

Project Stage 1

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Enrichment Datasets

Hospital Beds Dataset – Venkat Narayan Reddy Cheedu

Description:

According to reports and tele monitoring from the U.S. Department of Health and Human Services, this dataset provides weekly aggregated statistics on hospital bed utilization for COVID patients. It includes information on hospitals in all 50 states, including their name and address, as well as the number of confirmed and probable COVID cases in inpatient and ICU beds.

Data Type-Variable dictionary: Hospital_Beds

Name	Description	Datat ype
hospital_pk	This unique key for the given hospital that will match the ccn column if it exists, otherwise, it is a derived unique key.	Plain Text
collection_week	This date indicates the start of the period of reporting (the starting Friday).	Date & Time
state	The two-digit state/territory code for the hospital.	Plain Text
ccn	CMS Certification Number (CCN) of the given facility	Plain Text
hospital_name	The name of the facility reporting.	Plain Text
address	The address of the facility reporting.	Plain Text
city	The city of the facility reporting.	Plain Text
zip	The 5-digit zip code of the facility reporting.	Plain Text
hospital_subtype	The sub-type of the facility reporting. Valid values are Children's Hospitals, Critical Access Hospitals, Long Term, Psychiatric, Rehabilitation & Short Term. Some facilities are not designated with this field.	Plain Text
fips_code	The Federal Information Processing Standard	Plain Text

	(FIPS) code of the location of the hospital.	
is_metro_micro	This is based on whether the facility serves a Metropolitan or Micropolitan area. True if yes, and false if no.	Plain Text
total_beds_7_day_avg	Average of total number of all staffed inpatient and outpatient beds in the hospital, including all overflow, observation, and active surge/expansion beds used for inpatients and for outpatients (including all ICU, ED, and observation) reported during the 7-day period.	Number
all_adult_hospital_beds_7_day_avg	Average of all staffed inpatient and outpatient adult beds in the hospital, including all overflow and active surge/expansion beds for inpatients and for outpatients (including all ICU, ED, and observation) reported during the 7-day period.	Number
all_adult_hospital_inpatient_beds_7_day_avg	Average of total number of staffed inpatient adult beds in the hospital including all overflow and active surge/expansion	Number

	beds used for inpatients (including all designated ICU beds) reported during the 7-day period.	
inpatient_beds_used_7_day_avg	Average of total number of staffed inpatient beds that are occupied reported during the 7-day period.	Numb er
all_adult_hospital_inpatient_bed_occupied_7_day_avg	Average of total number of staffed inpatient adult beds that are occupied reported during the 7-day period.	Numb er
inpatient_beds_used_covid_7_day_avg	Average of reported patients currently hospitalized in an inpatient bed who have suspected or confirmed COVID-19 reported during the 7-day period.	Numb er
total_adult_patients_hospitalized_confirmed_and_suspected_covid_7_day_avg	Average number of patients currently hospitalized in an adult inpatient bed who have laboratory-confirmed or suspected COVID19, including those in observation beds reported during the 7-day period.	Numb er
total_adult_patients_hospitalized_confirmed_covid_7_day_avg	Average number of patients currently hospitalized in an adult inpatient bed who have laboratory-confirmed COVID-19, including those in	Numb er

	<p>observation beds. This average includes patients who have both laboratory-confirmed COVID-19 and laboratory-confirmed influenza.</p>	
total_pediatric_patients_hospitalized_confirmed_and_suspected_covid_7_day_avg	<p>Average number of patients currently hospitalized in a pediatric inpatient bed, including NICU, PICU, newborn, and nursery, who are suspected or laboratory-confirmed-positive for COVID-19. This average includes those in observation beds reported in the 7-day period.</p>	Number
total_pediatric_patients_hospitalized_confirmed_covid_7_day_avg	<p>Average number of patients currently hospitalized in a pediatric inpatient bed, including NICU, PICU, newborn, and nursery, who have laboratory-confirmed COVID-19. Including those in observation beds. Including patients who have both laboratory-confirmed COVID-19 and laboratory confirmed influenza in this field reported in the 7-day period.</p>	Number
inpatient_beds_7_day_avg	<p>Average number of total number of staffed inpatient beds in your hospital including all</p>	Number

