Health measures to travelers and cruise ships in response to COVID-19

Varvara A. Mouchtouri, PhD[*,†], Martin Dirksen-Fischer, MD[†,‡] and Christos Hadjichristodoulou, PhD[*,†]

[*]Laboratory of Hygiene and Epidemiology, Faculty of Medicine, University of Thessaly, 22, Papakyriazi street, Larisa, Greece, tel. +302410565009
[†]EU HEALTHY GATEWAYS joint action
[‡]Hamburg Port Health Center, Hamburg, Germany

Corresponding author: Christos Hadjichristodoulou, Laboratory of Hygiene and Epidemiology, Faculty of Medicine, University of Thessaly, 22, Papakyriazi street, Larisa, Greece, tel. +302410565007 email: xhatzi@uth.gr

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Rocklöv *et al.* using models estimated that early evacuation of all passengers who were quarantined for more than two weeks on board Diamond Princess in Japan in February 2020 would have been associated with 76 incubating persons, versus 619 who were actually tested positive for SARS-CoV-2 during the quarantine period on board the ship[1]. The modelling study supports the advice issued by the European Union "HEALTHY GATEWAYS" joint action on the 3rd of February for prevention and control of COVID-19, describing measures to ensure early detection, disembarkation of the first suspect COVID-19 case on board and his/her close contacts, and quarantine in ashore facilities[2]. Early detection and disembarkation would prevent further spread on board the ship and would help to limit the number of travelers requiring quarantine that would not be allowed to travel internationally. On the contrary, if all travelers on board are classified as having high risk exposure, then evacuation presents immense challenges including: issuance of visas and travel arrangements for repatriation, availability of buses for transportation and quarantine facilities ashore for thousands of travelers with related provisions for medication, food supplies according to dietary requirements, water and waste management, laundry and cleaning services. Health measures to crew members who would be classified as having high risk exposure are particularly complex. A number of crew is essential for safe ship navigation and operation; their quarantine is preferable to take place in facilities ashore or repatriation could be arranged. Air travel restrictions during the pandemic, pose additional challenge to travelers' repatriation. Capacities for cleaning and disinfection of different types of surfaces are essential including trained staff, personal protective equipment and materials. Logistical aspects for the next ship voyage should be considered.

International Health Regulations (2005) requires that at least one port of each country has the capacity to apply or supervise health measures in response to a public health emergency of international concern[3]. If the capacities are not in place, then ships may be required to divert to another port specified by the State Party. Port health authorities faced unprecedented challenges when cases of COVID-19 were detected on ships, since there was no experience in the global community during previous events and there are still many uncertainties about the responsibilities for arrangements and their cost recovery. As the pandemic spreads, public health authorities are overburdened dealing with measures in the community and are possibly unable to deal with large cruise ship evacuations. Worldwide, many ports

refused cruise ship calls. Effective response to COVID-19 cases on board cruise ships requires availability of predefined standardised emergency plans at ports and on ships, trained staff to execute them and coordinated efforts with clear roles between ships and authorities at local, central and international level. More clarity and guidance is needed regarding the responsibilities, the essential capacities to be available at the port and the cost recovery of health measures. Special agreements may be required between the cruise industry and the administrations at the ports of call in the future.

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