**R2D2 Query #1**

**Date Run: 06-01-2020**

**Database Refresh date (every F): 05-22-2020**

**Caboodle data date (every M): 05-25-2020**

**HDC OMOP refresh date (every W): 05-27-2020**

**Results submitted as Site 7: 06-05-2020**

**Results resubmitted as Site 7: 07-14-2020**

Goal: Answer this question, **[**What is the all-cause mortality of hospitalized, African-American patients versus all other patients of other racial groups?**?]**

Purpose: To document key changes from UCSD code to necessary to answer this question with HDC data.

Issues to address:

* 05-29-2020 [LS] Do we have a database with a populated death table?
  + Yes, we do, but only for date and not datetime.
* 06-03-2020 [LS] Did death happened during the hospital admission?
  + UCSD code contains -> death dates between visit\_occ start and end dates
* 06-04-2020 [LS] we need to look for COVID + hospitalized patients who were alive and discharged
  + Discharged tables are all nulls and 0’s
  + need to use visit start and end dates from the visit occ table
* 06-11-2020 [LS] 3 logic bucket – (1) hospitalized + COVID (no visit end date, no death date), (2) discharged alive (visit end date, no death date), and (3) death (visit end date, death date)
  + [Diana] there are no records where we have a visit\_occ start date and no visit\_occ end date. We use visit\_occ because it tracks the whole time a patient who was in the hospital and would show someone receiving IP, OP, ER…etc with start and end dates. Visit details shows smaller visits, like maybe each time a doctor saw the patient while they were in the hospital. So, I think someone at HDC might need to clarify our access to data for patients currently hospitalized.
  + [Diana notes] it may not be possible to segregate data of discharged alive vs hospitalized because we don’t have records of visit\_occ start date and no visit\_occ end date
* 06-25-2020 [DI] Discharged and deaths don’t add up to the hospitalized. Math is wrong.
* 07-02-2020 At first, DI’s thoughts were because of the addition of the 24 hour hospitalization (code modification I made). Went back to Diana’s original code and ran it. Math was still wrong.
* 07-06-2020 [Diana] Totals did not match up is because someone can have multiple stays and then die during one of the later stays. For example, one patient may have a visit\_end\_date of 4/16 at 16.23, but a new visit\_start date at 4/16 at 17:00. These were counted as both discharged alive and deceased, but counted once as hospitalized. There were 8 patients like that.
* 07-06-2020 [Lisa] We use date of death occurring between the start and end dates to indicate death. Since the death date did not occur during the start and end dates of the first record (ER to IP), that person is considered alive and counted once in that bucket.  The second visit occurrence record that start 40 minutes later, the death DOES occur between those start and end dates so they then get counted as deceased with that record. I think the missing piece of this is we have nothing showing the continuous care this person received from when they entered the hospital to when they died or otherwise left the hospital's care.  There are preceding\_visit\_occurrence id's on the records but those look like the go back to outpatient visits.
* 07-06-2020 [Diana] Sent information on those 8 patients with multiple visits. [Click here](https://olucdenver.sharepoint.com/sites/R2D2CP3OCOVIDRapidResponse/Shared%20Documents/Adult%20Hospitalized%20Patients%20-%20Race%20Ethnicity/Archive/Multiple_Mortality.xlsx). Each of the 8 patients has more than one visit\_occurrence record. A few have more than one cohort start date (assumed that they have more than one diagnosis). I pulled the row level detail and added in the care sites for that visit\_occurrence record.  Hospital\_mortality = 0 means alive at the end of the visit\_occurrence record.  1 means died during occurrence record.  When we do the final counts, we pull out distinct counts of person\_ids that fit each category.
* 07-14-2020 [Diana] I re-uploaded the SQL for this one.  It produced results with person\_id and visit\_occurrence ids instead of just person\_ids so multiple admissions would get captured properly.
* **[2020-08-11] [DI] Q1 is DROPPED from the R2D2 questions. Repeat of Q5, except Q5 is more detailed.**

