To: 5.1.2e [5.1.2e @nlr.nl]; 5.1.2e [5.1.2e @nlr.nl]; 5.1.2e 5.1.2e [5.1.2e @rivm.nl]
Cc: 5.1.2e [5.1.2e @nlr.nl]
From: 5.1.2e
Sent: Wed 9/30/2020 3:51:05 PM
Subject: [Spam] FW: MCG Update COVID-19
Received: Wed 9/30/2020 3:51:33 PM
IFT collated 200930.pdf
SAFO20009 Sep 2020.pdf

Allen,

Bij deze stuur ik jullie twee nieuwe updates vanuit IATA. Mogelijk relevante aspecten wederom geel gemarkeerd.

Groet,
5.1.2e

From: 5.1.2e <5.1.2e @iata.org>
Sent: 30 September 2020 05:05
To: 5.1.2e <5.1.2e @iata.org>
Subject: Re: MCG Update COVID-19

Greetings again, Medical Contact Group.

As was foreshadowed, today there is a new publication in Emerging Infectious Diseases here:
https://wwwnc.cdc.gov/eid/article/26/12/20-3910_article
This analyses a flight with a number of passengers subsequently discovered to be COVID-19 cases; careful follow-up including whole genome sequencing was carried out and the analysis indicates 8 secondary cases highly likely to have been infected on board, with another 3 possible cases. 5.1.2e

There's also a summary article here looking at all of the published events of in-flight transmission, and the effect of masks:
https://academic.oup.com/jtm/advance-article/doi/10.1093/jtm/taaa178/5910636 5.1.2e

I have prepared and attached a table collating all of the papers and the possible/probable transmission cases, adding up to a total of 42 for the entire year, during a period in which around 1.2 billion passengers have been carried. 5.1.2e Even if the available data represent a very large underestimate of the total amount of transmission on board, that total remains very low as a proportion of travel. The remaining risk, as is outlined in the second article, has no doubt been further reduced by the widespread use of face coverings, recommended by IATA some months ago. It is good to see these scientific papers published; there may be more cases, and we continue to monitor the literature and other available sources of information.

The even bigger challenge is how to reliably prevent travel-associated importation of COVID-19, which we believe will need to incorporate evidence-based testing strategies using rapidly emerging technologies.

Finally, yesterday I omitted to send you the FAA's newly updated "SAFO" guidance on Occupational Health and Safety Guidance for Air Carriers and Crews which is now attached for your reference. Best wishes to you all, 5.1.2e

5.1.2e
5.1.2e

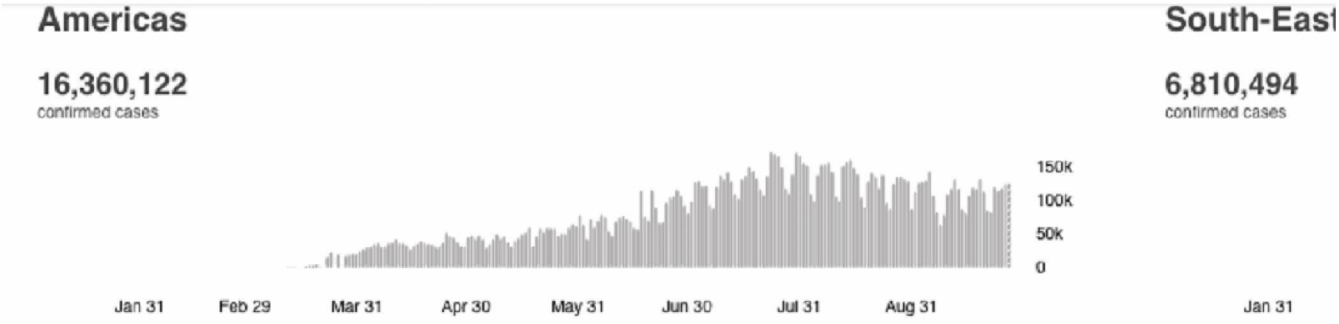
From: 5.1.2e <5.1.2e @iata.org>
Date: Tuesday, 29 September 2020 at 5:25 PM
To: 5.1.2e <5.1.2e @iata.org>
Subject: Re: MCG Update COVID-19

