (hospitalization (2)) were confirmed negative, discharged, and returned home by a regular flight (*Cumulative total of 288)</td>
<td>9:30: The SDF’s vehicle equipped CT scanners withdrew Video conference (information sharing and handling issues with related organizations) Nagasaki Prefecture Response Headquarters, Nagasaki City, MHLW, Nagasaki University, The Costa Atlantica, Koyagi Dock (DMAT)</td>
</tr>
<tr>
<td></td>
<td>18:00: One doctor and two nurses boarded the vessel (arrived after confirmed PCR negative results at Narita Airport, and after boarded, isolated in private rooms for observation for 2 weeks)</td>
<td>10:00: Report on the withdrawal of the GSDF (courtesy call by Nagasaki Governor, attended by Nagasaki Mayor)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10:20: Sending off the SDF’s vehicle.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>16:30: Press conference Director-General of Nagasaki Prefecture Health &amp; Welfare Department “No matters to report (questions and answers only)”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>17:00 p.m.: Video conference MHLW, Nagasaki Prefecture Response Headquarters, Nagasaki City “Regarding measures to be taken”</td>
</tr>
<tr>
<td>May 16, 2020</td>
<td></td>
<td>9:30: Video conference (information sharing and handling issues with related organizations) Nagasaki Prefecture Response Headquarters, Nagasaki City, MHLW, Nagasaki University, The Costa Atlantica, Koyagi Dock (DMAT)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15:00 Press conference Director-General of Nagasaki Prefecture Health &amp; Welfare Department “Crew members scheduled to return home”</td>
</tr>
<tr>
<td>Date</td>
<td>Movement of the cruise ship, outbreak of COVID-19 infection, etc.</td>
<td>Response of related organizations, etc.</td>
</tr>
<tr>
<td>-----------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>May 17, 2020</td>
<td>- Eleven foreign nationals who had tested positive and then confirmed negative disembarked and returned home by a regular flight (&quot;Cumulative total of 299&quot;)</td>
<td>9:30: Video conference (information sharing and handling issues with related organizations) Nagasaki Prefecture Response Headquarters, Nagasaki City, MHLW, Nagasaki University, The Costa Atlantica, Koyagi Dock (DMAT) 15:00 Press conference Director-General of Nagasaki Prefecture Health &amp; Welfare Department “Crew members scheduled to return home”</td>
</tr>
<tr>
<td>May 18, 2020</td>
<td>- Two foreign nationals who had tested negative and completed their observation period, and two foreign nationals who had tested positive and then confirmed negative disembarked and returned home by a regular flight (&quot;Cumulative total of 303&quot;)</td>
<td>9:30: Video conference (information sharing and handling issues with related organizations) Nagasaki Prefecture Response Headquarters, Nagasaki City, MHLW, Nagasaki University, The Costa Atlantica, Koyagi Dock (DMAT) 15:00 Press conference Manager of Nagasaki Prefecture Welfare and Public Health Department: “Crew members scheduled to return home, and test status of those confirmed positive” 17:00 p.m.: Video conference MHLW, Nagasaki Prefecture Response Headquarters, Nagasaki City “Regarding measures to be taken”</td>
</tr>
<tr>
<td>May 19, 2020</td>
<td>- One person who had tested negative and completed his/her observation period disembarked and returned home by a regular flight. (&quot;Cumulative total of 304&quot;)</td>
<td>9:30: Video conference (information sharing and handling issues with related organizations) Nagasaki Prefecture Response Headquarters, Nagasaki City, MHLW, Nagasaki University, The Costa Atlantica, Koyagi Dock (DMAT) 15:00 Press conference Director-General of Nagasaki Prefecture Health &amp; Welfare Department “Crew members scheduled to return home” 16:00: Video conference MHLW, Nagasaki Prefecture Response Headquarters, Nagasaki City “Regarding measures to be taken”</td>
</tr>
<tr>
<td>Date</td>
<td>Movement of the cruise ship, outbreak of COVID-19 infection, etc.</td>
<td>Response of related organizations, etc.</td>
</tr>
<tr>
<td>--------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>May 20, 2020</td>
<td>• Two foreign nationals who had tested negative and completed their observation period disembarked and returned home by a regular flight (*Cumulative total of 306)</td>
