

How to effectively organize infectious disease management at European airports?

Methodology

This study consists of three steps. First, we performed a scoping literature study to research the available evidence on how task division, allocation and rewarding should be solved among stakeholders involved in infectious disease control at airports, and the available solutions from practice. After, these universal problems of organization were further explored in focus groups among stakeholders. In addition, a questionnaire was sent to assess role clarity and information flow at three-six airports.

Literature research:

First, we performed a scoping literature search on how task division, allocation, rewarding and information flow should be organized for infectious disease control at airports according to available laws, regulations and evidence from practice. We searched on websites of WHO headquarters, WHO EURO, ECDC, IATA, ICAO, and AIRSAN and in databases Web of Science, Scopus, Pubmed. Search terms included air travel, organization, public health events, and their synonyms for data bases. On the websites of WHO, ECDC and only "airport" and synonyms were used as a search term; at IATA and ICAO 'infectious diseases'. Search strategies and number of hits are presented in **Annex 1**.

Title/abstract Screening criteria and data extraction

Using subsequent title, abstract, screening, we included:

- Setting: Air travel / transport
- Discipline: Public health emergency response
- Outcome: Organizational aspects
- Unclear content

Excluded were those:

- Disaster management: focusing on prevention and/or response to air crashes or disaster management specifically,

Search strategy

Aim of this review: to identify prescriptive (laws, regulations) and descriptive (examples from practice at individual airports) characteristics of task allocation, task division, information flow and rewarding for tasks involved with infectious disease prevention and control at airports.

Research questions:

- How **should** task division, task allocation, rewarding and information provision for infectious disease management be organized at airports?
- How **is** task division, task allocation, rewarding and information provision for infectious disease management organized at airports?

Databases:

Peer-reviewed literature: Pubmed, Scopus, and Web of Science

Grey literature: websites of WHO, ECDC, AIRSAN, CAPSCA, IATA, ICAO.

Search terms:

Setting		Topic		Outcome	Settings
<i>Title/Keyword</i>		<i>Title/Keyword</i>		<i>Title/Abstract/Keyword</i>	
Airport	AND	Infectious disease response	AND	organization	
airports, aerospace, airdrome, aerodrome, air station, air stations, air terminal, air terminals, aviation, airfield, airfields, air transport, air transportation, airplane, airplanelines, passageway, passageways, point of entry, points of entry		health emergency, health emergencies, health event, health events, health hazard, health hazards, health crisis, health crises, disaster, disasters, infection, infections, infectious, infected, communicable, diseases, disease, illness, contagious, preparedness, prepared, response, epidemic, epidemics, pandemic, pandemics		Organization, organizations, airport company, airport companies, organizational, infrastructure, task division, dividing tasks, task distribution, distributing tasks, task allocation, allocating tasks, task assignment, assigning tasks, information provision, communication, coordination, collaboration, information flow, cooperation, reward, rewards, rewarding, contract, contracts, agreement, agreements, efficiency, management, culture, governance,	<u>>2004; all languages</u>

Databases Results

Pubmed: 121

Scopus: 78

Web of Science: 134

Totaal 288

Dubbel: 53

Ontdubbeld: 235

Grey literature results

Unique results: 63.

TOTAL: 235 + 63 = 298 articles

Results

Pubmed search – 25 april 2020

((((((((((((((((((((((airport[Title]) OR airports[Title]) OR aerospace[Title]) OR airdrome[Title]) OR aerodrome[Title]) OR "air station"[Title]) OR "air stations"[Title]) OR "air terminal"[Title]) OR "air terminals"[Title]) OR aviation[Title]) OR airfield[Title]) OR airfields[Title]) OR "air travel"[Title]) OR "air traveler"[Title]) OR "air travelers"[Title]) OR "air traveller"[Title]) OR "air travellers"[Title]) OR "air transport"[Title]) OR "air transportation"[Title]) OR airplane[Title]) OR airplanes[Title]) OR passageway[Title]) OR passageways[Title]) OR airports[MeSH Terms]) OR "Aerospace Medicine"[MeSH Terms]

