Healthy GateWays

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PREPAREDNESS AND ACTION AT POINTS OF ENTRY (PORTS, AIRPORTS, GROUND CROSSINGS)

GUIDELINES FOR INTER-COUNTRY COMMUNICATION & INFORMATION FLOW IN OUTBREAK INVESTIGATIONS ON SHIPS & PUBLIC HEALTH EVENT MANAGEMENT

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Annexes

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1 INTRODUCTION

As ships move rapidly from port to port, when a public health event occurs on board coordinated actions between ships and public health authorities are needed at the various ports of call. Currently, no clear rules for inter-country communication exist when public health events occur on ships. This document describes the suggested information flow when an outbreak occurs on board, and furthermore how different actors – including the ship master, local port competent authorities and central level authorities of countries in the ship's itinerary – share information, follow-up a public health event and take health measures. This document will be considered by the EU HEALTHY GATEWAYS joint action sustainability working group in order to determine the next steps forward for exploitation of the suggested inter-country communication guidelines.

This is Deliverable 9.4 titled "Guidelines for inter-country communication and information flow in outbreak investigations on ships and public health event management". According to Grant Agreement (Number 801493) of the EU HEALTHY GATEWAYS joint action, Deliverable 9.4 includes the roles of stakeholders involved in outbreak investigation on ships and in general in the management of public health events, as well as flowcharts of information among countries and at European level. The EU HEALTHY GATEWAYS joint action has received funding from the European Union, in the framework of the Third Health Programme (2014-2020) [1].

Methods used to produce this document included a review of best practices identified through surveys conducted in the framework of the joint action. In addition, a review of the literature including existing guidelines from the European Centre for Disease Prevention and Control (ECDC) and the World Health Organization (WHO) was done to ensure consistency with existing guidance and interoperability with guidelines produced in both the European and international context [2-16]. Moreover, this deliverable is based on materials produced under the EU SHIPSAN ACT joint action. Lessons learned from previous and current public health emergencies of international concern (PHEIC) and other outbreaks were also reviewed and incorporated in these guidelines.

A small-scale multi-sectorial table-top exercise at European level was conducted, to assist competent authorities and organizations at national and European level to test these guidelines produced for inter-country communication and information flow in outbreak investigations on ships and management of public health events.

2 PROBLEM ANALYSIS

Public health events can occur on board ships as well as on land-based premises. Although communication flows, networks and platforms for information exchange related to cross border public health events are well established in European Union Member States (EU MS), competent authorities face challenges when dealing with public health events occurring on ships. Under the activities of the EU SHIPSAN ACT and EU HEALTHY GATEWAYS joint actions, the consortiums recognized that past outbreaks occurring on board ships sailing in EU countries' waters were not always detected and/or adequately investigated by public health authorities. These included outbreaks of salmonellosis, fever and rash disease, sexually transmitted disease and cases of Legionnaires' disease (Personal Communications). Some examples of delayed or miscommunication that are recently shared are the following.

On one occasion, information about a case of typhus fever on a ship travelling to a port of an EU country was notified to the competent authority through different information systems and included contradicting information; during the collection of information it was determined that the ship had left the port of an EU country approximately 3 weeks before and was currently sailing to a port in South America. It is notable that while in the Maritime Declaration of Health it was declared that no suspected or confirmed cases were on board, during the collection of information it was clarified that an ill person was disembarked in a previous port.

In another outbreak of salmonellosis, none of the ports of calls/countries took the lead of investigating the outbreak, and the ship departed from EU countries without the outbreak source being identified.

In another instance, an outbreak of 30 cases of fever and rash among crew members was reported by a ship to a European port, but no action was taken by any port of call.

The following facts challenge detection, risk assessment, implementation of response measures and follow-up of public health events on ships:

- Ships continuously sail from port to port within the same country or between countries. The normal communication flows of public health information used for land-based premises cannot be used for ship related events.
- Crew members and passengers travel to different destinations around the world upon disembarking. A disease diagnosis could be made after disembarkation.
- Ship routes are not always known, particularly in the case of cargo ships.
- The length of time in which ships are anchored at ports is insufficient for authorities to perform risk assessments and to observe/implement control measures.
- A high population turnaround on board passenger ships can pose a challenge when health measures must be taken to travellers.

- Competent authorities involved in detection, risk assessment, response measures and the legal framework related to ships, differ from those applied on land.

A ship's itinerary should be taken into consideration when scheduling the application of control measures and follow-up of events. If health measures should be taken to travelers and/or crew, the destination country must be informed.

Two different flows exist for sharing information about public health responses on ships:

(a) competent authorities at local level implementing public health measures on ships share information with the next and previous ports of call, either directly or via national level competent authorities using different networks/platforms (e.g. EU SHIPSAN Information System (EUSIS), Early Warning and Response System (EWRS), ECDC Epidemic Intelligence Information System (EPIS), International Health Regulations (IHR) National Focal Point (NFP) communication channels) depending on the event

(b) the ship captain sends health information to the competent authority at next port of call (via the National Single Window (NSW) or Fax or Email or Telephone or other means).

The two different information flows described above must be linked. Both health information which the ship captain sends to the competent authority at the next port of call, as well as information regarding measures taken by the competent authorities must be shared with the previous and next ports of call.

It is essential to ensure early detection and containment of events, before they evolve into outbreaks which fulfill criteria requiring international collaboration for control. Therefore, information sharing should ensure: a) direct port-to-port communication (via EUSIS), and b) communication among authorities at national, EU and international level (via EWRS, EPIS, IHR NFP).