\*updated: 06-19-2020 R2D2 Tech WG

* decided that we change the cohort definition to COVID (21 days prior to admission to through the end of admission) instead of 14 days.
* Minimal time of hospitalization (Length of stay) to be 1-day difference between admissions and discharge
* Take out the no COVID-19 associated hospitalization in the six months prior to the index event inclusion criteria

**Results ran 07-14-2020 / 21 days prior to admissions and to end of admissions. Results with person\_id and visit\_occurrence ids instead of just person\_ids so multiple admissions would get captured properly.**

**(submitted to github)**

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| --- | --- |
| Site number in the format of (SiteXX) | Site07 |
| Number of African American patients **discharged alive** from COVID-19 related hospitalization | 175 |
| Number of non African American patients **discharged alive** from COVID-19 related hospitalization | 1189 |
| Number of patients (all races) **discharged alive** from COVID-19 related hospitalization | 1364 |
| Number of **deceased** African American patients during COVID-19 related hospitalization | 24 |
| Number of **deceased** non-African American patients during COVID-19 related hospitalization | 159 |
| Number of **deceased** patients (all races) during COVID-19 related hospitalization | 183 |
| Number of total African American patients (alive or deceased) of COVID-19 related hospitalization | 199 |
| Number of total non-African American patients (alive or deceased) of COVID-19 related hospitalization | 1348 |
| Number of total patients (all races, alive or deceased) of COVID-19 related hospitalization | 1547 |

Edited code --> [HERE](https://olucdenver.sharepoint.com/sites/R2D2CP3OCOVIDRapidResponse/Shared%20Documents/Adult%20Hospitalized%20Patients%20-%20Race%20Ethnicity/Archive/q1_BQ_v2.sql)

