



## Short Communication

### On my experience with early warning of an imminent severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) outbreak

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#### ABSTRACT:

In recent years, a number of life-threatening human pathogens have emerged. A novel coronavirus-related disease, known as coronavirus disease 19 (COVID-19), was first reported in Wuhan, China. The pathogen of COVID-19 has been identified as SARS-CoV-2. SARS-CoV-2 proceeded to spread in China and around the world, reaching pandemic proportions. The COVID-19 outbreak has caused huge human casualties and serious economic losses, posing a global threat. The continued periodic emergence of the coronavirus poses a major threat to human health and the economy. Ironically, even after a decade of research on coronaviruses, there is still no licensed vaccine or therapeutic agent to treat coronavirus infection. This highlights the importance of early warning and preventive measures in public health agencies to prevent future pandemics. Here, I draw on media reports and expertise to sum up my experience prior to the widespread outbreak of SARS-CoV-2. I believe this can serve as a reference for the prevention of COVID-19 and an aid for control systems of public health agencies to improve epidemic monitoring and early warning.

**KEYWORDS:** COVID-19; SARS-CoV-2; coronavirus; outbreak; warning

#### INTRODUCTION

I have followed the development of the COVID-19 pandemic that the media reported in December 2019 as an outbreak of unexplained pneumonia. On 14 January, 2020, when Wuhan was still the only Chinese city affected, I developed the following summary:

1. On 8 January, 2020, the *Observer Network* reported a case of pneumonia of unknown origin in South Korea in a Chinese national, who had neither visited the South China Seafood Wholesale Market alleged to have been the source of the outbreak during his stay in Wuhan, nor had any contact with wild animals.<sup>1</sup> The report indicated that the patient was possibly infected by close contact with a case of COVID-19.
2. A World Health Organization statement on 9 January, 2020 reported that the pneumonia virus from Wuhan, China was not easily spread by human-to-human transmission, which, nonetheless, could be ruled out.<sup>2</sup>
3. On 14 January, 2020, *Beijing News* reported a confirmed case of COVID-19 in Thailand in a traveller from Wuhan, China,<sup>3</sup> suggesting the need to strengthen control and protective measures among travellers from Wuhan.
4. The Wuhan Municipal Health Commission announced a pneumonia epidemic of unknown viral pneumonia on 14 January, 2020.<sup>4</sup>
5. Medical professionals should not only deal instinctively with all kinds of risk, but should also, more importantly, cultivate the ability for risk prediction, to thereby prevent risks from escalating.
6. At the time, individuals working, studying, or travelling in Wuhan had not returned to their hometowns; upon their return, the situation became uncontrollable.

For the abovementioned reasons, though the epidemic was reportedly limited to Wuhan on 14 January, 2020, I anticipated the possibility of a complex epidemic situation. I directly reported my concerns to the Medical Department of the People's Hospital and the Commission Office of Xishuangbanna Prefecture to urge the initiation of preventive measures as soon as possible to prevent and control the spread of COVID-19.

The COVID-19 pandemic illustrates that in public health emergencies, it is more important to provide early warning of diseases and to report outbreaks to government departments so that preventive measures can be implemented to reduce waste of resources and risk to medical staff. I hope that government departments will encourage professional and technical staff to take responsibility, give advice, and provide early warning in future potential public health emergencies, and suggest that they be rewarded and commended.

#### **Conflict of Interests**

There are no conflicts of interest.

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