

Influenza A(H1N1) and the aviation sector

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Plan

- Pandemic planning in aviation
 - Chicago Convention
- Current H1N1 situation
- Central role of WHO
- UN communication
- ICAO provisions
- Airport screening
- Cabin ventilation
- Airport operations

Article 14, Convention on International Civil Aviation (Chicago Convention – 1944)

- ‘Each contracting State agrees to take effective measures to prevent the spread by means of air navigation of cholera, typhus (epidemic), smallpox, yellow fever, plague, and ***such other communicable diseases as the contracting States shall from time to time decide to designate....***’



2003: SARS

2005 – Avian influenza

2009

Influenza A(H1N1)

Central role of WHO

Pandemic alert phase 5

(phase - signifies spread of disease, not severity)

- Phase 5
 - The same identified virus has caused sustained community level outbreaks in at least two countries in one WHO region
- Phase 6
 - Sustained community level outbreaks in at least one other country in another region

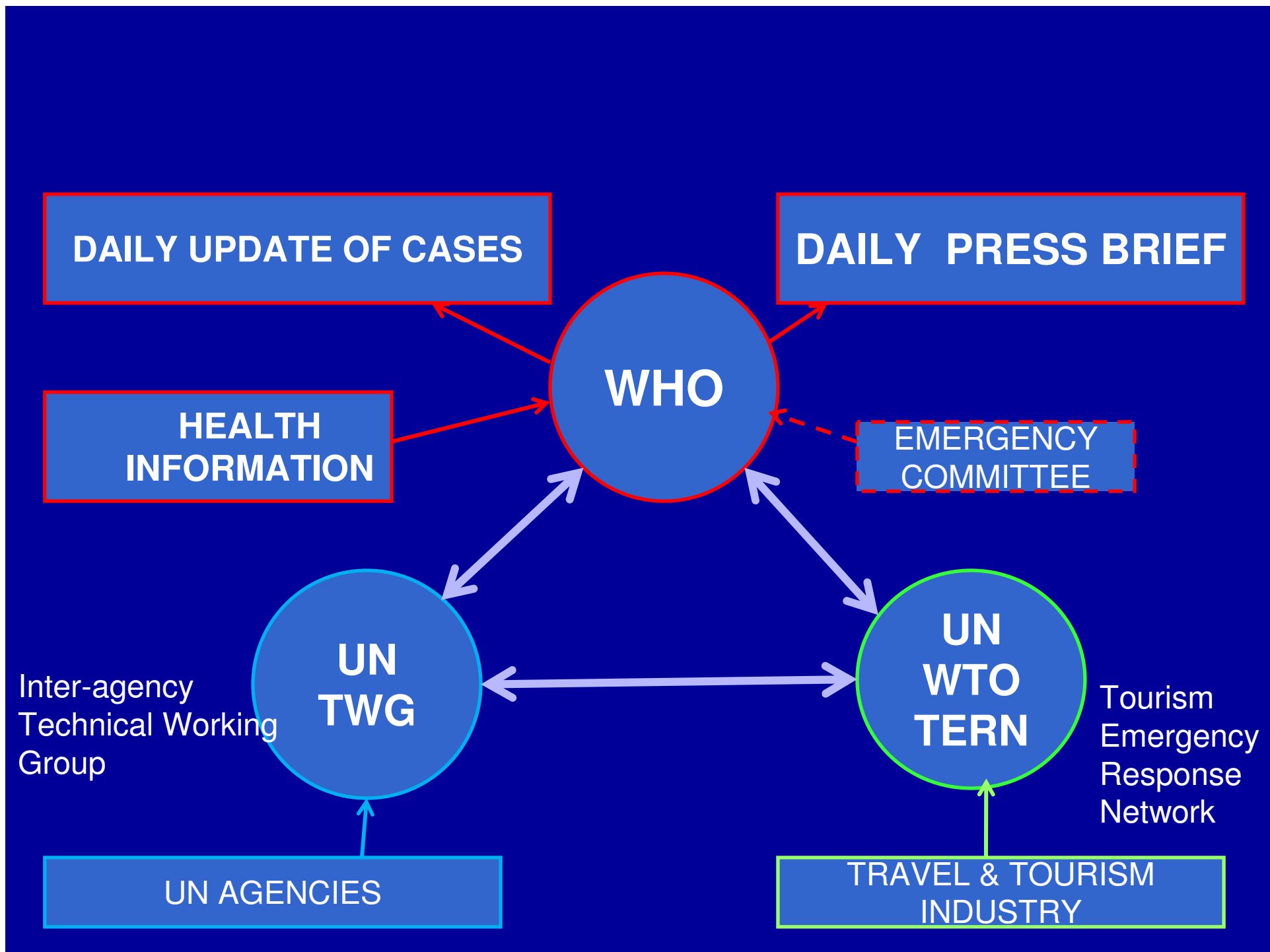
World Health Organization

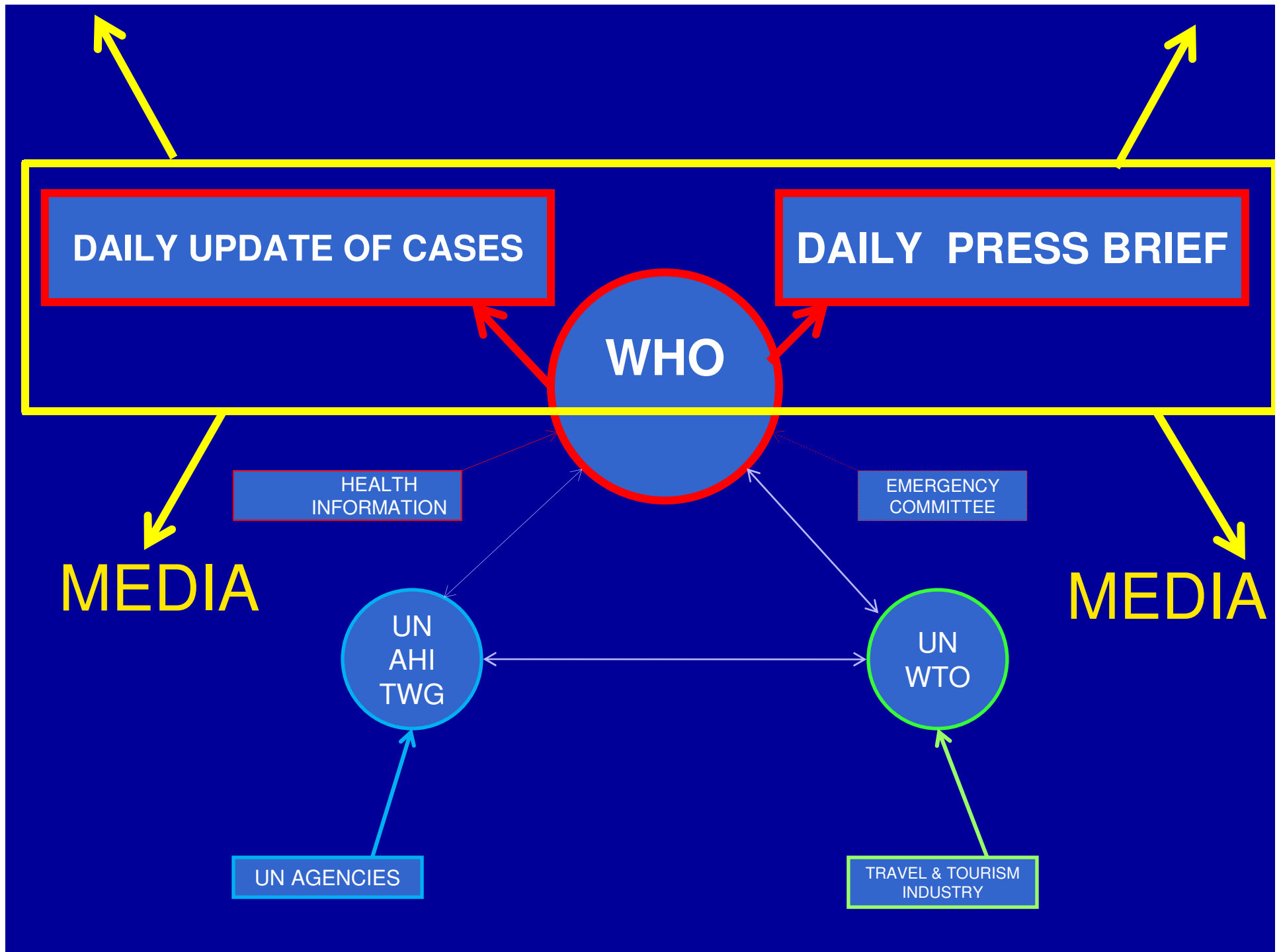
- No travel restrictions advised
 - Disease has already spread
- At present, illness is mild in most cases
- Can be treated by oseltamivir (Tamiflu)

World Health Organization

- Simple, practical measures:
 - Frequent handwashing (sanitizer if handwashing not possible)
 - Social distancing/illness distancing
 - Do not travel/go to work with flu-like symptoms
 - Returning travellers who fall ill – seek medical care
 - Cough etiquette (use a tissue, dispose of tissue, wash hands)

