

# COVID-19 Vaccination Data Repository

## Snowflake Job Aid: Frequently Used SQL Queries

Last Updated 2/22/2022

### LHJ Data Sources in CA\_VACCINE

Role: CA\_LHJ\_RO

Database: CA\_VACCINE

Schema: PUBLIC

Views: VW\_ALL\_IIS\_LHJ (dose level view) or  
VW\_ALL\_IIS\_RECIPIENTS\_LHJ (recipient level view)  
VW\_DERIVED\_FED\_OVERALL\_BY\_COUNTY\_DEMOGRAPHICS (Federal Administrations Summary)  
VW\_GC\_LHJ\_DOSE\_ADMIN\_ADDRESS (dose-level geocoded addresses for vaccine administrators)  
VW\_GC\_LHJ\_DOSE\_RECIP\_ADDRESS (dose-level geocoded addresses for vaccine recipients)  
VW\_GC\_LHJ\_RECIP\_ADMIN\_ADDRESS (recipient-level geocoded addresses for vaccine administrators)  
VW\_GC\_LHJ\_RECIP\_RECIP\_ADDRESS (recipient-level geocoded addresses for vaccine recipients)

### Examples

Below are some examples of SQL queries that can be used with the PUBLIC views in Snowflake. Inserting a double hyphen (--) in the beginning of a line makes the line a comment; any text between -- and the end of the line will be ignored and will not be evaluated in the query. To include the line in the query, delete the double hyphen.

#### To count total COVID-19 doses administered statewide:

```
select
  count(distinct vax_event_id)
from
  "CA_VACCINE"."PUBLIC"."VW_ALL_IIS_LHJ";
```

#### To count total COVID-19 doses administered by county:

```
select
  recip_county_label as RecipCounty,
  --admin_county_label as AdminCounty,
  --mixed_county as MixedCounty,
```

```
count(distinct vax_event_id)
from
"CA_VACCINE"."PUBLIC"."VW_ALL_IIS_LHJ"
group by
1;
```

**To count total COVID-19 doses administered by zip code:**

```
select
  recip_address_zip as RecipZIP,
  --admin_address_zip as AdminZIP,
  --mixed_zip as MixedZIP,
  count(distinct vax_event_id)
from
"CA_VACCINE"."PUBLIC"."VW_ALL_IIS_LHJ"
group by
1;
```

**To count total COVID-19 doses by manufacturer or dose number:**

```
select
  vax_label as Manufacturer,
  --dose_num,
  count(distinct vax_event_id) as Doses
from
"CA_VACCINE"."PUBLIC"."VW_ALL_IIS_LHJ"
group by
1
order by
1;
```

**To count total persons vaccinated by Vaccine Equity Metric quartile and county:**

```
select
  hpiquartile as VEM,
  HPI_COUNTY_RCP_ZIP as Recipient_County,
  count(distinct recip_id) as Persons
from
"CA_VACCINE"."PUBLIC"."VW_ALL_IIS_RECIPIENTS_LHJ"
group by
1, 2
order by
1, 2;
```

**To count total persons vaccinated with at least one COVID-19 vaccine dose by county:**

```
select
  recip_county_label as RecipCounty,
  --admin_county_label as AdminCounty,
  --mixed_county as MixedCounty,
  count(distinct recip_id) as Persons
from
  "CA_VACCINE"."PUBLIC"."VW_ALL_IIS_RECIPIENTS_LHJ"
group by
  1
order by
  1;
```

**To count total persons fully or partially vaccinated by county:**

```
select
  recip_county_label as RecipCounty,
  --admin_county_label as AdminCounty,
  --mixed_county as MixedCounty,
  count(distinct recip_id) as Persons
from
  "CA_VACCINE"."PUBLIC"."VW_ALL_IIS_RECIPIENTS_LHJ"
where
  fully_vaccinated=1      --fully vaccinated
  --fully_vaccinated=0   --partially vaccinated
group by
  1
order by
  1;
```

**To see persons who received a J&J dose:**

```
select
  distinct recip_id,
  recip_first_name,
  recip_last_name,
  recip_dob
from
  "CA_VACCINE"."PUBLIC"."VW_ALL_IIS_RECIPIENTS_LHJ"
where
  vax_received like '%J&J%';
```

**To count total persons who received only one dose of Pfizer or Moderna vaccine:**

```
select
  mixed_county,
  vax_received,
  count(distinct recip_id) as Persons
from
  "CA_VACCINE"."PUBLIC"."VW_ALL_IIS_RECIPIENTS_LHJ"
where
  (
    (VAX_RECEIVED like 'Pfizer')
    or (VAX_RECEIVED like 'Moderna')
  )
  and not (
    DS1_ORIG_DOSE_NUM = '2'
    and DS2_VAX_EVENT_ID is null
  )
  and DS2_ADMIN_DATE is null
  --and mixed_county=""
--only has single dose labeled as dose 2
--does not have two doses
--county filter
group by
  1, 2
order by
  1, 2;
```