	overflow, observation, and active surge/expansion beds used for inpatients (including all ICU beds) reported in the 7-day period.	
total_icu_beds_7_day_avg	Average number of total number of staffed inpatient ICU beds reported in the 7-day period.	Number
total_staffed_adult_icu_beds_7_day_avg	Average number of total number of staffed inpatient adult ICU beds reported in the 7-day period.	Number
icu_beds_used_7_day_avg	Average number of total number of staffed inpatient ICU beds that are occupied reported in the 7-day period.	Number
staffed_adult_icu_bed_occupancy_7_day_avg	Average of total number of staffed inpatient adult ICU beds that are occupied reported in the 7-day period.	Number
staffed_icu_adult_patients_confirmed_and_suspected_covid_7_day_avg	Average number of patients currently hospitalized in a designated adult ICU bed who have suspected or laboratory-confirmed COVID-19 reported in the 7-day period.	Number
staffed_icu_adult_patients_confirmed_covid_7_day_avg	Average number of patients currently hospitalized in a designated adult ICU bed who have	Number

	laboratory-confirmed COVID-19. Including patients who have both laboratory-confirmed COVID-19 and laboratory-confirmed influenza in this field reported in the 7-day period.	
total_patients_hospitalized_confirmed_influenza_7_day_avg	Average number of patients (all ages) currently hospitalized in an inpatient bed who have laboratory-confirmed influenza. Including those in observation beds reported in the 7-day period.	Number
icu_patients_confirmed_influenza_7_day_avg	Average of patients (all ages) currently hospitalized in a designated ICU bed with laboratory-confirmed influenza in the 7-day period.	Number
total_patients_hospitalized_confirmed_influenza_and_covid_7_day_avg	Average number of patients (all ages) currently hospitalized in an inpatient bed who have laboratory-confirmed COVID-19 and laboratory-confirmed influenza reported in the 7-day period.	Number
total_beds_7_day_sum	Sum of reports of total number of all staffed inpatient and outpatient beds in the hospital, including all overflow, observation, and	Number

	active surge/expansion beds used for inpatients and for outpatients (including all ICU, ED, and observation) reported during the 7-day period.	
all_adult_hospital_beds_7_day_sum	Sum of reports of all staffed inpatient and outpatient adult beds in the hospital, including all overflow and active surge/expansion beds for inpatients and for outpatients (including all ICU, ED, and observation) reported during the 7-day period.	Number
all_adult_hospital_inpatient_beds_7_day_sum	Sum of reports of all staffed inpatient and outpatient adult beds in the hospital, including all overflow and active surge/expansion beds for inpatients and for outpatients (including all ICU, ED, and observation) reported during the 7-day period.	Number
inpatient_beds_used_7_day_sum	Sum of reports of total number of staffed inpatient beds that are occupied reported during the 7-day period.	Number
all_adult_hospital_inpatient_bed_occupied_7_day_sum	Sum of reports of total number of staffed inpatient adult beds that are occupied reported	Number

	during the 7-day period.	
inpatient_beds_used_covid_7_day_sum	Sum of reported patients currently hospitalized in an inpatient bed who have suspected or confirmed COVID-19 reported during the 7-day period.	Number
total_adult_patients_hospitalized_confirmed_and_suspected_covid_7_day_sum	Sum of reports of patients currently hospitalized in an adult inpatient bed who have laboratory-confirmed or suspected COVID19. Including those in observation beds reported during the 7-day period.	Number
total_adult_patients_hospitalized_confirmed_covid_7_day_sum	Sum of reports of patients currently hospitalized in an adult inpatient bed who have laboratory-confirmed COVID-19. Including those in observation beds. Including patients who have both laboratory-confirmed COVID-19 and laboratory confirmed influenza in this field during the 7-day period.	Number
total_pediatric_patients_hospitalized_confirmed_and_suspected_covid_7_day_sum	Sum of reports of patients currently hospitalized in a pediatric inpatient bed, including NICU, PICU, newborn, and nursery, who are suspected or	Number