Communication

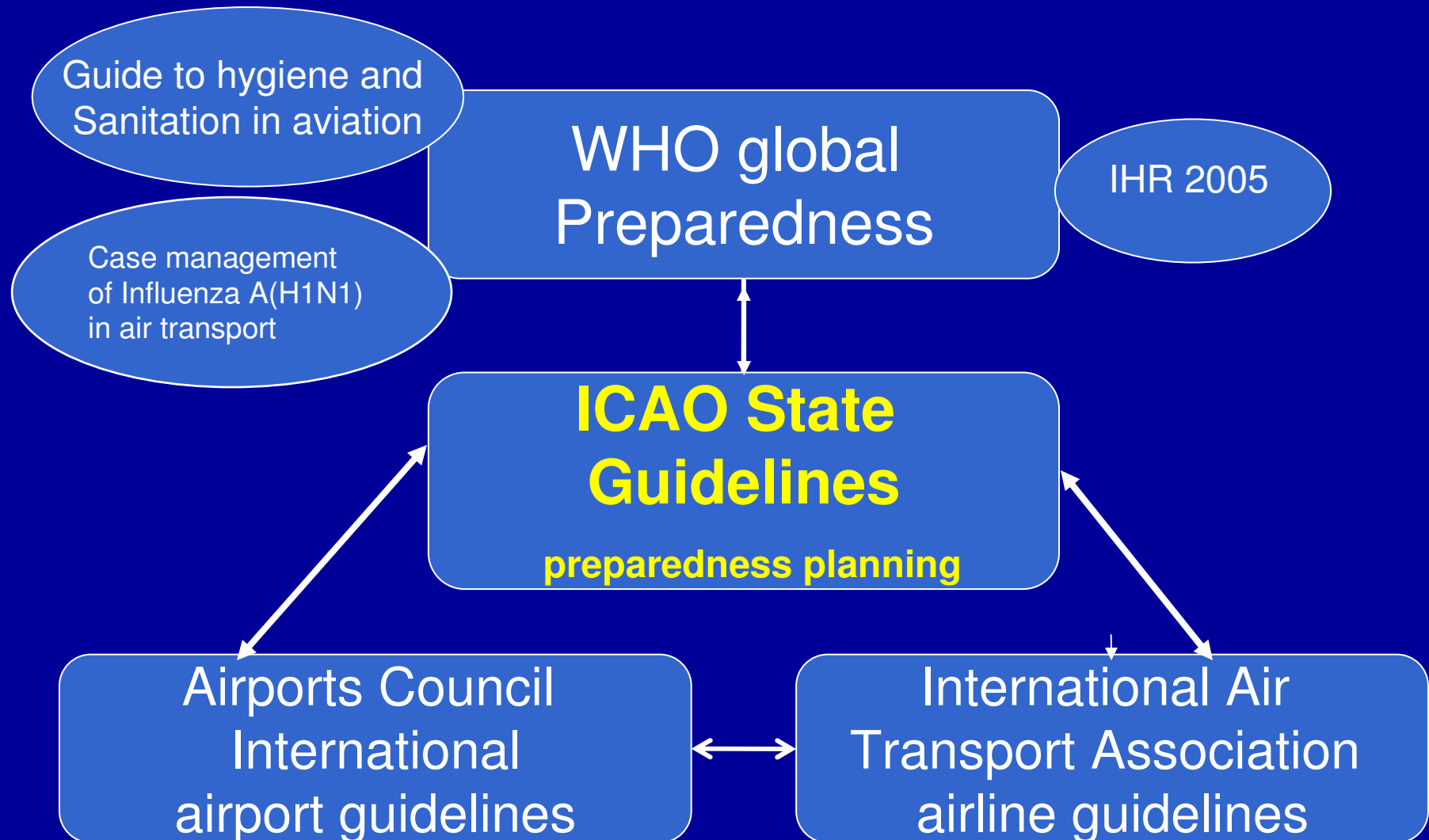




Main role of ICAO

- Implementation of appropriate, harmonized preparedness plans by stakeholders in the aviation sector
- Support WHO in implementation of health measures in aviation

Aviation related actions



Changes to ICAO provisions

2007

- States to have a pandemic preparedness plan for aviation - integrated into national plan
- Cabin crew advice on how to identify a suspected case (changes to aircraft declaration)
- Passenger locator card for contact tracing agreed by WHO (collaboration with IATA)

2009

- 'Universal precaution kit' for managing on board communicable disease
- Pilot in command to notify air traffic control of a suspected case

Identification of case of communicable disease by cabin crew

APPENDIX 1. GENERAL DECLARATION

297 mm (or 11 3/4 inches)

GENERAL DECLARATION (Outward/Inward)		
Operator		
Marks of Nationality and Registration	Flight No.	Date
Departure from	Arrival at	
(Place)	(Place)	
FLIGHTROUTING (“Place” Column always to list origin, every en-route stop and destination)		
PLACE	NAMES OF CREW*	NUMBER OF PASSENGERS ON THIS STAGE**
		Departure Place:
		Embarking
		Through on same flight
		Arrival Place:
		Disembarking
		Through on same flight
Declaration of Health Name and seat number or function of persons on board with illnesses other than airsickness or the effects of accidents, who may be suffering from a communicable disease (a fever — temperature 38°C/100°F or greater — associated with one or more of the following signs or symptoms, e.g. appearing obviously unwell, persistent coughing, impaired breathing, persistent diarrhoea, persistent vomiting, skin rash, bruising or bleeding without previous injury; or confusion of recent onset, increases the likelihood that the person is suffering a communicable disease) as well as such cases of illness disembarked during a previous stop		For official use only
Details of each disinsecting or sanitary treatment (place, date, time, method) during the flight. If no disinsecting has been carried out during the flight, give details of most recent disinsecting.....		
Signed, if required, with time and date Crewmember concerned		
I declare that all statements and particulars contained in this General Declaration, and in any supplementary forms required to be presented with this General Declaration, are complete, exact and true to the best of my knowledge and that all through passengers will continue/have continued on the flight.		
SIGNATURE Authorized Agent or Pilot-in-command		