**To count fully or partially vaccinated persons by VEM quartile or age group:**

```
select
  hpiquartile as VEM,
  --hpiquartile_rcp_zip as VEM_Recip,
  --recip_age_group,
  count(distinct recip_id) as Persons
from
  "CA_VACCINE"."PUBLIC"."VW_ALL_IIS_RECIPIENTS_LHJ"
where
  fully_vaccinated = 1
  --fully_vaccinated = 0
  --and mixed_county = ""
--fully vaccinated
--partially vaccinated
--county filter
group by
  1
order by
  1;
```

**To count total persons by vaccination status and user-defined age group:**

```
select
  count(distinct recip_id) as Persons
from
  "CA_VACCINE"."PUBLIC"."VW_ALL_IIS_RECIPIENTS_LHJ"
where
  fully_vaccinated = 1          --fully vaccinated
  and recip_age between 12 and 15  --age filter
;
```

**To count total persons by VEM quartile, county, and vaccination status:**

```
select
  HPIQUARTILE as VEM,
  HPI_COUNTY_RCP_ZIP as Recipient_County,
  count(distinct recip_id) as Persons
from
  "CA_VACCINE"."PUBLIC"."VW_ALL_IIS_RECIPIENTS_LHJ"
where
  fully_vaccinated = 1          --fully vaccinated
  --fully_vaccinated = 0      --partially vaccinated
group by
  1, 2
order by
  1, 2;
```

**To count total federal agency administrations by county and age group:**

```
select
  COUNTY,
  DEMOGRAPHIC_CATEGORY,
  DEMOGRAPHIC_VALUE,
  CUMULATIVE_TOTAL_DOSES
from
  "CA_VACCINE"."PUBLIC"."VW_DERIVED_FED_OVERALL_BY_COUNTY_DEMOGRAPHICS"
where
  COUNTY = 'Alameda'
  and DEMOGRAPHIC_CATEGORY = 'Age Group';
```

**To count total federal agency administrations by county and race/ethnicity:**

```
select
  COUNTY,
  DEMOGRAPHIC_CATEGORY,
  DEMOGRAPHIC_VALUE,
  CUMULATIVE_TOTAL_DOSES
from
  "CA_VACCINE"."PUBLIC"."VW_DERIVED_FED_OVERALL_BY_COUNTY_DEMOGRAPHICS"
where
  COUNTY = 'Alameda'
  and DEMOGRAPHIC_CATEGORY = 'Race/Ethnicity';
```

**To see booster rate\* by county:**

```
with elig_recipient as (
select
  mixed_county as county,
  count( recip_id ) as eligible_recipient_count
from
  "CA_VACCINE"."PUBLIC"."VW_ALL_IIS_RECIPIENTS_LHJ"
where
  fully_vaccinated
  and (
    (datediff(
      day,
      (fully_vaccinated_date),
      dateadd(day,-1,current_date)
    ) > 135
    and left(vax_received,3) <> 'J&J'
    and not contains(vax_received,'Pfizer')
    and recip_age > 17)
  or
    (datediff(
      day,
      (fully_vaccinated_date),
      dateadd(day,-1,current_date)) > 135
    and left(vax_received,3) <> 'J&J'
    and contains(vax_received,'Pfizer')
    and recip_age > 11)
  or
    (datediff(
      day,
      (fully_vaccinated_date),
```

```

dateadd(day,-1,current_date)) > 51
and left(vax_received,3) = 'J&J'
and recip_age > 17))
group by
1),

booster_recip as (
select
mixed_county as county,
count (distinct bridge_recip_id) as measure_value
from
"CA_VACCINE"."PUBLIC"."VW_ALL_IIS_LHJ"
where
is_additional_dose_and_24_days = 1
and admin_date >= '2021-08-13'
group by
1)
select
a.county,
measure_value/eligible_recipient_count as booster_rate
from
elig_recipient a
left join booster_recip b on a.county = b.county
order by
1;

```

\* Booster dose recipients are defined here as individuals who received a dose at least 24 days after series completion (2 Pfizer or Moderna doses or 1 Janssen dose) since August 13, 2021. This metric includes both individuals who received booster doses and individuals who received additional doses. Booster eligible recipients include individuals 18 years and older who had at least one dose of J&J 2 or more months ago, or at least two doses of an mRNA vaccine 5 or more months ago.

**To join dose-level data to geocoded addresses for vaccine administrators:**

```

select da.VAX_EVENT_ID,
da.BRIDGE_RECIP_ID,
da.RECIP_ID,
da.RESPONSIBLE_ORG,
da.ADMIN_NAME,
ADMIN_GC_INPUT_ADDR,
ADMIN_GC_STATUS,
ADMIN_GC_SCORE,
ADMIN_GC_MATCH_TYPE,

