



Review Article

A Study on the Impact of Covid 19 on USA with Emphasis on State of Indiana, United State of America

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Abstract

This paper reviews different pertinent articles on the negative impact of corona virus in America with much emphasis on Indiana. First, the study gave a brief historical background pertaining to the origin of covid 19 in the US with a focus on the prevailing covid variants in US and Indiana in particular. Next, the study compares how US has managed the covid outbreak with how the other great nations have handled the pandemic. Finally, the paper homes in on the negative impact of covid on Indianan residents. The impact of covid on Indiana's economy, health and education systems were also discussed.

Keywords: Covid 19; Indiana; Corona virus; Variant

Abbreviations: CDC: Centers for Disease Control and Prevention; SARS: Severe Acute Respiratory Syndrome

Introduction

The outbreak of covid 19 in US has led to devastating consequences in several states in America including Indiana. The negative impact of covid can be felt in all sectors of the American economy, notably the health and education sectors [1]. However, the American government has been sharply criticized for her poor handling of covid outbreak and has been hugely blamed for the relatively larger covid infection and death rate than the ones observed in any other country [2]. Consequently, recent research efforts have been geared towards investigating why the covid pandemic had such untold impact on US despite she is

widely considered a pace setter in global affairs. It is therefore the objective of this paper to review the major literatures on covid pandemic so as to shed light on why the impact of covid has been so devastating in America.

Historical Background

Origin of Covid in America

The first occurrence of corona virus in US was reported on January 20, 2020. The victim of the said disease was admitted into an emergency clinic situated in Snohomish County, Washington DC where he was confirmed a covid patient [3]. The patient aged 35 had a 4-day prior record of severe cough and fever; however, his health condition continued to deteriorate despite his admission and the attendant treatment that he was receiving from the said clinic – he later developed pneumonia in addition to nausea [3].

Upon cross-examination, it was found that the victim contracted the disease from Wuhan, China where he had earlier visited prior to his return to Washington on Jan 15, 2020 [3]. In subsequent months, Seattle became recognized as the focal point of early outbreak of covid 19 in US. Additionally, fourteen cases of covid 19 were recorded from January 21 all through February 23, 2020-with all the cases involving victims who had previously visited to China prior to their infections. The first case of corona virus in America that involved a victim without any prior travel experience out of the country, was noted in California on February 26, 2020; while the first case of covid 19 that claimed human life was recorded in February 29 of that year [3].

However, the rapid spread of covid across the nation led to the closure of key establishments including educational and public institutions among several others – a trend that culminated in unprecedentedly high unemployment rate in May 2020 comparable to what the situation was during the period of Great Depression [3]. Moreover, the ravaging effects of corona virus across US and their attendant harsh health and economic repercussions motivated the need for the provision of vaccines, by prominent American health stakeholders, for the most vulnerable individuals [3]. Consequently, US rolled out vaccines on December 14, 2020, for covid 19 prevention for the first time after the outbreak of the highly infectious disease was reported. Nonetheless, with about 68.1 million covid cases and 855,000 deaths reported by 2022, America has the worse cases of covid 19 infections and deaths than any country in the world since the first case of covid was recorded in 2020 [3].

Key Covid Variants in America

Currently, there are 5 prominent covid 19 variants in the world, namely: Omicron, Delta, Gamma, Beta and Alpha variants [4]. The Delta and Omicron variants were discovered in India (2020) and South Africa (2021) respectively, while the Alpha, Beta and Gamma variants were identified in Britain, South and Brazil respectively in 2020. Alpha became a major variant in America shortly after it was identified in Britain in November 2020. It was then identified as the a ‘variant of concern’ by the American Centre of Disease Control (CDC)-66% of covid cases in US in April 2021 were attributed to Alpha variant. However, the outbreak of the Delta variant brought an end to the Alpha variant and its ravaging scourge [4].

