Guidance to shipping for pandemic influenza

Passenger Shipping Association/Health Protection Agency/Association of Port Health Authorities

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Reason for guidance

As well as pre-existing guidance for seasonal influenza, national and international guidance was produced at the time of the emergence of the novel H1N1 influenza (now called Pandemic H1N1 2009). In the UK, the initial guidance was designed specifically for the containment phase of the pandemic. This has now ended and we are currently in the situation where we are adapting to a higher incidence of influenza which is likely to persist for the next 18-24 months. In the UK, the cumulative incidence may well reach 25-30% compared to 5-6% annually for seasonal influenza. In essence, compared to the incidence of seasonal influenza, we are in the equivalent of a protracted outbreak scenario. Also, the behaviour of the new virus has become clearer; at present it causes a relatively mild illness, similar in severity to seasonal influenza, rather than the more highly virulent virus that was previously anticipated.

Given the current world wide distribution of distribution of Pandemic H1N1 2009 virus, no measure to prevent the introduction of the virus, either on board a large passenger ship or into a port, is likely to be completely effective. The focus of this guidance is on measures to minimise the spread of the virus, both on board a ship and disembarking from a ship, as much as is practicable.

It is important to note that this guidance is valid for this stage of this pandemic; if and when the virus mutates and acquires other characteristics, e.g. becomes more pathogenic, or if an avian virus pandemic occurs, then this guidance may need to be modified.
The first part of the guidance is for cruise ships that carry a doctor. Guidance for ships not carrying a doctor is given in Annex 1 and for ferries in Annex 2.
The cruise guidance is organised in 4 sections; before embarkation, during the voyage, disembarkation and notification/port health actions.

Before embarkation.

- Notification of passengers. During this pandemic, media coverage has been so extensive that virtually no-one will be unaware of the risk of transmission of infection associated with coming into contact with other people, particularly in large groups. It is inevitable that passenger ships will have people coming on board, on a regular basis, who are, or will become, infectious during the voyage. Passengers who are at risk of serious complications of infection with Pandemic H1N1 2009, because of underlying medical conditions, should take this into account when choosing to cruise. It is impractical to expect ships to send out pre-embarkation letters solely to point out that there have been cases of influenza-like illness on board, unless there are extenuating circumstances. It is recommended that passengers have guidance on precautions that they should take issued to them, either before embarkation or as a cabin health information letter, when they come on board.

- Screening. Passengers with influenza should not join the ship unless they agree to remain isolated until they are no longer infectious and the ship has sufficient capability to enable this to be carried out effectively. Screening passengers before joining is recommended. This should be carried out by the ship's medical staff and boarding restrictions should apply to anyone who meets the UK case-definition of influenza-like illness (temperature = 38°C or greater and two or more symptoms of either cough, sore throat, runny nose, headache, joint/limb pain or severe illness suggestive of an infectious process); please note that the US CDC case-definition is pyrexia (temperature = 38°C or greater) plus one additional symptom. Several public health questionnaires have been produced (e.g. European Cruise Council on www.europeancruisecouncil.com) which can be used to identify passengers for screening. If a passenger is refused boarding, they should be given a pre-prepared advice sheet, detailing respiratory hygiene, along with a surgical face-mask to wear.

- Crew members who have influenza-like symptoms should be assessed by the medical staff and isolated on board as required

- Staff personal protective equipment (PPE). Staff who are asked to carry out assessments should wear a surgical face mask and disposable gloves and aprons, and wash their hands afterwards or use an alcohol hand gel.

- Thermal screening. Research has shown [1] that, though thermal screening can be very sensitive, it is very dependent on a number of factors for accuracy, including which part of the body to screen, operator variability, background

temperature etc. which, in practice renders it very unreliable. As such, its use is not recommended.

- Immunisation. In the UK, immunisation against H1N1 is prioritised by clinical need by the Department of Health. It is not expected that ships' crews will be a group recommended for immunisation. If companies wish their employees to be immunised, they will need to make private arrangements, once vaccine becomes available.

During the voyage

- Reporting illness. Passengers and crew should be reminded, when they join, of the need to report respiratory illness as soon as possible.

- Treatment. Passengers and crew who are diagnosed with influenza may be offered treatment with oseltamivir (Tamiflu). If taken within two days of the onset of symptoms, it is likely to shorten the duration of symptoms (and infectiousness to others). Diagnosis should be on clinical grounds, though rapid testing may be helpful in some circumstances (see below).

- Rapid tests for influenza. The sensitivities of these tests for influenza fall far short of 100% (a preliminary evaluation by CDC of three tests showed sensitivities of 40-69%) [2]. This means that a number of true cases of influenza will be wrongly diagnosed as negative. As such, these tests cannot be recommended as a screening tool. They may be helpful, if used, in some circumstances e.g. where there is an apparent cluster of cases, where required by port health authorities abroad or at clinical discretion.

- Shore-based testing. Samples for H1N1 testing should be taken at clinical discretion or for cases of severe or atypical illness. The ship should ask the port health authority (or local authority) for assistance in getting these samples tested, in association with the Health Protection Unit. For groups of patients, there is little value in taking more than 5-10 specimens, as the results of these are likely to be representative of the whole group.