<td>9:30: Video conference (information sharing and handling issues with related organizations)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Nagasaki Prefecture Response Headquarters, Nagasaki City, MHLW, Nagasaki University, The Costa Atlantica, Koyagi Dock (DMAT)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>14:00 Press conference</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Director-General of Nagasaki Prefecture Health &amp; Welfare Department</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“Crew members scheduled to return home (Two of whom were discharged)”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>17:00 p.m.: Video conference</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MHLW, Nagasaki Prefecture Response Headquarters, Nagasaki City</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“Regarding measures to be taken”</td>
</tr>
<tr>
<td>May 21, 2020</td>
<td>Two positives who were hospitalized on May 2 and 4 respectively (hospitalization (5) &amp; (6)) were confirmed negative, discharged, and returned home by regular flights (*Cumulative total of 308)</td>
<td>9:30: Video conference (information sharing and handling issues with related organizations)</td>
</tr>
<tr>
<td></td>
<td>• One foreign national who had tested negative and completed his/her observation period</td>
<td>Nagasaki Prefecture Response Headquarters, Nagasaki City, MHLW, Nagasaki University, The Costa Atlantica, Koyagi Dock (DMAT)</td>
</tr>
<tr>
<td></td>
<td>Eighteen foreign nationals who had tested positive and then confirmed negative disembarked and returned home by regular flights (*Cumulative total of 327)</td>
<td>15:00 Press conference</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Director-General of Nagasaki Prefecture Health &amp; Welfare Department</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“Crew members scheduled to return home”</td>
</tr>
<tr>
<td>May 22, 2020</td>
<td>• Two foreign nationals who had tested negative and completed their observation period and three foreign nationals who had tested positive and then confirmed negative disembarked and returned home by regular flights (*Cumulative total of 332)</td>
<td>17:00 p.m.: Video conference</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MHLW, Nagasaki Prefecture Response Headquarters, Nagasaki City</td>
</tr>
<tr>
<td></td>
<td>“Regarding measures to be taken”</td>
<td></td>
</tr>
<tr>
<td>May 23, 2020</td>
<td>• One foreign national who had tested negative and completed his/her observation period disembarked and returned home by regular flight (*Cumulative total of 333)</td>
<td>9:30: Video conference (information sharing and handling issues with related organizations)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Nagasaki Prefecture Response Headquarters, Nagasaki City, MHLW, Nagasaki University, The Costa Atlantica, Koyagi Dock (DMAT)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15:00 Press conference</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Director-General of Nagasaki Prefecture Health &amp; Welfare Department</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“Testing status of positives”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>17:00 p.m.: Video conference</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MHLW, Nagasaki Prefecture Response Headquarters, Nagasaki City</td>
</tr>
<tr>
<td></td>
<td>“Regarding measures to be taken”</td>
<td></td>
</tr>
<tr>
<td>Date</td>
<td>Movement of the cruise ship, outbreak of COVID-19 infection, etc.</td>
<td>Response of related organizations, etc.</td>
</tr>
<tr>
<td>-------------</td>
<td>-----------------------------------------------------------------</td>
<td>------------------------------------------</td>
</tr>
</tbody>
</table>
| May 24, 2020| One positive hospitalized on May 9 (hospitalization (7)) was confirmed tested negative, discharged, and returned home by a regular flight (*Cumulative total of 334 in total)  
  * Two foreign nationals who had tested negative and completed their observation period, and one foreign national who had tested positive and then confirmed negative disembarked and returned home by regular flights (*Cumulative total of 337) | 9:30: Video conference (information sharing and handling issues with related organizations)  
  Nagasaki Prefecture Response Headquarters, Nagasaki City,  
  MHLW, Nagasaki University,  
  The Costa Atlantica, Koyagi Dock (DMAT) |
| May 25, 2020| One foreign national who had tested negative and completed his/her observation period disembarked and returned home by a regular flight (*Cumulative total of 338) | 9:30: Video conference (information sharing and handling issues with related organizations)  