Currently, rules/framework/guidelines do not exist regarding: who coordinates the investigation of an outbreak on board ships that call ports in more than one EU country and/or an EU and non-EU country; what information about implemented measures is shared among competent authorities at the ports of call and how this information is shared; and who determines that the outbreak is over. Each country communicates information using different means and routes within the country, according to their national policies and structures. Public health events on ships may not fulfill the criteria to be reported through EWRS; however, port-to-port communication is essential. The different ports of call in a ship's itinerary should use the same channels and means for communication and provide only correct and verified information.

The COVID-19 pandemic revealed the need for rapid information sharing among the ports of call in a ship's itinerary which are involved in event management on affected ships. EU HEALTHY GATEWAYS has developed a special component in the EU SHIPSAN Information System for sharing information related to COVID-19 cases on ships among content authorities. All types of ships can be affected by infectious diseases, including cargo and passenger ships.

Communication rules, regulations and practices may vary from country to country. It is therefore important to use existing channels and frameworks of inter-country communication. Moreover, guidelines produced can be flexible to allow for various communication options, provided that all stakeholders can access the appropriate information. However, it should be noted that communicating information about public health responses exclusively via email/phone/fax has several limitations, including: a) only recipients of such messages will have access to information shared, b) information about response measures will not be stored in one place where all ports of call can access and review, and c) it is not possible to access historical data about outbreaks that previously occurred on a specific ship d) sensitive information and personal data might need to be shared. Therefore, on-line web based platforms present advantages and provide an EU added value to public health information sharing.

3 ANALYSIS OF STAKEHOLDERS INVOLVED IN OUTBREAK MANAGEMENT ON SHIPS

3.1 SHIP OFFICERS, SHIP OPERATORS AND THEIR AGENTS

According to the IHR, ship officers, ship operators and their agents must report to the competent authority at the destination port as early as possible, and as soon as information on any cases of diseases of infectious nature or any public health risk on board the ship becomes available to them [10, 11]. The ship officer, ship operator or their agents should make all efforts to establish communication with the competent authority at the port of destination, in case there is a public health risk on board or cases of diseases of infectious nature. Before arrival at its first port of call and if the port requires, the master of a ship on international voyage should communicate the health conditions on board to the competent authority via submission of the Maritime Declaration of Health (MDH) through the Maritime Single Window or by other means in accordance to the countries requirements [10].

The ship officers, ship operators and their agents should also provide any additional information requested by the competent authority, to facilitate the latter with conducting the public health risk assessment [11].

3.2 LOCAL HEALTH AUTHORITY

The local level competent authority will be the first to receive information of a public health event on board a ship through different means and sources (e.g. via ship, IHR NFP, previous port of call). Communication is key to an effective and coordinated response.

In accordance with IHR, the local level competent health authority must have established procedures for communication with the ship, the other complementary authorities and/ or service providers at local, regional or central level including the IHR NFP, other Point of Entry types (airports, ground-crossings) and other ports both within and outside the country.

The local level authority should perform a risk assessment and implement control measures if necessary. Risk assessment could involve requesting additional information from the ship and reviewing documents remotely, a visit on board the ship to conduct a focused inspection or an outbreak investigation, collecting samples and/or clinical specimens, and interviewing crew members and passengers etc. Health measures could include disinfection, decontamination, disinsection, medical examination, vaccinations, contact tracing etc. Information for risk assessment and/or health measures implementation must be shared with the previous and next ports of calls, the national level authorities, and if necessary shared

through international level platforms with other countries. Therefore, information sharing and effective communication by all ports of call is essential.

Essential arrangements for communication available at all times at the local health authority are presented in **Box 1**.

Criteria for reporting events from the port health authority to the IHR NFP are summarised in the IHR (2005), as well as the *WHO Handbook for management of public health events on board ships* and presented in **Box 2**.

Criteria for communicating events to other ports (port-to-port communication) according to IHR are presented in **Box 3.**

Box 1: Essential arrangements for communication available at all times - Extract from WHO Handbook for management of public health events on board ships [11]

Essential arrangements for communication available at all times (page 13)

'IHR Annex 1 (b) describes the required core capacities that must be available at all times at ports. State Parties must provide appropriate public health emergency response by establishing and maintaining a public health emergency contingency plan (12), including the nomination of a coordinator and contact points for relevant PoE, public health and other agencies and services.
The essential arrangements for communication that should be available at all times are:

- Procedures and means of communication for receiving health information, documents, and/ or reports from ships regarding public health events or cases of illness on board, and to provide advice and advance notice of the application of control measures, as applicable. For this purpose the competent authority should:
  - (a) Identify the responsible authorities and establish means of communication and procedures to report all available essential information to the health authority at local, intermediate or national levels, including communicating with the IHR NFP for public health assessment, care and response. Authorities that can be involved in the event management, depending on the situation, are: customs, veterinary, environmental, security, police, fire, immigration, agriculture, occupational health, chemical, radiological, laboratories, ambulatory services, hospitals and the local authority for death registries.
  - (b) Maintain the following contact details for the above mentioned authorities: telephone, email, facsimile and mobile-text. Radio can be used to communicate information, depending on the event. In the absence of a reliable terrestrial network, alternative networks offer communication with ships in emergencies.
- Procedures and means for communication with competent authorities at other PoE to provide relevant information regarding evidence found, as well as further control measures needed on arrival of the affected ship at the next port.
- Identify and update contact details of conveyance operators, including agents or legal representatives at shore, and provide them with current contact details of the public health/competent authority for accurate and timely communication.
- Establishment of all administrative arrangements and necessary procedures for the issuance of free pratique (permission for a ship to enter a port, embark or disembark, discharge or load cargo or stores) to ship and health documents, as required.
- Identification of medical facilities/service providers and establishment of administrative arrangements for access to medical and diagnostic facilities for assessment and care of ill travellers or those suspected of being ill, as appropriate, and according to national plans and protocols.
- Establishment of administrative arrangements for communication in order to transport ill passengers to appropriate medical facilities at shore, as appropriate.
- Establishment of mechanisms to be activated when arrangements are needed to follow-up with passengers and crew members who have disembarked and are sent for treatment either in isolation units, at health care facilities or are under quarantine on shore for advice and/or adoption of further

health control measures regarding the remaining travellers left on board, as applicable, according to national plans and protocols."

