

PART 2.

Summary

Elements of Communication for a broader public.

This part is not aimed at arguing the science, but at building trust.

We can hear and read too many opinions.

What is written here are NOT opinions at all, the statements of this summary are all based on hard facts. This was written with vulgarization for the general public in mind. It is meant to elevate the average citizen knowledge by giving them some info that they can check for references if they would desire. When dealing with health issues, we feel that citizens have to be seen as adults and not treated like children unable to understand the underlying problems.

This part covers 7 main questions. Those are answered as simply as possible.

The evidence supporting the general public statements are contained in a series of 9 technical notes in the Part 3 via numbers for example [See Note xx]. Those direct links between facts and the more basic communication may help the reader to further his/her understanding.

In those 9 in-depth Notes, all the scientific, technical and medical elements available are listed, reviewed, discussed and referenced. Those can be controlled by anyone. Nearly ALL of the references are from peer-reviewed high quality publications and some high-end broader reviews. As much as possible, newspaper articles were avoided.

Part of the problem with this crisis is either a lack of accurate communication, or contradictory communication, or communication by conflicted persons – all of which led to a deep mistrust in the public, and may have made the situation much worse than it needed to be.

The aim of this part is essentially to convey in simple terms for the widest possible audience all of the science and all of the data, because the public needs to understand in order to trust.

What seems obvious is that we all painted ourselves into a corner.

We need a better way out than doing the same thing and expecting some different results.

Note:

The type of *Info-demiology* (Information filled with pseudo-epidemiology) that the average public was exposed to since January 20, was exactly what led to misguided decisions. “Essential data” were aired regardless of their true importance. We feel that a free press has to educate. It is *now* evident that the selection of “essential data and epidemiological models” without hard questions can create misuse and abuse of information, without critical concerns and debates. We give here below some useful keywords for the interested reader, we feel that some public interest actions are needed to avoid a repeat.

- **Institutional Communication Media**
- **Freedom of Media communications and verified Contents**
- **Patient Education Information**

In 1994 The Patient Education Institute at the University of Iowa in Iowa City, founded by Moe Ajam embarked on the development of an interactive multimedia system to be used at the Point-of -Care to educate patients and to document patient education X-Plain tutorials and modules) (<https://pubmed.ncbi.nlm.nih.gov/11497310/>) (Pr. James Goldberg and G Tritto in Paris promoted the design of Patient Education Information as a general approach to people. Now WABT (Paris) is developing with “ Le centre MOBILE AVICENNE de l’UNESCO” on line-courses on transmissible Infectious diseases in Africa, Central Asia and Mediterranean.

1. The virus does NOT kill directly, it is not Ebola. Why are we treating it like it is?

The common cold group of viruses – like the flu one - is quite numerous [See Note 1], and they adapt fast (mutate) so that they can escape classical vaccinations easily [See Note 2 & 5]. However some of them like the SARS, MERS and possibly many others to be discovered, are a bit more dangerous as they can go fast and give more complications like bacterial pneumonias [Note 3] and ARDS (Acute Respiratory Distress Syndrome) [See Note 4]. We say that those viruses are thus more “virulent”. However they are absolutely not like Ebola, or other deadly fevers, and they are not like the bacterial plagues or the highly contagious and very deadly infectious diseases of the recent past [See Note 3, 4 and 9]. And yes, good sanitation is always needed as for any infectious disease (sanitation is quite bad in rural or suburban China for ex.). It is not the virus that killed but the **course** of the disease (in this case the severe bacterial pneumonia or viral sepsis).

2. Wrong statistics led nearly all (but not all) countries to misguided decisions.

Public health is difficult to manage but it needs accurate information for the authorities to make sensible decisions. When one collects only death data from coughing people, without knowing anything else, does ANY of those so-called death rates make sense? It does NOT! In such malpractice, we could even measure 100% of fatalities if we were to choose to [See Note 9]. Why did that happen will be explained below (see tests). Some real statistics came from South Korea early on, but were dismissed [See Note 9], some other came later out of Germany, US, Iceland but was doubted [Note 9], a key paper was published in the Wall Street Journal highlighting the reality of the problem, without being able to lead us out of the wrong spiral. In short, except at a few places, no one really measured the infected people who were not coming to hospitals, the infected people who came but had NO complications deserving Intensive or Critical care, and the ones who just had a fever or a flu. Conclusion: fatalities are much more lower than the world press has been busy airing 24/7. How much? Probably between 10 and 50 times less! [See Note 9]. And yes, the flu kills more [See Note 9]!

Would we have taken the same decisions if such analysis had been done early on?

3. Complications from the virus may in some cases bring us to ICU and in the danger zone – but they can be avoided and this is part of the way out of this crisis.

Such viruses can be very dangerous of course. We all know about the elderly, the infants, the persons with some compromised health (having COPD, Asthma, Smokers, Chemotherapy, Immunotherapy, surgery, patients already in ICU...) [See Note 3 and 4]. At risk we also have some patients with hypertension (too high blood pressure) and diabetes, and also probably some persons who have genetic predispositions for it. With each passing year, those viruses may be fatal to some of those people [See note 3, 4 and 9].

Those fatalities should always be as minimal as possible or even non-existent, but for this we do not need fear-based hospital entrances like in bad movies, we need just plain good medical practices. Triage is fine as long as medical priorities remain priorities, and FAST patient treatment in community is needed [See Note 3]. Upon faster treatment, patients will not need to be hospitalized and clog ICUs. [See Note 4].

Usually this type of virus creates 2 major complications in a minority of the infected persons (remember near 95% of the persons will never have those complications):

bacterial infections that come on top of the virus because our lungs have more secretions [See Note 3], and strong difficulties of breathing linked to the obstruction of our airways by those secretions that lead to many secondary problems seen in different (non-SARS) viruses in fact [See note 4].