Fever (38 °C/100 °F or greater) plus one or more of the following signs or symptoms:

- Appearing obviously unwell
- Persistent coughing
- Impaired breathing
- Persistent diarrhoea
- Persistent vomiting
- Skin rash
- Bruising or bleeding without previous injury
- Confusion of recent onset

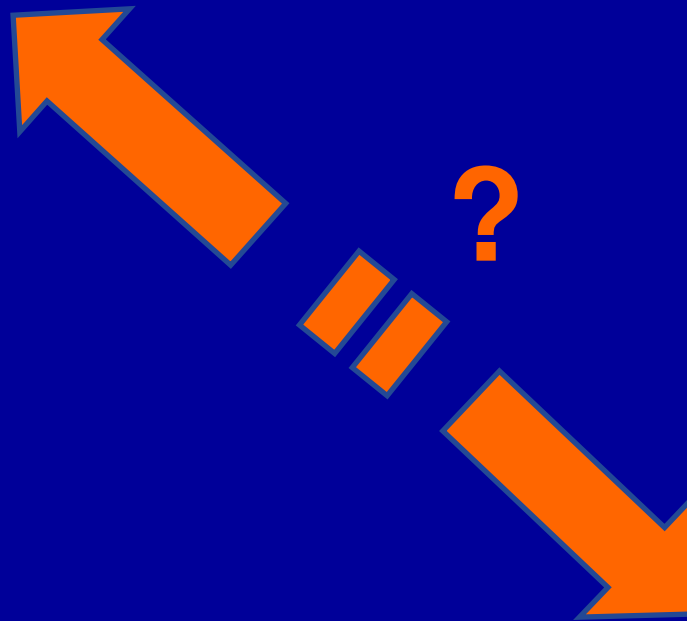
On board medical supplies

- Inclusion of a 'universal precaution kit'
 - Managing on board communicable disease event
 - Personal protective equipment
 - Absorbent powder
 - Germicidal disinfectant
 - Biohazard disposal bag etc.
- Inclusion of thermometer in first aid kit

Procedures for Air Navigation Services – Air Traffic Management

- procedure for utilising Air Traffic Control for notifying destination of communicable disease