Box 2: Criteria for reporting events from the local port health authority to the IHR NFP - Extract from WHO Handbook for management of public health events on board ships (*page 14)*

Communication from port to national level
Events are escalated as appropriate (e.g. to regional authorities, national surveillance centres, IHR NFPs) according to national rules and regulations.

Immediate reporting of an event to the IHR NFP is necessary in the following circumstances:

- If the event involves the diseases that must be notified under Annex 2 of IHR: smallpox, poliomyelitis due to wild type poliovirus, human influenza caused by a new subtype, or severe acute respiratory syndrome (SARS), then the authority at port must immediately report the events to the IHR NFP, who in turn must notify WHO. If the event involves the diseases included in the algorithm in Annex 2 of IHR, then the authority at port must immediately report the events to the IHR NFP. Once it is reported, the NFP uses the decision instrument found in Annex 2 of the IHR to determine the wider health impact. Some of the diseases are: cholera, pneumonic plague, yellow fever, viral haemorrhagic fevers (VHFs) (EVD, Lassa fever, Marburg virus disease), West Nile fever and other diseases that are of special national or regional concern, e.g. dengue fever, Rift valley fever and meningococcal disease.
- If there is any information about evidence of a public health risk identified outside the territory of the country that may cause international disease spread, as manifested by exported or imported: (a) human cases; (b) vectors which carry infection or contamination; or (c) goods that are contaminated, then the authority must inform the IHR NFP as soon as possible, who in turn must notify WHO.
- Immediate reporting of the event to the IHR NFP might be necessary if investigation, follow-up of the event or contact tracing are needed and another country needs to be informed.

Box 3: Criteria for reporting events from port-to-port - Extract from WHO Handbook for management of public health events on board ships **(page 14)**

Communication between ports

"As part of the event management on ships, communication among port authorities of different or the same country may be necessary.

Port-to-port communication (either directly or through the IHR NFPs of two or more countries) is necessary in the following circumstances according to the IHR:

(a) when the competent authority for the point of entry is not able to carry out the control measures required in an affected ship at the time of departure, they must inform the next known point of entry (IHR Articles 27 and 28);

(b) when a follow-up inspection is required to determine the success of the vector control measures applied. The competent authorities for the next known port of call with a capacity to make such an inspection shall be informed of this requirement in advance by the competent authority advising such follow-up (IHR Annex 5);

(c) when a traveller suspected of being ill is placed under public health observation upon arrival and has been allowed to continue an international voyage, provided that the traveller does not pose an imminent public health risk. The State Party that placed the traveller under observation must inform the competent authority of the point of entry at the destination, if known, of the traveller's expected arrival. On arrival, the traveller shall report to that authority (IHR Article 30);

(d) when samples for laboratory analysis have been taken, and based on the results obtained, a re-inspection is required. In this case, the competent authority should inform the next appropriate port of call coinciding with the re-inspection date specified in the Ship Sanitation Certificate (SSC) (IHR Annex 3).

If investigation of an event requires contact tracing, then communication with previous ports would be necessary. Follow up of events and updating of event progress would involve communication with next and previous ports of call as appropriate."

3.3 CENTRAL LEVEL AUTHORITY

Responsible authorities to be involved in the management of public health events at ports include: the IHR NFP, the EWRS NFP, national central level coordinator of points of entry (if applicable), and the NFP of ECDC disease-specific networks. Links should be established between these national central level authorities and the port local health authorities, to ensure public health events that meet certain criteria are reported to the central level authority as described in **Box 2**. The central level authority will then assess the public health events reported, and decide if those events/measures taken should be reported at an EU and/or international (non-EU) level.

According to IHR (2005) competent authorities at national level should have the capacities described in Annex 1 of IHR (2005) to assess, notify and respond to public health events [10]. IHR (2005) Annex 2 provides an algorithm for national level authorities to decide if a public health event should be reported to WHO: https://www.who.int/ihr/annex_2/en/.

In accordance with Article 15 of Decision 1082/2013/EC, EU MS should designate the competent authority or authorities responsible at national level for notifying alerts and determining the measures required to protect public health [17]. More information is described in paragraph 3.4.

3.4 EU LEVEL AGENCIES AND NETWORKS

3.4.1 Early Warning and Response System

Purpose

The Early Warning and Response System (EWRS) of the European Union is a tool with restricted access that allows the Commission and EU MS competent authorities **at national level** to be in permanent communication for the purposes of alerting, assessing public health risks and determining the measures that may be required to protect public health [6].

According to Article 15 of Decision 1082/2013/EC, each EU MS should designate the competent authority or authorities responsible at national level for notifying alerts and determining the measures required to protect public health [6]. Moreover, EU MS should *"ensure that effective communication channels are established between the EWRS competent authorities and any other relevant competent authorities within their jurisdiction in order to promptly identify serious cross-border threats to health"* [8].