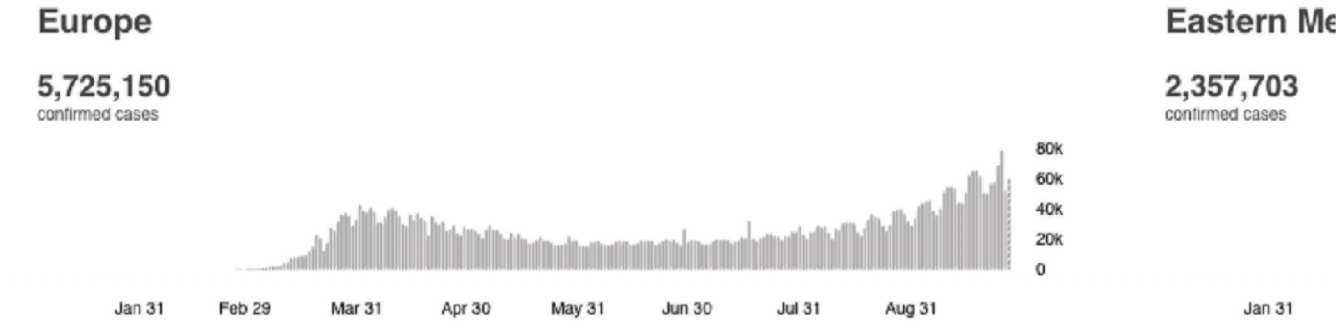
Hi once again to the MCG,

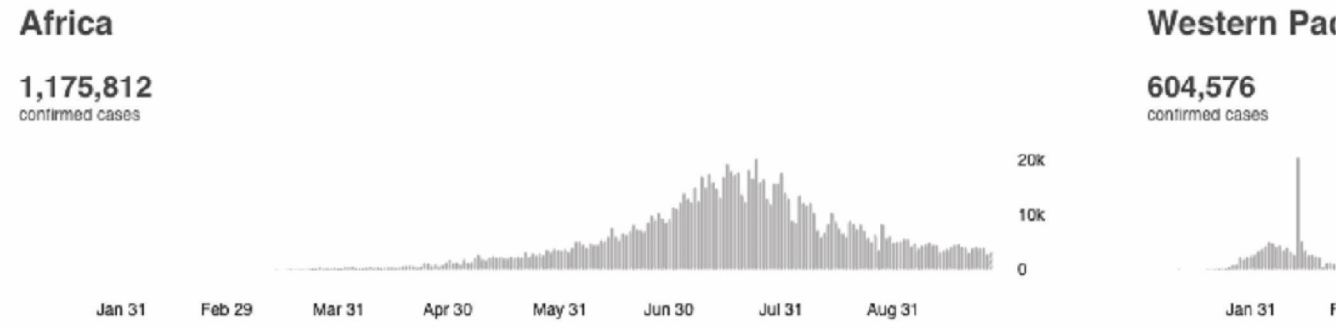
NUMBERS

The milestone that we are passing of 1 million reported deaths is similar to estimates for the 1968 and 1957 influenza pandemics. However WHO states that the true mortality is likely to be much greater than the reported number of deaths, and worldwide daily case numbers and deaths are not declining, so we have some distance to go yet with this pandemic.

Amongst regions, the trends in case numbers are shown graphically here (source: WHO). Several individual countries, from all those regions but especially Europe, are dealing with increasing daily cases (as shown here: https://covid19-country-overviews.ecdc.europa.eu/)







TESTING

The WHO has announced plans through the ACT Accelerator (in co-operation with partners including FIND, GAVI, CEPI and Global

Fund, Gates Foundation, World Bank, Wellcome Foundation) to distribute large numbers of rapid diagnostic tests for COVID-19 worldwide. Last week the first such Antigen test was added to the WHO's Emergency Use Listing (EUL) for diagnostics, and a second one is to be added shortly. These tests, which are performed using a portable kit and provide an answer with a colour change (somewhat like a pregnancy) are costed at under US$5 each and the initiative involves an agreement to produce and distribute 120 million test kits, ensuring supply to low-middle income countries. See details of the named tests here:
https://www.globalpointofcare.abbott/en/product-details/panbio-covid-19-ag-antigen-test.html
http://sdbiosensor.com/xe/index.php?mid=product&_filter=search&search_target=title&search_keyword=COVID&document_srl=7672

The WHO sees these antigen tests as "part of the toolkit", and points to their use in specified situations including:

- Suspected outbreaks in remote or closed settings where PCR testing is unavailable;
  - Allowing rapid investigations of clusters where there is one known PCR positive case;
  - Monitoring trends amongst essential or frontline workers;
  - In situations where there is widespread community transmission (and PCR capacity may be overwhelmed).