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| /\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/ |
| Project: R2D2 |
| Question number: Question\_0001 |
| Question in Text: What is the all-cause mortality of hospitalized, African-American patients vs all other patients of other racial groups? |
| Database: SQL Server |
| Author name: Diana Ir |
| Author GitHub username: dir0417 |
| Author email:diana.ir@ucdenver.edu |
| Invested work hours at initial git commit: 32 |
| Initial git commit date: 05/20/2020 |
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| Section 1: Site specific customization required (Please substitute code to identify COVID-19 patients at your site) |
| \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/ |
| **The code started with creating a temp table for COVID positive patients from the omop\_v5.OMOP5.cohort database, where the cohort\_definition\_id is defined.** |
| -- COVID positive patients |
| if object\_id('tempdb.dbo.#covid\_pos') is not null drop table #covid\_pos |
| select subject\_id [person\_id], cohort\_start\_date, cohort\_end\_date |
| into #covid\_pos |
| from omop\_v5.OMOP5.cohort |
| where cohort\_definition\_id = 100200 ---Site10 COVID-19 CONFIRMED POSITIVE REGISTRY  **For our cohort definition, we used the ATLAS cohort definition of [COVID ID2 v1- Persons hospitalized with COVID-19 narrow, w/ no prior observation required cohort #108, [https://atlas.ohdsi.org/#/cohortdefinition/108](https://atlas.ohdsi.org/" \l "/cohortdefinition/108)] to identify our hospitalized covid+ patients. The cohort was defined as COVID+ 21 days prior to admission throughout the end of admission (excludes the inclusions). To look at how the cohort was defined, click here -> https://ohdsi-atlas.healthdatacompass.org/#/cohortdefinition/15057. (can access through Eureka)**  **[DI] Persons hospitalized with COVID-19, narrow, w/ no prior observation,**  **cohort #108 R2D2 Q1,2**  **Initial Event Cohort, People having any of the following:**   * **a visit occurrence of IP, EI visits, occurrence start is after 2019-12-01 with continuous observation of at least 0 days prior and 0 days after event index date, and limit initial events to: all events per person.**   **For people matching the Primary Events, include:**  **Having any of the following criteria:**   * **at least 1 occurrences of a condition occurrence of COVID-19 (including asymptomatic) where event starts between 21 days Before and all days After index start date and event starts between all days Before and 0 days After index end date or at least 1 occurrences of a condition occurrence of Any Condition** * **Condition Source Concept is COVID-19 source codes where event starts between 21 days Before and all days After index start date and event starts between all days Before and 0 days After index end date** * **or at least 1 occurrences of a measurement of COVID-19 specific testing (pre-coordinated Measurements) - Positive, where event starts between 21 days Before and all days After index start date and event starts between all days Before and 0 days After index end date** * **or at least 1 occurrences of a measurement of COVID-19 specific testing (pre-coordinated Measurements excluded), value as concept is any of: Detected, Detected, Positive, Present, Present, Positive, where event starts between 21 days Before and all days After index start date and event starts between all days Before and 0 days After index end date** * **or at least 1 occurrences of an observation of COVID-19 specific testing (pre-coordinated Measurements excluded), value as concept is any of: Detected, Detected, Positive, Positive, Present, Present, where event starts between 21 days Before and all days After index start date and event starts between all days Before and 0 days After index end date** * **or at least 1 occurrences of an observation of Any Observation, where event starts between 21 days Before and all days After index start date and event starts between all days Before and 0 days After index end date**   **Limit cohort of initial events to: all events per person.**  **Inclusion Rules**   * **Inclusion Criteria #1: age >=18**   + **Having all of the following criteria:**   + **with the following event criteria: with age >= 18**   **Limit qualifying cohort to: all events per person.**  **We identified hospitalized and COVID+ (21 days prior to admission throughout the end of admission) patients through the selection of patients with unique subject\_id (no duplicates). We used the cohort table, which are primary building blocks to define the features of the cohort [cohort\_definition\_id] from the achilles\_result database. We counted the total number of patients by subject id that fit the criteria of hospitalized and COVID+ and the total records for patients who are hospitalized and/or COVID+.