Milestone #2

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```
#load libraries
library(tidyverse)
```

```
## Warning in system("timedatectl", intern = TRUE): running command 'timedatectl'
## had status 1
```

```
## -- Attaching packages --------------------------------------- tidyverse 1.3.1 --
```

```
## v ggplot2 3.3.3     v purrr   0.3.4
## v tibble  3.1.2     v dplyr   1.0.6
## v tidyr   1.1.3     v stringr 1.4.0
## v readr   1.4.0     v forcats 0.5.1
```

```
## -- Conflicts ------------------------------------------ tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()    masks stats::lag()
```

```
library(lubridate)
```

```
##
## Attaching package: 'lubridate'
```

```
## The following objects are masked from 'package:base':
##
##     date, intersect, setdiff, union
```

Description of dataset What is the data source? (1-2 sentences on where the data is coming from, dates included, etc.)

The data source for the COVID-19 Vaccine Administered by Zip Code dataset is the California Immunization Registry and the American Community Survey's 2015-2019 5-Year data.

The data source for the CA County Demographic dataset is based on US census data.

How does the dataset relate to the group problem statement and question?

There is growing concern that counties with younger median age are less likely to have higher counts of vaccinated persons. To investigate this, we need to explore the CA census demographics to compare median age values and proportions of vaccinate persons together on a county level. This will help us determine if there is any relationship between those two variables.

```r
#Import statement
library(readr)
cov_vax_admin <- read_csv("cov_vax_admin.csv")
```

```
##
## -- Column specification --------------------------------------------------------
## cols(
##   X1 = col_double(),
##   as_of_date = col_character(),
##   zip_code_tabulation_area = col_double(),
##   local_health_jurisdiction = col_character(),
##   county = col_character(),
##   vaccine_equity_metric_quartile = col_double(),
##   vem_source = col_character(),
##   age12_plus_population = col_double(),
##   persons_fully_vaccinated = col_double(),
##   persons_partially_vaccinated = col_double(),
##   redacted = col_character()
## )
```

```r
cov_vax_admin
```

```
## # A tibble: 65,268 x 11
##       X1 as_of_date zip_code_tabulat~ local_health_jur~ county vaccine_equity_m~
##    <dbl> <chr>                  <dbl> <chr>             <chr>              <dbl>
##  1     1 1/5/2021               92703 ORANGE            ORANGE                 1
##  2     2 1/5/2021               92285 SAN BERNARDINO    SAN B~                 1
##  3     3 1/5/2021               92284 SAN BERNARDINO    SAN B~                 1
##  4     4 1/5/2021               92275 IMPERIAL          IMPER~                 1
##  5     5 1/5/2021               92532 RIVERSIDE         RIVER~                 3
##  6     6 1/5/2021               92376 SAN BERNARDINO    SAN B~                 1
##  7     7 1/5/2021               92345 SAN BERNARDINO    SAN B~                 1
##  8     8 1/5/2021               91343 LOS ANGELES       LOS A~                 2
##  9     9 1/5/2021               91910 SAN DIEGO         SAN D~                 2
## 10    10 1/5/2021               91773 LOS ANGELES       LOS A~                 3
## # ... with 65,258 more rows, and 5 more variables: vem_source <chr>,
## #   age12_plus_population <dbl>, persons_fully_vaccinated <dbl>,
## #   persons_partially_vaccinated <dbl>, redacted <chr>
```

```r
ca_county_demographics <- read_csv("ca_county_demographics.csv")
```

```
## Warning: Missing column names filled in: 'X1' [1]
```

```
##
## -- Column specification --------------------------------------------------------
## cols(
##   .default = col_double(),
##   name = col_character()
## )
## i Use `spec()` for the full column specifications.
```

```r
ca_county_demographics
```

```
## # A tibble: 58 x 23
##       X1 name  pop2012 pop12_sqmi  white  black ameri_es  asian hawn_pi hispanic
##    <dbl> <chr>   <dbl>      <dbl>  <dbl>  <dbl>    <dbl>  <dbl>   <dbl>    <dbl>
##  1     1 Kern   851089      104.   5.00e5  48921    12676 3.48e4    1252   413033
```

