**Abstract:**

**Covid-19 has emerged as a global concern for public health due to the outbreak in larger scale. Big story right now is that for the past three months India has now crossed over 2.48 lakhs positive cases. Now out of two lakhs there are still one lakh active cases are suffering from infectious disease Covid-19, which means one lakh people in the country has been recovered from the spread. Perhaps it’s important to note that 57% of the cases where concentrated in top cities like Maharashtra, Tamil Nadu, Delhi, Gujarat & Rajasthan. This study aims to forecast the utilization of Hospital beds by comparing the current situation and spread of novel coronavirus in India.**

**Introduction:**

Coronavirus disease (COVID-19) is an infectious disease caused by (SARS‑CoV‑2). The cases of novel covid19 infected pneumonia started since the 19th of December, 2019, in Wuhan (Central China). A large-scale outbreak of the disease resulted as a pandemic disease. It became a public health concern all over the world on the 7th of January, 2020, the etiological agent of the outbreak was identified as a novel coronavirus2, and it was renamed as COVID-19 by WHO on the 12th of February, 2020. It is a zoonotic coronavirus which is similar to SARS and MERS coronavirus. The WHO announced it as a “Public health emergency of international concern” on the 30th of January,2020. Most people infected with the COVID-19 virus will experience mild to moderate respiratory illness and recover without requiring special treatment.  Older people, and those with underlying medical problems like cardiovascular disease, diabetes, chronic respiratory disease, and cancer are more likely to develop serious illness. In demand for critical care in this vast nation, it requires most of the health care facilities must be prepared with health care essentials such as ventilators, hospital beds and intensive care units (ICU), is expected to increase with the rising number of cases within the Country. An estimated 2899570 hospital beds are available in India. These resources are limited and usually function at more than half capacity outside public health emergencies.

Estimation of potential coronavirus-driven demand for hospital and ICU beds is critical to inform operations dedicated to scaling up healthcare capacity. In this study, we to project the COVID-19 associated demand for hospital and ICU beds within India. To this end, we will develop a dynamic model of SARS–CoV-2 transmission, parameterized with the Indian population demographics and latest estimates from global COVID-19 outbreaks.

**COVID IN INDIA:**

India is a part of the country which is fighting against this deadly virus across the [worldwide](https://en.wikipedia.org/wiki/COVID-19_pandemic) to find the vaccine. The effect of this virus caused [social](https://en.wikipedia.org/wiki/Social_impact_of_the_COVID-19_pandemic)  and [economic](https://en.wikipedia.org/wiki/Economic_impact_of_the_COVID-19_pandemic) disruption. First case of COVID-19 in [India](https://en.wikipedia.org/wiki/India) which was [originated from China](https://en.wikipedia.org/wiki/COVID-19_pandemic_in_mainland_China), was reported on 30 January 2020. As of 5 June 2020, the [MoH&FW](https://en.wikipedia.org/wiki/Ministry_of_Health_and_Family_Welfare) has confirmed a total of 226,770 cases | 109,462 recoveries & 6,348 deaths in the country. India currently has the largest number of [confirmed cases in Asia](https://en.wikipedia.org/wiki/COVID-19_pandemic_in_Asia), with the number of total confirmed cases breaching the 100,000 mark on 19 May and 200,000 on 3 June. The number of confirmed cases also been increased in India in the past few weeks. Covid 19 threatens to over -whelm hospital facilities thorough out the World. Our objective is to predict the health service utilisation and hospital beds availability in the coming months for the top 5 affected states in India.

**Challenges we face now:**

On June 1, the [Delhi Disaster Management Authority](https://indianexpress.com/article/cities/delhi/coronavirus-covid-19-delhi-cases-death-toll-6438076/) ordered district magistrates to identify indoor stadiums, banquet halls and other venues that could be used to set up beds for Covid-19 patients, The Indian Express reported.

On June 4, [Deputy Chief Minister Manish Sisodia](https://scroll.in/latest/963801/delhi-few-private-hospitals-to-be-fully-turned-into-covid-19-facilities-says-deputy-cm-sisodia) announced that three more private hospitals in the city were being converted into Covid-19 treatment facilities, in addition to five government-run and three private hospitals already being used for the purpose.

**References:**

[1] <https://scroll.in/article/963789/please-help-as-coronavirus-cases-soar-in-delhi-patients-are-struggling-to-find-hospital-beds>

In a letter written to the magistrates on Monday, the DDMA has asked them to identify on "top priority" indoor air-conditioned rooms, preferably large multipurpose halls, banquet halls, indoor stadiums, for putting up extra beds for Covid-19 patients.  
[2] <https://economictimes.indiatimes.com/news/politics-and-nation/delhi-needs-additional-beds-and-land-for-burial/articleshow/76142926.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst>

[3] <https://covid19.who.int/region/searo/country/in>

[4] <https://www.definitivehc.com/resources/covid-19-capacity-predictor>

[5] <https://www.nejm.org/doi/full/10.1056/NEJMsb2005114>

[6]<https://www.medrxiv.org/content/10.1101/2020.03.27.20043752v1.full>