

The Tragedy of Names

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The naming of pathogens and their associated syndromes is a thorny process which unfolds in a complex geopolitical environment. This brief piece offers perspective on the multitude of forces that shape the name of a pathogen and summarizes the story of *Sin Nombre* Virus, with some reference to the ongoing saga of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). A monopoly on names and circulating monikers rarely exists, and certain communities become disproportionately impacted by misunderstandings or stigmatization. By acknowledging these processes, we can better serve as allies to affected communities dealing with both pandemic and prejudice.

INTRODUCTION

“One cannot guess how a word functions. One has to look at its application and learn from that.”

–Ludwig Wittgenstein, *Philosophical Investigations* [1]

Words are seldom constrained by their intended meanings and prescribed roles, especially names. Systems of classification and specialized language have been with us since Aristotle and continue more than two millennia later. Unsurprisingly, in our present age, names and titles are still ascribed to the rapid discoveries and movements of our lives. Questions surrounding the naming of an “X” – whether it be a zoonotic disease, a physical phenomenon, or a philosophical concept – are far from novel. It is essential for various shareholders to engage with socio-political forces and multifaceted questions surrounding

a novel entity’s name. The process of naming pathogens and their associated syndromes is one such enterprise that calls for serious consideration.

THE NAMING PROCESS

Names of pathogens and their associated syndromes conventionally have been derived from geographic locations, presumed reservoirs, physician-scientists, and even mythological shepherds (ie, syphilis) [2], but the past century has witnessed several attempts to systematically classify and codify names applied to pathogens and the syndromes they cause [3,4]. A recent example is the 2015 World Health Organization (WHO) statement titled *World Health Organization Best Practices for the Naming of New Human Infectious Diseases* [4]. Its principal aim was “to minimize unnecessary negative impact of

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Abbreviations: CDC, Centers for Disease Control and Prevention; SARS-CoV-2, severe acute respiratory syndrome coronavirus 2; WHO, World Health Organization; ICD-11, International Classification of Diseases.

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disease names on trade, travel, tourism or animal welfare, and avoid causing offence to any cultural, social, national, regional, professional or ethnic groups.” The WHO encouraged the use of descriptors related to a pathogen’s syndrome, spatiotemporal distribution, or severity while leaving out people’s names, cultural references, and specific geographic locations.

In May 2019, the newest edition of the International Classification of Diseases (ICD-11) was adopted by the World Health Assembly [5]. Echoing sentiments of the WHO’s 2015 statement, ICD-11 topic advisory groups were guided by the need to consider various cultural contexts in which diseases manifest [6]. They were also encouraged to seek out diverse viewpoints when crafting new approaches to classification.

Part of the WHO’s motivation to call for best practices in naming stemmed from concerns related to recent epidemics and the rapid dissemination of damaging names fostered by social media [7]. The 2010s had already witnessed avian influenza [8] lead to government-sanctioned culling of thousands of animals as well as heightened levels of discrimination targeting African immigrants and migrants during the 2014 Ebola outbreak [9]. Physicians and epidemiologists generally applauded this new iteration of naming guidelines as long overdue [10-12], but some prominent critics expressed dissent and even forecasted a future of “boring names and a lot of confusion” [10].

If presented as a façade routinely polished by WHO administrators, the naming process appears orderly, even logical. In reality, naming is thorny and chaotic. When whispers of a novel pathogen reverberate throughout scientific articles, news media sources, and basic researchers’ email accounts, a torrent of events is set in motion. Movers and shakers like the WHO, the International Committee on Taxonomy of Viruses, regional governments, epidemiologists, and opportunists all compete to influence the circulating name of a pathogen. For viruses specifically, there is no standardized nomenclature [13], and the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) pandemic has further complicated debates amongst virology societies [14].

The hasty process is shaped by nonuniform knowledge bases, levels of influence, and disparate motives, but a name is eventually forged. As a product of historical contingencies, it may very well fall short of capturing the essence of a pathogen or even fail to provide any pertinent epidemiological information. The situation is further muddied by the ability of dissenters to use any number of offensive or inaccurate monikers when referring to the novel pathogen or syndrome.