- Prophylaxis. Prophylactic oseltamivir may be given to crew who have been in close contact with someone who has influenza. Defining 'close contact' in ship conditions is frequently difficult; it will typically include anyone who shares a cabin or has to work with them in a confined space. Giving prophylaxis to close contacts of passengers with influenza is possible but not essential. If prophylaxis is given, it has the advantage of preventing some further cases, thus lessening the burden of caring for ill passengers, particularly as many people who cruise are older or likely to have underlying medical conditions which may make them more susceptible to complications if they become ill. Giving prophylaxis to close

contacts of passengers may become more important as the incidence of illness on board rises.

- Long-term prophylaxis. It is possible that some essential crew, e.g. watch-keepers, may be required to take repeated doses of prophylaxis to ensure safety or continue the running of the ship. The recommended duration of oseltamivir is for 10 days post-exposure, and it is licensed for giving for up to 42 days. There is no published evidence of an occupational health hazard from the long-term use of oseltamivir. Given the very wide range of circumstances in which such crew situations might arise, it is not practicable to give further possible criteria for use.

- Children. As children have a higher attack rate than adults, it would be prudent to monitor groups of children, brief youth leaders and advise parents to keep them separate if they develop symptoms of an influenza-like illness.

- Containment – isolation time. People diagnosed with influenza should be confined to their cabins until their influenza-like symptoms have settled. Please note that in the US confinement is recommended for 24 hours after the fever has stopped, without the use of fever-reducing medication. People who have influenza may shed virus for up to 10-14 days; it is not practical to isolate people for this length of time, therefore the duration of isolation is a compromise to prevent exposure to others when the infectiousness is at its highest. This will usually be 5-7 days from the onset of symptoms. Care should be taken not to be overly draconian about the length of time a recovering person who now feels well should be isolated for, particularly if they received oseltamivir; this may make people less likely to present to the medical service when they become ill. It is not practical to 'police' passengers in isolation, but they should be prevented from disembarking for shore visits, e.g. by suspending their ship's shore- pass. People in isolation should put on a surgical face-mask, if it can be tolerated, when anyone-else is in the cabin.

- Containment – crew. If significant numbers of crew are infected, consideration should be given to grouping crew who are ill or in isolation together ('cohorting'). This will reduce the exposure of other crew members to infection.

- Containment – contacts and others. Close contacts of symptomatic passengers do not need to be isolated unless they too become symptomatic. Staff visiting ill people's cabins, e.g. delivering meals or normal housekeeping duties, should wear a surgical face-mask before entering the cabin and discard it on leaving. There is no need for additional disinfection procedures while a cabin is occupied by a person in isolation; normal cleaning should continue as usual (by trained and supervised cleaning teams)

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- PPE. Staff in contact with people ill with influenza, or in isolation, should, as a minimum, wear a surgical face-mask and wash their hands immediately afterwards. Alcohol hand sanitiser can be used as it will inactivate influenza virus.

- Disinfection. Normal cleaning procedures (by trained and supervised cleaning teams) should be carried out in cabins when people who have had influenza disembark or are released from isolation. There is no need for additional procedures or products to be used.

- In general, there will seldom be any need to close ship facilities, unless due to reduced staffing levels. When numbers of crew are affected, consideration should be given to suspending crew mass gatherings, such as recreational events.

Disembarkation

- Passengers in isolation during the voyage should not be permitted to disembark.

- Passengers disembarking at the end of voyage should be assessed for fitness to travel. Advice should be sought from the local port health authority (or local authority) as to the arrangements at that particular port. In the UK, it is not possible to impose any restriction on travel for disembarking passengers who have influenza, whether confirmed or not. Where possible, it is preferable to arrange transport in a private vehicle with the minimum possible number of accompanying people. The passenger should wear a surgical face-mask while in transit and observe respiratory hygiene measures to reduce transmission risk. If the passenger has to use public transport they should wear a surgical face-mask and observe good respiratory hygiene as above but also practice social distancing where possible (keeping 2 metres away from other people). Any passengers who choose to disembark from the ship rather than remain in isolation should be given health and travel advice and the port health authority (or local authority) should be informed.

- Accommodation ashore. Passenger s who are unfit to travel should either be admitted to hospital ashore or stay in local accommodation until they recover. Cruise lines should assist in making arrangements. There is no need to make special hygiene arrangements with the accommodation.

Notification of illness and port health intervention

- There is a legal requirement for the ship's master to notify cases of infectious disease to the port health authority (or local authority) when arriving from a foreign port. This includes all cases of influenza-like illness. Though UK national legislation requires notification not more than 12 hours, or less than 4 hours, before arrival, if a ship requires assistance from the shore-side public health authorities, advance notification (24 hours) is desirable.

- If the ship is having difficulty in controlling the spread of infection on board, they may request assistance from the port health authority (or local authority), though it should be recognised that there is little that the shore authorities can do except to ensure that the ship has an adequate respiratory policy on board, covering isolation, prophylaxis, cough etiquette, social distancing and hand-washing, and that it is being applied correctly. Specific attention should be given to the implications for crew members.