```
##  2     2 Kings  155039     111.   8.30e4  11014     2562 5.62e3     271    77866
##  3     3 Lake    65253      49.1  5.20e4   1232     2049 7.24e2     108    11088
##  4     4 Lass~   35039       7.42 2.55e4   2834     1234 3.56e2     165     6117
##  5     5 Los ~ 9904341    2423.   4.94e6 856874    72828 1.35e6   26094  4687889
##  6     6 Made~  153025      71.1  9.45e4   5629     4136 2.80e3     162    80992
##  7     7 Marin  255509     486.   2.02e5   6987     1523 1.38e4     509    39069
##  8     8 Mari~   18455      12.6  1.61e4    138      527 2.04e2      26     1676
##  9     9 Mend~   88094      25.1  6.72e4    622     4277 1.45e3     119    19505
## 10    10 Merc~  256841     130.   1.48e5   9926     3473 1.88e4     583   140485
## # ... with 48 more rows, and 13 more variables: other <dbl>, mult_race <dbl>,
## #   males <dbl>, females <dbl>, med_age <dbl>, households <dbl>,
## #   families <dbl>, hse_units <dbl>, ave_fam_sz <dbl>, vacant <dbl>,
## #   owner_occ <dbl>, renter_occ <dbl>, county_fips <dbl>
```

Identify data types for 5+ data elements/columns/variables for both data sets

```
#2 Identify data types for 5+ data elements/columns/variables

#viewing structure of both datasets

str(ca_county_demographics)
```

```
## spec_tbl_df [58 x 23] (S3: spec_tbl_df/tbl_df/tbl/data.frame)
##  $ X1         : num [1:58] 1 2 3 4 5 6 7 8 9 10 ...
##  $ name       : chr [1:58] "Kern" "Kings" "Lake" "Lassen" ...
##  $ pop2012    : num [1:58] 851089 155039 65253 35039 9904341 ...
##  $ pop12_sqmi : num [1:58] 104.28 111.43 49.08 7.42 2423.26 ...
##  $ white      : num [1:58] 499766 83027 52033 25532 4936599 ...
##  $ black      : num [1:58] 48921 11014 1232 2834 856874 ...
##  $ ameri_es   : num [1:58] 12676 2562 2049 1234 72828 ...
##  $ asian      : num [1:58] 34846 5620 724 356 1346865 ...
##  $ hawn_pi    : num [1:58] 1252 271 108 165 26094 ...
##  $ hispanic   : num [1:58] 413033 77866 11088 6117 4687889 ...
##  $ other      : num [1:58] 204314 42996 5455 3562 2140632 ...
##  $ mult_race  : num [1:58] 37856 7492 3064 1212 438713 ...
##  $ males      : num [1:58] 433108 86344 32469 22416 4839654 ...
##  $ females    : num [1:58] 406523 66638 32196 12479 4978951 ...
##  $ med_age    : num [1:58] 30.7 31.1 45 37 34.8 33.1 44.5 49.2 41.6 29.6 ...
##  $ households : num [1:58] 254610 41233 26548 10058 3241204 ...
##  $ families   : num [1:58] 191739 31939 16255 6800 2194080 ...
##  $ hse_units  : num [1:58] 284367 43867 35492 12710 3445076 ...
##  $ ave_fam_sz : num [1:58] 3.61 3.59 2.94 2.98 3.58 3.63 2.94 2.77 3.02 3.74 ...
##  $ vacant     : num [1:58] 29757 2634 8944 2652 203872 ...
##  $ owner_occ  : num [1:58] 152828 22329 17472 6590 1544749 ...
##  $ renter_occ : num [1:58] 101782 18904 9076 3468 1696455 ...
##  $ county_fips: num [1:58] 6103 6089 6106 6086 6073 ...
##  - attr(*, "spec")=
##   .. cols(
##   ..   X1 = col_double(),
##   ..   name = col_character(),
##   ..   pop2012 = col_double(),
##   ..   pop12_sqmi = col_double(),
##   ..   white = col_double(),
##   ..   black = col_double(),
##   ..   ameri_es = col_double(),
##   ..   asian = col_double(),
##   ..   hawn_pi = col_double(),
##   ..   hispanic = col_double(),
##   ..   other = col_double(),
##   ..   mult_race = col_double(),
##   ..   males = col_double(),
##   ..   females = col_double(),
##   ..   med_age = col_double(),
##   ..   households = col_double(),
##   ..   families = col_double(),
##   ..   hse_units = col_double(),
##   ..   ave_fam_sz = col_double(),
##   ..   vacant = col_double(),
##   ..   owner_occ = col_double(),
```