There is great interest in this announcement, given IATA's recently announced position in support of routine travel-associated antigen testing of passengers.

OTHER ARTICLES

An article in Science describes finding that 10% of patients with severe COVID-19 had auto-antibodies to interferon, compared with none of the mild-moderate cases, and only 0.3% of healthy controls, suggesting a possible explanation for the great difference in mortality in older patients. https://science.sciencemag.org/content/early/2020/09/23/science.abd4585

US CDC guidance regarding the modes of spread may soon be updated (a draft update was posted briefly recently - but then removed – emphasising the importance of aerosol transmission). The current guidance is here:
https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/how-covid-spreads.html

The CDC has an excellent site with regular science updates here:
https://www.cdc.gov/library/covid19/scienceupdates.html?Sort=Date%3A%3Adesc
Johns Hopkins University also has one here: https://www.hopkinsmedicine.org/coronavirus/coronavirus-research/

The BOS-HKG incident of suspected in-flight spread (supported by genetic sequencing, and mentioned in my update last week) was mentioned in Nature here: https://www.nature.com/articles/d41586-020-02696-5?WT.ec_id=NATURE-20200924&utm_source=nature_etoc&utm_medium=email&utm_campaign=20200924&sap-outbound-id=FF72276384DAE3D1A104B5DA38960426E3F7BA37
Meanwhile the new paper discussing another suspected incident with on-board transmission by passengers to multiple other passengers, is expected soon (it was discussed at the on-line Aviation Health Conference) and I will forward this to you when available. 5.1.2e

OTHER

Some other notes from the Aviation Health Conference last week:

- One study of COVID-19 survival on aircraft surfaces showed that after 24 hours, viable virus was negligible (reduced 1000 fold from original counts). All the different forms of cleaning/disinfection were highly effective at removal. This awaits publication, and a follow-up study of periods less than 24 hours.
- A comprehensive study of staff of an airline indicated COVID-19 rates similar to the population; the suspected origin was much more commonly the community (54%), than friends/family (23%), or colleagues (21%). None of the crew members were suspected of becoming infected on board.
- A manufacturer study of droplet flow on board indicated likely very low persistence (a few minutes only) on board of exhaled particles due to cabin airflow.
- A detailed study showed that UVA light can penetrate some aircraft windows in some cases, presenting some possible skin cancer hazard for pilots.

- Hands-only CPR (compressions only, no ventilation) was already being promoted for in-flight cardiac arrest, prior to the pandemic and appears effective.
- A cost-benefit study of autoinjector adrenaline kits in the community indicated an estimated cost of $50 million per life potentially saved.
- Other papers: pilot alcohol testing in India, managing norovirus infection in passengers, disinfectants on aircraft, and the Russian "doctors on board" scheme.

Finally a brief update on the DRC situation with Ebola virus disease – 124 cases and 50 deaths, no new cases since 18 September.

Best wishes, and I will be in touch again soon.

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5.1.2e

From: 5.1.2e <5.1.2e@iata.org>
Date: Monday, 21 September 2020 at 6:28 PM
To: 5.1.2e <5.1.2e@iata.org>
Subject: Re: MCG Update COVID-19

Hello again Medical Contact Group – today I have a lot of important references.

There are two newly published papers concerning likely in-flight transmission events. The first one is one I signalled in these updates some months ago, and it is also referred to in our medical evidence document (https://www.iata.org/contentassets/f1163430bba94512a583eb6d6b24aa56/covid-medical-evidence-for-strategies-200806.pdf - it is the London-Hanoi flight VN54 in March https://wwwnc.cdc.gov/eid/article/26/11/20-3299_article and the epidemiological investigation points to probable in-flight transmission to 12 fellow passengers and a crew member (with two more passengers possibly) by one highly symptomatic passenger. This was in March when mask use was not common practice.

