MANAGING THE SPREAD OF COVID-19 PANDEMIC IN INDONESIAN SEA TRANSPORTATION

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ABSTRACT

COVID-19 has been pandemic since the early 2020 and many efforts have been carried out worldwide. Among others, managing the spread of pandemic has been focused on air transportation since the mobility of people has been more actively using aeroplane hence the possibility of infecting people is much higher. Despite less intense, efforts to minimise the blow-out of COVID-19 in sea transportation have also been conducted. The International Maritime Organization (IMO) released guidance such pretravel information to crews and customers The types of guidance include the following items, namely pre-departure, social distancing, the use of masks, personal hygiene, environmental hygiene, and training. In the case of Indonesia, similar direction is introduced and implemented to cargo and passenger vessels. The current paper discusses the Indonesian regulation of managing COVID-19, which is based on IMO/WHO guidance, together with its implementation in the daily activities of people in sea transportation. A survey questionnaire is made out to collect the relevant information. The discussion covers the implementation of such guidance to Indonesian cargo and passenger vessels difficulties in applying the regulation on those ships and the related solutions.

Keyword: Sea transportation, COVID 19, pandemic

Introduction

A new type of SARS-COV2 virus, which is later known as COVID-19, was triggered in Wuhan (China) at the end of 2019 and later in the early 2020 the World Health Organisation (WHO) announced the disease as pandemic thus global care are taken into consideration accordingly. COVID-19 itself is a respiratory virus, which spreads primarily through contact with an infected person through respiratory droplets generating by coughing or sneezing, which can be inhaled or contaminate hands and surfaces. Therefore, the effects of COVID-19 can be very dangerous when people gather in a crowded area such as in a bar, office, market, and aeroplane.

After the broke-up in the early 2020 and stated as a pandemic by WHO, the COVID-19 outbreak has badly affected almost all the economic activities and interaction among people around the world. By the first quarter of the year 2020, the disease has occurred from a health issue into a complex health and social problems [1]. According to United Nations (UN) by the second quarter of 2020, 90% of the world economy will have experienced various kinds of lockdowns [2]. Meanwhile, the International Energy Agency (IEA) [3] reported that approximately 54% of the world population was influenced by limited mobility and other forms of social movements and mass crowds [4].

Among all industries, the aviation sector is perhaps the most affected sector [5]. The unexpected decrease in passenger demand has caused most of the airlines to cut almost all their operations and hence grounded the entire fleets [6]. Consequently, many

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airports have closed their runways to give space for aircraft parking. Furthermore, most companies must reduce their ground staff to a minimum together with strict rotations [7]. Overall, the effects of COVID-19 on air transportation are tremendous.

In terms of land transportation, a study into the effect of COVID-19 on railway sector was carried out by [8]. New avenues which can play an essential role in enhancing rail competitiveness and resilience to future crisis have been identified. The railway system can play an important role in the development of new mobility transportation systems. Furthermore, the pandemic has brought the ultimate significance of maritime transport as an essential means for ensuring the stability of global supply chain and maintaining the connectivity among disjointed markets.

To prevent the spread of COVID-19, the Indonesian Government has made recommendations known as 3M: washing hands, wearing masks, and maintaining distance [11]. In the case of Indonesia, COVID-19 has affected the sea transportation sector, including those engaged in passenger movement [10]. Mentioned that the transportation restriction regulations were launched by the Government requiring all passengers to wear mask while onboard ship, the body temperature should be less than 38 degrees Celsius, and the total seating capacity for passenger vessels was reduced into 50%.

The present work is focused on the identification of possible spread of COVID-19 onboard ship both cargo and passenger ships. The study includes the procedure or guidance used by those vessels whether they follow the standard guidance from IMO/WHO or the derivation of it by the Indonesian Government. A survey questionnaire is made out and distributed among shipowners and operators to collate the data for further analysis.

COVID-19 Guidance by the International Organisation

As a responsibility of the COVID-19 outbreak, IMO released a guidance from WHO in order to promote public health measures on cargo ships and fishing vessels. Member States and international organisations are invigorated to distribute the guidance to all parties concerned as widely as possible.

It is quite clear that seafarers both on cargo and passenger carriers face serious challenges in maintaining their health in the time of COVID-19 pandemic. The IMO guidance is provided for shipowners, seafarers, unions and associations, and competent authorities for health and transport on protecting seafarers working on cargo ships and fishing vessels from transmission of COVID-19.