```
##   ..   renter_occ = col_double(),
##   ..   county_fips = col_double()
##   .. )
```

```
str(cov_vax_admin)
```

```
## spec_tbl_df [65,268 x 11] (S3: spec_tbl_df/tbl_df/tbl/data.frame)
##  $ X1                           : num [1:65268] 1 2 3 4 5 6 7 8 9 10 ...
##  $ as_of_date                   : chr [1:65268] "1/5/2021" "1/5/2021" "1/5/2021" "1/5/2021" ...
##  $ zip_code_tabulation_area     : num [1:65268] 92703 92285 92284 92275 92532 ...
##  $ local_health_jurisdiction    : chr [1:65268] "ORANGE" "SAN BERNARDINO" "SAN BERNARDINO" "IMPERIAL
##  $ county                       : chr [1:65268] "ORANGE" "SAN BERNARDINO" "SAN BERNARDINO" "IMPERIAL
##  $ vaccine_equity_metric_quartile: num [1:65268] 1 1 1 1 3 1 1 2 2 3 ...
##  $ vem_source                   : chr [1:65268] "Healthy Places Index Score" "Healthy Places Index S
##  $ age12_plus_population        : num [1:65268] 57183 2317 22255 2269 19882 ...
##  $ persons_fully_vaccinated     : num [1:65268] NA NA NA NA NA NA NA 17 28 27 ...
##  $ persons_partially_vaccinated : num [1:65268] NA NA NA NA NA ...
##  $ redacted                     : chr [1:65268] "Information redacted in accordance with CA state pr
##  - attr(*, "spec")=
##   .. cols(
##   ..   X1 = col_double(),
##   ..   as_of_date = col_character(),
##   ..   zip_code_tabulation_area = col_double(),
##   ..   local_health_jurisdiction = col_character(),
##   ..   county = col_character(),
##   ..   vaccine_equity_metric_quartile = col_double(),
##   ..   vem_source = col_character(),
##   ..   age12_plus_population = col_double(),
##   ..   persons_fully_vaccinated = col_double(),
##   ..   persons_partially_vaccinated = col_double(),
##   ..   redacted = col_character()
##   .. )
```

The 5+ data elements/columns/variables we are interested in:

From COVID vax data set: county (county: chr), persons fully vaxxed (persons_fully_vaccinated: num), age 12+ population (age12_plus_population: num), zip code (zip_code_tabulation_area: num).

County is the only character value of interest while the rest of the variables are numeric.

From the Census data set: median age (med_age: num), county name (name: chr), and overall population (pop2012: num).

County name is the only character value of interest while the rest of the variables are numeric.

All the variables we are interested in are in the desired type/format and we will not need to convert any columns to numeric or another type.

#3 Provide a basic description of the 5+ data elements [in other words: what type of functions can you apply to these data elements (aka variables); Numeric: mean, median, range, max, summary Character: unique values/categories Or any other descriptives that will be useful to the analysis

```
#This is the unweighted mean of the medium ages across each county in
#California

ca_county_demographic_total_mean_age <- ca_county_demographics %>%
  summarize(total_mean_age = mean(med_age, na.rm = TRUE))

(view(ca_county_demographic_total_mean_age))
```

```
## # A tibble: 1 x 1
##   total_mean_age
##            <dbl>
## 1           38.5
```

```
# A tibble: 1 x 1
  #total_mean_age
          # <dbl>
#1           38.5

#Exploring the mean age for each county in California

mean_age_county <- ca_county_demographics %>%
summarize(med_age_piped = mean(med_age,na.rm = TRUE))
mean_age_county
```

```
## # A tibble: 1 x 1
##   med_age_piped
##           <dbl>
## 1          38.5
```

