New Zealand Maritime Pilots Association

Advisory **Notice** 01/2020

8 April 2020

COVID-19 **Pandemic** - Practical Advice for Pilots

Dear Colleagues,

After receiving numerous guidance and advice notices from various sources on COVID-19, we felt there was a need to develop some advice for pilots that is both practical and achievable. After reviewing available material, discussing the situation with some members and considering the issues raised, this was not going to be a simple task. I was pleased however when I heard from my counterpart in Australia that they had seen the same need and had developed a very credible advice document for pilots. This was reviewed by some of our executive team and as it was agreed that we couldn't produce anything comparable in a reasonable time, we have with AMPI's agreement chosen to endorse and disseminate their document. They have also done the same with the UKMPA, who have circulated it to approximately 500 pilots over there.

The following advice which is available at https://www.ampi.org.au/Covid-19 as a pdf for printing, has been written by a pilot from the Australasian Marine Pilots Institute (AMPI), in consultation with a Master Mariner who also holds a microbiology degree. It has been medically corroborated by an occupational physician (Dr Maurice Harden) and endorsed by a triage nurse currently working on the CV19 frontline.

Without wanting to delve too deeply into medical and microbiological science, the information is designed to shine some light on the fundamentals of viral transmission and debunk some widely held misconceptions. There is no doubt that this virus is highly transmissible but with sensible precautions we can prevent ourselves becoming infected and more importantly, prevent further transmission.

Thanks to AMPI for their foresight and proactivity in producing and sharing their document.

Regards,

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How to Avoid Catching COVID19 whilst Piloting

Maritime Pilots pick up bacterial and viral infections on ships all the time and have for millennia. The seasonal influenza travels around the world every year, in part with the help of infections picked up on board ships.

The current risk of infection from CV19 for a Maritime Pilot is quite different from other workers in frontline border or medical professions. Vessels are often many days from their last foreign port call and have made specific medical declarations prior to arrival. This doesn't mean that are guaranteed to be CV19 free, but the chances are far lower than you would find in say, an international airport.

The risks we as Maritime Pilots have to contend with come from a carrier who has infected bridge surfaces and equipment or passes the infection directly to you via a handshake or cough. These risks are relatively easily mitigated.

Virus Transmission

Bacteria and viruses are transmitted from person to person via a number of methods.

- direct (blood/saliva/bodily fluids)
- aerial (airborne virus)
- physical
- droplet

The first two methods are irrelevant for the pilotage environment. Direct transmission would occur if say, sharing an intravenous needle, kissing or sexual contact. CV19 is not thought to be an airborne virus so you can't catch it by simply breathing.

The more common methods of transmission, and the ways you as a Maritime Pilot are likely to catch a virus, are by the last two, physical and droplet.

Virus Viability Outside the Body

The good news for us is that viruses don't survive very well out in the wild, they need a host (i.e you) to survive and multiply. To get from person to person in normal pilotage interactions (as opposed to direct blood, saliva, sexual or airborne transmission) the virus has to be expelled by the carrier through a cough, sneeze, spit or even speaking/shouting.

The virus is now out and about for as long as it can survive, usually a matter of hours or minutes (depending on a number of variables) *. The virus is protected by the mucus surrounding it, as well as a viral envelope called a capsid.

Medical advice suggests COVID19 can be detected outside the body for up to three days* but this would require absolute ideal conditions. Also, being detectable is not the same as being infectious. The longer a virus is without a host, the weaker it becomes.

A 2011 study** carried out in the UK concluded that the Influenza A(H1N1) virus was no longer viable from between 4 to 9 hours depending on the surface it was left on.

The harsh maritime environment is nowhere near ideal for virus viability. Salt, air and sunlight in particular weaken a virus out in the open. Hard, non-porous surfaces (stainless steel) are better for virus viability. Porous surfaces less so. Human skin, particularly on the hands is actually a very good at repelling and killing viruses due to its pH, porous nature and the anti-microbial bacteria that lives

there. The fact remains, viruses will die fairly quickly without a host and the trick is to not become one.

For you to become infected, the virus needs an entry path into your body. As COVID19 is not airborne, you don't catch it simply by breathing 'infected air'.

The skin is an excellent barrier to infection, so the virus needs a moist membrane like the mouth, tongue, nose, eyes or a cut/graze to get in. Unless the transmitting person has sneezed directly into your face, the easiest and most likely way you'll become infected is if you do it yourself. That is, most people will touch their face, mouth, nose and eyes multiple times an hour. If the virus is on your hands, it will get in and do what viruses do best – multiply.

Habits

As an example, medical laboratory technicians use a number of techniques to prevent themselves catching infections or compromising the materials they work with. Cleanliness, meticulous personal habits and PPE are their bread and butter. Lab Tech's are as studious about not touching their faces as we are about watching the helm indicator.

Get into the habit of not touching anything you don't absolutely have to. Allow the crew to open the bridge door, don't shake hands with the Captain, use your own radio, don't hug the compass repeater, let the Master use his/her own pen, ask the crew to set the radar to your liking.

