SciMedCentral Clinical Research in Infectious Diseases

Commentary

Covid-19: "Unprecedented"? Not Really

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Abstract

The Covid-19 pandemic that began in 2020 has been widely described as an unprecedented occurrence that could not be anticipated. The reality of overwhelmed emergency rooms and hospitals was reported as perhaps tragic but certainly unexpected. So, too, were the number of patients who while recovered suffered long term respiratory and neurological conditions. And, when a vaccine was introduced, there was surprise at the number of persons who rejected it, and the science that had produced it. In fact, however, none of this was unprecedented. The history of pandemic occurrences is replete with antecedents that could have but were not employed both in planning for this viral event and as guidance during its virulent years. That history is briefly reviewed here as is the identification of what was unique in practitioner and public response to the course of the respiratory virus.

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Submitted: 28 May 2023

Accepted: 08 June 2023

Published: 10 June 2023

ISSN: 2379-0636

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Keywords

- Bioethics
- Covid 19
- Epidemics
- Hippocrates
- Smallpox
- Poliomyelitis
- Yellow Fever
- Professionalism

INTRODUCTION

The impact of Covid-19 on health systems at ever level, global to local, was widely described in academic and popular literatures as "unprecedented" in its impact on societies, their economies, and as a challenge to local health systems, the public, and governing political economies [1,2]. It was presented as a new phenomenon for which there could have been no advanced planning. For an historian of epidemiology and public health, however, Covid-19 was an expected event that followed the predictable course of epidemics/pandemics throughout history. Simply, it had all happened before. Overcrowded hospitals and insufficient burial sites, public campaigns for sanitary programs (clean hands, fresh air), international quarantines to slow disease progression and short-term economic effects, all had historical antecedents. Before looking at what might, in fact, have been unique in this experience it is worthwhile to stop and consider its antecedents.

ANTECEDENTS

Since Hippocrates' first description of the "Fever of Perinthus," a respiratory disease outbreak in 412 BC [3], physicians, the public, and health officials have confronted periodic, epidemic recurrences of this type of virus [4]. And while "Long-Covid" symptoms for those recovering are particular to this specific virus, longer-term symptoms affecting recovering patients are a common phenomenon. Hippocrates described irregular vision, night blindness, and other longer-term symptoms for those infected and survived. More recently, survivors of the "Spanish Flu" in the 1920s similarly suffered a series of respiratory and non-respiratory, typically neurologic symptoms, some longer lasting than others. Best known today was the encephalitis lethurgia cohort made famous by Oliver Sacks in *Awakenings* [5]. And, of course, some poliomyelitis survivors in the 1950s had long-term respiratory difficulties and mobility limits as a result of that viral pandemic.

Nor was the international focus on the pandemic its causes, pattern of progression, or treatments anything new. The first international congress on diseases was convened in 1851 with cholera its principal subject. International researchers from European and North American countries reported on the pattern of cholera's progression at every scale while debating the precise nature of its cause [6]. In the twentieth century there were other international disease conferences, including one on cancer described as 'pandemic' with the best known held in Brussels in 1936 [7].

COVID-19

Thus COVID-19 presented not an "unprecedented mobilization of the global community" [8] but, instead a new mobilization in response to a bacterial or viral event. Digital technologies for production and publication resulted in a vastly greater number of publications, and their broader distribution, but that was a difference in degree, not in kind.

Then and now, citizens were urged to personal hygiene as governments promoted programs for better institutional ventilation, personal hand washing, and increased attention to dense habitations. Then and now, *Dirt and Disease* were seen as inevitable companions contributing to disease incidence as they were during recurrent polio epidemics beginning in the 1880s [9].

From plague to the Spanish Flu and then poliomyelitis local and national health agencies have encountered the challenge of sick populations seeking care in overcrowded hospitals

with insufficient beds for their care. Each epidemic/pandemic has spurred concerted attempts by the scientists of the day to confront and if not overcome then contain the disease and treat those affected. The speed with which a vaccine was created using mRNA technologies, after the virus was profiled, was unprecedented [10]. But as was the case with polio, the vaccine's creation was the result of years of prior, ongoing experimental study. In this the history of the Covid-19's development and distribution mirrors, in many ways the decades long search for and then rapid introduction of polio vaccines by Sabin and Salk [11].

Following 2003 Severe Acute Respiratory Syndrome (SARS) outbreaks in several countries, the US Centers for Disease Control, among others, convened studies and panels on the need for preparedness before a future pandemic occurred [12]. Few countries followed those recommendations, however. That future pandemics would occur was never in question. Besides those easily anticipated annual influenza pandemics, the WHO has warned of the likely introduction of "Disease X," a new and more virulent bacterial or viral pandemic for which no rapid clinical responses would be available [13]. COVID-19 was not Disease X but did present a new viral challenge for which, at first, no immediate vaccination was available. The result was significant at global, national, and local scales of address and treatment.

WHAT WAS NEW

Like its predecessors, COVID-19 created an overwhelming class of patients requiring emergency and sustained treatment in cities and regions whose health facilities were overloaded. And, like its predecessors, programs of containment and isolation were attempted but failed to halt the spread of the virus. And, too, programs of quarantine and the illness of significant members of the population had both short and long-term economic and social effects. In short: We had seen it all before.

What was new with this pandemic experience was the speed with which the rapid typing of the viral genome permitted rapid profiling of the virus and the relatively rapid development of a vaccine. What had taken decades in the past now could be accomplished in perhaps a year.

And, too, the digital revolution permitted the daily collection and public presentation of data at both global, national and local scales [14]. The introduction by Johns Hopkins of its Covid-19 Dashboard, and others that followed, presented a dynamic portrait of the pandemics expansion and, over time, parsed elements of the populations most affected in specific countries and regions. It was, in other words, the first pandemic whose progress could be seen, and whose data could be analyzed, in real time.