```

```

ADMIN_GC_MATCH_ADDR,
ADMIN_GC_ADDR_TYPE,
ADMIN_GC_MATCH_ADDR_ZIP,
ADMIN_GC_BLOCKGROUP,
ADMIN_GC_BLOCKGROUP10,
ADMIN_GC_COUNTYNAME,
ADMIN_GC_SCHOOLDISTRICT,
ADMIN_GC_US_CONGRESSDISTRICT,
ADMIN_GC_CA_ASSEMBLY,
ADMIN_GC_CA_SENATE,
ADMIN_GC_SHAPE,
ADMIN_GC_LONG,
ADMIN_GC_LAT
from
"CA_VACCINE"."PUBLIC"."VW_GC_LHJ_DOSE_ADMIN_ADDRESS" da
join "CA_VACCINE"."PUBLIC"."VW_ALL_IIS_LHJ" lhj_dose
on da.VAX_EVENT_ID=lhj_dose.VAX_EVENT_ID
and da.BRIDGE_RECIP_ID=lhj_dose.BRIDGE_RECIP_ID;

```

**To join dose-level data to geocoded addresses for vaccine recipients:**

```

select dr.VAX_EVENT_ID,
dr.BRIDGE_RECIP_ID,
dr.RECIP_ID,
RECIP_GC_INPUT_ADDR,
RECIP_GC_STATUS,
RECIP_GC_SCORE,
RECIP_GC_MATCH_TYPE,
RECIP_GC_MATCH_ADDR,
RECIP_GC_ADDR_TYPE,
RECIP_GC_MATCH_ADDR_ZIP,
RECIP_GC_BLOCKGROUP,
RECIP_GC_BLOCKGROUP10,
RECIP_GC_COUNTYNAME,
RECIP_GC_SCHOOLDISTRICT,
RECIP_GC_US_CONGRESSDISTRICT,
RECIP_GC_CA_ASSEMBLY,
RECIP_GC_CA_SENATE,
RECIP_GC_SHAPE,
RECIP_GC_LONG,
RECIP_GC_LAT
from
"CA_VACCINE"."PUBLIC"."VW_GC_LHJ_DOSE_RECIP_ADDRESS" dr

```



```
join "CA_VACCINE"."PUBLIC"."VW_ALL_IIS_LHJ" lhj_dose
on dr.VAX_EVENT_ID=lhj_dose.VAX_EVENT_ID
and dr.BRIDGE_RECIP_ID=lhj_dose.BRIDGE_RECIP_ID;
```

**To join recipient-level data to geocoded addresses for vaccine administrators:**

```
select ra.RECIP_ID,
ra.RESPONSIBLE_ORG,
ra.ADMIN_NAME,
ra.ADMIN_ADDRESS_STATE,
ADMIN_GC_INPUT_ADDR,
ADMIN_GC_STATUS,
ADMIN_GC_SCORE,
ADMIN_GC_MATCH_TYPE,
ADMIN_GC_MATCH_ADDR,
ADMIN_GC_ADDR_TYPE,
ADMIN_GC_MATCH_ADDR_ZIP,
ADMIN_GC_BLOCKGROUP,
ADMIN_GC_BLOCKGROUP10,
ADMIN_GC_COUNTYNAME,
ADMIN_GC_SCHOOLDISTRICT,
ADMIN_GC_US_CONGRESSDISTRICT,
ADMIN_GC_CA_ASSEMBLY,
ADMIN_GC_CA_SENATE,
ADMIN_GC_SHAPE,
ADMIN_GC_LONG,
ADMIN_GC_LAT
from
"CA_VACCINE"."PUBLIC"."VW_GC_LHJ_RECIP_ADMIN_ADDRESS" ra
join "CA_VACCINE"."PUBLIC"."VW_ALL_IIS_RECIPIENTS_LHJ" lhj_recip
on ra.RECIP_ID=lhj_recip.RECIP_ID;
```

**To join recipient-level data to geocoded addresses for vaccine recipients:**

```
select rr.RECIP_ID,
RECIP_GC_INPUT_ADDR,
GC_INPUT_ADDR,
RECIP_GC_STATUS,
RECIP_GC_SCORE,
RECIP_GC_MATCH_TYPE,
RECIP_GC_MATCH_ADDR,
RECIP_GC_ADDR_TYPE,
RECIP_GC_MATCH_ADDR_ZIP,
```

```
RECIP_GC_BLOCKGROUP,  
RECIP_GC_BLOCKGROUP10,  
RECIP_GC_COUNTYNAME,  
RECIP_GC_SCHOOLDISTRICT,  
RECIP_GC_US_CONGRESSDISTRICT,  
RECIP_GC_CA_ASSEMBLY,  
RECIP_GC_CA_SENATE,  
RECIP_GC_SHAPE,  
RECIP_GC_LONG,  
RECIP_GC_LAT  
from  
"CA_VACCINE"."PUBLIC"."VW_GC_LHJ_RECIP_RECIP_ADDRESS" rr  
join "CA_VACCINE"."PUBLIC"."VW_ALL_IIS_RECIPIENTS_LHJ" lhj_recip  
on rr.RECIP_ID=lhj_recip.RECIP_ID;
```

## References

The data dictionaries for VW\_ALL\_IIS\_LHJ and VW\_ALL\_IIS\_RECIPIENTS\_LHJ can be found on the [CAIR2 Website](#).