However, the real tragedy concerns the human lives affected by names – whether official or vernacular. Presently, the world witnesses ongoing stigma and violence

disproportionately impacting Asian-Americans and Asian communities [15-18] as labels like “Wuhan Virus” and “Chinese Virus” are used for the pathogen recognized by the WHO as SARS-CoV-2 [19].

NAMING *SIN NOMBRE* VIRUS

The chain of events surrounding the discovery of *Sin Nombre* Virus provides a poignant example of a naming process’ impact. In May 1993, a young man from a Navajo community in New Mexico mysteriously developed respiratory failure and died [20]. Medical providers then recognized that his fiancée had passed away in the preceding days from a similar type of syndrome. In the following weeks, the Centers for Disease Control and Prevention (CDC) and state health departments entered Navajo communities in the Four Corners area of the Southwestern United States, and ultimately isolated a novel hantavirus from deer mice living in local households and barns. Labels like “Navajo Flu,” “Navajo Illness,” “Muerto Canyon Virus,” and “Four Corners Illness” entered public discourse [21-23].

Some reports equated Navajo people with disease and contagion [21,24] while health officials failed to respect the mourning practices of the affected communities as they incessantly probed for information on recent deaths [21]. The high mortality of hantavirus pulmonary syndrome intensified public fears despite the absence of evidence supporting human-to-human transmission. Ben Muneta, a Navajo man, stated, “They would give you hate stares, and refuse to help you. It was like going back in time 20 or 30 years, when I was growing up, and people didn’t like Indians” [22].

The CDC proposed the name “Muerto Canyon Virus,” a name which was problematic for indelibly linking the virus to the region and being insensitive to the site’s connection to a Spanish atrocity [22]. The Navajo Nation Council organized and unanimously voted to request that the CDC find an alternative name [25]. During this time, the Navajo Nation’s President Peterson Zah was a vocal critic of sensationalist news coverage and the stigmatization affecting his community [21]. “The story of the Hanta Virus is a perfect example of an intercultural setting and the friction that lies just beneath the surface, and which explodes when unknowing outsiders trample on age-old customs.” He reflected, “Deaths and the unknown nature of the illness served only to reinforce stereotypes ... [and] the view of Indians as second-class citizens was further supported.” After successful efforts on the part of Navajo communities, *Sin Nombre* – *without name* – virus became the CDC-endorsed name for the novel hantavirus [20].



Figure 1. “Jimmy Germ” cartoon. Originally published in the American Medical Association’s *Hygeia* journal, the villainous caricature representing contagion offers a striking contrast to the blond American child in the upper-right panel and resembles anti-immigration cartoons of the early 20th century. *Image in is public domain.*

CONCLUSIONS AND OUTLOOK

The stories of *Sin Nombre* Virus and SARS-CoV-2 echo historical responses to emerging pathogens which often attempt to depict a foreign “other” as culpable, dangerous, or even villainous. In 1923, for example, the American Medical Association published a cartoon about “Jimmy Germ” in their *Hygeia* journal intended for a public readership (Figure 1) [26]. They enlisted ethnic stereotypes and regnant cultural assumptions about sources of danger and corruption to enhance the threat posed by the germ. The caricature’s sinister face resembles those depicted in anti-immigration political cartoons and stands in stark contrast to that of the blond American child. The Immigration Act of 1924 which set immigration quotas related to national origins and categorically excluded Asian immigrants is perhaps more than coincidence.

We are far from out of the woods with regards to SARS-CoV-2, its circulating monikers, and what it means for communities who face *both* pandemic and prejudice. These events occurred despite the prompt establishment

of an official name that accords with best practices [19], highlighting the lack of monopoly on naming. Names are abstract conduits of power forged by complex geopolitical events which frequently lead to multiple titles propagated by multiple parties. They signify far more than morally neutral “scientific” facts.

The present century will invariably bring more challenges as humankind continues to encroach upon new environments, exposing itself to pathogens, vectors, and reservoirs [27]. We have no option but to collect ourselves and stand ready to face it. By advocating for naming practices which accord with existing proposals while continuing to include diverse perspectives [4], we can better serve as allies for affected communities. People-centered language developed for other communicable diseases like acquired immunodeficiency syndrome and tuberculosis offers an important precedent for how to shape discussions [28,29]. Everyone is responsible for how we respond to the next challenge.

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