**  **SELECT COUNT (DISTINCT co.subject\_id) total\_people, COUNT(\*) total\_records**  **FROM achilles\_results.cohort co**  **WHERE co.cohort\_definition\_id = 15057**  **Re-Ran 06-22-2020 (not submitted to github)**   |  |  | | --- | --- | | **Total people** | **Total Records** | | **1464** | **1521** |   **Ran 06-11-2020 (submitted to github)**   |  |  | | --- | --- | | **Total people** | **Total Records** | | **1438** | **1486** |   **Total People = # of unique patients with COVID+ and hospitalized**  **Total Records = # of records of COVID and hospitalized that met the inclusion criteria**  **Here we see that 1464 total unique patients in UCHEALTH and we have a total of 1521 events who are hospitalized and COVID+ in records.**  **CU-AMC modified version of the USCD code**  -- COVID positive patients  drop table if exists temp\_covid\_scratch.covid\_pos;  CREATE TABLE temp\_covid\_scratch.covid\_pos  AS  SELECT subject\_id person\_id,  cohort\_start\_date,  cohort\_end\_date  FROM achilles\_results.cohort  WHERE cohort\_definition\_id = 15057;--- COVID+ and hospitalized patients |
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| Section 2: COVID +ve with hospital admission within 21 days |
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| **Here we are looking at patients who were hospitalized with COVID (14 days prior to admission to through the end of admission). The code started out with creating a temp table for COVID hospitalization selecting tables from person, visit\_occ, death, and the COVID+ table we created from the first section from the database omop\_v5\_OMOP5 visit. A LEFT JOIN was used to match the death table person id to the COVID positive table person id, whatever did not match Diana be labeled with a NULL on the COVID positive table. The code specifically identifies patients that had a visit occ of IP and EI and have a COVID status 14 days prior to admissions. The COVID positive patients should have a start date that is between the hospitalized start and end dates.**  **Update: 06-19-2020 R2D2 Tech WG decided that we change the cohort definition to COVID (21 days prior to admission to through the end of admission) instead of 14 days. We also added minimal time of hospitalization (LOS) to be 1-day difference between admissions and discharge.** |
| --COVID pats w/ hospitalizations within 21 DAYS of COVID +ve status |
| if object\_id('tempdb.dbo.#covid\_hsp') is not null drop table #covid\_hsp |
| select distinct cp.person\_id, cp.cohort\_start\_date, cp.cohort\_end\_date |
| , vo.visit\_occurrence\_id, vo.visit\_start\_datetime, vo.visit\_end\_datetime, vo.visit\_concept\_id |
| , vo.discharge\_to\_concept\_id, vo.discharge\_to\_source\_value |
| , d.death\_datetime |
| , case when d.death\_date between vo.visit\_start\_datetime and vo.visit\_end\_datetime |
| or discharge\_to\_concept\_id = 44814686 -- Deceased |
| then 1 else 0 end as [Hospital\_mortality] |
| into #covid\_hsp |
| from #covid\_pos cp |
| join omop\_v5.OMOP5.visit\_occurrence vo on vo.person\_id = cp.person\_id |
| left join OMOP\_v5.OMOP5.death d on d.person\_id = cp.person\_id |
| where vo.visit\_concept\_id in (9201, 262) -- IP, EI visits |
| and (datediff(dd, cp.cohort\_start\_date, vo.visit\_start\_datetime) between 0 and 14 -- +ve COVID status within 14 days before admission |
| or cp.cohort\_start\_date between vo.visit\_start\_datetime and vo.visit\_end\_datetime |
| ) |
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| Section 3 |
| Query: (1A) What is the all-cause mortality of hospitalized, African-American patients |
| vs all other patients of other racial groups? |
| \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/ |
| **A temp table is created for hsp\_mortality, selecting tables from the person, covid+ and hsp patients (section 2) and linking it to the race field in the person table**. |
|  |
| --Hospitalizations with race |
| if object\_id('tempdb.dbo.#hsp\_mortality') is not null drop table #hsp\_mortality |
| select distinct p.person\_id, p.race\_concept\_id, p.race\_source\_value, cp.death\_datetime, cp.cohort\_start\_date |
| , cp.visit\_occurrence\_id |
| , cp.visit\_start\_datetime, cp.visit\_end\_datetime, cp.discharge\_to\_concept\_id, cp.discharge\_to\_source\_value |
| , cp.Hospital\_mortality |
| , case when p.race\_concept\_id = 8516 --Black or African American |
| then 1 else NULL end as [African\_American] |
| into #hsp\_mortality |
| from #covid\_hsp cp |
| left join OMOP\_v5.omop5.person p on p.person\_id = cp.person\_id |
|  |
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| Section 4: Results |
| \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/ |