AND

((((((((((((((((((((((("health emergency"[Title]) OR "health emergencies"[Title]) OR "health event"[Title]) OR "health events"[Title]) OR "health crisis"[Title]) OR "health crises"[Title]) OR "health emergency"[Title]) OR "health emergencies"[Title]) OR "health threat"[Title]) OR "health threats"[Title]) OR infection[Title]) OR infections[Title]) OR infectious[Title]) OR infected[Title]) OR communicable[Title]) OR diseases[Title]) OR disease[Title]) OR illness[Title]) OR contagious[Title]) OR epidemic[Title]) OR epidemics[Title]) OR pandemic [Title]) OR pandemics[Title]) OR prepared[Title]) OR preparedness[Title]) OR response[Title]) OR "Communicable Diseases"[MeSH Terms]) OR Epidemics[MeSH Terms]) OR Pandemics[MeSH Terms]

AND

((((((((((((((((((((((organization[Title/Abstract]) OR organizations[Title/Abstract]) OR "airport company"[Title/Abstract]) OR "airport companies"[Title/Abstract]) OR organizational[Title/Abstract]) OR infrastructure[Title/Abstract]) OR "task division"[Title/Abstract]) OR "task distribution"[Title/Abstract]) OR "task allocation"[Title/Abstract]) OR "task assignment"[Title/Abstract]) OR "information provision"[Title/Abstract]) OR communication[Title/Abstract]) OR coordination[Title/Abstract]) OR collaboration[Title/Abstract]) OR "information flow"[Title/Abstract]) OR cooperation[Title/Abstract]) OR reward[Title/Abstract]) OR rewards[Title/Abstract]) OR rewarding[Title/Abstract]) OR contract[Title/Abstract]) OR contracts[Title/Abstract]) OR agreement[Title/Abstract]) OR agreements[Title/Abstract]) OR efficiency[Title/Abstract]) OR efficient[Title/Abstract]) OR effective[Title/Abstract]) OR effectiveness[Title/Abstract]) OR management[Title/Abstract]) OR culture[Title/Abstract]) OR cultural[Title/Abstract]) OR cultures[Title/Abstract]) OR governance[Title/Abstract]) OR "Organization and Administration"[Mesh Terms]

Filters activated: Publication date from 2004/12/31 to 2020/12/31

Results: 73

Web of Science – 23 April 2020

All databases: Core collection, Medline, KCI Korean Journal Database, Russian Science Citation Index, ScIELO Citation Index

TI=(airport\$ OR airdrome\$ OR aerodrome\$ OR aviat* OR (air AND field\$) OR (air AND travel*) OR (air AND transport*) OR "point of entry" OR "points of entry") AND TS=(organi* OR planning OR distrib* OR allocate* OR divi* OR inform* OR communicat* OR collaborat* OR coordinat* OR cooperat* OR reward* OR contract* OR agreem*) AND SU=Infectious Diseases

Databases= WOS, KJD, MEDLINE, RSCI, SCIELO Timespan=All years. Search language=Auto

Results: 210

>2004, = 134

Scopus – 25 April 2020

TITLE(airport OR airports OR aerospace OR airdrome OR aerodrome OR aviation OR airfield OR airfields OR (air AND travel) OR (air AND transport) OR (air AND transportation) OR airplane OR airplanes OR passageway OR passageways OR (point AND entry) OR (points AND entry)) AND (TITLE(infection OR infectious OR infections OR infected OR communicable OR contagious OR prepared OR preparedness OR respond OR response OR epidemic OR epidemics OR pandemic OR pandemics) OR KEY(infection OR infectious OR infections OR infected OR communicable OR contagious OR prepared OR preparedness OR respond OR response OR epidemic OR epidemics OR pandemic OR pandemics))AND TITLE-ABS-KEY(organization OR organizations OR infrastructure OR planning OR communication OF coordination OR (information AND flow) OR cooperation OR reward OR rewards OR rewarding OR contract OR contracts OR agreement OR agreements OR efficiency OR efficient OR effective OR effectiveness or management OR managing OR culture OR cultural OR cultures OR governance OR governing)

Limited to 2005 - 2020

Results : 78

Grey literature – 25 April 2020**WHO – points of entry**

<http://www.euro.who.int/en/health-topics/health-emergencies/international-health-regulations/points-of-entry/points-of-entry>

- International Health Regulations (2005). A guide for public health emergency contingency planning at designated points of entry (2012)
- A guide for public health emergency contingency planning at designated points of entry (EN)
- IHR Brief No. 3: Points of entry under the IHR (2005) (PDF, 40 KB)

- Assessment tool for core capacity requirements at designated airports, ports and ground crossings. WHO headquarters, 2009
- Tutorial for Notification Assessment under the IHR

➔ Link naar WHO Lyon office, daar kopje → 'public health at ports, airports, and ground crossings' → publications:

