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What can the COVID-19 pandemic teach the planetary defense community?

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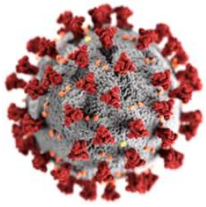

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The COVID-19 pandemic has highlighted some key lessons that also apply to the Planetary Defense (PD) community. It would be prudent to take those to heart in order to improve future responses to potential asteroid threats. Here are some key take-aways and topics the PD community needs to address and take action on.

When, not if

Both, the pandemic as well as the risk posed by a potential asteroid impact, are events that have been described as 'when, not if'. Scientists and experts have warned since decades that it would only be a matter of time until humanity would be faced with a pandemic and recommended that actions be taken in order to be prepared.

However, funding is rarely allocated before a major event happens, and usually only in response to it when the costs of dealing with the crisis are far greater than they would have been preparing for them.

This was the case for the pandemic and currently the same attitude seems to hold true for planetary defense. While several studies have flagged the necessity of in-space assets to detect NEOs, e.g., NASA's NEO Surveillance Mission (NEOSM), funding is not at a level that would indicate decision makers are taking the problem very seriously.

Information vacuum

At the beginning of the pandemic very little was known about the novel Coronavirus. The medical community just started to study the virus, its transmissibility, its effects on patients, treatment options, etc. It took time in order to answer questions decision makers and the public had alike.

At the beginning of any crisis the public is starving for information in order to process what is happening and deciding on a plan of action. When no information is available, an information vacuum is created that will be filled no matter how. Key is to fill it with accurate information and not rumor and gossip.

The same can be expected for a potential impact of an asteroid. Key information such as size, impact location, expected damage, etc. will not be available straight away, perhaps even for years. Thus the potential for an information vacuum is high and needs to be addressed, ideally by a trusted source.

Communication Strategy

The US Centers for Disease Control and Prevention (CDC) has a Crisis and Emergency Risk Communication (CERC) manual to guide communities how to communicate effectively with the public. It has 6 principles:

1. Be First
2. Be Right
3. Be Credible
4. Express Empathy
5. Promote Action
6. Show Respect

These principles would also apply in case of a potential or predicted asteroid impact announcement. If not already in place, could this or a similar approach be a model for IAWN, the UN, and countries to inform the public?

Another aspect to keep in mind is the duration of the threat and how it affects the behavior of the public. As we have seen during the ongoing pandemic, people get tired hearing the same messages with the result of responsiveness to measures decreasing with time. In case of an asteroid impact that is predicted to happen in several years the same might happen although the behavior of the public might be less of a driver than during the pandemic.

Dealing with misinformation

The appearance of misinformation can have many causes, from deliberate misinformation, over not knowing any better, to trying to fill an information vacuum. Nowadays, even a harmless fly-by will result in some fake news on social media, usually aimed at enticing fear in the readers. The PD community has to acknowledge the fact that misinformation will always be there. The question is how to address it.

Currently it is not fully clear who really speaks for the PD community. IAWN is still far from its goal to become by 2019 the global trusted and credible source of NEO information, notification and warning as it is still not known even to some within the NEO and PD community, let alone the general public.

Additionally, there seems to be a general reluctance in expert individuals to speak out publicly and clarify misinformation even if they could, out of concern that their statements might be taken as official stance of their (government) employers while they do not have that mandate and could also potentially say something incorrect that might later be held against them. The result is that the information is often coming from sources who may not always be in the best position to do so, leading potentially to more confusion and creating the appearance that the leading PD experts remain silent. Especially in view of situations when quick communication is called for, this needs to be addressed in advance.

Actions and Questions to be addressed by the PD community

1. Decision makers need to be made aware that funding NEO detection capabilities now is cheaper and safer in the long run.
2. How can the PD community avoid an information vacuum? What templates, strategies, etc. can be prepared in advance?
3. Review principles of crisis and emergency risk communication. What is currently in place? Does it require any updates?
4. How to take the time factor into account when communicating with the public to avoid fatigue?
5. How does the PD community intend to address misinformation?
6. Who can speak for the PD community?
7. How to establish IAWN as the globally known, trusted and credible source of NEO information?
8. Establish a communication strategy for experts to speak out on misinformation.

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