- The ship may well be under stress attempting to continue to operate normally. Port health authorities (or local authorities) should ensure that the ship's safety is not compromised by reduced staff levels.

Media

- It is important that port health authorities (or local authorities), where possible, pro-actively set the expectation that, during a pandemic, influenza aboard a passenger ship is no more of a newsworthy event than influenza ashore.

References

1. Nasirin, S A. Technical Review of Thermal Imaging Technologies for Assessment of Abnormal Body Temperature of Passengers at the UK Point of Entry. Health Protection Agency, September 2008.
2. Evaluation of Rapid Influenza Diagnostic Test for detection of Novel influenza A (H1N1) Virus – United States 2009. *MMWR* August 7, 2009 /**58**(30);826-829

Further information. The most up-to-date information on pandemic influenza in the UK can be found on the Health Protection Agency website; www.hpa.org.uk

Annex 1 Guidance for ships not carrying a doctor.

The major issues for ships not carrying a doctor are; symptomatic crew members joining the ship, treatment of symptomatic crew, prophylaxis of other crew members and ship safety.

Crew joining a ship. Ideally, symptomatic crew who meet the UK case-definition of influenza-like illness (temperature>38°C, and two or more symptoms of either cough, sore throat, runny nose, headache, joint/limb pain or severe illness suggestive of an infectious process) should not be allowed on board (please note that the US CDC case-definition is pyrexia plus one additional symptom). However, this is often difficult in practice. They may be allowed on board at the Master's discretion if they can be isolated, preferably commencing oseltamivir immediately. If it is not possible to isolate them, they will inevitably infect other crew members (unless they are immune due to previous infection, immunisation or are taking prophylactic oseltamivir). The Master must take into consideration the guidelines for protracted prophylaxis on page 3 (the recommended duration of oseltamivir is 10 days post-exposure, and it is licensed for giving for up to 42 days) and the impact of crew illness on being able to carry out normal ship activity safely.

Treatment of symptomatic crew. Crew members who meet the case definition for novel influenza above should be isolated immediately until they become symptom-free. If the ship carries oseltamivir, it should be commenced immediately, unless there are underlying reasons why not. If the crew member appears seriously unwell, medical advice should be sought immediately with the presumption that they will be transferred ashore.

Prophylaxis of contacts. Persons in close contact with a crew member with symptoms suggestive of novel influenza may be given a 10-day course of oseltamivir, if it is carried on board. Defining 'close contact' in ship conditions is frequently difficult; it will include anyone who shares a cabin or has to work with them in a confined space.

Notification of illness to Port Health Authority/local authority. There is a legal requirement for the ship's master to notify cases of infectious disease to the port health authority/local authority (when arriving from a foreign port). This includes all cases of presumed influenza. Though UK national legislation requires notification not more than 12 hours, or less than 4 hours, before arrival, if a ship requires assistance from the shore-side public health authorities, advance notification (24 hours) is desirable.

Annex 2 Guidance for Ferries

Ferries may be of short duration (hours) or longer (overnight) providing cabin accommodation and meals. They differ from cruise ships in that they provide an essential public service rather than a recreational one. As such, it is not practicable to restrict passengers boarding a ferry because of influenza. However, it would be reasonable to expect ferries to do what they can to prevent transmission of infection to other passengers.

Passengers. If a passenger is symptomatic, they should be seated in the most isolated accommodation area available, provided with a surgical face-mask, if available and advised about cough etiquette and social distancing by pre-prepared leaflets. It would also be advisable to have posters displayed with respect to cough etiquette and hand-washing. If cabins are available, a symptomatic passenger should be isolated there where possible, though it will not normally be possible to provide any supervision or services (meals, etc.). A cabin which has been occupied by a symptomatic passenger should be cleaned after use in the normal way.
On some short routes, it might be practicable for symptomatic passengers to remain in their vehicles, subject to Marine & Coastguard Agency approval.
If a passenger becomes seriously ill during a crossing, they should be dealt with as for any other sick passenger by contacting the port health authority/local authority for assistance or the NHS for advice.

Crew. Symptomatic crew joining a ferry should be dealt with as in 'crew joining a ship' in annex 1. Where possible it is preferable for them to be accommodated ashore and join the ferry when they become asymptomatic. However, they may be allowed on board at the Master's discretion, for instance if they have already commenced Oseltamivir, and preferably if they can be isolated on board. For crew members already aboard who become ill, they should either be isolated on board or accommodated ashore and treated as in 'treatment for symptomatic crew' in Annex 1.

International ferries. The same notification requirements apply as in 'notification of illness to Port Health Authority/local authority in Annex 2.

Cancellation of service. The cancellation/suspension of a ferry service, particularly to an island community, because of crew incapacity is a serious issue. Ferry companies should be engaged with the local authority emergency planning teams for such an occurrence, including contingency plans and issuing public statements.

Annex 3 Membership of working group constructing this guidance.

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