CONTROLLING THE COVID-19: A SUCCESSFUL MODEL FROM A SMALL ISLAND

We don't pass a day without reading about the COVID-19 pandemic that has already killed over 217,000 people worldwide as of 28 April 2020. The outbreak started in Wuhan, China, where it has killed 4,633 people. But in Taiwan, only six deaths occurred so far with 429 confirmed cases. How did the small island (36,000 km^2) close to China managed to confront the pandemic? A closer scrutiny of the crisis may shed some answers.

When the SARS outbreak spread across Taiwan in 2002-03, it suffered the 3rd highest mortality, following Hong Kong and China. Subsequently, it enforced emergency protocols to deal with disease outbreaks by adopting scientific methods through artificial intelligence, big data, new tools/technologies and rapid screening/monitoring to contain infections originating from overseas. Besides, Taiwan harbors one of the highest human densities in the world (649 people/km^2). So, it must be always prepared to face the worst case scenarios of health disasters.

Being neighbors, China and Taiwan share the same language, Mandarin. People also move frequently back and forth. In early December 2019, news broke out in social media about a deadly infectious pneumonia killing people in Wuhan and, immediately, the health officials in Taiwan sent out red alert to the health community. At that time, other countries were not aware of its severity. Only on 31 December 2019, China alerted the WHO about the outbreak in Wuhan. Instantly, Taiwan's Center for Disease Control (CDC) ordered inspections of all passengers arriving from Wuhan.

Since 2013, Taiwan installed infrared thermal imaging tools in all sea and airports, so monitoring passengers to check for fever has become mandatory. Passengers were asked to scan a QR code to inform their travel history and symptoms online and the data immediately transferred to CDC. When Taiwan's senior officials visited China with their official permission on 12 January 2020 for fact checking, they were not given access to inspect the ground reality that provoked suspicion. When they returned, they activated the epidemic command center on 20 January by notifying all hospitals across Taiwan to do rapid tests and report suspected infections to the CDC. The rapid response yielded good results to identify, trace, isolate and ultimately prevent community transmission. The first case of infection emerged on 21 January. Then, Taiwan banned visitors from Wuhan and also stopped all tour groups to China. Only on 30 January, the WHO announced COVID-19 as public health emergency of international concern with a global pandemic tag on 11 March.

By using big data, a high-tech health firm alerted the government that COVID-19 would reach Taiwan within a week, so it acted swiftly. Besides, Taiwan has integrated its health insurance database with immigration/customs database that scan all travel tickets with variables such as origin of flights, total routes over two-weeks period, travel history, infection risks, etc. Also, all citizens are enrolled in health insurance database accessible by authorities. In addition, cellphones with built-in GPS are used to track foreign travelers and those who violate mandatory home-quarantine are instantly tracked; they are caught, fined and confined again. In one case, a quarantine violator was fined a hefty fee of USD 33,000 that shows the firmness of law enforcement. Everyone works as usual without any lockdown and no panic buying. The government provides face-masks and hand sanitizers for a reasonable price. We continue with our classes in the university, but strictly follow social distancing. Taiwan thus undoubtedly did excellent epidemic control to minimize mortality from COVID-19. But, the WHO doesn't recognize it since Taiwan is not a member of the UN, which is a political matter.

We fully agree with the concept expressed in the editorial of the last issue of *Interciencia*, that scientific solutions are fundamental to deal health crises and not politics. History tends to repeat itself as we saw how the HIV-AIDS pandemic killed over 36 million people worldwide. When a deadly disease starts to kill people in one location, it must be contained without delay by using science, logic and discipline timely. If not, we will be haunted again with a new pandemic in near future.

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