1 in 7 of hospitalized patients were infected by bacteria and among those patients fatality was 50%. So the situation is clear [See Note 3 for details]. In general – with other viruses - Doctors usually have a few days (8-10) before seeing those complications, in the case of this SARS-2 virus, one has 2-3 days. So early blind antibiotherapy is warranted.

When a bacterial pneumonia comes, the patient needs antibiotics. When ARDS comes the patient needs antibiotics and either oxygen or respiratory help (with respirators).

Why is this virus creating more complications and becoming a logistics problem? It acts faster than the other viruses of its category, it goes deeper [See Note 4]. It has some surface that makes it “stickier” to the airways and allows the virus to penetrate airway and lung cells more easily [Note 4]. Also old molecules like amantadine, ... may be effective at decreasing the stickiness hence making the viral infection less risky for both the concerned persons and the medical personnel [Note 4].

4. Why vaccines are needed but will be slow and most likely never as good on their own as natural immunization of the population?

Vaccines are powerful tools against viruses and bacteria. They are however only effective when those viruses and bacteria do not change fast (mutations). In such case their efficacy can be quite low. An example is the yearly flu vaccine that needs upgrades (modifications) twice a year and still is only 50% effective. But this low efficacy is good enough to decrease the speed and the reach at which the flu virus spreads [See Note 5].

A vaccine made by the industry is like having a very strong key to close a door. The natural vaccination of the population is more like having millions of different keys protecting the same door because each of us will develop antibodies against some different parts of the virus [see Note 5]. When a virus changes (mutates) [See Note 2], then it can evade the vaccine (the single keylock) but can NEVER evade the millions of personal keys. This is called “herd immunity” and is - in those cases where germs change easily and fast - more powerful than actual vaccines.

Vaccines take time to be made and tested. It will be at best 12 months before available. But remember this is a member of the common cold family, if a vaccine against those types of viruses was easy it would have been made decades ago. So waiting sheltered while waiting for the vaccine is not a good option as we share this virus with other animals [See Note 7]. There the cure may indeed become worse than the disease. (See below social-distancing and sheltering).

5. But people are dying - Will leaving the population exposed lead to many fatalities?

Not necessarily if planned, if we focus on the treatment of the complications **early** and do not wait that a pneumonia needs to be ventilated. By focusing the care on the persons with compromised conditions, the elderly, and the infants, we avoid the dangerous complications (like in Sweden [see Note 9]). By not doing this, we are creating the logistic crisis at the hospitals by having given up the community care giving, and by not taking into account the specific speed of this virus.

6. The SARS Virus like all/most respiratory viruses is airborne, and animals can be reservoirs. Role of Surfaces, droplets.

A virus is so infinitely small and weights nearly nothing; hence it is always on the move through the air, a bit like particles of dust. We breathe 1000's of them in and out of our lungs at any given time. The majority of those viruses are harmless to us, and the viruses that can cause us harm, do not always successfully infect us (it takes many virus particles to succeed into bringing us into sickness) [See Note 6], or do infect us only mildly. Only in 10-15 % of the cases [See Note 3, 8 & 9], the infected persons will have a major illness, and only a fraction of those will need to be treated for the complications [See Note 9].

Droplets from infected coughing do contain the viruses [See Note 6], and those droplets indeed fall on the ground and surfaces in less than 6 feet. However lots of droplets remain in the air also, and the virus can survive inside them for 3 hours [See Note 6].

This family of viruses - like the flu - can easily go from one type of animal to the other, or from animals to humans and back [See Note 7]. Remember that bird and swine flus are common. In some cases the animals may be carriers where the virus stays alive without making them sick, in some cases the animals themselves can be sick [See Note 7].

Also this virus was reported to have originated from a live animal market in rural China. Bats, rodents can be reservoirs, but we should not be surprised that civets, rodents, birds or livestock could be hosts [See Note 7].

What do you think will happen when we, humans, get out of our "shelters" again? We will keep exchanging those viruses with animals.

7. Isolation, social distancing and quarantines can be both very good and very bad.

If a killer virus like Ebola had hit us, ALL of what was decided and implemented would make sense. However when dealing with a virus that is NOT a direct life threat but only an indirect one, after the initial surprise, some proportionate response should be put in place. Isolation and social distancing should not be large scale, nor systematic, but **targeted**.

When infected and coughing - as we all do or should do – we should isolate ourselves, and not go to work to avoid spreading. Given the fact that this virus can bring the complications very fast, remaining isolated with a fever and chills may lead to a worsening of the situation and bacterial infections. The same is valid for those of us who have a pre-existing condition, or are at risk. Isolation in such cases, will inevitably lead to catastrophes.

So community care is essential, as most of the infected persons, if taken up early with appropriate care will not need Intensive care and/or respirators. Leaving people quarantined (like in cruise ships or in large facilities) is downright bad preventive medicine, and can worsen the situation. Having dedicated parts of medical facilities, to test and treat is needed, but treating the patients with the protective gear only seen in *end-of-the-world* movies leads to insane situations. This heavy gear generates huge fears and hampers **everything**: doctors stop thinking, military-style triage replaces medicine, diagnostic are NOT properly done, treatments are being denied even to patients infected with the viruses. Triage is to make choices about 2 patients based on their respective chances of survival and choosing. But given the wrong public health statistics, given the fact that most patients will never be at risk, it has NO place nor use in our actual situation.

It is not the role of the authority to decide what procedures may MD's do or not, as some countries have proposed for specialized medicine.

Isolation of large populations – while waiting on a possibly effective vaccine against this group of viruses – is NOT a sustainable solution; it is not even a solution.