| **This Diana count up the patients in each group.** |
| /\* |
| Question (1A) What is the all-cause mortality of hospitalized, African-American patients |
| vs all other patients of other racial groups? |
| \*/ |
|  |
| --Patient status: Alive |
| -- Counts of AA patients discharged alive |
| select count(distinct person\_id) from #hsp\_mortality where [Hospital\_mortality] = 0 and African\_American = 1 |
|  |
| -- Counts of non-AA patients discharged alive |
| select count(distinct person\_id) from #hsp\_mortality where [Hospital\_mortality] = 0 and African\_American is null |
| --Counts of total patients discharged alive |
| select count(distinct person\_id) from #hsp\_mortality where [Hospital\_mortality] = 0 |
|  |
| --Patient status: Deceased |
| --Total # African American (COVID +ve pats) who died during hospital stay |
| select count(distinct person\_id) from #hsp\_mortality where [Hospital\_mortality] = 1 and African\_American = 1 |
|  |
| -- Total # other races (COVID +ve pats) who died during hospital stay |
| select count(distinct person\_id) from #hsp\_mortality where [Hospital\_mortality] = 1 and African\_American is null |
|  |
| --Total # COVID +ve patients who died during hospital stay |
| select count(distinct person\_id) from #hsp\_mortality where [Hospital\_mortality] = 1 |
|  |
| --Race: |
| --Total AA admitted to the hospital |
| select count(distinct person\_id) from #hsp\_mortality where African\_American = 1 |
|  |
| --Total non-AA admitted to hospital |
| select count(distinct person\_id) from #hsp\_mortality where African\_American is null |
|  |
| --Total patients admitted |
| select count(distinct person\_id) from #hsp\_mortality  **Results ran 06-11-2020**   |  |  | | --- | --- | | Site number in the format of (SiteXX) | Site07 | | Number of African American patients **discharged alive** from COVID-19 related hospitalization | 164 | | Number of non African American patients **discharged alive** from COVID-19 related hospitalization | 1102 | | Number of patients (all races) **discharged alive** from COVID-19 related hospitalization | 1266 | | Number of **deceased** African American patients during COVID-19 related hospitalization | 23 | | Number of **deceased** non-African American patients during COVID-19 related hospitalization | 154 | | Number of **deceased** patients (all races) during COVID-19 related hospitalization | 177 | | Number of total African American patients (alive or deceased) of COVID-19 related hospitalization | 187 | | Number of total non-African American patients (alive or deceased) of COVID-19 related hospitalization | 1251 | | Number of total patients (all races, alive or deceased) of COVID-19 related hospitalization | 1438 |   **Results ran 06-22-2020 / 21 days prior to admissions and to end of admissions**  **(not submitted to github)**   |  |  | | --- | --- | | Site number in the format of (SiteXX) | Site07 | | Number of African American patients **discharged alive** from COVID-19 related hospitalization | 166 | | Number of non African American patients **discharged alive** from COVID-19 related hospitalization | 1128 | | Number of patients (all races) **discharged alive** from COVID-19 related hospitalization | 1294 | | Number of **deceased** African American patients during COVID-19 related hospitalization | 24 | | Number of **deceased** non-African American patients during COVID-19 related hospitalization | 162 | | Number of **deceased** patients (all races) during COVID-19 related hospitalization | 186 | | Number of total African American patients (alive or deceased) of COVID-19 related hospitalization | 190 | | Number of total non-African American patients (alive or deceased) of COVID-19 related hospitalization | 1284 | | Number of total patients (all races, alive or deceased) of COVID-19 related hospitalization | 1474 |   **Re-ran 06-25-2020 (not submitted to github) / 21 days prior to admissions and to end of admissions and minimal time of hospitalization (Length of stay) to be 1-day difference between admissions and discharge, >18 years of age. (not submitted to github)**   |  |  |  | | --- | --- | --- | | Site number in the format of (SiteXX) | Site07 | Site07 | | Number of African American patients **discharged alive** from COVID-19 related hospitalization | 167 | 167 | | Number of non African American patients **discharged alive** from COVID-19 related hospitalization | 1145 | 1145 | | Number of patients (all races) **discharged alive** from COVID-19 related hospitalization | 1312 | 1312 | | Number of **deceased** African American patients during COVID-19 related hospitalization | 24 | 24 | | Number of **deceased** non-African American patients during COVID-19 related hospitalization | 167 | 167 | | Number of **deceased** patients (all races) during COVID-19 related hospitalization | 191 | 191 | | Number of total African American patients (alive or deceased) of COVID-19 related hospitalization | 191 | 191 | | Number of total non-African American patients (alive or deceased) of COVID-19 related hospitalization | 1304 | 1304 | | Number of total patients (all races, alive or deceased) of COVID-19 related hospitalization | 1495 | 1495 |   **Before, without the addition of the 1-day difference stay, we saw that the discharged alive + deceased = hospitalized. After the inclusion of the 1 day difference between admissions and discharge, the numbers of discharged alive and deceased do not equal to the hospitalized.**  **Re-ran 06-30-2020 21 days prior to admissions and to end of admissions and minimal time of hospitalization (Length of stay) to be 1-day difference between admissions and discharge, >18 years of age. (submitted to github)**   |  |  | | --- | --- | | Site number in the format of (SiteXX) | Site07 | | Number of African American patients **discharged alive** from COVID-19 related hospitalization | 167 | | Number of non African American patients **discharged alive** from COVID-19 related hospitalization | 1145 | | Number of patients (all races) **discharged alive** from COVID-19 related hospitalization | 1312 | | Number of **deceased** African American patients during COVID-19 related hospitalization | 24 | | Number of **deceased** non-African American patients during COVID-19 related hospitalization | 167 | | Number of **deceased** patients (all races) during COVID-19 related hospitalization | 191 | | Number of total African American patients (alive or deceased) of COVID-19 related hospitalization | 191 | | Number of total non-African American patients (alive or deceased) of COVID-19 related hospitalization | 1304 | | Number of total patients (all races, alive or deceased) of COVID-19 related hospitalization | 1495 |   **Results ran 07-14-2020 / 21 days prior to admissions and to end of admissions. Results with person\_id and visit\_occurrence ids instead of just person\_ids so multiple admissions would get captured properly.**   |  |  | | --- | --- | | Site number in the format of (SiteXX) | Site07 | | Number of African American patients **discharged alive** from COVID-19 related hospitalization | 175 | | Number of non African American patients **discharged alive** from COVID-19 related hospitalization | 1189 | | Number of patients (all races) **discharged alive** from COVID-19 related hospitalization | 1364 | | Number of **deceased** African American patients during COVID-19 related hospitalization | 24 | | Number of **deceased** non-African American patients during COVID-19 related hospitalization | 159 | | Number of **deceased** patients (all races) during COVID-19 related hospitalization | 183 | | Number of total African American patients (alive or deceased) of COVID-19 related hospitalization | 199 | | Number of total non-African American patients (alive or deceased) of COVID-19 related hospitalization | 1348 | | Number of total patients (all races, alive or deceased) of COVID-19 related hospitalization | 1547 |   Edited code --> [HERE](https://olucdenver.sharepoint.com/sites/R2D2CP3OCOVIDRapidResponse/Shared%20Documents/Adult%20Hospitalized%20Patients%20-%20Race%20Ethnicity/Archive/q1_BQ_v2.sql)  Submission details  To the [results](https://github.com/DBMI/R2D2-Queries/blob/master/Question_0001_UCSD_AAMortalityDuringHospitalization/results) directory, please upload .csv file of 2 rows and 10 columns in the following format with a header (one .csv file per institution named as InstitutionName\_results.csv)   * Column 1: Site number in the format of (SiteXX) * Column 2: Number of African American patients **discharged alive** from COVID-19 related hospitalization * Column 3: Number of non African American patients **discharged alive** from COVID-19 related hospitalization * Column 4: Number of patients (all races) **discharged alive** from COVID-19 related hospitalization * **All discharge\_to\_concept\_id  = 0  in HDC  records** * Column 5: Number of **deceased** African American patients during COVID-19 related hospitalization * Column 6: Number of **deceased** non-African American patients during COVID-19 related hospitalization * Column 7: Number of **deceased** patients (all races) during COVID-19 related hospitalization * Column 8: Number of total African American patients (alive or deceased) of COVID-19 related hospitalization * Column 9: Number of total non-African American patients (alive or deceased) of COVID-19 related hospitalization * Column 10: Number of total patients (all races, alive or deceased) of COVID-19 related hospitalization |