There are two main communication channels in EWRS: the first is "general messaging" where the competent health authority in a given Member State shares information about events of a potential EU

dimension with all national EWRS focal points, the Commission, ECDC and WHO [7]. The second "selective exchange messaging" channel allows focal points to send a message to selected recipient(s) and can also be used for contact tracing purposes, with contact tracing/health information visible only to the Member States directly concerned [7].

In addition a platform for the secure exchange of Passenger Locator Form data of infected passengers for the sole purpose of SARS-CoV-2 contact tracing of exposed persons by the EWRS competent authorities ('PLF exchange platform') is established under the EWRS as a complement of the selective messaging functionality existing within that system. The PLF exchange platform shall provide a digital entry point for EWRS competent authorities to securely connect their national digital PLF systems or connect through the common European Union digital Passenger Locator Form System ('EUdPLF')[1], in order to enable the exchange of data collected through PLFs [18]

Criteria of events to be reported in the EWRS

Alerts are initiated in the EWRS by national competent authorities or the Commission when an event fulfils the criteria below as described in Decision 1082/2013/EU:

(a) it is unusual or unexpected for the given place and time, or it causes or may cause significant morbidity or mortality in humans, or it grows rapidly or may grow rapidly in scale, or it exceeds or may exceed national response capacity; and

(b) it affects or may affect more than one Member State; and

(c) it requires or may require a coordinated response at Union level.

Events should be notified to EWRS without delay, and in any event no later than 24 hours from when first becoming aware of the threat [8]. The Member State or the Commission may inform the Health Security Committee ('HSC') to the introduction of an alert [8].

Events notified through EWRS can be visible to other organisations (European Commission, WHO-Europe, EMA, ECHA, ECHO) and Neighbourhood countries [6].

The alert is deactivated by the party that introduced the alert, after the threat has ceased to exist and after all MS agree to the deactivation[8].

3.4.2 ECDC disease-specific networks

ECDC operates a total of 18 operational disease networks aiming to *"enhance capabilities and strengthen capacity for pathogen detection, characterisation and surveillance of specific diseases and antimicrobial*

[1] https://www.euplf.eu/en/home/index.html

resistance"[2]. https://www.ecdc.europa.eu/en/about-us/who-we-work/disease-and-laboratory-networks

ECDC launched on 22 June 2021 the European surveillance portal for infectious diseases (EpiPulse), an online portal for European public health authorities and global partners to collect, analyse, share, and discuss infectious disease data for threat detection, monitoring, risk assessment and outbreak response. https://www.ecdc.europa.eu/en/news-events/launch-epipulse-new-portal-strengthen-prevention-and-control-infectious-diseases [19]. In particular, it allows public health authorities at national level to share technical information to assess whether current and emerging public health threats have a potential impact in the EU. EPIPULSE aims to "*ensure transparent and timely information sharing among the participating public health authorities in order to detect public health threats at an early stage and facilitate their reporting under Decision 1082/2013/EU and the coordination of response activities"[3].* Whereas the previous 'EPIS' platform was available to only some disease networks, EpiPulse will be available to all the networks operated by ECDC.

The following networks are relevant to cruise ships public health events:

- ***Travel-associated Legionnaires' disease surveillance scheme of the European Legionnaires' Disease Surveillance Network (ELDSNet)***
  https://www.ecdc.europa.eu/en/about-us/partnerships-and-networks/disease-and-laboratory-networks/eldsnet

The aim of ELDSNet is to *"detect, control and prevent cases, clusters and outbreaks of Legionnaires' disease in EU/EEA countries, and assist with detection and response outside these countries. The network supports the Member States and other involved countries to share information and collaborate on response actions to provide better protection from travel-associated Legionnaires' disease, both domestically and abroad"[4].* National public health authorities appoint members to the ELDSNet network that act as contact points, and events are communicated via the ECDC EPIPULSE [4].

- ***FWD (Food- and Waterborne Diseases and Zoonoses)***

EPIPULSE-FWD facilitates the early detection and assessment of multi-country/multinational molecular typing clusters and outbreaks of FWDs [3].

- ***VPD (Vaccine Preventable Diseases)***

EPIPULSE-VPD facilitates the early detection and sharing of information on outbreaks of VPDs and adverse events from vaccinations, allowing exchange of information on technical topics related to vaccinations and the control of vaccine preventable diseases [3].

3.4.3 European Maritime Single Window

In order to simplify reporting formalities on board ships, EU MS have developed national "single windows" where ship operators can submit data electronically and make data available to multiple authorities.

The Commission had established a European Maritime Single Window environment' ('EMSWe') which provides *"the legal and technical framework for the electronic transmission of information in relation to reporting obligations for port calls in the Union, which consists of a network of maritime National Single Windows with harmonised reporting interfaces and includes data exchanges via SafeSeaNet and other relevant systems as well as common services for user registry and access management, addressing, ship identification, location codes and information on dangerous and polluting goods and on health"[5]*

3.4.4 Ship sanitation database, EU SHIPSAN Information System (EUSIS)

Regulation (EU) 2019/1239 of the European Parliament and of the Council of 20 June 2019 establishing a European Maritime Single Window environment and repealing Directive 2010/65/EU includes the establishment of a common ship sanitation database that is able to receive and store data on Maritime Declarations of Health applicable from 15 August 2025 [5].

In accordance with Article 17, the Commission shall make available a common ship sanitation database that is able to receive and store data related to the Maritime Declarations of Health under Article 37 of the IHR (2005). Personal data relating to ill persons on board ships shall not be stored on that database. The competent health authorities of the Member States shall have access to the database for the purpose of receiving and exchanging data [5].