The Delta variant was more infectious and transmissible than the Alpha variant that came before [4]. The outbreak of the Delta variant in America in June 2021 resulted in surges in covid cases across US cities including the highly vaccinated ones. Because the Delta variant was more virulent than any other variant, its outbreak resulted in rapid hospitalization and deaths among the Americans who were not vaccinated³. However, Omicron supplanted the Delta variant as the major covid variant in America. Omicron spread the

disease more rapidly than any other covid variant observed in the US including the Delta variant. This variant also resisted protection offered to vulnerable American victims (in the form vaccination) than any other covid variant did³. While ensuring that individuals get the proper vaccines with the right dosage could offer adequate protection against Omicron that could not eliminate the likelihood of infection by the said variant [4].

Fortunately, Beta has never been identified in America as a prominent covid variant [4]. In regions other than United State where it was prevalent, it was known to have higher likelihood of resulting in rapid hospitalization and death than the other variants [4]. It was also known to resist vaccinations of all kinds. However, information pertaining to the Gamma variant could not be found in the literature, to my best knowledge [4].

Key Covid Variants in Indiana

Like the case with United State, the prominent covid variant in Indiana is Omicron [5]. Omicron became the major covid variant in Indiana on December 20, 2021-with over 52.6% cases attributable to the said variant as opposed to the less than 1% cases attributable to it at a point in time much earlier in that year [5]. A similar surge in infection cases could be observed at the national level with an increase of 77 to 95% cases reported over that period. Recent data also shows that Omicron variant is currently responsible for 22.5% of covid infection cases in Indiana; it was observed that infection cases in Indiana double those of Chicago every 2-3 days [5].

Comparing Covid Prevalence Rate in US with Other Regions

Comparing Covid outbreak in US with Europe

Other countries including European countries trail US in Covid 19 cases; America has larger number of infections and deaths attributable to corona virus than any other nation [6]. Although this trend could arguably be ascribed to her relatively larger number of population than most nations in the world and not on account of her unsatisfactory management of covid outbreak per se as widely speculated [6]. Since there is hardly any individual nation in Europe that is as populous as United State, it will be helpful to compare US covid cases with those of Western Europe instead of those of an individual European country-the Western Europe which is comprised of Germany, Italy, Austria, France, and Spain has a population of 330 million as opposed to US with a comparable population of 320 million [6].

Additionally, when the US covid cases were compared with those of the Western European bloc, it was found that the latter has worse covid records than the former; America has half the number of covid cases records in the Western Europe and one seventh the death cases attributable to covid in the said region, though

infections spread faster and deaths occur more rapidly in America than in Western Europe at any point in time [6]. However, unlike the America's government that was blamed for her poor handling of covid pandemic, most countries in Western Europe are lauded for their satisfactory management of the pandemic outbreak [6].

Comparing Covid Outbreak in US with Asia

The countries in the Asia-Pacific have better records of managing the covid pandemic than their North Atlantic counterparts because of their superior health policy framework and the high level of compliance to pandemic measures by the public [1]. Again, the US has a relatively larger adult population than majority of the Asian countries with similar covid cases, notably China, South Korea, Singapore, and Taiwan. Because of the underlying health conditions of these individuals, they are most vulnerable to corona virus infection and deaths attributable to covid [7].

Furthermore, studies have shown that America has a lower number of health care personnel and "acute hospital beds" than most advanced countries in the world (including Asian countries), even though she has a "lower bed occupancy rate", more "intensive care beds" and a better capability of offering radiography scans of covid victims [7]. In the same vein, a sizable proportion of American population cannot afford health care delivery services because they are either not insured or underinsured-approximately 30 million do not have any health insurance while roughly 44 million do not have proper or adequate coverage[7]. Additionally, the ability of most Asian countries (most notably Taiwan and South Korea) to urgently execute similar pandemic measures (adopted during the 2003 SARS outbreak) to combat covid, helped checkmate the spread of corona virus in those nations especially at the early stage of the outbreak [7]. All these observations and facts contributed immensely to the reason why US covid infections and death cases are worse than those of the developed countries in Asia [7].

Comparing Covid Outbreak in US with Neighboring North American Countries

As said before, America leads every nation in covid infection and death cases; this observation is also true for her neighboring North American countries [7]. However, except for the comparatively large nations, comparing US covid cases with those of the other nations on a country-by-country basis will not give a reliable insight into how America has really fared in her handling of the covid pandemic [6]. For example, the covid cases in New York alone were worse than those of Canada at a point in time-with the former recording at least 59,500 covid infections and 1000 deaths compared to the roughly 7, 405 covid infections and 74 deaths noted for the latter [8].