CURRENT SITUATION: AIRLINE NOTIFICATION OF EVENT



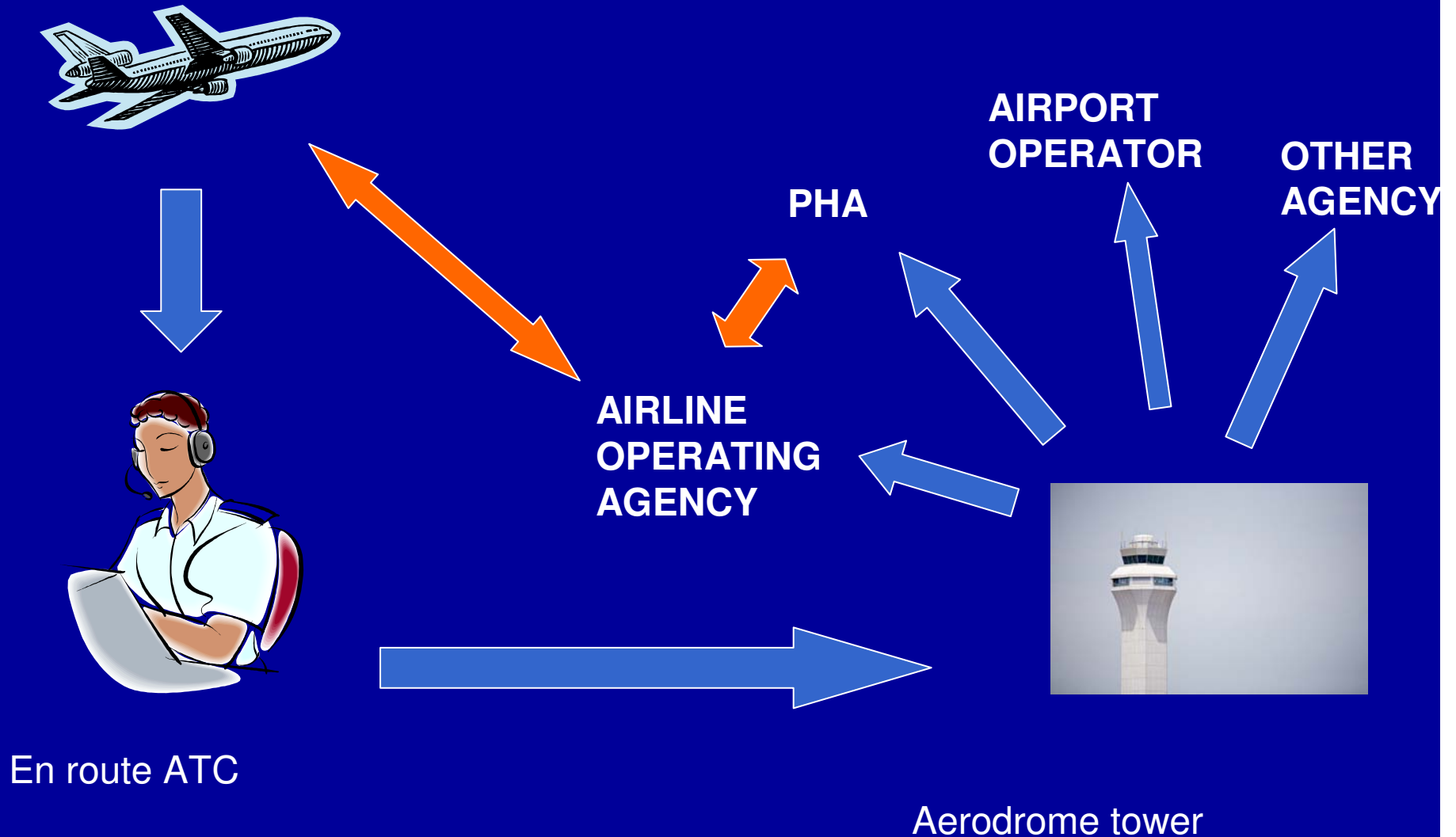
PHA



AIRLINE
OPERATING
AGENCY

AIRPORT

ATC NOTIFICATION OF EVENT



Public Health Passenger Locator Card

PUBLIC HEALTH PASSENGER LOCATOR CARD			
<small>Public Health Passenger Locator Card to be completed when recommended by the World Health Organization or when public health authorities suspect the presence of a communicable disease. The information you provide will assist the public health authorities to manage the public health event by enabling them to trace passengers who may have been exposed to communicable disease. The information collected will be held by the public health authorities in accordance with applicable law and will be used only for public health purposes.</small>			
Flight Information			
1. Airline and Flight Number		2. Date of arrival	
Airline Flight Number		DD MM YYYY	
		3. Seat Number where you actually sat on the aircraft	
Personal Information			
4. Name			
Family Name		Given Name(s)	
Your Current Home Address (including country)			
Street Name and Number		City	State/Province
Country		ZIP/Postal Code	
Your Contact Phone Number (Residential or Business or Mobile)			
Country code	Area Code	Phone Number	E-mail address
Passport or Travel Document Number		Issuing Country/Organization	
Contact Information			
5. Address and phone number where you can be contacted during your stay or, if visiting many places, your cell phone and initial address			
Street Name and Number		City	State/Province
Country		ZIP/Postal Code	
Telephone Number (including country code) or mobile phone number			
6. Contact information for the person who will best know where you are for the next 31 days, in case of emergency or to provide critical health information to you. <small>Please provide the name of a close personal contact or a work contact. This must NOT be you.</small>			
a. Name			
Family Name		Given Name(s)	
b. Telephone Number			
Country code	Area Code	Phone Number	E-mail address
c. Address			
Street Name and Number		City	State/Province
Country		ZIP/Postal Code	
7. Are you traveling with anyone else? YES/NO Circle appropriate response If so, who? (name of individual(s) or group)			

For contact tracing of travellers who have been in contact with a suspected or known cases of H1N1 – on WHO/ICAO/IATA website

Use in conjunction with health declaration card (IATA website)