The EU SHIPSAN Information System (EUSIS) (https://sis.shipsan.eu/) consists of four components:

(a) ***IHR Ship Sanitation Certificate Database***

(b) **Public Health Information - Communication network platform for EU ports**

(c) **European Database for storing Maritime Declaration of Health**

(d) **Database for recording ship inspections according to the European Manual**

EUSIS records data of ship inspections and data on management of public health events on ships (names of ships, hygiene inspection results, description of public health events on ships, names of ports and names of officers working in EU ports). The system enables ship-to-port, port-to-national authorities and port-to-port communication. Moreover, read access is given to the national central level authorities, ECDC, NFP ECDC networks, the European Commission and WHO. Data are recorded by officers working at port health authorities in EU countries and by ship operators/Captains of ships sailing in the EU.

The purpose of EUSIS is to maintain a communication system that can improve consumers' (passengers and crew) health protection through:

(a) recording of information related to communicable diseases by the ship using web based standardized disease recording forms. This information can be used for the risk assessment conducted by competent authorities (e.g. port health authorities, national authorities, EWRS NFPs),

(b) facilitating communication by maintaining registries including contact details for ships, competent authorities, and port health officers including inspectors,

(c) creating an alert system to ensure that outbreaks and other public health events can be investigated and controlled in a timely manner without over reaction,

(d) facilitating the exchange of information between ports during outbreak investigation,

(e) sharing of information on hygiene inspections, sharing epidemiological information among competent authorities at ports in a standardized and confidential way,

(f) to maintain a European database for storing the Maritime Declaration of Health which have been submitted to the National Single Window to EUSIS.

3.4.5 Union Maritime Information and Exchange System (SafeSeaNet)

SafeSeaNet (SSN) is a Union information system for the exchange of vessel and voyage related information between designated participants within EU established under Directive 2002/59/EC, as amended. The system was developed by the Commission in cooperation with the Member States to ensure the implementation of Union legislation. EMSA is responsible for the development, operation and maintenance of the central SSN system as well as the interfaces with the Member States national systems.

The objective of the SSN system is to support EU and MS activities and enable the receipt, storage, retrieval and exchange of information for the purpose of maritime safety, port and maritime security, marine environment protection and the efficiency of maritime traffic and maritime transport.

The SSN system also supports the data exchange at EU level between the maritime National Single Windows established under the European Maritime Single Window environment Regulation (EU) 2019/1239.

Member States receiving information on a possible, probable or confirmed COVID-19 case may share it on a voluntary basis with the Member States along the planned route of the ship and the ship's flag (if

an EU Member State) via SSN. For this, an addendum to the SSN Incident Report Guidelines[2] has been adopted by the Commission and the Member States on 15th April 2020 providing guidance to Member State Authorities on how to exchange information relating to possible, probable, or confirmed cases of COVID-19 infection on board ships, and on the measures taken by the competent authorities in Member States located along the routes taken by the ships concerned. Member States can share this information with other Member States on a voluntary basis using the Incident Report type "Others" which is an existing functionality of SSN.

3.5 INTERNATIONAL LEVEL (NON-EU)

IHR NFP network

IHR (2005) requires Member States to establish a National IHR Focal Point to communicate with the WHO IHR contact points for urgent communications between countries and WHO. The functions National IHR NFPs have as described in IHR (2005) (Article 4) are:

(a) sending to WHO IHR Contact Points, on behalf of the State Party concerned, urgent communications concerning the implementation of these Regulations, in particular under Articles 6 to 12; and

(b) disseminating information to, and consolidating input from, relevant sectors of the administration of the State Party concerned, including those responsible for surveillance and reporting, points of entry, public health services, clinics and hospitals and other government departments.[10]

The IHR NFP has to notify within 24 hours all events that may constitute a public health emergency of international concern (PHEIC) via the most effective means and to continue to communicate with WHO to provide timely, accurate and sufficient public health information regarding the event notified (IHR, Article 6) [10].

Criteria of events to be reported to WHO as potential PHEIC

IHR NFP should use the decision instrument available in Annex 2 of the IHR to assess if an unexpected or unusual public health event may constitute a public health emergency of international concern and should be notified to WHO [10]. WHO in turn will communicate with all parties to inform them of a public health risk and provide information in order to prevent similar incidents from occurring [10].

IHR NFP communication channels

[2] Available at http://emsa.europa.eu/ssn-main/documents/item/1137-ssn-incident-report-guidelines-v120.html

The communication channels used by the IHR NFP for reporting to WHO are:

- urgent communications under IHR 2005
- European Commission's Early Warning and Response System (EWRS)
- other governmental channels (e.g. the Ministry of Health and national government agencies), or
- partner networks (e.g. other UN agencies, Global Outbreak, Alert and Response Network (GOARN)) [15]
- IHR Event Information Site (EIS) - Secure website developed by WHO to facilitate communications with the National IHR Focal Points (NFPs) [20]

The WHO Event Management System (EMS) is the central electronic repository for event-related information. National IHR Focal Points (NFPs) and relevant government communications, event details, WHO assessments and decisions are documented and recorded in EMS [15]. All events that fulfil the Annex 2 criteria for notification must be recorded in EMS. However, other public health events monitored by WHO may also be recorded in EMS [20].

3.6 WHO COORDINATES PUBLIC HEALTH EVENT RESPONSE

When a public health event occurs on board a ship calling different ports in EU countries, it is important that one of the authorities coordinates the public health response, informs all involved authorities regarding the outbreak investigation's outcome, prepares the investigation report and decides to close the public health event.