It is also pertinent to state here that no paper that compares the US covid cases with the entire North American region could be found in the literature, to my best knowledge. However, there is sufficient information in the literature that compares the US covid cases with those of a few North American countries, especially Canada [8]. Moreover, Canada's better handling of the covid pandemic than US could be ascribed to the former's more effective policy framework, her better health care delivery system, and her better health insurance coverage than those of the latter [2,8].

Comparing Covid Outbreak in Indiana with Other US States

According to Indiana Covid-19 Home Dashboard, Indiana recorded 507 covid infection cases and 2 deaths attributable to corona virus with approximately 5300 covid tests administered to Hoosiers in 2022. However, when different American states were evaluated in 2022 based on how the state leaders made decisions that affected the school system, employment condition, the social life and health of their residents (in what has been regarded as a "pandemic scorecard"); it was found that Indiana ranked 5th, 15th, 20th and 40th (among the 50 US states evaluated) in her handling of health, economic, social and education issues respectively during the covid pandemic [9].

Impact of COVID on Indiana Residents

Impact on health

Further studies of the IndyStar Report published in 2021, revealed that the harsh impact of covid on health in Indiana can be seen in the rapid hospitalization of Hoosiers infected with covid-19, and in the rising cases of deaths attributable to covid infections. As an illustration of this trend, Indiana recorded 676,247 covid cases in 2021 alone despite 915 719 Hoosiers were vaccinated that year. Of these cases, 12 510 led to the outright death of the victims. In the same vein, findings from the same source show that 47 398 Hoosiers were hospitalized for covid infection – 8 299 of these victims required intensive care and 40 424 were admitted on a long-term basis with at least 92 731 emergency visits recorded in treatment centers that year. A much-related record also shows that 2 304 727 'doses of COVID vaccines' were offered to Indianan residents and 8 592 072 covid tests were administered in 2021; it was also observed that over 8 592 072 masks were donated to residents in Indiana as a preventive measure against the spread of covid in Indiana that year [10].

Impact on Education and Lifestyle

The impact of covid on education in Indiana was very huge. For example, the said online report published by IndyStar confirmed that 5 800 Indianan teachers contacted covid in 2021 alone while at least 6 890 non-academic staff of Indianan schools were infected – it was also observed that 29 736 Indianan K-12

students contracted covid that year. Despite the harsh effects of the pandemic on Indianan education system, as shown by the report; educational activities continued in Indiana in 2011 with roughly 1 112 670 Indianan students still learning despite the covid outbreak [10].

Impact on Economy

The economic consequence of covid outbreak in Indiana is also alarming but not as alarming as the outbreak's impact on education and lifestyle, the *IndyStar* report revealed. As said before, Indiana was ranked poorly in her handling of the education of her residents during the pandemic. However, the report noted that the major evidence of the damaging impact of covid outbreak on Indiana's economy lies in the rise of unemployment rate – unemployment reached 16.9% during the pandemic in April 2020 with roughly 139 174 Hoosiers entitled to unemployment benefits that year [11,12].

The said report also showed that 15, 949 Indianans accepted monetary benefits from the state and federal governments totaling \$33.8 million to offset the costs of house rents. It was also found that roughly 238 businesses received grossly reduced interest loans from *Indy Chambers's* Rapid Response fund to nullify the negative economic impact of covid on their businesses.

Conclusion

1. The high covid infection and death rate observed in the US during the pandemic could be attributed to the relatively larger population of America than most countries in the world, and not solely to her poor handling of the pandemic per se, as widely reported.
2. Because of their superior health policy, their ability to learn from previous pandemic outbreak in Asia, and the high level of compliance to covid measures by their public; the countries in Asia unlike their North American counterparts were able to curtail the spread of covid significantly upon its outbreak.

3. The impact of covid in Indiana was less felt on the health sector but was most felt on the education sector.

Statement of Competing Interests

There is no statement of competing interests, to my knowledge.

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