Health declaration card

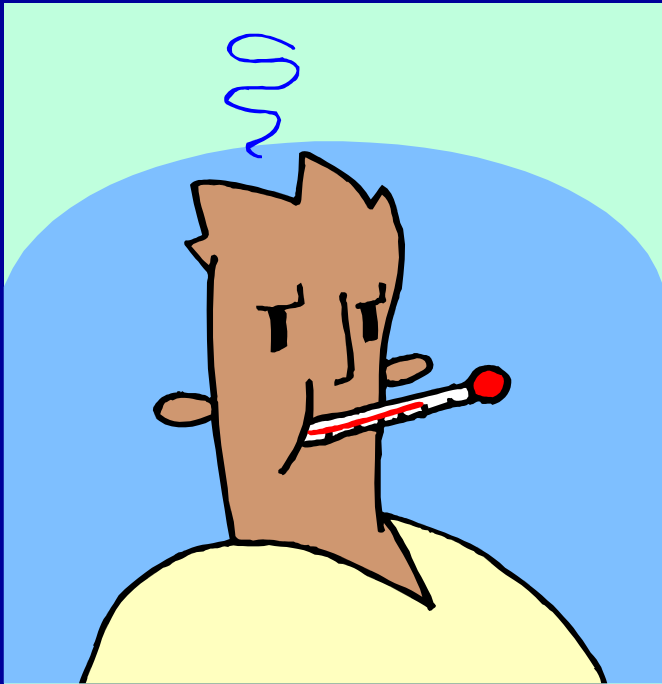
PUBLIC HEALTH - PASSENGER HEALTH DECLARATION CARD																																																													
<p>Public Health Passenger Health Declaration Card to be completed when requested by destination public health authorities. This part of the form contains the information that is not captured by the Passenger Locator Card on the reverse of this form. The information is intended to be held by the public health authorities in accordance with applicable law and to be used only for public health purposes.</p>																																																													
Passenger Information																																																													
<p>Sex</p> <p>Male <input type="checkbox"/> Female <input type="checkbox"/></p>	<p>Birth Date</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; width: 20px; height: 20px; display: inline-block;"></td> <td style="border: 1px solid black; width: 20px; height: 20px; display: inline-block;"></td> <td style="width: 10px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px; display: inline-block;"></td> <td style="border: 1px solid black; width: 20px; height: 20px; display: inline-block;"></td> <td style="width: 10px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px; display: inline-block;"></td> <td style="border: 1px solid black; width: 20px; height: 20px; display: inline-block;"></td> <td style="border: 1px solid black; width: 20px; height: 20px; display: inline-block;"></td> <td style="border: 1px solid black; width: 20px; height: 20px; display: inline-block;"></td> </tr> <tr> <td style="text-align: center;">DD</td> <td></td> <td></td> <td style="text-align: center;">MM</td> <td></td> <td></td> <td style="text-align: center;">YYYY</td> <td></td> <td></td> <td></td> </tr> </table>											DD			MM			YYYY																																											
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Public Health Questions																																																													
<p>a. Have you had a fever or chills in the last 24 hours?</p> <p>b. Do you have a cough or difficulty breathing of recent onset?</p> <p>c. Do you have a sore throat, runny nose, headache or body aches?</p> <p>d. Have you vomited or had diarrhoea in the last 24 hours?</p> <p>e. In the last 10 days, have you been near or spent time with someone who had a fever and cough, or was a known case of influenza?</p> <p>f. Do you have a chronic disease or condition?</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p>Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p>Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p>Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p>Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>																																																												
<p>List all the countries where you have been (including where you live) in the last 10 days: <i>List in order with most recent country first (where you boarded)</i></p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%; text-align: right;">1.</td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> </tr> <tr> <td style="text-align: right;">2.</td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> </tr> <tr> <td style="text-align: right;">3.</td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> <td style="border: 1px solid black; width: 20px; height: 20px;"></td> </tr> </table>		1.																				2.																				3.																			
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<p>The first part of this form "Public Health - Passenger Locator Card" has remained unchanged. This part of the form has been developed for the Influenza A (H1N1) outbreak only and will be revised afterwards.</p>																																																													

- Developed by IATA – to assist harmonization
- Specifically for use in H1N1

Airport screening

- Health declaration card
- Temperature
 - Infra-red imaging
 - Temperature probe
- Screening not recommended by WHO for H1N1
 - But could be regarded as disease surveillance tool
- Not likely to be too disruptive
 - Significant disruption under IHR = delay of >24 hours