If you have been issued with alcohol surface wipes, a good technique may be to wipe down a small area where you intend to work from. Wipe down chair arms, the compass repeater, VHF handpiece and a small area of working surface for your paperwork, then stay there. You can of course move around the bridge but be mindful not to touch anything you don't need to. In terms of potentially infectious surfaces, an open bridge wing is far less dangerous than say an internal steel door handle due to its exposure to sun and salt air. Keep bridge wing doors or windows open for a flow of fresh air.

It is not generally necessary to sign passage plans and MPX documentation. With the advent of VDR's a verbal confirmation is sufficient and/or via the VHF. For pilotage bills, writing "social distancing" in the master's signature box may be sufficient.

These are just some examples of habits you can get into to lessen your hand contact with potentially infected surfaces.

Cleanliness

We are all being told to wash our hands. Slopping on bucket loads of alcohol gel is not recommended and may even lead to a false sense of security. If you swabbed the freshly washed hands of an untrained person you would find a multitude of surviving bacteria. Thumbs in particular are often not as clean as they could be so be particular about getting the front, back and the thumbs thoroughly scrubbed. A surgeon will scrub their hands for several minutes before moving on to fingernails, wrists, forearms, and after all that they wear gloves as well. We don't need to go that far, but be aware, the normal quick hand wash is probably inadequate. Use soap, wash for a good 30 seconds and don't miss the back of your hands and thumbs.

Alcohol hand sanitiser is not a substitute for good hand washing. There is absolutely no point in smearing gel over the top of dirt which can protect the virus from the sanitising properties of the gel. Once the gel has worn off the virus will still be on your hands. In addition, alcohol gel can reduce the

naturally occurring anti-microbial bacteria (good bacteria) living on your skin, adversely affecting your natural defences.

Masks, Gloves and PPE

If you don't stick your fingers in your mouth, chances are you don't really need additional PPE. We are not dealing with an infectious hospital ward type situation. We are trying not to pick up an infection from a surface that has been contaminated by someone who may not even know they have it, in an environment that is less than ideal for a virus to survive outside the body.

There are two main sorts of masks being disseminated by employers. N95 P2 masks and general surgical masks. Neither are particularly good in a situation where an infected person is coughing and sneezing prolifically in your direction, but probably fine for pilotage.

The P2 mask has an exhalation vent which makes it comfortable to wear as hot breath doesn't build up inside the mask. However, if you are a carrier then it is possible for droplets to escape through the vent making it a bit useless for preventing you infecting others.

The surgical mask is less comfortable due to the lack of exhaust vent but is quite good at catching your own spittle. On the flipside, it is not great for preventing droplets arriving in your mouth/nose due to the lack of a good seal around the sides.

The ideal arrangement for a Pilot would be for the crew to wear surgical masks and you the P2 mask.

Gloves will prevent you from getting the virus directly on to your hands. This is fine right up until the point where you scratch your nose. If you choose to wear gloves you have to exercise the same meticulous habits as you would without them. Use them only once and remove them by peeling them off from the wrist leaving them inside out. Then wash your hands.

Other PPE being talked about is disposable coveralls and eye protection. Again, in the pilotage environment, both are probably not required unless you are dealing with confirmed illness on board. If that's the case, other safety measures have already failed, and the advice would be to decline the pilotage and leave.

Food and Drink

The best advice is to not eat or drink anything provided by the crew onboard ship. The risk is probably not in the food itself, but more likely from the handling of the plates, tray and cutlery. The same goes for bottled water, i.e. the bottle could conceivably have the virus on the outside. If you carry your own water, keep it inside your bag. The bottle needs to have a flip top lid or screw cap, that allows the drinking nozzle to be accessed and closed without touching it.

Whichever way you look at it, food is problematic, even if you carry your own. You have to assume that the virus is on your hands whilst getting the food unwrapped and into your mouth safely and without touching it. The best advice is to not eat onboard at all. This may require a change to way you prepare for work, the hours you work or the number of acts you conduct consecutively.

Post Pilotage

The pilot launch is potentially a space where further transmission can occur. Door handles, arm rests, radios and keyboards should be disinfected between pilot transfers.

Once back at the Pilot Station, wash your hands. Again, chairs, keyboards and other common user equipment should be cleaned between uses. Leave as much work clothing you can at work. Once at home, change your clothing and wash it. Wash your hands or take a shower before settling into home. Disinfect any piloting equipment (PPU etc), ready for your next act.

In Summation

The above is by no means exhaustive but should be taken as practical advice to minimise the likelihood of picking up COVID19, or any other virus whilst piloting.

Stay safe.

References

* Professor Deenan Pillay, Virologist, University College London https://www.theguardian.com/science/audio/2020/mar/24/covid-19-how-long-can-it- survive-outside-the-body

**Survival of Influenza A(H1N1) on Materials Found in Households: Implications for Infection

Control. Dr J Greatorex et al.

With thanks to the Australasian Marine Pilots Institute (AMPI) for their kind permission for reproduction. The original document has been edited by the UKMPA.