	laboratory-confirmed-positive for COVID-19. Including those in observation beds reported in the 7-day period.	
total_pediatric_patients_hospitalized_confirmed_covid_7_day_sum	Sum of reports of patients currently hospitalized in a pediatric inpatient bed, including NICU, PICU, newborn, and nursery, who have laboratory-confirmed COVID-19. Including those in observation beds. Including patients who have both laboratory-confirmed COVID-19 and laboratory confirmed influenza in this field reported in the 7-day period.	Number
inpatient_beds_7_day_sum	Sum of reports of total number of staffed inpatient beds in your hospital including all overflow, observation, and active surge/expansion beds used for inpatients (including all ICU beds) reported in the 7-day period.	Number
total_icu_beds_7_day_sum	Sum of reports of total number of staffed inpatient ICU beds reported in the 7-day period.	Number

total_staffed_adult_icu_beds_7_day_sum	Sum of reports of total number of staffed inpatient adult ICU beds reported in the 7-day period.	Number
icu_beds_used_7_day_sum	Sum of reports of total number of staffed inpatient ICU beds reported in the 7-day period.	Number
staffed_adult_icu_bed_occupancy_7_day_sum	Sum of reports of total number of staffed inpatient adult ICU beds that are occupied reported in the 7-day period.	Number
staffed_icu_adult_patients_confirmed_and_suspected_covid_7_day_sum	Sum of reports of patients currently hospitalized in a designated adult ICU bed who have suspected or laboratory-confirmed COVID-19 reported in the 7-day period.	Number
staffed_icu_adult_patients_confirmed_covid_7_day_sum	Sum of reports of patients currently hospitalized in a designated adult ICU bed who have laboratory-confirmed COVID-19. Including patients who have both laboratory-confirmed COVID-19 and laboratory-confirmed influenza in this field reported in the 7-day period.	Number
total_patients_hospitalized_confirmed_influenza_7_day_sum	Sum of reports of patients (all ages) currently hospitalized in an	Number

	inpatient bed who have laboratory-confirmed influenza. Including those in observation beds reported in the 7-day period.	
icu_patients_confirmed_influenza_7_day_sum	Sum of reports of patients (all ages) currently hospitalized in a designated ICU bed with laboratory-confirmed influenza reported in the 7-day period.	Number
total_patients_hospitalized_confirmed_influenza_and_covid_7_day_sum	Sum of reports of patients (all ages) currently hospitalized in an inpatient bed who have laboratory-confirmed COVID-19 and laboratory-confirmed influenza reported in the 7-day period.	Number
total_beds_7_day_coverage	Number of times in the 7 day period that the facility reported total number of all staffed inpatient and outpatient beds in your hospital, including all overflow, observation, and active surge/expansion beds used for inpatients and for outpatients (including all ICU, ED, and observation).	Number
all_adult_hospital_beds_7_day_coverage	Number of times in the 7-day period that the facility reported	Number

	total number of all staffed inpatient and outpatient adult beds in your hospital, including all overflow and active surge/expansion beds for inpatients and for outpatients (including all ICU, ED, and observation).	
all_adult_hospital_inpatient_beds_7_day_coverage	Number of times in the 7-day period that the facility reported total number of staffed inpatient adult beds in your hospital including all overflow and active surge/expansion beds used for inpatients (including all designated ICU beds).	Number
inpatient_beds_used_7_day_coverage	Number of times in the 7-day period that the facility reported total number of staffed inpatient beds that are occupied.	Number
all_adult_hospital_inpatient_bed_occupied_7_day_coverage	Number of times in the 7-day period that the facility reported total number of staffed inpatient adult beds that are occupied.	Number
inpatient_beds_used_covid_7_day_coverage	Number of times in the 7-day period that the facility reported "inpatient_beds_used_covid."	Number
total_adult_patients_hospitalized_confirmed_and_suspected_covid_7_day_coverage	Number of times in the 7-day period that the facility reported	Number

