

Prevention of COVID-19 at UM: Applied Science in Real Life

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COVID-19 is a new challenge. As we have seen in the past, there will be solutions from the beta/medical sciences at some point (treatments and vaccines), and until then, answers are expected from the behavioral sciences. Behavioral science does not have the final answer; but there are answers. We simply never know enough, but we do know something and this knowledge accumulates over time. From a policy perspective, that is annoying, but pretending to have all the answers right now, is not the solution.

Prevention of COVID-19 is possible when people adapt their behavior. Which is easier said than done. Simplified, theory indicates that the order of decision-making in case of risk-information is:

- How serious is infection with COVID-19?
- Do I personally run a risk?
- Is there a behavior change that might protect me?
- Can I do that?

After each question, people may decide that it is not their problem. The crucial question is the last one, and when people experience that the preventive behavior that is asked from them is too challenging, they revise the answers to the earlier questions; we call that a defensive response. Part of that is ignoring or downgrading the danger.

More in general, human behavior is determined by:

- Attitude: Beliefs about advantages versus disadvantages of the behavior; with risk as one of the possible disadvantages
- Perceived norms: Influence of the social environment: expectations of others, behavior of others
- Self-efficacy: A person's belief in their ability to succeed in the (preventive) behavior. Can I do that?

These three factors are strong determinants of behavior within an environment that makes the behavior easier or more difficult: policies, facilities, et cetera. Moreover, many behaviors are more or less automatic: they are impulsive or habitual.

Again, the crucial determinant for change in behavioral routines is the last one: self-efficacy, often in combination with perceived norms that are not supportive of the preventive behavior. Risk perception and attitude change are seldom enough to change people's behavior when self-efficacy is low and perceived norms not supportive.

Nothing is ever easy. The behavioral context is also one of a social dilemma: "If everyone else sticks to the rules, then I don't have to". In that case, people misuse the cooperative behavior of others; we call those "free riders". That is one reason why we cannot just rely on friendly communication: **some people need supervision and control, and confrontational communication.** That is one of the tasks of the Corona-stewards and the Corona-coaches.

Understanding people's motivation is essential for changing them, at least in a setting where complete control is not feasible. Prevention is based on voluntary behavior change, supported by facilities and some kind of surveillance and control. Ideally, people do the right thing, but reality is never ideal.

Which behavior is our goal? Again, science does not have an easy answer. Given the transmission, being near other people who might be infected is the main issue. Keeping a distance of 1.5 meter makes sense, as well as people with complaints staying home and getting a test (and adequate ventilation; which is mainly a technological solution). That worked very effectively in April-May of this year, however, with a high price. Going easier on these two principles turns out to be risky.

The science about facemasks is unclear. The detailed review by the RIVM concluded that there is no clear evidence that facemasks are helpful for the prevention of COVID-19, as these studies were not methodologically adequate, and theory gives contradictory predictions: wearing facemasks may lead to people not keeping the 1.5m distance. Moreover, many people do not use the facemask correctly. Some studies show that when people voluntarily wear masks, others keep more distance, but there simply is no evidence of what will happen if masks are mandatory; anecdotal evidence suggest that people may stop with the other preventive behaviors. Again, we do not know enough to advise on policy decisions. Of course, it is advised to wear a facemask in situations where 1.5m distance is not possible. But wearing a facemask is no excuse for not keeping 1.5m distance in general.

How can we get people to keep 1.5m distance and be tested when they have complaints? As mentioned earlier, we need to know the precise determinants for these two behaviors: attitude, perceived norm, self-efficacy, and environment. At the moment, we do not have that information. There are publications, but they have two serious shortcomings:

- Most research on determinants, including Dutch projects, dates from April, immediately after the first response to COVID-19. It seems obvious that the public response has changed after the initial reaction.
- Most research on determinants, including Dutch projects, is based on voluntary participation. That is understandable but it probably does not reflect the whole population.

One interesting exception of the first shortcoming is a Belgian study that measured determinants over time. They showed a decrease in motivation to follow the guidelines over time, but especially after the announcement of stricter guidelines in August (in Belgium).

What have we learned about keeping 1.5m distance from the studies so far, and what do we know from the health promotion literature?

