Covid-19 Statistics Queried using mongoDB and SQL

```
Total vaccinations in the US march 2021 vs november 2021

> db.case2covid.find({date2:"3/31/21"}, {total_vaccinations:1, date2:1})
{ "_id" : ObjectId("61a00c7a310b45c7b7f5d956"), "date2" : "3/31/21", "total_vaccinations" : 171461095 }

> db.case2covid.find({date2:"11/22/21"}, {total_vaccinations:1, date2:1})
{ "_id" : ObjectId("61a00c7a310b45c7b7f5da3e"), "date2" : "11/22/21", "total_vaccinations" : 452657967 }
```

```
#4 Booster (do for august, sept, oct, nov)--leaving this for future aspects in our presentation

> db.case2covid.find({ date2: { $in: ["8/31/21", "9/30/21", "10/31/21", "11/22/21"]}}, {total_boosters:1, date2:1})
{ "_id" : ObjectId("61a00c7a310b45c7b7f5d9ed"), "date2" : "8/31/21", "total_boosters" : 1464482 }
{ "_id" : ObjectId("61a00c7a310b45c7b7f5da0d"), "date2" : "9/30/21", "total_boosters" : 5708602 }
{ "_id" : ObjectId("61a00c7a310b45c7b7f5da2a"), "date2" : "10/31/21", "total_boosters" : 20678146 }
{ "_id" : ObjectId("61a00c7a310b45c7b7f5da3e"), "date2" : "11/22/21", "total_boosters" : 35992923 }
```

```
#5 Compare # of deaths before vaccination and after vaccination (do a 3 month diff, 6 month, 9 month)

> db.case2covid.find( { date2: { $in: ["12/12/20","4/12/21","8/12/21", "11/16/21"]}}, {new_deaths:1})
{ "_id" : ObjectId("61a00c7a310b45c7b7f5d8e4"), "new_deaths" : 2533 }
{ "_id" : ObjectId("61a00c7a310b45c7b7f5d964"), "new_deaths" : 452 }
{ "_id" : ObjectId("61a00c7a310b45c7b7f5d9d7"), "new_deaths" : 1012 }
{ "_id" : ObjectId("61a00c7a310b45c7b7f5da39"), "new_deaths" : 1278 }
```

```
#6. Query cases trend and vaccinations based on holiday times (2020 christmas/new years, labor day, july 4th, Feb7th super bowl.
april 2nd good friday)  --harinee should do both cases and deaths

> db.case2covid.find( { date2: { $in: ["7/4/20", "7/4/21", "2/7/21", "9/7/20", "9/6/21", "4/10/20", "4/2/21", "12/25/20",
"12/25/21"]}},{_id:0,new_deaths:1, date2:1, new_cases:1, total_vaccinations:1})
{ "date2" : "4/10/20", "new_cases" : 34347, "new_deaths" : 2186, "total_vaccinations" : "" }
{ "date2" : "7/4/20", "new_cases" : 48946, "new_deaths" : 302, "total_vaccinations" : "" }
{ "date2" : "9/7/20", "new_cases" : 23898, "new_deaths" : 320, "total_vaccinations" : "" }
{ "date2" : "12/25/20", "new_cases" : 108685, "new_deaths" : 1505, "total_vaccinations" : 2812926 }
```

```
{ "date2" : "2/7/21", "new_cases" : 91883, "new_deaths" : 1477, "total_vaccinations" : 49279064 }
{ "date2" : "4/2/21", "new_cases" : 71849, "new_deaths" : 901, "total_vaccinations" : 179628307 }
{ "date2" : "7/4/21", "new_cases" : 3824, "new_deaths" : 38, "total_vaccinations" : 338443229 }
{ "date2" : "9/6/21", "new_cases" : 78057, "new_deaths" : 590, "total_vaccinations" : 380803017 }
```

```
# 7. Weekly hospitalizations before and after vaccination (do the 3 month diff thing here too)

> db.case2covid.find( { date2: { $in: ["8/23/20","12/13/20","4/11/21", "11/7/21"]}}, {_id:0,weekly_hosp_admissions:1, date2:1,
total_vaccinations:1})
{ "date2" : "8/23/20", "weekly_hosp_admissions" : 30417, "total_vaccinations" : "" }
{ "date2" : "12/13/20", "weekly_hosp_admissions" : 101588, "total_vaccinations" : 21815 }
{ "date2" : "4/11/21", "weekly_hosp_admissions" : 39199, "total_vaccinations" : 207184029 }
{ "date2" : "11/7/21", "weekly_hosp_admissions" : 35721, "total_vaccinations" : 435609677 }
```

```
> db.test_mental.aggregate([{$group:{_id: "$Changes in work intensity", Count_of_people: { $sum:1 }}}])
{ "_id" : 1, "Count_of_people" : 4699 }
{ "_id" : 2, "Count_of_people" : 391 }
{ "_id" : 3, "Count_of_people" : 18 }

> db.test_mental.aggregate([{$group:{_id:{Rating: "$Changes in work intensity", Gender: "$Gender"}, Count_of_people: { $sum:1 }}}])
{ "_id" : { "Rating" : 3, "Gender" : 1 }, "Count_of_people" : 4 }
{ "_id" : { "Rating" : 1, "Gender" : 1 }, "Count_of_people" : 1140 }
{ "_id" : { "Rating" : 1, "Gender" : 2 }, "Count_of_people" : 3559 }
{ "_id" : { "Rating" : 2, "Gender" : 2 }, "Count_of_people" : 285 }
{ "_id" : { "Rating" : 2, "Gender" : 1 }, "Count_of_people" : 106 }
{ "_id" : { "Rating" : 3, "Gender" : 2 }, "Count_of_people" : 14 }

Key
Rating: 1 -> Greater; 2 -> No change; 3 -> Less;
Gender: 1 -> Male; 2 -> Female
```

```
>  db.test_mental.aggregate([{$group:{_id:{ Gender: "$Gender"}, Avg_days_per_week: { $avg:"$Working hours per week" }}}])

{ "_id" : { "Gender" : 1 }, "Avg_days_per_week" : 4.412 }
{ "_id" : { "Gender" : 2 }, "Avg_days_per_week" : 4.156817003628823 }

Key
Gender: 1 -> Male; 2 -> Female
```