```
#Exploring distinct county and zipcodes in California

unique(cov_vax_admin$county)
```

```
##  [1] "ORANGE"          "SAN BERNARDINO"  "IMPERIAL"        "RIVERSIDE"
##  [5] "LOS ANGELES"     "SAN DIEGO"       "TRINITY"         "SAN FRANCISCO"
##  [9] "TULARE"          "MARIN"           "CONTRA COSTA"    "KERN"
## [13] "VENTURA"         "SANTA BARBARA"   "SAN MATEO"       "SOLANO"
## [17] "FRESNO"          "MONTEREY"        "SONOMA"          "NAPA"
## [21] "ALAMEDA"         "MADERA"          "KINGS"           "INYO"
## [25] "SACRAMENTO"      "SAN LUIS OBISPO" "SANTA CLARA"     "EL DORADO"
## [29] "GLENN"           "YUBA"            "BUTTE"           "PLACER"
## [33] "AMADOR"          "SUTTER"          "MONO"            "LAKE"
## [37] "YOLO"            "HUMBOLDT"        "SAN JOAQUIN"     "TUOLUMNE"
## [41] "CALAVERAS"       "SHASTA"          NA                "SISKIYOU"
## [45] "LASSEN"          "MERCED"          "SANTA CRUZ"      "SAN BENITO"
## [49] "MODOC"           "STANISLAUS"      "MENDOCINO"       "SIERRA"
## [53] "TEHAMA"          "PLUMAS"          "MARIPOSA"        "DEL NORTE"
## [57] "NEVADA"          "ALPINE"          "COLUSA"
```

```
unique(cov_vax_admin$zip_code_tabulation_area)
```

```
##    [1] 92703 92285 92284 92275 92532 92376 92345 91343 91910 91773 92239 92057
##   [13] 92868 92865 92612 92026 92341 92339 95595 92234 91016 91105 91761 91405
```

```
##   [25] 91950 91914 92009 92707 92845 92807 92861 92368 92648 92647 92801 92311
##   [37] 92262 92253 92231 92869 92503 92410 91342 91722 92281 92407 92841 92614
##   [49] 92346 91303 91784 91384 92268 92203 92082 92029 92627 92832 92309 94127
##   [61] 92145 92081 94129 94103 92879 92821 92548 92230 93247 92147 92596 92886
##   [73] 92880 94925 92626 94523 94115 92604 93206 92544 92394 92395 92222 92140
##   [85] 92058 92055 92805 92562 92694 92332 92273 92555 92399 91748 91916 92258
##   [97] 92061 92014 92844 92663 92782 92656 92561 92358 92373 92259 92225 92347
##  [109] 92342 92866 92553 92551 92254 91902 93249 93004 93101 93041 94521 94025
##  [121] 94123 94535 92115 93730 93220 93064 93953 93932 94954 91602 94582 94573
##  [133] 94158 94528 94607 94588 94063 92114 93235 93723 93636 93524 93036 93103
##  [145] 91978 91962 91502 94503 94806 94534 94505 94963 94021 94611 94567 92220
##  [157] 92122 93258 93652 93628 93245 93928 93023 94805 91001 91948 91906 91401
##  [169] 94850 94720 94060 94585 94561 93545 93592 93043 91604 91204 91701 91607
##  [181] 91505 91935 91934 92374 92676 92833 92831 92692 92651 92124 92405 92359
##  [193] 91304 91905 92352 92131 92102 92655 92653 92404 95621 92337 91108 91324
##  [205] 91381 91932 92233 92308 93611 93426 93033 93108 94951 91608 94613 94548
##  [217] 94516 94085 94587 94022 92274 94804 92154 93633 93042 93603 93601 91942
##  [229] 91710 91423 91355 91107 91331 91306 91335 95639 95720 95920 94109 93643
##  [241] 93637 93630 93604 93434 93446 93311 93265 93251 92620 91963 95901 95973
##  [253] 95919 95717 95669 95674 94107 94002 92117 90713 90630 93614 93510 93201
##  [265] 93109 94924 95928 94972 90242 93535 93204 93207 93451 93287 93226 93430
##  [277] 91770 91767 95943 95842 93224 92173 92123 92078 90623 93926 93625 93517
##  [289] 93440 93238 93727 93230 93272 91766 91104 92518 92336 92325 92084 94564
##  [301] 94558 95662 91101 91352 91360 91361 91351 91320 91206 92584 91030 91344
##  [313] 91208 92083 94015 95823 95485 91755 91732 91301 91020 91775 91214 95138
##  [325] 92536 93205 93063 93701 91941 95830 95659 95606 95524 91040 91803 91321
##  [337] 91307 95237 92557 91367 92883 92508 92389 95528 95335 95257 95492 95476
##  [349] 91786 91730 91311 95233 95130 92677 92570 92507 92240 91901 91302 92364
##  [361] 92067 92344 92322 92011 92010 92780 94525 94128 92804 91201 93242 93234
##  [373] 93022 93021 92637 92378 92155 92135 92134 94619 94104 94024 94133 92704
##  [385] 94568 94549 94030 94005 94514 94507 92354 92324 92313 93222 92545 92603
##  [397] 92385 92019 92646 94501 94124 92860 92662 92567 92377 91006 93001 92678
##  [409] 92617 92391 94037 94502 94949 93312 93429 91911 91776 95668 95826 94956
##  [421] 90620 93631 93555 93544 93221 93427 93962 93111 94920 94933 93513 93428
##  [433] 93266 93401 93285 93254 93309 93240 92660 93402 93308 92139 92316 92280
##  [445] 91011 93013 92250 92132 92867 94560 94019 94544 94539 94130 94971 92223
##  [457] 94575 90715 93543 93286 92657 92630 92587 91980 95630 95957 95828 95925
##  [469] 94941 93641 95680 95653 96065 95930 95554 95035 97635 95626 96094 96009
##  [481] 95691 95547 95961 95821 95699 95610 95604 95458 95635 95442 95322 95148
##  [493] 95448 95982 95618 95615 96086 96146 95757 95377 96037 95073 95831 95665
##  [505] 95565 95062 95023 96134 96132 95652 95467 95319 95211 95545 95053 95341
##  [517] 95372 95139 96107 96038 95978 95968 95838 95742 95692 95585 95679 95314
##  [529] 95457 95822 95818 95713 95234 95616 95361 95351 95421 96118 96080 96071
##  [541] 95947 95910 95677 95121 95542 95815 95232 95240 95327 95318 95133 95008
##  [553] 95974 95420 95466 96058 96142 96141 95569 95758 95304 95553 95645 95655
##  [565] 95651 96085 96067 96044 96035 95984 95605 95568 95461 95765 95375 95746
##  [577] 95391 95248 95075 95013 95632 95627 96126 96027 95625 95558 95549 95543
##  [589] 96109 96063 96091 96011 96051 96129 96049 96112 95728 95640 95988 95220
##  [601] 96008 96119 96105 95527 96047 96084 96046 96029 96039 96002 96135 96074
##  [613] 95914 95695 95666 96014 96128 96148 95658 96117 96116 96108 96062 96054
##  [625] 96052 96013 96075 96061 96041 96010 95936 95726 95690 96133 96017 96123
##  [637] 96101 96097 96096 96137 96125 96103 96022 96155 96111 95963 95631 96007
##  [649] 96057 96020 96016 96115 96104 95355 96121 95693 95681 95116 95070 96110
##  [661] 96093 96088 95638 96113 96076 96048 95589 95835 95833 96056 96122 95724
```