	patients currently hospitalized in an adult inpatient bed who have laboratory-confirmed or suspected COVID19. Including those in observation beds.	
total_adult_patients_hospitalized_confirmed_covid_7_day_coverage	Number of times in the 7-day period that the facility reported patients currently hospitalized in an adult inpatient bed who have laboratory-confirmed COVID-19. Including those in observation beds. Including patients who have both laboratory-confirmed COVID-19 and laboratory confirmed influenza in this field.	Number
total_pediatric_patients_hospitalized_confirmed_and_suspected_covid_7_day_coverage	Number of times in the 7-day period that the facility reported Patients currently hospitalized in a pediatric inpatient bed, including NICU, PICU, newborn, and nursery, who are suspected or laboratory-confirmed-positive for COVID-19. Including those in observation beds.	Number
total_pediatric_patients_hospitalized_confirmed_covid_7_day_coverage	Number of times in the 7-day period that the facility reported patients currently hospitalized in a	Number

	pediatric inpatient bed, including NICU, PICU, newborn, and nursery, who have laboratory-confirmed COVID-19. Including those in observation beds. Including patients who have both laboratory-confirmed COVID-19 and laboratory confirmed influenza in this field.	
inpatient_beds_7_day_coverage	Number of times in the 7-day period that the facility reported total number of staffed inpatient beds in your hospital including all overflow, observation, and active surge/expansion beds used for inpatients (including all ICU beds).	Number
total_icu_beds_7_day_coverage	Number of times in the 7-day period that the facility reported total number of staffed inpatient ICU beds.	Number
total_staffed_adult_icu_beds_7_day_coverage	Number of times in the 7-day period that the facility reported total number of staffed inpatient adult ICU beds.	Number
icu_beds_used_7_day_coverage	Number of times in the 7-day period that the facility reported total number of staffed inpatient ICU beds.	Number

staffed_adult_icu_bed_occupancy_7_day_coverage	Number of times in the 7-day period that the facility reported total number of staffed inpatient adult ICU beds that are occupied.	Number
staffed_icu_adult_patients_confirmed_and_suspected_covid_7_day_coverage	Number of times in the 7-day period that the facility reported patients currently hospitalized in a designated adult ICU bed who have suspected or laboratory-confirmed COVID-19.	Number
staffed_icu_adult_patients_confirmed_covid_7_day_coverage	Number of times in the 7-day period that the facility reported patients currently hospitalized in a designated adult ICU bed who have laboratory-confirmed COVID-19. Including patients who have both laboratory-confirmed COVID-19 and laboratory-confirmed influenza in this field.	Number
total_patients_hospitalized_confirmed_influenza_7_day_coverage	Number of times in the 7-day period that the facility reported patients (all ages) currently hospitalized in an inpatient bed who have laboratory-confirmed influenza. Including those in observation beds.	Number
icu_patients_confirmed_influenza_7_day_coverage	Number of times in the 7-day period that the facility reported	Number

	patients (all ages) currently hospitalized in a designated ICU bed with laboratory-confirmed influenza.	
total_patients_hospitalized_confirmed_influenza_and_covid_7_day_coverage	Number of times in the 7-day period that the facility reported patients (all ages) currently hospitalized in an inpatient bed who have laboratory-confirmed COVID-19 and laboratory-confirmed influenza.	Number
previous_day_admission_adult_covid_confirmed_7_day_sum	Sum of number of patients who were admitted to an adult inpatient bed on the previous calendar day who had confirmed COVID-19 at the time of admission reported in the 7-day period.	Number
previous_day_admission_adult_covid_confirmed_18-19_7_day_sum	Sum of number of patients age 18-19 who were admitted to an adult inpatient bed on the previous calendar day who had confirmed COVID-19 at the time of admission reported in the 7-day period.	Number
previous_day_admission_adult_covid_confirmed_20-29_7_day_sum	Sum of number of patients age 20-29 who were admitted to an adult inpatient bed on the previous calendar day who had confirmed COVID-19 at the time of admission	Number

	reported in the 7-day period.	
previous_day_admission_adult_covid_confirmed_30-39_7_day_sum	Sum of number of patients age 30-39 who were admitted to an adult inpatient bed on the previous calendar day who had confirmed COVID-19 at the time of admission reported in 7-day period.	Numb er
previous_day_admission_adult_covid_confirmed_40-49_7_day_sum	Sum of number of patients age 40-49 who were admitted to an adult inpatient bed on the previous calendar day who had confirmed COVID-19 at the time of admission reported in 7-day period.	Numb er
previous_day_admission_adult_covid_confirmed_50-59_7_day_sum	Sum of number of patients age 50-59 who were admitted to an adult inpatient bed on the previous calendar day who had confirmed COVID-19 at the time of admission reported in 7-day period.	Numb er
previous_day_admission_adult_covid_confirmed_60-69_7_day_sum	Sum of number of patients age 60-69 who were admitted to an adult inpatient bed on the previous calendar day who had confirmed COVID-19 at the time of admission reported in 7-day period.	Numb er
previous_day_admission_adult_covid_confirmed_70-	Sum of number of	Numb

