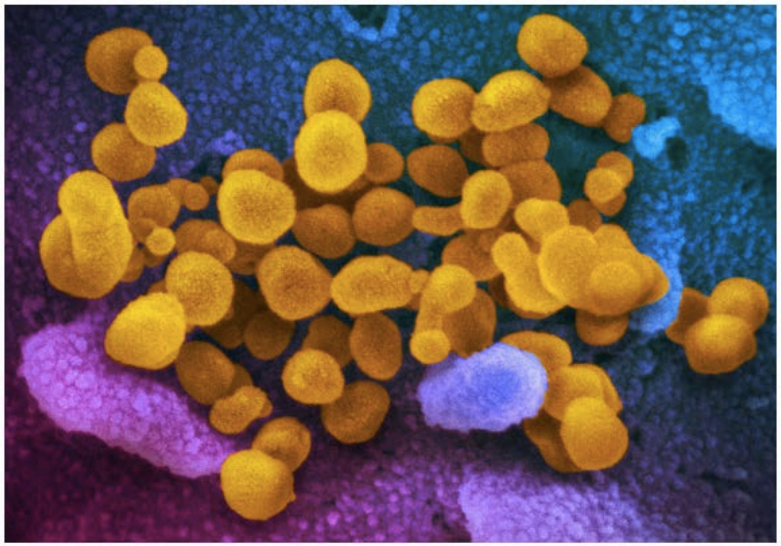
Recommendations of my brother Denis Coulombier
to protect yourself from the Corona Virus
(from his blog *http://sybelisama.blogspot.com/*)

Friday, 6 March 2020

Epidemic rogue wave, 6 March 2020

As a sailor, I have always thought about rogue waves, those mythical monsters that can wreck your boat for good. As an epidemiologists, I spent my professional life preparing for the rogue pandemic that can wreck a country down for couple of weeks. To prevent being caught at sea in by a rogue wave, there is not much a sailor can do when far from the coast. Yet, for the rogue pandemic, there are two things a sailor can do: 1) anchor for a few weeks in one of your favorite natural harbour, or 2) protect yourself from getting infected...



Sars Cov2, source NIAID Rocky Mountain Laboratories (RML), U.S. NIH / Public domain

While you can find lots of good ideas for the first option on this blog, in this post, I will provide you with instructions for the second option...

In order to get protected, you should:

- First, avoid panicking, as the diseases is not so severe. But it may affect many people as there is no immunity in the population.
- Young generations will not develop severe diseases, unless heavily contaminated.
- But the elderly are at increased risk of developing more severe disease.
- Don't bother using masks! Not only they are not effective in protecting from infection, but they can even be infective if you touch them with your fingers on your face.
- Unless you work in hospital settings, the coronavirus does not transmit beyond one metre of a sick person coughing or sneezing at you. Therefore a mask is not useful unless you are in a very particular situation such as sitting next to a patient in a long haul flight.
- Neither WHO nor the US-CDC are recommending wearing masks in the day-to-day life.
- Contamination is almost only achieved through transmission by infected hands that have touched surfaces contaminated by a sick patient, where the virus can survive for a couple of hours.
- Therefore, washing thoroughly your hands, using soap, for at least 20 seconds is the best way to destroy viruses. Yet, avoid touching anything in a public toilet after washing hands to avoid being contaminated again. Use a paper towel to close the tap and open the door...

- When a tap and a sink are not available, you should use hydro-alcoholic gels that you can buy in pharmacies. They will kill any virus on your hands when you use them.
- You should hang one such dispenser at the entrance of your apartment so as to prevent bringing in any virus from the outside, especially when coming from work through public transport.
- In addition, you should have a small dispenser with you at all time, in your pocket, to disinfect your hands after situations where you could have been exposed through touching contaminated surfaces, e.g. going somewhere through public transports, using public toilets elevators, ramps in escalators…
- Stop shaking hands during social interactions, don't kiss friends, avoid direct contact as much as possible.
- The main risk is to touch your face with infected hands! And believe me, this may happen unconsciously quite often in a day.
- In short, the hands are the risk, not the air that you breathe unless in very particular situations.