Another article has also been published at the same time, relating to a March Boston-Hong Kong flight https://wwwnc.cdc.gov/eid/article/26/11/20-3254_article with likely transmission to two crew members, supported by gene sequencing.

A third article is expected soon relating to another event (also in March) again supported by gene sequencing, with up to 11 secondary cases from 3 potential primaries. This and the Hanoi flight are the most significant of these events that we are aware of.

Finally, there is another one here: https://www.sciencedirect.com/science/article/pii/S1477893920303781 - in this case 18 flights in February/March (when passenger numbers were high and mask use was low) were analysed, yielding 21 suspected index cases from the total of over 2200 passengers, and there were 5 suspected secondary cases (4 passengers and one crew).

We were aware of the more significant of these incidents some time ago, and our overall assessment remains that the risk of on-board transmission is low. See an IATA statement here: https://www.iata.org/en/pressroom/pr/2020-09-19-01/ and also a relevant CDC statement referred to here:
https://www.washingtonpost.com/local/trafficandcommuting/nearly-11000-people-have-been-exposed-to-the-coronavirus-on-flights-the-cdc-says/2020/09/19/d609adbc-ed27-11ea-99a1-71343d03bc29_story.html
"Nearly 11,000 people have been exposed to the coronavirus on flights, the CDC says..... Federal officials have investigated cases of people flying while capable of spreading the virus, but confirming such transmissions is difficult."
See also https://apple.news/AsYs3vZGcRFqUIAJZQxeNUg

Note also the US CDC media statement on adjusting entry strategy for international air passengers:
https://www.cdc.gov/media/releases/2020/s-0909-covid-19-entry-strategy-air-passengers.html

In addition to the reference I sent you on antigen testing below (https://apps.who.int/iris/bitstream/handle/10665/334253/WHO-2019-nCoV-Antigen_Detection-2020.1-eng.pdf), WHO has also produced updated generic guidance on diagnostic testing here:

https://apps.who.int/iris/handle/10665/334254
And a reminder about criteria for release from isolation in those who have had COVID-19 here:
https://apps.who.int/iris/bitstream/handle/10665/332451/WHO-2019-nCoV-Sci_Brief-Discharge_From_Isolation-2020.1-eng.pdf?sequence=1&isAllowed=y

Harvard's Chan School of Public Health has published the Mask Technical Bulletin on the NPLI website. You may read it here:
https://cdn1.sph.harvard.edu/wp-content/uploads/sites/2443/2020/09/Face-Mask-Use-in-Air-Travel.pdf
A further article from Thailand on public mask wearing effectiveness is here: https://wwwnc.cdc.gov/eid/article/26/11/20-3003_article

You will have seen that the AstraZeneca vaccine trial has been resumed after full consideration of the patient who developed symptoms during the trial. And of course, you also will have seen that the number of COVID-19 deaths globally is about to reach 1 million.

Some key facts from the latest World Tourism Organisation update on travel restrictions, as of 1 September:
Of all destinations worldwide, 115 destinations (53%) have eased COVID-19 related travel restrictions for international tourism: 44 in Europe; 27 in the Americas (including 18 Small Island Developing States); 26 in Africa; 13 in Asia and the Pacific; and 5 destinations in the Middle East. This is an increase of 28 destinations from July.
Meanwhile, 93 destinations (43% of all destinations worldwide, down 22 from July) keep their borders completely closed for international tourism: 28 in Asia/Pacific (61% of all destinations); 27 destinations in Africa (51% of all destinations); 21 destinations in the Americas (41% of all); 9 destinations in Europe (17% of all destinations in Europe) including 2 which have recently reintroduced complete border closure; and 8 destinations in the Middle East.

Finally a last reminder about the 2020 On-line Aviation Health Conference starting in 24 hours from now – there are two different time slots, to accommodate time zones, and it runs for two consecutive days, each session around 2.5 hours (Day 1 COVID, Day 2 non-COVID): https://www.quaynote.com/conference/aviation-health-2020/

Best wishes once again, and I expect to update once more inside the next week.