79_7_day_sum	patients age 70-79 who were admitted to an adult inpatient bed on the previous calendar day who had suspected COVID-19 at the time of admission reported in 7-day period.	er
previous_day_admission_adult_covid_confirmed_80+_7_day_sum	Sum of number of patients 80 or older who were admitted to an adult inpatient bed on the previous calendar day who had confirmed COVID-19 at the time of admission reported in 7-day period.	Number
previous_day_admission_adult_covid_confirmed_unknown_7_day_sum	Sum of number of patients age unknown who were admitted to an adult inpatient bed on the previous calendar day who had confirmed COVID-19 at the time of admission reported in 7-day period.	Number
previous_day_admission_pediatric_covid_confirmed_7_day_sum	Sum of number of pediatric patients who were admitted to an inpatient bed, including NICU, PICU, newborn, and nursery, on the previous calendar day who had confirmed COVID-19 at the time of admission.	Number
previous_day_covid_ED_visits_7_day_sum	Sum of total number of ED visits who were seen on the previous	Number

	calendar day who had a visit related to COVID-19 (meets suspected or confirmed definition or presents for COVID diagnostic testing – do not count patients who present for pre-procedure screening) reported in 7-day period.	
previous_day_admission_adult_covid_suspected_7_day_sum	Sum of number of patients who were admitted to an adult inpatient bed on the previous calendar day who had suspected COVID-19 at the time of admission reported in 7-day period.	Number
previous_day_admission_adult_covid_suspected_18-19_7_day_sum	Sum of number of patients age 18-19 who were admitted to an adult inpatient bed on the previous calendar day who had suspected COVID-19 at the time of admission reported in 7-day period.	Number
previous_day_admission_adult_covid_suspected_20-29_7_day_sum	Sum of number of patients age 20-29 who were admitted to an adult inpatient bed on the previous calendar day who had suspected COVID-19 at the time of admission reported in 7-day period.	Number
previous_day_admission_adult_covid_suspected_30-39_7_day_sum	Sum of number of patients age 30-39	Number

	who were admitted to an adult inpatient bed on the previous calendar day who had suspected COVID-19 at the time of admission reported in 7-day period.	
previous_day_admission_adult_covid_suspected_40-49_7_day_sum	Sum of number of patients age 40-49 who were admitted to an adult inpatient bed on the previous calendar day who had suspected COVID-19 at the time of admission reported in 7-day period.	Number
previous_day_admission_adult_covid_suspected_50-59_7_day_sum	Sum of number of patients age 50-59 who were admitted to an adult inpatient bed on the previous calendar day who had suspected COVID-19 at the time of admission reported in 7-day period.	Number
previous_day_admission_adult_covid_suspected_60-69_7_day_sum	Sum of number of patients age 60-69 who were admitted to an adult inpatient bed on the previous calendar day who had suspected COVID-19 at the time of admission reported in 7-day period.	Number
previous_day_admission_adult_covid_suspected_70-79_7_day_sum	Sum of number of patients age 70-79 who were admitted to an adult inpatient bed on the previous	Number

	calendar day who had suspected COVID-19 at the time of admission reported in 7-day period.	
previous_day_admission_adult_covid_suspected_80+_7_day_sum	Sum of number of patients 80 or older who were admitted to an adult inpatient bed on the previous calendar day who had suspected COVID-19 at the time of admission reported in 7-day period.	Number
previous_day_admission_adult_covid_suspected_unknown_7_day_sum	Sum of number of patients age unknown who were admitted to an adult inpatient bed on the previous calendar day who had suspected COVID-19 at the time of admission reported in 7-day period.	Number
previous_day_admission_pediatric_covid_suspected_7_day_sum	Sum of number of pediatric patients who were admitted to an inpatient bed, including NICU, PICU, newborn, and nursery, on the previous calendar day who had suspected COVID-19 at the time of admission reported in 7-day period.	Number
previous_day_total_ED_visits_7_day_sum	Sum of total number of patient visits to the ED who were seen on the previous calendar day regardless of reason	Number