```
##  [673] 95698 95697 95486 95435 95811 96106 96032 96001 96023 96019 95923 95829
##  [685] 95686 95207 95206 95113 95219 95054 95915 95468 96031 96120 96090 96006
##  [697] 96050 95450 96021 96145 95949 95934 95864 95816 95709 90024 95122 95046
##  [709] 95310 95446 96073 96150 95386 94526 94074 94547 94541 94401 90094 90059
##  [721] 90732 90010 95358 95236 94306 94043 90095 90250 90605 90025 95118 95379
##  [733] 95338 95252 95429 90706 90031 90029 95364 95345 95333 95369 94599 94590
##  [745] 94577 94552 90831 90079 90073 90254 95410 90280 90021 95010 95354 95311
##  [757] 95453 96064 96059 95360 94546 94536 94518 90742 91913 90302 90201 95076
##  [769] 94551 94531 94709 94592 92120 93623 93943 93619 93558 93519 93314 90601
##  [781] 91711 91706 91106 91024 91702 93283 93410 93449 93003 94930 94903 91406
##  [793] 94597 90290 96136 96130 96069 95376 95368 95254 95251 94565 94118 90090
##  [805] 90018 90740 90703 90606 90063 90245 90035 95117 94957 95471 95469 96087
##  [817] 95370 95329 95226 94131 94515 90755 95445 95223 95215 95125 95064 96034
##  [829] 96028 96024 95437 95417 95388 95672 95367 95571 95348 95439 95312 95562
##  [841] 96033 96025 96140 95222 95209 95033 95563 95245 95374 95131 95051 95404
##  [853] 95112 95460 95323 95444 95366 95224 95110 95020 95449 95313 95135 96068
##  [865] 96003 96092 95134 95305 95663 95660 95556 95463 95494 95382 95415 95601
##  [877] 96143 95202 95432 95401 95834 90405 95124 95018 95005 95317 95551 96055
##  [889] 95039 95007 95443 95357 94530 94116 90089 90710 95303 90743 90212 95320
##  [901] 94566 94508 94122 94108 94089 94087 90747 90506 90503 90277 95227 95212
##  [913] 95136 95490 96161 95014 95427 95426 95407 95249 95465 95321 95111 95065
##  [925] 95041 92590 95132 95620 95587 96040 96015 96124 96114 95126 95546 95511
##  [937] 95488 95428 95340 92356 92111 92110 92059 92624 92264 92128 93305 93223
##  [949] 93648 93606 93441 90631 93653 93647 92127 92210 92201 92071 92028 92887
##  [961] 92808 93292 93452 90504 93640 92338 92270 92251 92243 93424 93405 93244
##  [973] 93654 93528 94014 93646 92583 92252 92070 92024 92021 92701 92105 93433
##  [985] 92119 93010 93725 94904 94704 90815 90814 93635 92585 92320 92278 92267
##  [997] 92266 92242 92036 94707 94702 90071 90602 92129 92327 92706 92691 92257
## [1009] 92106 92283 92625 92870 92408 93624 92505 92328 92688 92592 92065 92027
## [1021] 92020 92679 92586 92543 92108 92363 92256 92025 93522 92277 93518 93657
## [1033] 92530 92384 92305 92304 92241 92882 92683 92649 92107 93117 93656 93432
## [1045] 93703 94020 92382 92282 92276 92260 92211 92101 92629 92315 93313 93202
## [1057] 93015 94111 94305 95383 95363 95334 95326 95970 95946 95926 95951 93665
## [1069] 93923 93550 94603 94403 93465 95247 95634 95140 95623 92802 93906 93610
## [1081] 93450 94964 94945 94040 95942 95315 95959 94612 94044 94102 95356 95337
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## [1117] 93668 93726 94579 94303 95987 95944 95841 95993 95918 95917 95819 95694
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## [1141] 92301 92249 92227 92121 92109 95714 95703 95937 93662 93605 93602 93532
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```