Regards, 5.1.2e 5.1.2e (5.1.2e)

From: 5.1.2e < 5.1.2e @iata.org>
Date: Monday, 14 September 2020 at 8:41 PM
To: 5.1.2e < 5.1.2e @iata.org>
Subject: Re: MCG Update COVID-19

My greetings again to the MCG,

Apologies for brevity of this update while I am travelling away from the virtual office. You will be well aware of trends to new waves of infections in several locations including in Europe.

WHO on 11 September released important updated guidance on antigen testing, which is relevant to ongoing discussions with ICAO and IATA on this topic: https://apps.who.int/iris/bitstream/handle/10665/334253/WHO-2019-nCoV-Antigen_Detection-2020.1-eng.pdf

Media reported that the Ansari X Prize foundation is offering $5million as the prize for a COVID-19 test meeting prescribed requirements for reliability and speed.

BlueDot reports that Dominican Republic has introduced a rapid nanomaterial-based breathalyser test for COVID-19, quoting a small study showing only around 76% sensitivity and 88% specificity, and applying the test randomly to arriving travellers, replace PCR test result requirements. This is in addition to other public health measures. It is reported that they have also offered travellers insurance coverage with medical assistance, accommodation and flight changes in the event of testing positive during their stay.

I mentioned previously the National Academies workshop on airborne transmission which was excellent, detailed and comprehensive, here is the link again: https://www.nationalacademies.org/event/08-26-2020/airborne-transmission-of-sars-cov-2-

a-virtual-workshop - very good summaries of the general themes and conclusions are presented in talks 31-34 (about an hour to listen to). Another very good talk is number 22 [redacted] and he does briefly discuss the aircraft cabin environment at about the 18:45 point.

As noted previously there have been just a handful of case reports of individuals with documented second infections with COVID-19, including the one in Nevada whose second infection was much more severe than the first.

Some key points from a recent IATA commissioned survey of customers:

- Confidence in Flying
  - 57% believe that the risk of catching a virus on the plane is low (up from 45% in April)
  - 86% of those who have travelled since June felt safe and that COVID-19 measures were well-implemented
- Borders
  - 82% believe that closing borders is an effective control measure for COVID-19, but 61% believe that COVID-19 is sufficiently controlled in their country for borders to be opened
  - 65% believe that quarantine is not needed if COVID-19 testing is implemented
- COVID-19 Measures
  - 58% of travellers are willing to wear a mask during travel, up sharply from 41% in June
  - Over 80% of travellers are willing to take a COVID-19 test to travel before, after or during travel; including arriving at the airport three hours early
- Return to travel
  - 49% of travellers plan to resume travel within 2-3 months, up slightly from 45% in June but down from 61% in April
  - The easy availability of a vaccine, COVID-19 treatment and COVID-19 testing are the most popular trigger points for returning to travel

Expect the next MCG update early next week.
Best wishes,
[redacted] ([redacted])

From: [redacted] < [redacted]@iata.org>
Date: Monday, 7 September 2020 at 8:14 PM
To: [redacted] < [redacted]@iata.org>
Subject: Re: MCG Update COVID-19

Hello again to the MCG,

A couple of days ago, India recorded more new cases in one day than China has recorded in all of 2020. Both India and Brazil exceed 4 million reported cases now, and Russia 1 million. Of course, we expect that in many regions, confirmed cases are a significant underestimate of actual total case numbers. The trends of cases and deaths for individual countries is well displayed in this ECDC page, section 2.2: https://covid19-country-overviews.ecdc.europa.eu/

Some more references for you: An excellent workshop on airborne transmission is available here: https://www.nationalacademies.org/event/08-26-2020/airborne-transmission-of-sars-cov-2-a-virtual-workshop - if you have limited time I recommend starting with talk number 10 for an overview. The notion that droplets are predominant or even will defined, compared to aerosols, is significantly challenged in the workshop.

A useful study on immunity (serology) in Iceland is here: https://www.nejm.org/doi/full/10.1056/NEJMoa2026116?query=TOC

An interesting article about spread on a bus in China in January - https://jamanetwork.com/journals/jamainternalmedicine/fullarticle/2770172
Two similar buses took members of a group from the same region to the same event (on 19 January near Wuhan), a 50 minute journey each way, and subsequently an infected case was identified in the group. Of those who travelled on the same bus as the index case, 23 others out of 68 (34%) became cases; of those on the other bus, none of the 60 became infected. Of the 172 others who attended the event but not on either of the buses, there were 7 cases, all of whom reported close contact with the index case. There was no relationship between proximity of seating on the bus, which had recirculation of air without filtration.