- Most people agree with the preventive effect of the 1.5m guideline and want to comply with it. Potentially useful messages are:
 - o Keeping 1.5m distance is a very good thing – the best way to prevent COVID-19 infection
 - o By keeping 1.5m distance you take your responsibility, and especially also for (vulnerable) others
 - o By keeping 1.5m distance you belong to a group of people who together try to get the virus under control
 - o Meet your social contacts online; most people do and always keep 1.5m distance IRL

- Most people think they should keep 1.5m distance but they find it quite difficult to do it in real life

Potentially useful messages are:

- o Most people around you want to keep 1.5m distance. So, if someone comes too close, just say so, or avoid the situation.
- o Think in advance what you will say; for example: ask them politely to keep sufficient distance. Most people do not do it on purpose.
- o Sometimes you yourself do not keep 1.5m distance by accident. Stay alert, and you will manage. Remind yourself every now and then.
- o Hold on! We are social animals, and we are not programmed to automatically keep our distances. Even if you forget it sometimes – in the end it will become a habit.
- o You can decide to wear a facemask, which may help keeping others at a distance. Do remember to keep the 1.5m distance yourself – that is still the best prevention. And keep following the other prevention advises. Get tested when you have complaints or are afraid to infect others.

The two statements above also indicate the positive effect of having Corona-stewards and Corona-coaches. Most people who do not comply with the 1.5m guideline do not do that on purpose. Sometimes people comply with social pressure to join a group. They may be embarrassed when being told to keep distance, but they do agree with the guideline.

Environment: Making the healthy behavior the easy behavior. Promote maintenance of behavior change by 'nudging': e.g. availability of gels and lines on the floor, and making working from home easier.

What have we learned about voluntary self-isolation and being tested for COVID-19? In fact, very little. There are now facilities, that are relatively easy to go to. In terms of behavior, people have to self-observe for complaints, decide to take a test immediately, and self-isolate until they know the result. The same kind of determinants are relevant, in general: risk perception, attitude, perceived norm, self-efficacy, facilities. In this case, there is a conflict between not infecting others, e.g. vulnerable family members, against finding out that you are infected with COVID-19, with all related consequences. Defensive responses may be expected. Again, self-efficacy about how to deal with such a situation is a crucial factor, including social support, as well as the earlier mentioned argument of taking responsibility (personal norm), especially for others.

What about limiting social contacts in times of COVID-19? The Belgian study showed that, over time, people find limiting social contacts the most difficult behavior to comply with. In theory, the basic idea of the "social bubble" is OK, but in practice, people keep having contacts with others outside their bubble, which makes the bubble an illusion. Keeping distance in general is something people try to do; keeping away from your social contacts is much more difficult.

In other words: people feel a reduction in autonomy and a reduction in relatedness, while both are essential for healthy functioning. More in general, this relates to **mental health in times of COVID-19**. Those reactions are more prevalent in younger adults. How can we respond to this?

- Stress that the quality of social interactions is more important than the number. Find interests that do not need much company. Meet your social contacts online.
- Show how the situation could have been without all the guidelines and regulations. Reinforce everyone's contributions to where we are now.
- Listen to the people who find their freedom threatened. Respond and explain. Keep sanctions consistent and in proportion.
- For the leadership: Create a predictable environment. Explain clearly what the indicators will be for future changes in the guidelines and/or restrictions.

One separate issue is the psychological stress in all **faculty and staff who are responsible for teaching and research** and who have to adapt to the new situation. Here, the reduction in autonomy and relatedness is also present. Again: create a predictable environment; listen, respond and explain, reinforce everyone's contributions.

How to proceed at UM?

The first priority is to gather more information from students about their determinants of complying with the guidelines. We will organize focus group interviews with students to collect qualitative data on what they think are important issues in relation to complying with the guidelines. Then those ideas are confirmed in a quantitative study using the Flycatcher student panel (October 2020). The outcomes of the study will be discussed with parties involved and will be translated into policy and communication recommendations for the university leadership. The cycle will be repeated to monitor changes in determinants and behaviors (April 2012). The outcomes of this research will be publicly available and the researchers will cooperate with the university leadership to optimally apply the results into appropriate prevention practice.

The next priority is the faculty and staff. The focus could be on their experiences with working from home, and with their preferences for going or not going to work at the office.