  Nagasaki Prefecture Response Headquarters, Nagasaki City,  
  MHLW, Nagasaki University,  
  The Costa Atlantica, Koyagi Dock (DMAT)  
  15:00 Press conference  
  Director-General of Nagasaki Prefecture Health & Welfare Department *Testing status of positives*  
  16:00: Video conference  
  MHLW, Nagasaki Prefecture Response Headquarters, Nagasaki City  
  *Regarding measures to be taken* |
| May 26, 2020| 19:45: One who had tested positive and then confirmed negative (male in his 20s, foreign national) on board was transported by ambulance to a designated medical institution in Nagasaki City and was hospitalized <hospitalization (8)> | 9:30: Video conference (information sharing and handling issues with related organizations)  
  Nagasaki Prefecture Response Headquarters, Nagasaki City,  
  MHLW, Nagasaki University,  
  The Costa Atlantica, Koyagi Dock (DMAT)  
  15:00 Press conference  
  Director-General of Nagasaki Prefecture Health & Welfare Department  
  *Crew members scheduled to return home, and testing status of those confirmed positive*  
  17:00 p.m.: Video conference  
  MHLW, Nagasaki Prefecture Response Headquarters, Nagasaki City  
  *Regarding measures to be taken* |

*Removal of container houses started.*
<table>
<thead>
<tr>
<th>Date</th>
<th>Movement of the cruise ship, outbreak of COVID-19 infection, etc.</th>
<th>Response of related organizations, etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 27, 2020</td>
<td>- Two foreign nationals who had tested negative and completed their observation period and 25 foreign nationals who had tested positive and then confirmed negative disembarked and returned home by regular flights (*Cumulative total of 365)</td>
<td>9:30: Video conference (information sharing and handling issues with related organizations)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Nagasaki Prefecture Response Headquarters, Nagasaki City, MHLW, Nagasaki University, The Costa Atlantica, Koyagi Dock (DMAT)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15:00 Press conference Director-General of Nagasaki Prefecture Health &amp; Welfare Department &quot;Testing status of positives&quot;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>16:00: Video conference MHLW, Nagasaki Prefecture Response Headquarters, Nagasaki City &quot;Regarding measures to be taken&quot;</td>
</tr>
<tr>
<td>May 28, 2020</td>
<td>- 65 Indian nationals who had tested negative and completed their observation period and 30 Indian nationals who had tested positive and then confirmed negative disembarked and returned home by a charter flight (*Cumulative total of 460)</td>
<td>9:30: Video conference (information sharing and handling issues with related organizations)</td>
</tr>
<tr>
<td></td>
<td>18:30: One person (female in her 40s, foreign national) who had tested positive and then confirmed negative on board was transported by ambulance to a designated medical institution in Nagasaki City and was hospitalized &lt;hospitalization (9)&gt;</td>
<td>Nagasaki Prefecture Response Headquarters, Nagasaki City, MHLW, Nagasaki University, The Costa Atlantica, Koyagi Dock (DMAT)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15:00 Press conference Director-General of Nagasaki Prefecture Health &amp; Welfare Department &quot;Crew members scheduled to return home, and testing status of those confirmed positive (aiming to zero positives on board)&quot;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>16:00: Video conference MHLW, Nagasaki Prefecture Response Headquarters, Nagasaki City &quot;Regarding measures to be taken&quot;</td>
</tr>
<tr>
<td>Date</td>
<td>Movement of the cruise ship, outbreak of COVID-19 infection, etc.</td>
<td>Response of related organizations, etc.</td>
</tr>
<tr>
<td>------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>May 29, 2020</td>
<td>• Five who had tested negative and completed their observation period and 13 foreign nationals who had tested positive and then confirmed negative disembarked and returned home by a charter flight (*Cumulative total of 478)</td>
<td>9:30: Video conference (information sharing and handling issues with related organizations) Nagasaki Prefecture Response Headquarters, Nagasaki City, MHLW, Nagasaki University, The Costa Atlantica, Koyagi Dock (DMAT)</td>
</tr>
<tr>
<td></td>
<td>18:00: One person (male in his 30s, foreign national) who had tested positive and then confirmed negative on board was transported by ambulance to a designated medical institution in Nagasaki City and was hospitalized &lt;hospitalization (10)&gt;</td>