Gender: 1 -> Male; 2 -> Female

Avg Satisfaction level with the protective measures grouped by gender

```
> db.test_mental.aggregate([{$group:{_id:{ Gender: "$Gender"}, Rating_avg: { $avg:"$Satisfaction level with the protective measures"
}}}])

{ "_id" : { "Gender" : 1 }, "Rating_avg" : 2.112 }
{ "_id" : { "Gender" : 2 }, "Rating_avg" : 1.9932607568688439 }
```

Key
Gender: 1 -> Male; 2 -> Female

Count of people receiving training grouped by occupation

```
db.test_mental.aggregate([{$group:{_id:{ training: "$Psychological training", Occupation: "$Occupation"}, training: { $sum:1}}}])

{ "_id" : { "training" : 1, "Occupation" : 5 }, "training" : 157 }
{ "_id" : { "training" : 3, "Occupation" : 1 }, "training" : 142 }
{ "_id" : { "training" : 3, "Occupation" : 6 }, "training" : 456 }
{ "_id" : { "training" : 3, "Occupation" : 5 }, "training" : 300 }
{ "_id" : { "training" : 2, "Occupation" : 3 }, "training" : 437 }
{ "_id" : { "training" : 2, "Occupation" : 2 }, "training" : 83 }
{ "_id" : { "training" : 1, "Occupation" : 3 }, "training" : 271 }
{ "_id" : { "training" : 2, "Occupation" : 1 }, "training" : 105 }
{ "_id" : { "training" : 3, "Occupation" : 2 }, "training" : 188 }
{ "_id" : { "training" : 1, "Occupation" : 4 }, "training" : 227 }
{ "_id" : { "training" : 3, "Occupation" : 4 }, "training" : 762 }
{ "_id" : { "training" : 2, "Occupation" : 5 }, "training" : 198 }
{ "_id" : { "training" : 2, "Occupation" : 6 }, "training" : 361 }
{ "_id" : { "training" : 1, "Occupation" : 2 }, "training" : 50 }
{ "_id" : { "training" : 1, "Occupation" : 1 }, "training" : 47 }
{ "_id" : { "training" : 3, "Occupation" : 3 }, "training" : 687 }
{ "_id" : { "training" : 2, "Occupation" : 4 }, "training" : 434 }
{ "_id" : { "training" : 1, "Occupation" : 6 }, "training" : 203 }
```