What was unprecedented was the early insistence by experts on the need for triage protocols that would permit the allocation of existing resources to more rather than less worthy persons. Where in past pandemics it was assumed that everyone would be done to save all those suffering, in this case the reflexive response, early in the pandemic, was to create protocols that would permit ventilators to be taken from one patient for another, worthier and more likely to survive, and beds in ICU's to be similarly reallocated [15].

In the end, as had happened before with the "Spanish flu" and with poliomyelitis, temporary wards were opened in public spaces, like gymnasiums, and methods of assuring ventilation and respiratory support for all in need were developed. But where, in the past, such measures would have been seen as the reflexive norm, simply a necessity to be met, this pandemic began with assumptions of a fixed limit, resource scarcity. Triage protocols were called for from the start. And, where in the early 1950s, officials and the public saw the salvation of all affected in the poliomyelitis pandemic as a public triumph and a social good during Covid-19, commentators focused on the onerous economic costs of care and its disruptive effect on economies [16].

PUBLIC AND PROFESSIONAL SENTIMENTS

Since the earliest days of smallpox, inoculation then vaccination in the late 18th century (from the word vaccinia, or "smallpox) there has been first public skepticism and fear followed rapidly by public acceptance [17]. The same occurred later with the poliomyelitis vaccines. Despite reports of occasional incidents of vaccine reaction, or isolated vaccine-related outbreaks, the benefits were broadly seen as outweighing any risks. The relatively rapid acceptance of these, and other vaccination programs, relied on a general trust in the efficacy of medicine, the abilities of medical science, and a trust in medical practitioners.

Uniquely, the introduction of COVID-19 vaccinations was met with intense and sustained public fears of the new mNRA vaccine. Questions of its efficacy, and the science underlying it, fuled a movement based on individual autonomy without regard to concerns for broad, public herd immunity. Non-vaxers, as they were called, ignored the evidence of general safety and the urgings of federal and local health authorities in favor of a sense of personal right, privilege and enduring skepticism. News reports from multiple jurisdictions began reporting from Emergency Rooms and Intensive Care sites on the admission of patients in severe respiratory distress who had refused COVID-19 vaccinations.

Separately but, perhaps in a related trend, practitioners physicians and nurses began to report dissatisfaction and 'burnout' from the patient burden. Some retired as a result, often years before they otherwise would have left their professions. This, too, was unprecedented. No such sense of discouragement or professional dissatisfaction was reported after the influenza pandemic of the 1920s, in the early 1950s, poliomyelitis. There was, if anything, public and professional pride in the care that could be provided and relief in the introduction of vaccinations to prevent future epidemics.

More recent rejection of vaccinations reflects in part a relatively new distrust in medicine, medical science and its practitioners. At the same time, reports of violence against practitioners by family members, and some patients, increased. These occurred within what Annamarie Mol called a new, consumerist "politics of the who" in which individual choice irrespective of clinical recommendations or realities dominated medical decision making [18]. While perhaps part of a general trend of citizen distrust in governments and officialdom, it was

also the natural outcome of bioethics' campaign, begun in the 1970s, to denigrate practitioners as any more than medical technicians or salespersons [19]. In its place, as Hastings Center cofounder put it in 1993, a consumerist market-oriented model was advanced.

"The emergence ideologically of a form of bio-ethics dovetailed very nicely with the reigning political liberalism of the educated classes in America, as manifested by the market system economically and by a great emphasis on individual freedom in our cultural and political institutions [20]."

With that, reciprocities of respect and trust that had once defined patient-practitioner relationships were if not severed then severely diminished. As general public trust in practitioners, and in medical science, decreased, dissatisfaction with the realities of practice increased.

DISCUSSION

As a stock broker once said to me, proudly, "there is no yesterday in this business." Nor is there a sense of tomorrow, of future needs and the necessity of planning today for tomorrow's emergencies. We saw this most clearly in the ignoring of not only the lessons of past pandemics—this one, after all, was "unprecedented"—but the recommendations of a health planners who, after SARS, argued for preparations before another epidemic or pandemic event occurred. In health as in everything else, a consumerist, market mentality ignores as unprofitable both past histories and the probability of future events in favor of economies of the moment.

Few medical schools include today classes on medical histories, humanities, or the historical role of practitioners in relations to patients and society. Classes on medical ethics are subsumed, at best, in those on "professionalism" with practitioners simply another class of "professionals". As such they are to be modest players in a never negotiated, never written, contract between business, government, and practitioners [21]. Its stated goal is to impart a "professional identity" grounded in "the ascendant ideology of the time [that] promotes the efficiency of free markets in every area of social life" [22].

As a result, there was little preparation for the exigencies of the rapid and global realities of the Covid-19 virus and its variants. Nor, in the midst of its progression, did practitioners or officials think to see it in the context of past pandemics resulting in overflowing hospital emergency rooms and wards in the midst of the absence of rapid and effective treatments. And, too, when new vaccines became available public skepticism based on a consumerist ideology and a diminished trust of all authority, including that attending to medicine and medical science, resulted in the refusal by some to accept the vaccines when they were developed.

Despite public campaigns to recognize the contributions of practitioners, especially nurses, in treating those affected the realities in the face of overwhelming patient need--one reflexively wants to say "demand"--resulted…in practitioner discouragement and dissatisfaction. It became generally recognized that the pandemic revealed systemic deficiencies in the consumerist medicine that had become the norm. The long-term effects of those on practice, and public attitudes toward practice, were similarly exacerbated. And in the long history of practitioner and public response to pandemic events that was new, indeed.

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