Now, in Sweden lately, and probably in many places elsewhere, it has proven impossible to buy hand sanitiser. Therefore, the only option left is to prepare your own. The World Health Organization has published instructions on how to prepare such sanitisers.

Today, I prepared my own! But quite a challenge still. First, you have to find the ingredients for preparing one litre of hand sanitiser:

- Ethanol: 833 ml
- Hydrogen peroxide: 42 ml
- Glycerol: 15 ml
- Water 110 ml, to top-up to one litre.

Or, I you got a one litre ethanol bottle like I did, use the following:

- Ethanol: 1000 ml, 1 litre
- Hydrogen peroxide: 50 ml
- Glycerol: 17 ml
- Water 133 ml, to top-up to 1.2 litres.

In Sweden:

- Ethanol is only available with a prescription. So I went to Bauhaus and bought one litre of Röd Ethanol, used for "fondue" burners. Pure ethanol, but coloured and with an added smell so that you would not to use it to prepare your favourite cocktails.
- Glycerol is out of stock in pharmacies. The alternative was to buy 99.9% pure Aloe Vera from ICA in order to give the preparation a bit of gelling.
- Hydrogen peroxide (eau oxygénée in French) is sold in pharmacies in Sweden for 10€ for 100 ml while on the Carrefour website, 250 ml are costing 1.2€! Well, you only need 42 ml, so don't be cheap!
- Only water is therefore available fo free...

So, this morning I was ready with all components in my kitchen. WHO instructions tell you to do the preparation in a certain order. In the clip-top jar (or any other tightly-closing recipient):

1. Poor the ethanol first
2. The add the hydrogen peroxide
3. Add the glycerol (or aloe vera)
4. Complete with boiled or clean water
5. Gently mix

Here is the result:

About Denis Coulombier

Dr Denis Coulombier is a medical doctor and a specialist in tropical diseases and public health with extensive international experience. He joined the Epidemic Intelligence Service of the US Centers for Disease Control and Prevention in 1991 and subsequently worked in the Epidemiology Program Office of the CDC (Center for Disease Control) in Atlanta. In 1995 he returned to native France to head the Unit for information systems in the National Institute for Public Health. In 2000, Dr Denis Coulombier was seconded to the WHO (World Health Organization) to lead the team in charge of epidemiology capacity strengthening. From May 2005, he was the head of Unit for Preparedness and Response, and from April 2011 he is the head of Unit for Surveillance and Response Support in the ECDC (European Centre for Disease prevention and Control) in Stockholm.

Here is an interview he gave on September 9th 2008 (in French) about ECDC :

Here is an article about pandemic in Europe Denis published in 2005 :

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H5N1 influenza and the implications for Europe

A pandemic is likely, but Europe is getting prepared

In the 20th century, the world experienced three influenza A pandemics: "Spanish flu" claiming 20-40 million lives in 1918-9 and the "Asian flu" of 1957 and "Hong Kong flu" of 1968, each of which claimed 1-4 million lives.[1] It might be about to face another.

Birds are the natural hosts of influenza A, but most avian viruses are not transmitted to humans. However, the current influenza A/H5N1 virus is more virulent in birds than in the past and is associated with human infections.[2] Since its appearance in Hong Kong in 1997, the H5N1 epizootic, affecting both wild birds and domestic poultry, has spread to most countries in South East Asia and recently to Russia and Kazakhstan, directly threatening Europe.[3,4] An epidemic of another less virulent virus, A/H7N7, in the Netherlands in 2003 emphasised the potential for emergence of infection in Europe.[5]

There are three prerequisites for a pandemic: a novel virus subtype for which humans are immunologically naive must be transmitted to humans; it must replicate and cause disease; and it must be efficiently transmitted among humans.[1] The present H5N1 avian virus lacks the third step, but sustained human to human transmission could occur through additional mutations in the H5N1 genome, or through "reassortment"—that is, mixing with a virus of human origin in a co-infected host. The risk of such events increases as the avian epizootic continues.