Hong Kong government reported that as of 3rd September in the recent population-wide drive, 370,000 had undergone nucleic acid

testing and of the 128,000 tests so far completed, 6 positive tests were recorded.

Various initiatives on testing are being announced such as this study in Canada: https://aircanada.mediaroom.com/2020-09-03-McMaster-HealthLabs-Air-Canada-and-Greater-Toronto-Airports-Authority-to-Conduct-a-Voluntary-COVID-19-Study-of-Arriving-International-Travellers and in Germany where there is inbound testing in place now in both Frankfurt and Hamburg, processed well inside a day in almost all cases, with a number of other airports expected to follow.

This question of how to approach testing in aviation is one of the subjects of intensive work with groups from both the ICAO CART (Council Aviation Recovery Task Force) and CAPSCA over the next couple of weeks. I will update when the group has outputs available.

Reminder of useful link to COVID-19 Air traffic Dashboard here: https://www.icao.int/sustainability/Pages/COVID-19-Air-Traffic-Dashboard.aspx
And another one on Government responses to the pandemic is here: https://ourworldindata.org/policy-responses-covid

A Nature article on mortality, very readable and useful is here: https://www.nature.com/articles/d41586-020-02497-w?WT.ec_id=NATURE-20200903&utm_source=nature_etoc&utm_medium=email&utm_campaign=20200903&sap-outbound-id=BD7C2EA06A1F7BC7090389CCEAC5FC178189F351

Another update to the medical evidence document will be posted soon. Some relevant journal publications are also due out soon. I will update you again in about a week or possibly sooner.

Best wishes

5.1.2e

From: 5.1.2e < 5.1.2e @iata.org>
Date: Wednesday, 2 September 2020 at 10:12 PM
To: 5.1.2e < 5.1.2e @iata.org>
Subject: Re: MCG Update COVID-19

Again greetings to the Medical Contact Group.

Although it is a week since my last update to you, this one is relatively brief. I have several articles to point you towards:

An editorial in the Lancet talking about air travel in COVID: https://www.thelancet.com/journals/laninf/article/PIIS1473-3099(20)30647-2/fulltext

An article on immunity to COVID-19: https://www.nature.com/articles/d41586-020-02379-1

A good article from BMJ looking at distancing and suggesting a nuanced rather than a rigid approach:
https://www.bmj.com/content/370/bmj.m3223
It pairs with another piece discussing aerosol spread: https://www.bmj.com/content/370/bmj.m3206

A different look at the incubation period – and suggesting a slightly longer average than previously discussed:
https://advances.sciencemag.org/content/6/33/eabc1202

Another couple of articles suggesting saliva is effective for testing when compared with nasopharyngeal swabs:
https://jcm.asm.org/content/jcm/early/2020/08/07/JCM.01824-20.full.pdf
https://www.nejm.org/doi/full/10.1056/NEJMc2016359

Following the first case report of an individual with a definite second (genetically different) case of COVID-19 from Hong Kong, there were a further two case reports of second infections, from Belgium and the Netherlands.

Press release dated 28 August 2020 from ACI World showing COVID-19's effect on international air traffic is here:
https://aci.aero/news/2020/08/28/aci-world-data-shows-covid-19s-dramatic-effect-on-international-air-traffic/

An article on research by DARPA in the US, into droplet spread on board, is here:
https://www.dvidshub.net/news/377201/ustranscom-conducts-test-reduce-risk-covid-exposure-aircraft

The weekly WHO epidemiological update (31 August) is here: https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200831-weekly-epi-update-3.pdf?sfvrsn=d7032a2a_4

Finally, it was announced by WHO that, following successful eradication efforts in Nigeria, the African continent had been declared free of WILD poliomyelitis (polio). This does not mean all polio, because around 15 countries on the continent have outbreaks of polio associated with vaccine, an uncommon consequence of vaccination which is due to the fact that the polio vaccine is a live. This milestone means that wild polio remains only in Afghanistan and Pakistan.

Best wishes,

5.1.2e 5.1.2e (5.1.2e)