The working group that developed the current guidelines suggests the following rules:

Events on ships sailing in EU countries that do not fulfill criteria to be reported at EU level

a) For public health events that do not fulfill the criteria to be reported at an EU level, it is suggested that the competent authority in the home port[3] country acts as coordinator.
b) Alternatively, for public health events that do not fulfill the criteria to be reported at an EU level, and when national rules require it, the central level authority in the home port country could act as coordinator
c) If the port level or central level authority in the home port country cannot act as coordinator, then the port or central level authority in the country that identified the public health event should take on the role of coordinator.

[3] the port where passengers embark to start the voyage and disembark the ship at the end of the voyage or the port that the ship is taking on stores, supplies and fuel and loads/offloads cargo.

d) If none of the above can take on the role of the coordinator, then one of the port level or central level authorities on the itinerary of the ship should take on the role of the coordinator.
e) The local authorities at the ports of call should inform about any new evidence related to the event and response measures the relevant authorities within their country at local, sub-national and national levels and also update with this information the port-to-port communication platform (SHIPSAN Information System).

Coordinating the public health event response of events that fulfill criteria to be reported at EU level

a) For public health events that fulfill the criteria to be reported at an EU level, it is suggested that the central level authority in the country that identified the public health event acts as coordinator. If the central level authority in the country that identified the public health event cannot act as coordinator, then the central level authority in the country of the ship home port should take on the role of the coordinator.
b) For public health events affecting more than one country and/or there is transmission not only on board ships but also in the community, then ECDC if asked by EU MS could coordinate the response to the event. EPIPULSE could also be used for this purpose.
c) In all cases, the port-to-port communication (SHIPSAN Information System) and EU level communication platforms (EWRS) should be updated by recording the relevant information by the local or the central level authorities respectively.
d) The local authorities at the ports of call should inform the relevant authorities within their country at local, sub-national and national levels about any new evidence related to the event and response measures. Moreover, the central level authorities should inform the local level authorities for any evidence and response measures related to the event.

4 SUGGESTED INFORMATION FLOW IN RESPONSE TO OUTBREAKS ON SHIPS

The following table presents the six routes of communication and the 5Ws' (Who, Where, What, When, Why) and How:

a) Ship-to-port
b) Port-to-ship
c) Port-to-port
d) Port to national and sub-national level

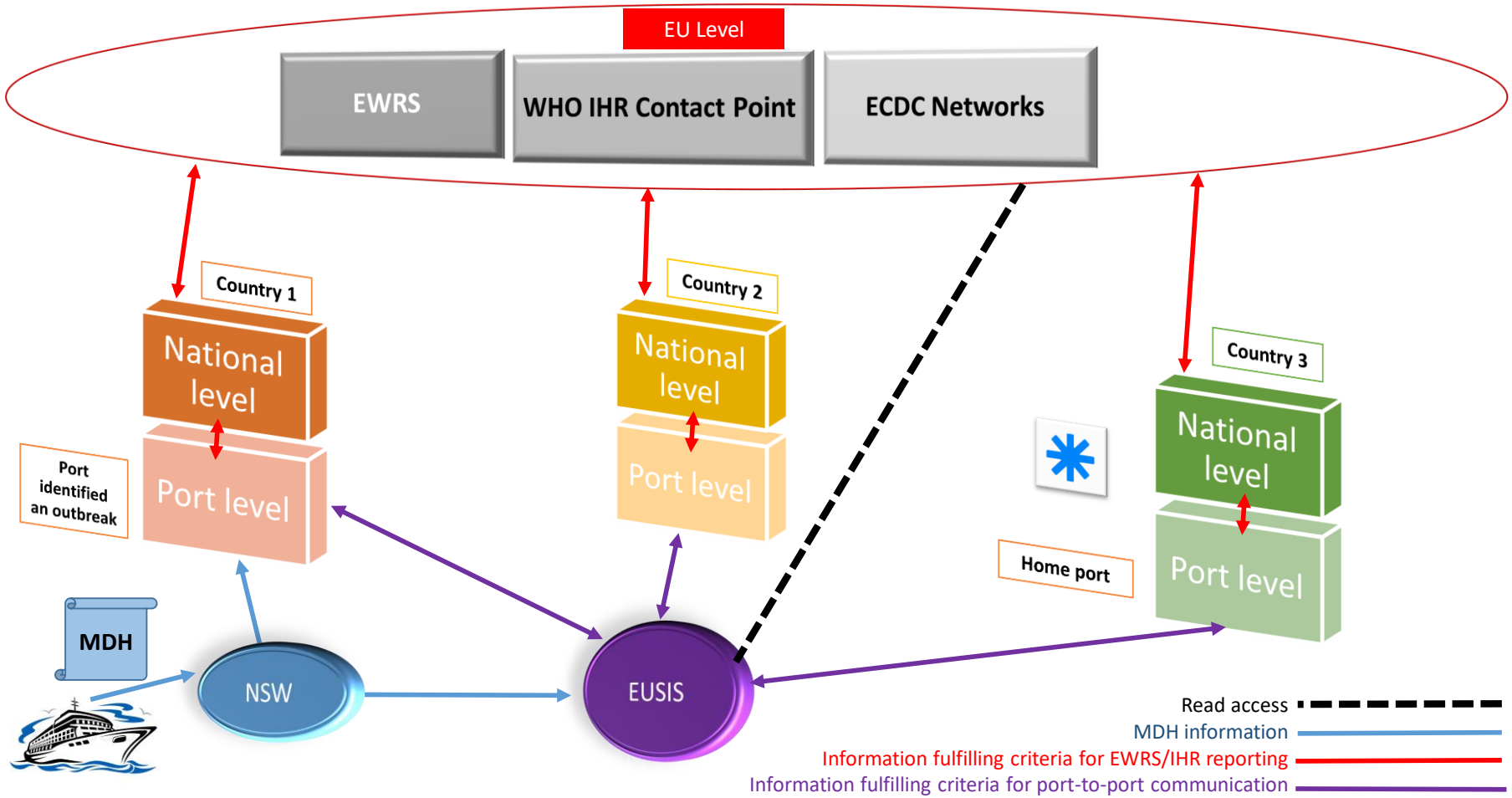
e) National level to international level