It is hard to assess precisely the risk of a pandemic. The recent situation in South East Asia, with low grade transmission of severe disease to (and between) humans, may remain stable. Alternatively, there might be a pandemic, with a virus of as yet unknown pathogenicity. The start of a pandemic may be controlled by targeted interventions around the first clusters of human cases, provided they are detected promptly.[6] Should this initial containment fail, however, all countries will eventually be affected because quarantine and border closures would probably be futile.[1]

Because of its dependence on sophisticated infrastructures, Europe would be very vulnerable to a pandemic. If 25% or more of the population were affected, vital functions such as food and fuel supplies would be severely threatened, unless appropriate preparations to maintain resilience are made—such as prophylaxis for key staff and plans within organisations for maintaining activities with a reduced workforce.[7,8]

Guidelines for public health interventions have been produced by the World Health Organization.[8,9,10] While there is still additional work to be done to refine them,[6] there is a general agreement on their nature and their phasing. They cover appropriate surveillance and detection systems, stockpiling of antiviral drugs, timely vaccine development, but also non-medical interventions, such as improved personal hygiene, early self isolation of cases, and cancelling of mass events. Implementing these measures in a major pandemic will be feasible only with good national and international coordination.

Success in controlling the epidemic of SARS (severe acute respiratory syndrome) in 2003 has proved the value of supranational public health governance, supporting country efforts. The 2005 World Health Assembly emphasised the importance of better preparedness at country level and in supporting the International Health Regulations.[11] Furthermore, the European Council in June 2005 asked European Union member states to improve the coordination of their national measures.

In the past 10 years, the EU has created technical agencies such as the European Agency for the Evaluation of Medicinal Products (EMEA), the European Food Safety Agency (EFSA), and the European Centre for Disease Prevention and Control (ECDC) to support member states. The various EU bodies and WHO are operating together to improve Europe's preparedness for major public health crises, including pandemic influenza. An early warning and response systems allows for timely exchange of information between the EU Commission, the European Centre for Disease Prevention and Control, and member states.

A recent WHO-EU workshop revealed that only 18 of the 25 member states had a published preparedness plan, and just one had conducted a simulation exercise.[12] The involvement beyond the health service sector and development of detailed plans subnationally needs strengthening. The European Commission in collaboration with WHO will arrange a follow-up meeting and conduct a European pandemic influenza simulation exercise later in 2005.

Europe produces more influenza vaccine than any other continent. But in a pandemic there will inevitably be shortages. These are strong arguments for making annual influenza vaccination more routine and increasing European production capacity. The European Commission has developed a partnership with European vaccine manufacturers to speed up vaccine production in a pandemic, and the EMEA and the centre for disease prevention will join forces to monitor adverse effects, effectiveness, and vaccine coverage.

Antiviral drugs are effective for early treatment of influenza and play some part in prevention. The EMEA has produced guidance to aid national decisions on procurement and use of antivirals.

The European Centre for Disease Prevention and Control monitors the epidemiological situation and is currently developing a preparedness assessment tool to be field tested in the coming weeks. The centre and the European Commission are also supporting the European influenza surveillance scheme, which is continuously adapting its epidemiological and virological monitoring to the threat of an H5N1 pandemic. On the EU level, links between human and veterinarian medicine exist but need to be further strengthened. More work is especially needed for effective crisis communication.

A pandemic will occur in the future. European institutions are taking this threat seriously, with efforts that will eventually pay off through reduced morbidity and mortality in the next pandemic. Meanwhile, activi-

ties to prepare for an influenza pandemic also make Europe better equipped to tackle seasonal influenza and other major public health crises. This is worth the investment and efforts.

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