UCSD Original Code (below )– DO NOT EDIT

|  |
| --- |
| Project: R2D2 |
| Question number: Question\_0001 |
| Question in Text: What is the all-cause mortality of hospitalized, African-American patients vs all other patients of other racial groups? |
| Database: SQL Server |
| Author name: Diana Ir |
| Author GitHub username: dir0417 |
| Author email: diana.ir@ucdenver.edu |
| Invested work hours at initial git commit: 32 |
| Initial git commit date: 05/20/2020 |
| \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/ |
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| Section 1: Site specific customization required (Please substitute code to identify COVID-19 patients at your site) |
| \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/ |
|  |
| -- COVID positive patients |
| if object\_id('tempdb.dbo.#covid\_pos') is not null drop table #covid\_pos |
| select subject\_id [person\_id], cohort\_start\_date, cohort\_end\_date |
| into #covid\_pos |
| from omop\_v5.OMOP5.cohort |
| where cohort\_definition\_id = 100200 ---Site10 COVID-19 CONFIRMED POSITIVE REGISTRY |
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|  |
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|  |
| Section 2: COVID +ve with hospital admission within 14 days |
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| \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/ |
|  |
| --COVID pats w/ hospitalizations within 21 DAYS of COVID +ve status |
| if object\_id('tempdb.dbo.#covid\_hsp') is not null drop table #covid\_hsp |
| select distinct cp.person\_id, cp.cohort\_start\_date, cp.cohort\_end\_date |
| , vo.visit\_occurrence\_id, vo.visit\_start\_datetime, vo.visit\_end\_datetime, vo.visit\_concept\_id |
| , vo.discharge\_to\_concept\_id, vo.discharge\_to\_source\_value |
| , d.death\_datetime |
| , case when d.death\_date between vo.visit\_start\_datetime and vo.visit\_end\_datetime |
| or discharge\_to\_concept\_id = 44814686 -- Deceased |
| then 1 else 0 end as [Hospital\_mortality] |
| into #covid\_hsp |
| from #covid\_pos cp |
| join omop\_v5.OMOP5.visit\_occurrence vo on vo.person\_id = cp.person\_id |
| left join OMOP\_v5.OMOP5.death d on d.person\_id = cp.person\_id |
| where vo.visit\_concept\_id in (9201, 262) -- IP, EI visits |
| and (datediff(dd, cp.cohort\_start\_date, vo.visit\_start\_datetime) between 0 and 14 -- +ve COVID status within 14 days before admission |
| or cp.cohort\_start\_date between vo.visit\_start\_datetime and vo.visit\_end\_datetime |
| ) |
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| Section 3 |
| Query: (1A) What is the all-cause mortality of hospitalized, African-American patients |
| vs all other patients of other racial groups? |
| \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/ |
|  |
|  |
| --Hospitalizations with race |
| if object\_id('tempdb.dbo.#hsp\_mortality') is not null drop table #hsp\_mortality |
| select distinct p.person\_id, p.race\_concept\_id, p.race\_source\_value, cp.death\_datetime, cp.cohort\_start\_date |
| , cp.visit\_occurrence\_id |
| , cp.visit\_start\_datetime, cp.visit\_end\_datetime, cp.discharge\_to\_concept\_id, cp.discharge\_to\_source\_value |
| , cp.Hospital\_mortality |
| , case when p.race\_concept\_id = 8516 --Black or African American |
| then 1 else NULL end as [African\_American] |
| into #hsp\_mortality |
| from #covid\_hsp cp |
| left join OMOP\_v5.omop5.person p on p.person\_id = cp.person\_id |
|  |
|  |
|  |
|  |
| /\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* |
| Section 4: Results |
| \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/ |
| /\* Question (1A) What is the all-cause mortality of hospitalized, African-American patients vs all other patients of other racial groups? \*/ |
| --Patient status: Alive |
|  |
| -- Counts of AA patients discharged alive |
| select count(distinct person\_id) from #hsp\_mortality where [Hospital\_mortality] = 0 and African\_American = 1 |
|  |
| -- Counts of non-AA patients discharged alive |
| select count(distinct person\_id) from #hsp\_mortality where [Hospital\_mortality] = 0 and African\_American is null |
|  |
| --Counts of total patients discharged alive |
| select count(distinct person\_id) from #hsp\_mortality where [Hospital\_mortality] = 0 |
|  |
|  |
| --Patient status: Deceased |
|  |
| --Total # African American (COVID +ve pats) who died during hospital stay |
| select count(distinct person\_id) from #hsp\_mortality where [Hospital\_mortality] = 1 and African\_American = 1 |
|  |
| -- Total # other races (COVID +ve pats) who died during hospital stay |
| select count(distinct person\_id) from #hsp\_mortality where [Hospital\_mortality] = 1 and African\_American is null |
|  |
|  |
| --Total # COVID +ve patients who died during hospital stay |
| select count(distinct person\_id) from #hsp\_mortality where [Hospital\_mortality] = 1 |
|  |
|  |
| --Race: |
|  |
| --Total AA admitted to the hospital |
| select count(distinct person\_id) from #hsp\_mortality where African\_American = 1 |
|  |
| --Total non-AA admitted to hospital |
| select count(distinct person\_id) from #hsp\_mortality where African\_American is null |
|  |
| --Total patients admitted |
| select count(distinct person\_id) from #hsp\_mortality |