f) National level to port

Both port-to-port and (inter)national communication routes are indispensable. The port-to-port communication route is critical because local level authorities have immediate access onto ships and the competence of applying health measures; therefore, reliable and verified information can be rapidly shared with others. The (inter)national route can be used only when certain criteria are fulfilled, and consist of the formal channels that keep national authorities aligned and informed.

The flow chart for communication routes is provided in **Figure 1**.

Figure 1: Flow chart of information when responding to public health events on ships



* Port/country coordinating outbreak response (home port) - if not possible then the port that identified an outbreak should take the lead of the outbreak

MDH: Maritime Declaration of Health, NSW: National Single Window, EUSIS: SHIPSAN Information System, EWRS: Early Warning and Response System, IHR: International Health Regulations

Note: For COVID-19 cases reporting on board ships, competent authorities can use the SafeSeaNet following the instructions given in the SafeSeaNet Incident Report Guidelines Addendum on "Reporting COVID-19 cases on board ships".

Communication routes	Who (sender)	Where (recipient)	What (content of message)	When (timing and conditions)	Why	How (means)
Ship-to-port	Ship master	Port competent authority	Maritime Declaration of Health (Annex 1) Information about the health conditions on board the ship and measures taken since the commencement of voyage.	Before arriving at the port and as soon as a public health risk has been identified on board.	To inform the next port of call about public health risks on board and any health measures that have been implemented as required by IHR.	NSW or Fax or Email or Telephone or other means EU MDH database (transmitted automatically from the NSW to the EU database)
Port-to-ship	Port competent authority	Ship master/ ship operator/ agent	Template 1 (**Error! Reference source not found.**) Information about a public health event that is relevant to the ship.	At any time when information about public health events are becoming available.	To inform the ship master/ship operator/agent about information of events that are linked to the ship and request additional information from the ship.	Fax or Email or Telephone or other means
Port-to-port	Port competent authority	Port competent authority	SHIPSAN Information System forms ( ) SafeSeaNet system – Incident Report type "Others" (Annex 8)	As soon as the IHR requirements for port-to-port communication are fulfilled. For criteria of events see **Box 3.**	To inform the next ports of call and other ports in the ship itinerary about the evidence of public health risks, any measures taken, any measure that should be followed up by next ports of call etc.	EU SHIPSAN Information System, SSC. SafeSeaNet system – Incident Report distributed along the ships' route

Port to national and sub-national level	Port competent authority	National and/or sub-national authority - *Regional level authority* - *EWRS FP* - *IHR NFP* - *Disease specific network NFP* - *National central level coordination authority*	Diseases and events - *Diseases under IHR Annex 2* - *EWRS diseases and events* - *Diseases under the national notification system* - *Unexpected number of cases* - *Country's specific criteria* For criteria of events see **Box 2**. **Box *3*** Template 2 (**Error! Reference source not found.**)	As soon as the public health events have been identified and criteria for national level notification are fulfilled.	To report events to the higher level in the country so that they can assess if those events should be reported at an EU or international level.	As per national rules and regulations
National level to international level	National level competent authority	EWRS IHR WHO contact point	EWRS Template (**Error! Reference source not found.**) IHR NFP Template (Annex 6)	As soon as the public health events that fulfill the criteria of EWRS and/or IHR have been identified.	Reporting of event to another country Follow-up of event that took place in more than one country	EWRS platform WHO IHR means of communication (email, WHO platforms, IHR

					Share information about an event when more than one nationals are affected Coordinating cross-border response and closing of event	Event Information Site (EIS))
National level to port	National level competent authority	Port competent authority	Template 4 (Annex 7)	As soon as the public health events have been identified that are relevant to the port (ships called the port or will call at the port)	To inform the port level authority about public health information that is relevant to the ships calling or called at the port	

*Expected number of cases

**More than expected number of cases

5 CONFIDENTIALITY OF INFORMATION SHARED

All information shared must respect the General Data Protection Regulation (EU) 2016/679.

Alerts initiated via EWRS should be in accordance with the COMMISSION RECOMMENDATION of 6 February 2012 on data protection guidelines for the Early Warning and Response System (EWRS). The information shared via the alerts created in EWRS is confidential and accessed only by ECDC, the Member States and the Directorate General Health and Food Safety (SANTE).

EWRS can be used for sharing data for contact tracing purposes. There are two main communication channels in EWRS; the first is general messaging where no health related or personal information are shared and the second "selective messaging" channel is used mainly for contact tracing purposes, with contact tracing and health information only visible to the Member States directly concerned [7].

Personal data relating to ill persons on board ships shall not be stored on the European Database for storing Maritime Declaration of Health [5].

6 COMMUNICATION WITH MEDIA AND THE PUBLIC

When communicating information related to a public health event with the media and the public, it is important to avoid inconsistent messages being shared that may lead to inappropriate behaviour. A written risk communication strategy targeting different stakeholders, including the travelling public and port staff should be part of the national and the port's public health emergency contingency plan (PHECP). All competent authorities involved in outbreak management should communicate and coordinate to ensure the consistency of messages shared with the public via different routes [11].