Temperature screening



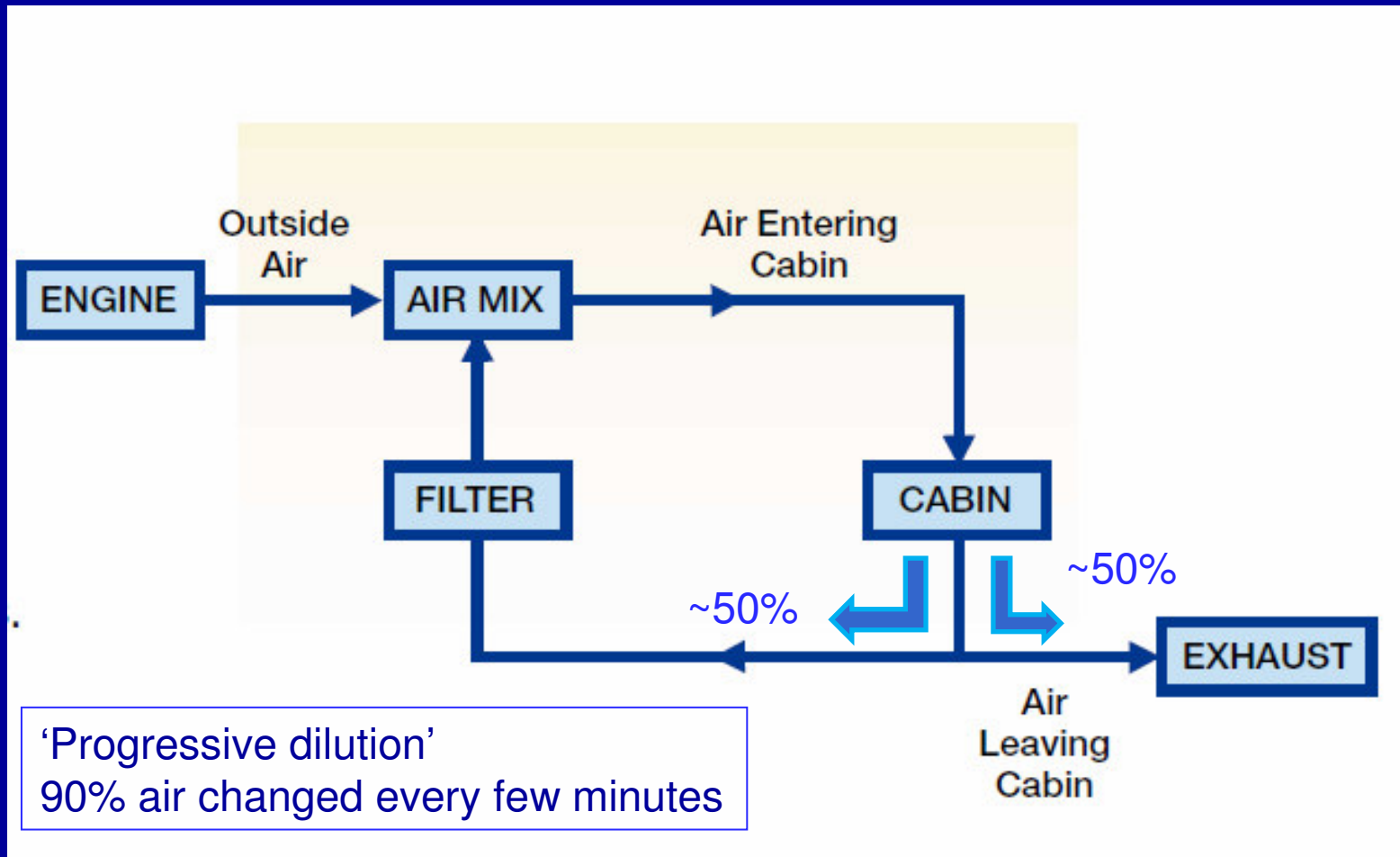
- Identifies travellers with fever
- Possible to be infectious without fever
- Not all H1N1 cases have a fever
- ? Deterrent effect to travellers

Screening - summary

- May identify some travellers at risk
- Not likely to have any significant effect on preventing spread of H1 N1
- May have a reassuring effect – the government is ‘doing something’
- May deter unwell potential travellers from travelling
- For consideration by governments - but not currently recommended by WHO