	for visit. Including all patients who are triaged even if they leave before being seen by a provider reported in the 7-day period.	
previous_day_admission_influenza_confirmed_7_day_sum	[FAQ - 34] Sum of number of patients (all ages) who were admitted to an inpatient bed on the previous calendar day who had laboratory-confirmed influenza at the time of admission reported in 7-day period.	Number
geocoded_hospital_address	The geocoded latitude and longitude of the facility reporting.	Point
hhs_ids	As a part of an effort to improve the granularity of spatial data, unique identifiers (named “HHS IDs” in the datasets) have been assigned to each individual facility. These unique identifiers are provided so data users can reference each individual “brick and mortar” facility that is reporting data to HHS, even in cases when multiple facilities report under the same CMS Certification Number (CCN). Additional datasets	Plain Text

	and further details related to HHS IDs will be released later.	
previous_day_admission_adult_covid_confirmed_7_day_coverage	Number of times in the 7 day period that the facility reported the number of patients admitted to adult inpatient bed on previous calendar day with confirmed COVID-19	Number
previous_day_admission_pediatric_covid_confirmed_7_day_coverage	Number of times in the 7 day period that the facility reported the number of pediatric patients admitted to an inpatient bed on previous calendar day with confirmed COVID-19	Number
previous_day_admission_adult_covid_suspected_7_day_coverage	Number of times in the 7 day period that the facility reported the number of patients admitted to adult inpatient bed on previous calendar day with suspected COVID-19	Number
previous_day_admission_pediatric_covid_suspected_7_day_coverage	Number of times in the 7 day period that the facility reported the number of pediatric patients admitted to inpatient bed on previous calendar day with suspected COVID-19	Number
previous_week_personnel_covid_vaccinated_doses_administered_7_day	The number reported of COVID-19 vaccination doses administered in the previous week	Number

	regardless of whether it is a first or second dose in a series. (Collected on Wednesdays only)	
total_personnel_covid_vaccinated_doses_none_7_day	The number reported of healthcare personnel who have not yet received a single vaccine dose. (Collected on Wednesdays only)	Number
total_personnel_covid_vaccinated_doses_one_7_day	The current number reported of healthcare personnel who have received at least one dose of COVID-19 vaccination that is administered in a multi-dose series. This field is meant to represent those who have begun but not completed the vaccination process. Does not include those who received a single-dose vaccine in this field. (Collected on Wednesdays only)	Number
total_personnel_covid_vaccinated_doses_all_7_day	The current number reported of healthcare personnel who have received a complete series of a COVID-19 vaccination. Includes those who have received all doses in a multi-dose series as well as those who received a single-dose vaccine.	Number

previous_week_patients_covid_vaccinated_doses_one_7_day	The number reported of patients who received the first dose of a COVID-19 vaccine that is administered in a multi-dose series. (Collected on Wednesdays only)	Number
previous_week_patients_covid_vaccinated_doses_all_7_day	The number reported of patients who received the final dose in a COVID-19 vaccination series. (Collected on Wednesdays only)	Number

How To Merge:

An fips_code column in the hospital beds dataset represented a unique code for the hospital's county and state of operation. The countyFIPS column in the COVID dataset contains the unique ID for each county in every state. By removing redundant data from the COVID dataset and filtering the hospital beds dataset to only include valid FIPS entries. The COVID dataset would be inner merged with the Hospital beds dataset, utilizing countyFIPS and fips_code.

How enrichment data is useful in Covid-19 Analysis:

Using Hospital beds dataset we can analyze significant components like patient-hospital bed ratio and patient-staff ratio which help in better management of hospital resource. By this analysis we can contribute to minimize the covid spread in United States.

Initial Hypothesis Questions:

- Are hospitals having good amount of ICU beds and Impatient beds relative with State Population?
- State with less beds could have a higher number of confirmed covid patients hospitalized compared to State with more beds due to resources.
- Is the number of Staff proportional to number of patients in a State?