ANNEXES

Annex 1: ***Maritime Declaration of Health***

MDH.pdf

Annex 2: ***Template 1 – Port-to-ship communication***

Purpose: *To inform the ship captain/operator about a public health event that relates to the ship.*

To: ship captain and ship operator email

Cc: <insert emails relevant stakeholders> according to authority communication rules

Bcc:

Subject: Information sharing related to <insert event> in <insert location>

****
FOR OFFICIAL USE ONLY
This communication is for official use only and is not for public dissemination. Recipients may distribute it at their discretion, for operational purposes, to relevant stakeholders.

Dear Captain,

In accordance with the International Health Regulations (IHR) (2005), <insert other national regulation>, the <insert authorities details> <insert country> would like to report <insert event description, if applicable, including, e.g.:

- *case definitions*
- *laboratory results*
- *source and type of the risk*
- *number of cases and deaths*
- *conditions affecting the spread of the disease*
- *health measures employed>*

<insert additional notes, if/as applicable, i.e.:

Should you require further information, please do not hesitate to contact the <insert country and authority details>.

Regards,

<insert authority and country>
<insert signature block>

Annex 3: ***EU SHIPSAN Information System forms***

PortCommunicationForm.pdf

The COVID-19 specific form can be found by double clicking here:

N1N2 COVID-19.pdf

Annex 4: ***Template 2 – communication from port to (sub-) national***

Purpose: *The port to inform the sub-national or national level authority for diseases under IHR Annex 2, EWRS diseases and events, diseases under the national notification system and events involving unexpected numbers of cases*

To: email of sub-national or national central level authority

Cc: <insert emails relevant stakeholders> according to authority communication rules

Bcc:

Subject: Information sharing related to <insert event> in <insert location>

****

FOR OFFICIAL USE ONLY
This communication is for official use only and is not for public dissemination. Recipients may distribute it at their discretion, for operational purposes, to relevant stakeholders.

Dear ……,

In accordance with the International Health Regulations (IHR) (2005), <insert other national regulation>, the <insert authorities details> would like to report <insert event description, if applicable, including, e.g.:

- *case definitions*
- *laboratory results*
- *source and type of the risk*
- *number of cases and deaths*
- *conditions affecting the spread of the disease*
- *health measures employed>*

<insert additional notes, if/as applicable, i.e.:

Should you require further information, please do not hesitate to contact the <insert authority details>.

Regards,

<insert authority>
<insert signature block>

NOTE FOR SENDER AND RECIPIENT: If this event has not been posted to the SHIPSAN Information System (EUSIS), it is advised to record the information in this message so that all ports of call have access and are aware of the public health event.

Annex 5: ***Template 3 – EWRS form***

EU MS without delay and in any event no later than 24 hours from when it first became aware of the threat should introduce an alert [6]. The alert shall specify how the criteria laid down in Article 9(1) of Decision No 1082/2013/EU and listed below are fulfilled[8].

"When notifying an alert, the national competent authorities and the Commission shall promptly communicate through the EWRS any available relevant information in their possession that may be useful for coordinating the response such as:

(a) the type and origin of the agent;

(b) the date and place of the incident or outbreak;

(c) means of transmission or dissemination;

(d) toxicological data;

(e) detection and confirmation methods;

(f) public health risks;

(g) public health measures implemented or intended to be taken at national level;

(h) measures other than public health measures;

(i) personal data necessary for the purpose of contact tracing in accordance with Article 16;

(j) any other information relevant to the serious cross-border threat to health in question."

Additionally the alert notification should include information whether the threat identified has previously been notified through other alert or information systems at Union level or under the Euratom Treaty [8].

Where a serious cross-border threat to health is communicated through more than one Union alert or information system, the Commission shall indicate through the EWRS the lead system for the specific type of information exchange [8].

More information is available to the EWRS NFRs.

Annex 6: ***IHR NFP form***

Detailed communication instructions for IHR NFPs are included in the WHO Standard Operating Procedures for IHR NFPs available from: http://www.paho.org/sites/default/files/2020-09/Standard-Operating-Procedures-IHR-NFP.docx [12]

Annex 7: ***Template 4 - National central level to port***

Purpose: *The sub-national or national level authority to inform the local level authority.*

To: email of local level authority

Cc: <insert emails relevant stakeholders> according to authority communication rules

Bcc:

Subject: Information sharing related to <insert event> in <insert location>

****
FOR OFFICIAL USE ONLY
This communication is for official use only and is not for public dissemination. Recipients may distribute it at their discretion, for operational purposes, to relevant stakeholders.

Dear ……,

In accordance with the International Health Regulations (IHR) (2005), <insert other national regulation>, the <insert authorities details> would like to report <insert event description, if applicable, including, e.g.:

- *case definitions*
- *laboratory results*
- *source and type of the risk*
- *number of cases and deaths*
- *conditions affecting the spread of the disease*
- *health measures employed>*

<insert additional notes, if/as applicable, i.e.:

Should you require further information, please do not hesitate to contact the <insert authority details>.

Regards,

<insert authority>
<insert signature block>

Annex 8: ***SafeSeaNet Incident Report type "Others"***

Detailed communication instructions for SSN Incident Report type "Others" to facilitate the exchange of information on COVID-19 cases on board ships approaching EU ports are included in the SSN Incident Reports Guidelines – Addendum COVID-19 available from: http://emsa.europa.eu/ssn-main/documents/item/1137-ssn-incident-report-guidelines-v120.html [18]

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