Key
Training: 1 -> Often; 2 -> Sometimes; 3 -> Never

```
Occupation:
1 -> Administrative personnel
2 -> Disease control personnel
3 -> Doctor
4 -> Nurse
5 -> Medical Technician
6 -> Other
```

Top 3 States with Highest percentage of Adult Suicidal Ideation

Select state_2019, percentage_2019, state_2020, percentage_2020, state_2021, percentage_2021 from adult_suicide_compiled ORDER BY percentage_2019 desc limit 3;

state_2019	percentage_2019	state_2020	percentage_2020	state_2021	percentage_2021
West Virginia	6.33	Texas	6.34	Texas	6.34
Utah	6.35	Florida	5.98	Utah	6.42
New Jersey	6.53	Utah	6.42	Florida	6.68

Top 3 States with Highest percentage of Adults with Substance Use Disorder

Select state_2019, percentage_2019, state_2020, percentage_2020, state_2021, percentage_2021 from adult_substance_compiled limit 3;

state_2019	percentage_2019	state_2020	percentage_2020	state_2021	percentage_2021
Florida	3.34	New Jersey	3.41	New Jersey	3.47
Missouri	3.47	Florida	3.49	New York	3.63
Texas	3.51	New York	3.68	Texas	3.66

Top 3 States with Highest percentage of Youth with Past Depression that received consistent treatment

Select state_2019, percentage_2019, state_2020, percentage_2020, state_2021, percentage_2021 from treatment_compiled limit 3;

state_2019	percentage_2019	state_2020	percentage_2020	state_2021	percentage_2021
Minnesota	39.7	Maine	65.6	Maine	50
Maine	38.7	Maine	50	Maryland	49.2
New Hampshire	38	Vermont	49.7	Vermont	45.4

Top 3 States with Highest percentage of Youth with Past Depression that received no treatment

Select state_2019, percentage_2019, state_2020, percentage_2020, state_2021, percentage_2021 from youth_past_depp_no_treatment_compiled limit 3;

state_2019	percentage_2019	state_2020	percentage_2020	state_2021	percentage_2021
Connecticut	45.8	Maine	38.6	Maine	38.6
Minnesota	46.5	District of Columbia	38.8	District of Columbia	38.8
Maine	48.5	Vermont	40.7	Vermont	40.7

Top 3 States with Highest percentage of Adults with mental illness

Select state_2019, percentage_2019, state_2020, percentage_2020, state_2021, percentage_2021 from adult_mental_compiled limit 3;

state_2019	percentage_2019	state_2020	percentage_2020	state_2021	percentage_2021
New Jersey	15.5	New Jersey	16.14	New Jersey	16.14
Hawaii	15.55	New Jersey	16.37	Texas	16.21

Illinois	15.73	Texas	16.21	Maryland	16.96

Top 3 States with Lowest percentage of Adult Suicidal Ideation

Select state_2019, percentage_2019, state_2020, percentage_2020, state_2021, percentage_2021 from adult_suicide_compiled ORDER BY percentage_2019 desc limit 3;

state_2019	percentage_2019	state_2020	percentage_2020	state_2021	percentage_2021
Utah	5.62	Utah	5.99	Utah	6.47
Vermont	5.48	Idaho	5.6	Alaska	5.85
Montana	5.29	Colorado	5.41	Colorado	5.51

Top 3 States with Lowest percentage of Youth with Past Depression that received no treatment

Select state_2019, percentage_2019, state_2020, percentage_2020, state_2021, percentage_2021 from youth_past_depp_no_treatment_compiled ORDER BY percentage_2019 desc limit 3;

state_2019	percentage_2019	state_2020	percentage_2020	state_2021	percentage_2021
Texas	71.3	Nevada	71	Nevada	71
Tennessee	70.7	Georgia	70.4	Georgia	70.4
South Carolina	69	Alabama	69.7	Alabama	69.7