- Coordination of public health surveillance
- Vector surveillance and control at ports airports and groundcrossings
- Handbook for management of public health events on board of ships
- Handbook for the management of public health events in Air Transport
- Handbook for inspection of ships and issuance of SSC
- Management of events on board ships
- Health protection at points of entry vector surveillance and control
- Management of events in air transport
- ➔ Link naar 'ports, airports and groundcrossings', daar op de homepage:
 - Aircraft disinsection for mosquito control
 - Coordinated public health surveillance between points of entry and national surveillance systems
 - Early detection, assessment and response to acute public health events
 - International certificate of vaccination or prophylaxis
 - International travel and health
 - guide to ship sanitation
 - guidelines for testing the efficacy of insecticide products used in public health passenger locator card
 - EHC 243: aircraft disinsection insecticides
 - Water and sanitation on ships and aircrafts
 - Case management of Influenza A(H1N1) in air transport
 - Guide to hygiene and sanitation in aviation: third edition
 - WER-article: public health measures taken at international boarders during early stages of pandemic influenza A(H1N1) 2009
 - WHO statement to cholera outbreaks and international travel and trade

WHO Airports: <http://www.euro.who.int/en/health-topics/health-emergencies/international-health-regulations/points-of-entry/points-of-entry/airports>

No new results.

CAPSCA website

No new results

IATA <https://www.iata.org/en/programs/safety/health>

- Public health emergencies/BCP (pdf)
- Passive passenger screening for passenger agents (pdf)

- Request form for passenger contact tracing (pdf)
- Passenger locator form
- International transport of human remains (pdf)

ICAO

- ICAO Assembly A37-WP/58 TE/14 - Improved management of communicable disease in the aviation sector through multi-sector collaboration (14/07/10)
- Article 14 — Prevention of Spread of Disease, Convention on International Civil Aviation (Doc 7300)
- Management of public health emergencies in aviation — GRF Davos One Health Summit 2012
- Guidelines for States Concerning the Management of Communicable Disease Posing a Serious Public Health Risk
- Template For An Aviation Public Health Emergency Preparedness Plan

AIRSAN website

- AIRSAN. Contact Tracing – Collaboration between the Public Health and the Aviation Sector. May 2015.
- AIRSAN - Remote risk assessment and management of communicable disease events on board an aircraft

ECDC website, publications and data:

<https://www.ecdc.europa.eu/en/publications-data>

Search term: airport:

65 results, of which 25 (rapid) risk assessments and Communicable disease threat reports excluded, others:

- Infection prevention and control measures for Ebola virus disease: entry and exit screening measures
- Public health management of healthcare workers returning from Ebola-affected areas
- Guidance for the management of suspected bubonic plague cases identified on aircraft and ships
- Rules for reimbursement of expenses incurred by invitees invited by ECDC
- Pneumonia cases possibly associated with a novel coronavirus in Wuhan, China
- Health emergency preparedness for imported cases of high-consequence infectious diseases
- Guidelines for the use of non-pharmaceutical measures to delay and mitigate the impact of 2019-nCoV
- Factsheet about Malaria
- Communication toolkit on chikungunya: how to prevent and control chikungunya
- Guidelines for the ECDC traineeship programme

- Disinfection of environments in healthcare and non-healthcare settings potentially contaminated with SARS-CoV-2
- Community engagement and institutional collaboration in Iceland during a norovirus outbreak at an outdoor/scout centre
- European legionnaires' Disease Surveillance Network (ELDSNet) – operating procedures
- The use of evidence in decision making during public health emergencies
- A spatial modelling method for vector surveillance
- ECDC country preparedness activities, 2013-2017
- Avian influenza overview February – August 2019
- Zika virus and safety of substances of human origin: a guide for preparedness activities in Europe – first update
- Field sampling for mosquitoes, sandflies, biting midges and ticks
- Vector control with a focus on *Aedes aegypti* and *Aedes albopictus* mosquitoes – Literature review and analysis
- Annual epidemiological report 2011
- Public health guidance on screening and vaccination for infectious diseases in newly arrived migrants within the EU/EEA
- External Evaluation of ECDC 2014

Overig gevonden artikelen

- Bongiovanni I, Newton C. Toward an epidemiology of safety and security risks: an organizational vulnerability assessment in international airports. Risk analysis. 2019;39(6):1281-97.

Citation screening moet nog, maar doe ik alleen op de geïnccludeerde artikelen.