

**Editorial. Opinion, Discussion.****LESSON LEARNED... AGAIN**Olga Vasylyeva, MD<sup>1\*</sup>**Author information:** <sup>1</sup>Infection Disease Department, Rochester General Hospital; 1425 Portland Ave, Rochester, NY

*Lethal pulmonary disease is spreading in the United States, no effective treatment is available, and the presidential election is around the corner.* Sounds familiar? But this is August of 1976, Philadelphia, and the country is challenged with the unprecedented threat, the cause of which to be identified only months later – a bacteria *Legionella*, responsible for what is known as Legionnaires' diseases, the lungs infection that can be treated with appropriate antibiotics.

Dr. Stephen B. Thacker, an epidemiologist investigator in 1976 and later the Director of the Office of Surveillance, Epidemiology, and Laboratory Services at CDC, recalled in the book "Outbreak investigations around the world" that outbreak became a political concern that year on the top of the threat of "swine flu" pandemic [1]. The witnesses reported that the media and public response was significant; the volume of calls to CDC led to the transition from analog to electronic "switch" [2].

Conspiracy theories and criticism surrounded a massive influenza vaccination campaign led by President Ford. The former director of CDC later called visible presidential participation in the influenza vaccination campaign a mistake because it made the campaign appear politically motivated [3]. *The New York Times* reported in 1976 that hastily formed policy on vaccination endangered the whole idea of preventive medicine [4]. In 1977 Congressional hearing was held to learn about the result of the CDC efforts and produced an educational volume of disease detectives'

investigation timeline [5]. And "oh, that Legionnaire's disease" appeared in Bob Dylan's lyric [6].

In 2006 Dr. Lawrence K. Altman, who covered the story for *The New York Times* thirty years prior, reflected on lessons learned, one of which – communication [7].

*Legionella* exhibited atypical behavior in the laboratory preventing its identification. It had puzzling clinical presentations varying from a deadly disease to very mild symptoms and made it seem unlikely for scientists that the same bug could cause these two different presentations. Conflicting information, initial failures to identify the cause, and some investigational lapses shifted public trust.

In March 2020, when Rochester, NY, had the first case of COVID-19, television from my hometown reached me for the comment. Among worldwide known recommendations to wash hands and avoid touching face, I spoke about daily changing information. Updating and shifting messages were overwhelming and frustrating, particularly when we sought the solid ground and what-to-do guideline to harness the fear of the threatening unknown. The fluidity of data was no less challenging for policymakers. All our guidelines had the word "preliminary" in their titles. The clinicians gave recommendations to patients with cautionary "unknown" or "this might change."

But this is OK. Constantly changing information is a good thing because it means we do learn more about the new virus. We do not want to be stuck with the facts that have lost their validity thanks to scientific advancement. Perhaps, this is a sort of self-comforting way to look at zig-zagging data, but it is also true for science – to constantly improve on the unlimited way to perfection. This is where science and politics disagree: development and doubt are integrity for the scientist, while consistency and certainty is integrity for the politician. If we want to be advised by science, we should expect updates and changes.

The *Legionella* disease outbreak taught us the importance of communication. But that was not the last outbreak to repeat

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this lesson for us. It is said that repetition is one of the best teaching techniques. I surely hope so.

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