The guidance covers the following activities: pre-boarding, onboard ship, leaving the ship, and communication. Pre-boarding screening is compulsory for seafarers and passengers before coming onboard ships to make sure that they are not exposed to COVID-19. Therefore, if any symptoms are identified, the seafarers and passengers are not allowed to work on ships, and they are advised to seek medical check. Risk analysis when onboard ship must be taken into consideration as they are highly possible contact among crew members. The analysis includes an explanation of where the interaction among crew members occurs. Crew members, in case experience symptom suggestive of COVID-19, before leaving the ships, are advised to report to shipowners for medical treatment. Furthermore, clear and timely communication among the ships, the ship owners and their agents, and shore-based organisations intending to board the ship is essential. This is very important to identify the possible spread of COVID-19 and minimise the worst effects.

COVID-19 Guidance by Indonesian Government

The Indonesian Government adopts guidance from World Health Organization (WHO) endorsed by Ministry of health and later implement it into specific application according to the International Maritime Organization (IMO) for passenger and cargo vessels used by the Ministry of Transportation. The guidance is further manipulated by local shipping companies to fit their needs.

Two shipping companies involved actively within the study, namely (1) PT Pelayaran Meratus representing cargo vessels and (2) PT Dharma Lautan Utama exemplifying passenger carriers. Less attention was given to fishing vessels, despite the numbers are enormous, hence the study on tis vessel type was not carried out.

Discussions

Based on the above guidance and to achieve the objectives, a set of questionnaire survey is made out.

Table 1. Pre-departure

Questions	Passenger Ship	Tanker/Cargo Vessel
Do you carry out routine COVID-19 testing before boarding?	Yes, refer to government policy. All crew and passengers are required to take the RT-PCR Test/ Rapid Test Antigen before boarding or on site / on board.	Yes, refer to government policy. All crew are required to take the RT-PCR Test / Rapid Test Antigen before boarding or on site/ on board.
Do you carry out body temperature measurement before boarding?	Yes. It is carried out every boarding activity/entering the port.	Yes. The crew must take temperature check every day.
Do you ask about possible COVID-19 exposure before boarding?	Yes.	Yes.

Table 2. Social distancing

Questions	Passenger Ship	Cargo Vessel
Is there social distancing measured in place onboard? If yes, what are they?	Yes, reduce the maximum capacity until 50%.	Yes
Do you implement a minimum distance for crew/passengers? If so, what distance and in what areas of the ship?	Yes, 1- 1.5 m	Yes, 1 m
Do you implement maximum capacity of crew/passengers on board? If so, what capacity and in what areas of the ship?	Yes, reduce the maximum capacity until 50%	Yes, we apply safe manning rules of the ship. 25-30% capacity of the room
Do you split the crew into separate isolated groups to stop spread through the entire crew?	No	No
Are physical distancing markers placed on the floor/different areas of the ship?	Yes	Yes
How overall passenger capacity been reduced? If so, what was the original capacity and what is the new capacity?	Yes, the new capacity is 50% of the original capacity	N/A
Are one-way systems used in any part of the ship?	Yes	No
If you do not require social distancing, what is the reason for this?	N/A	N/A

Before COVID-19 guideline can be developed for Indonesian vessels, the first step is to understand the current situation and anti-pandemic measurements there, for which, the questionnaires were distributed to Indonesian ship and boat operators. Six parameters are discussed and including pre-departure, social distancing, masks, personal hygiene, environmental hygiene, and training. Two types of vessels, which are widely operated to support economic growth, namely passenger ships and tanker/cargo vessel. All of those are tabulated in Tables 1 to 6.

Table 1 talked about pre-departure activity. Both types of vessels showed that all crew and passenger for passenger ships and all crew for tanker/cargo vessels are compulsory to take PCR Test / Rapid Antigen Test before boarding onboard ship. Temperature check is also a must for both ships, but the measurement for tanker/cargo vessel's crew must be done on an everyday basis. Later, both passengers and crew are asked about the possibility of exposure to COVID-19.

Table 2 shows social distancing to be applied onboard ship. Both ships implement a minimum distance of about 1-1.5m and reduce the maximum capacity of passengers and crew into 50% (passenger ships) and into about 30% in association with safe manning rules

Table 3. Masks.

Questions	Passenger Ship	Cargo Vessel
Do you require crew to wear fabric masks?	Yes	Yes.
Do you require passengers to wear fabric masks?	Yes, medical mask is mandatory	N/A
Are there any physical barriers or screens installed between crew and passengers?	No	N/A
Do you experience any difficulties in buying masks?	No	No
If you do not require mask, what is the reason for this?	N/A	N/A

Table 4. Personal hygiene.