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## [1321] 90067 90803 92371 92618 92506 92401 92392 92843 92806 92509 92008 92007
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## [1513] 95945 95636 95832 95814 95736 93215 95514 90805 90033 90014 95316 91977
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## [1537] 95430 95306 91791 91789 91601 91042 91205 91207 91202 92571 92705 92333
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## [1561] 95540 95307 91801 91606 94027 95255 92113 92091 95678 95350 95501 91007
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## [1585] 93445 93301 93256 93516 93243 94610 93960 93453 93514 93920 93721 93527
## [1597] 93622 93210 94571 94555 91203 93241 93901 93666 93554 93512 93442 94965
## [1609] 94937 94703 94595 94946 93271 93239 93650 93262 93257 93250 94618 93268
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## [1681] 95559 92602 95228 95482 95250 95431 95346 95330 94545 95324 95301 95519
## [1693] 95991 94710 94574 95205 95032 92040 92835 95462 95405 95412 95441 95607
## [1705] 90047 95225 92840 95045 95037 94510 92673 92310 92321 94960 94506 92056
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## [1729] 90058 95043 95619 95050 95564 95365 95537 95536 95685 94301 94589 94605
## [1741] 95019 94923 94928 94938 95971 94134 94939 95614 94708 95776 94553 90505
## [1753] 90266 94801 95470 95472 95066 94901 94404 95389 95503 95123 94970 95120
```

```r
#Exploring the total number of persons totally vaccinated per County

zip_vector <- unique(cov_vax_admin$zip_code_tabulation_area)

total_vaccinated_california <- cov_vax_admin %>%
group_by(county)%>%
summarize(total_vax = sum(persons_fully_vaccinated,na.rm = TRUE))


#Exploring the total population for each County

sum(ca_county_demographics$pop2012)
```

```
## [1] 37707477
```

```r
median(ca_county_demographics$pop2012)
```

```
## [1] 180662.5
```

```r
#Exploring the total number of persons age 12 and above per County

sum(cov_vax_admin$age12_plus_population)
```

```
## [1] 1233241724
```

```r
total_age12andabove_california <- cov_vax_admin %>%
group_by(county)%>%
summarize(total_age12andabove = sum(age12_plus_population,na.rm = TRUE), median_of_age_12_and_above = m
```