<td>11:00: Video conference Nagasaki Prefecture Response Headquarters, Costa Cruises “Regarding departure schedule”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12:30: Video conference Nagasaki Prefecture Response Headquarters, MHLW, “Regarding departure schedule”</td>
</tr>
<tr>
<td></td>
<td>Around 15:00: Costa Cruises announced on its website that the vessel is planned to depart from Nagasaki Port to Manila, Philippines at 11:00 a.m. on May 31.</td>
<td>15:00 Press conference Director-General of Nagasaki Prefecture Health &amp; Welfare Department “Prospective crew members to go home and the departure of the Costa Atlantica”</td>
</tr>
<tr>
<td></td>
<td>16:00: Video conference MHLW, Nagasaki Prefecture Response Headquarters, Nagasaki City “Regarding measures to be taken”</td>
<td>16:00: Video conference Nagasaki Prefecture Response Headquarters, MHLW, “Regarding measures to be taken”</td>
</tr>
<tr>
<td></td>
<td>• Nagasaki City held a briefing session for the chairperson etc., of Koyagi district’s residents associations (Municipal government and Mitsubishi) (Chairperson of Koyagi District Residents Association; chairpersons of 19 other Koyagi District Residents Associations; related departments of the municipal government, etc.) “Regarding the results of survey conducted in April on boarding and disembarking of the Costa Atlantica crew”</td>
<td></td>
</tr>
<tr>
<td>May 30, 2020</td>
<td>• One person who had tested negative and completed his/her observation period and two foreign nationals who had tested positive and then confirmed negative disembarked and returned home by a charter flight (*Cumulative total of 481)</td>
<td>9:30: Video conference (information sharing and handling issues with related organizations) Nagasaki Prefecture Response Headquarters, Nagasaki City, MHLW, Nagasaki University, The Costa Atlantica, Koyagi Dock (DMAT)</td>
</tr>
<tr>
<td>Date</td>
<td>Movement of the cruise ship, outbreak of COVID-19 infection, etc.</td>
<td>Response of related organizations, etc.</td>
</tr>
<tr>
<td>------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>May 31, 2020</td>
<td>• Four people who had tested negative and completed their observation period and 10 foreign nationals who had tested positive and then confirmed negative disembarked and returned home by a charter flight (*Cumulated total of 495)</td>
<td></td>
</tr>
<tr>
<td>9:00:</td>
<td>One person (female in her 20s, foreign national) who had tested positive and then confirmed negative on board was transported by ambulance to a designated medical institution in Nagasaki City and was hospitalized &lt;hospitalization (11)&gt;</td>
<td>14:00: Press conference Nagasaki Governor, “On the departure of the Costa Atlantica”</td>
</tr>
<tr>
<td>11:45:</td>
<td>The Costa Atlantica departed Nagasaki Port for Manila, Philippines (126 crew members on board)</td>
<td></td>
</tr>
<tr>
<td>Jun. 1, 2020</td>
<td>12:00: Governor visited Nagasaki University (President Kocho) (for gratitude)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>18:00: Video conference Prefectural government, MHLW: “Regarding to the responses taken so far”</td>
<td></td>
</tr>
<tr>
<td>Jun. 2, 2020</td>
<td>16:00: DMAT briefing session on activities Dr. Takayama, Dr. Kobayakawa, Coordinator Ohno, Coordinator Ikeda Nagasaki Governor, Vice Governor, Nagasaki Mayor</td>
<td></td>
</tr>
<tr>
<td>Jun. 4, 2020</td>
<td>• Three people who were hospitalized on Apr. 28, May 26, and May 9 respectively (hospitalization (4), (8), &amp; (11)) were discharged and returned home by regular flights (*Cumulative total of 498).</td>
<td></td>
</tr>
<tr>
<td>Jun. 5, 2020</td>
<td>• One who was hospitalized on May 29 (hospitalization (10)) was discharged and returned home by a regular flight (*Cumulative total of 499).</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Costa Atlantica arrived in Manila, Philippines)</td>
<td></td>
</tr>
<tr>
<td>Jun. 9, 2020</td>
<td>• One who was hospitalized on May 28 (hospitalization (9)) was discharged and returned home by a regular flight (*Cumulative total of 500)</td>
<td></td>
</tr>
<tr>
<td>Jul. 9, 2020</td>
<td>• One who was hospitalized on April 22 (hospitalization ①) was discharged and returned home by a regular flight (*Cumulative total of 501) ⇒ All crew left Nagasaki safely.</td>
<td></td>
</tr>
</tbody>
</table>
* Various other organizations were also involved.