Questions	Passenger Ship	Cargo Vessel
Do you have hand sanitiser placed throughout the ship? If so, where is the hand sanitiser located?	Yes, in the main access, embarkation stairs, passenger room, gathering area and information room.	Yes, in public space
If you do not have any hand hygiene stations, what is the reason for this?	N/A	N/A

Table 5. Environmental hygiene.

Questions	Passenger Ship	Cargo Vessel
Is the ship cleaned between voyages?	Yes	Yes
How often is the ship cleaned?	Every day (very often)	Every day
What cleaning products are used to clean the ship?	Chemical Cleaning / Byclean	General Cleaning Product / Floor Cleaner
Are any areas cleaned more or less frequently?	Yes	Yes
Is shared equipment sanitised between uses, e.g. life-jackets?	Yes	Yes
Is there a dedicated area to isolate possible COVID-19 cases?	Yes	Yes
What ventilation / air conditioning is used onboard the vessel? Has this been altered to reduce the risk of COVID-19?	Split and Central Type	Central System
If you do not have any environmental hygiene measures, what is the reason for this?	N/A	N/A

Table 6. Training.

Questions	Passenger Ship	Cargo Vessel
Are crew trained on COVID-19 prevention?	Yes	Yes
Are crew trained on recognising symptoms of COVID-19?	Yes	Yes
Are passengers given information on COVID-19 prevention?	Yes	N/A
Are passengers given information on recognising symptoms of COVID-19?	Yes	N/A
Is safety information regularly announced throughout the voyage?	Yes	N/A

on tanker/cargo vessels. Both vessels do not split their crew into separate isolated groups although they put physical distancing markers.

Passenger vessels apply one-way system to control the incoming and outgoing passengers, whilst tanker/cargo ships do not make such split.

Table 3 provided information about the use of masks. Both vessels require crew to wear fabric mask and passenger vessels ask their passengers to wear medical masks and there is no difficulties to purchase masks. There is no information about physical barriers or screens to be installed between crew and passengers.

Table 4 explained the availability of hand sanitiser throughout the ships and both vessels provide it. Passenger ships put it in the main access, embarkation stairs, passenger room, gathering area, and information room, whereas tanker/cargo vessels provide it in public spaces.

Table 5 showed any activities in relation to maintaining and optimising environmental hygiene. Both ships are clean regularly during and between voyages, and it is done every day. Both vessels use chemical products such as general cleaning products and floor cleaners. Shared equipment (such as lifejackets) is sanitised between uses and both ships provide a dedicated area to isolate possible COVID-19 cases. In terms of ventilation or air conditioning, passenger ships use both split and central type, whilst tanker/cargo vessels use central type only.

Table 6 describes the training activities to be done. Both ships give training on the prevention and recognition of COVID-19 symptoms. Further, passenger vessels, in particular, are provided with information on COVID-19 prevention, recognising the symptoms, and safety information throughout the voyage regularly.

Despite the implementation of those parameters by shipping companies and the increased number of active cases in sea transportation mode, the real data is not yet available. Further study should be carried out to find out the real cases in order to take necessary actions to reduce the worst effects caused by the COVID-19 pandemic.

Conclusion

It is apparent that the Indonesian Government adopts the IMO/WHO Guidance to be used in handling the spread of COVID-19 in sea transportation. Appropriate modifications are made to correspond to the needs of shipping companies. Both vessel types (passenger and cargos ships) consider the pre-departure requirement including routine COVID-19 test before boarding, conducting body temperature check, and asking possible COVID-19 exposure to passengers and crews. Both vessels apply physical distancing of about 1 to 1.5 m. Furthermore, passenger carriers reduce the capacity of passenger into 50% and the cargo vessels cut their crews onboard by 50%. Both vessels require passengers and crew to wear masks; the passengers must wear medical masks, but the crews of cargo ships can wear any mask. In terms of environmental hygiene, passenger ships use special chemical cleaning to entire compartments, whilst the cargo vessels use general cleaning products. Moreover, passenger ships use split and central types of air conditioning, whilst the cargo ships use a centralised system. Both vessels provide information and training to crews to prevent COVID-19, and in particular, the passenger ships also provide information on COVID-19 prevention and recognise its symptoms. Unfortunately, the real case data of infected COVID-19 in sea transportation during the study is not available.

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