Cabin Ventilation

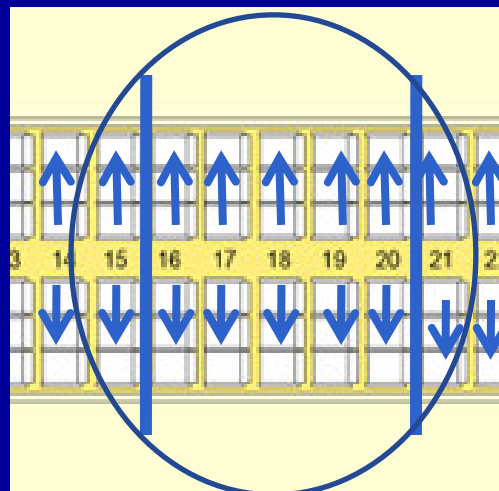
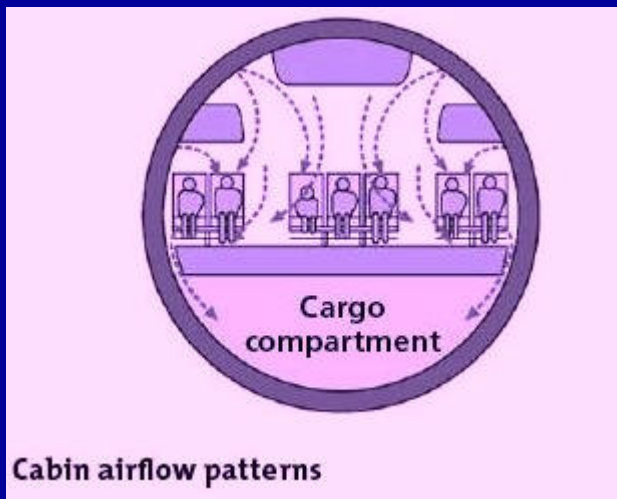
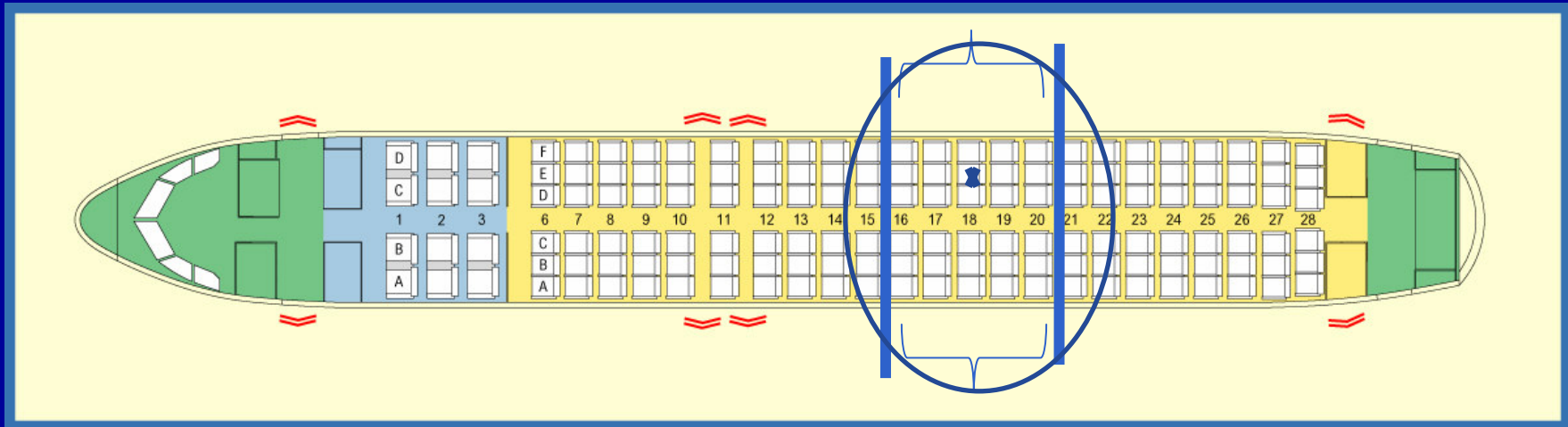
Air recirculation – through high efficiency particulate air (HEPA) filters > 99% efficient



Courtesy: Pall Corporation

“Close contact”

Same row, 2 rows ahead and behind



Airflow – across cabin,
not longitudinal

Airport operational issues

- Maintaining flight operations when numbers of staff are reduced: up to 40% for 8 weeks
 - Air traffic controllers, pilots, cabin crew
 - IT support, ground transportation
 - Power supply

CAPSCA project

- “Cooperative Arrangement for the Prevention of Spread of Communicable disease through Air travel”
- Commenced 2006 in Asia Pacific
- Now also in Africa and Americas
- Goals
 - Training
 - Development of guidance material
 - Airport evaluations

“Cooperative”

- Main partners
 - World Health Organization, International Air Transport Association, Airports Council International
- Other contributors
 - UN Office for the Coordination of Humanitarian Affairs, World Food Programme, International Organization for Migration, UN World Tourism Organization, European Civil Aviation Conference, US Centers for Disease Control and Preventionand others

Successful preparedness
planning requires effective
inter-organization
collaboration

Some findings from airport evaluations

- Designated aircraft parking area –not necessarily located distant from terminal
- Passenger baggage from affected area – does not need to be disinfected
- Arriving passengers should be handled as close to routine as possible
- Need clear lines of responsibility and communication
- All stakeholders need to be involved

Key messages

- Simple preventative measures are effective – handwashing, cough etiquette, illness distancing
- Risk of developing a serious illness is low:
 - and can be treated with oseltamivir (Tamiflu)
- International communication between main players is good-lessons have been learned from SARS
- Communication between public health and aviation sector at national level is vital
- ICAO in collaboration with its partners have developed guidance material for aviation preparedness-widely available
- Evolution of H1N1 cannot be predicted

“Plan for the worst,
hope for the best”

Useful websites

- ICAO
<http://www.icao.int/icao/en/med/guidelines.htm>
- WHO
[http://www.who.int/ihr/travel/A\(H1N1\)_air_transport_guidance.pdf](http://www.who.int/ihr/travel/A(H1N1)_air_transport_guidance.pdf)
http://www.who.int/water_sanitation_health/hygiene/ships/guide_hygiene_sanitation_aviation_3_edition.pdf
- United Nations
<http://www.un-influenza.org/>
- UN World Tourism Organization
<http://www.sos.travel/>
- US Centers for Disease Control and Prevention
<http://www.cdc.gov/>
- International Air Transport Association
<http://www.iata.org/index.htm>
- Airports Council International
http://www.airports.org/cda/aci_common/display/main/aci_content07.jsp?zn=aci&cp=1_665_2__

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