DURHAM COLLEGE

SUCCESS MATTERS

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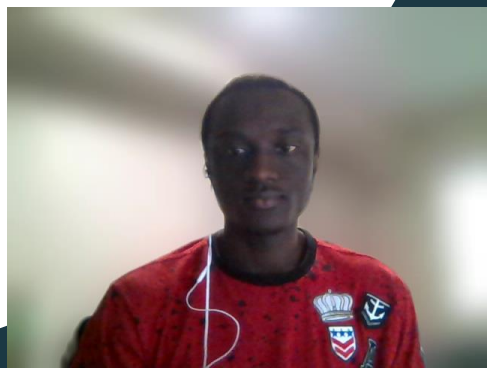
DATA 2205 – VISUALIZATIONS, LEADERSHIP

ASSIGNMENT 5 – PRESENTATION PROJECT

PROF: SERGEY RODIN

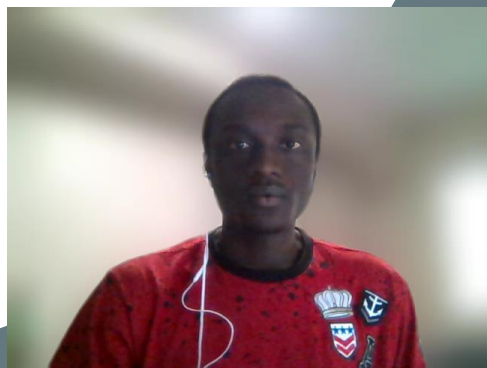


INTRODUCTION

- In this report, we will walk through three COVID-19 datasets in Canada from 2019 to 2020. The virus came with a pandemic that ushered in blood rush from governments and health professionals, to lace up and get ready for battle

Most of the datasets have common variables like

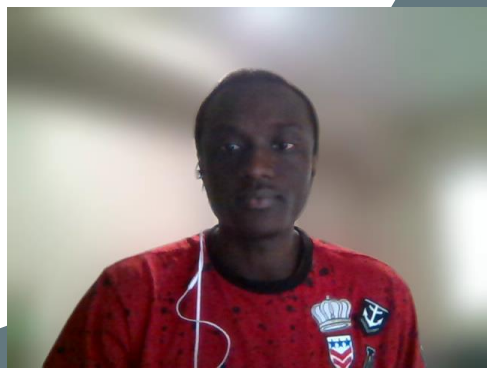
- covid cases
- Vaccines distributed
- Affected groups (age and others)
- Health units at play

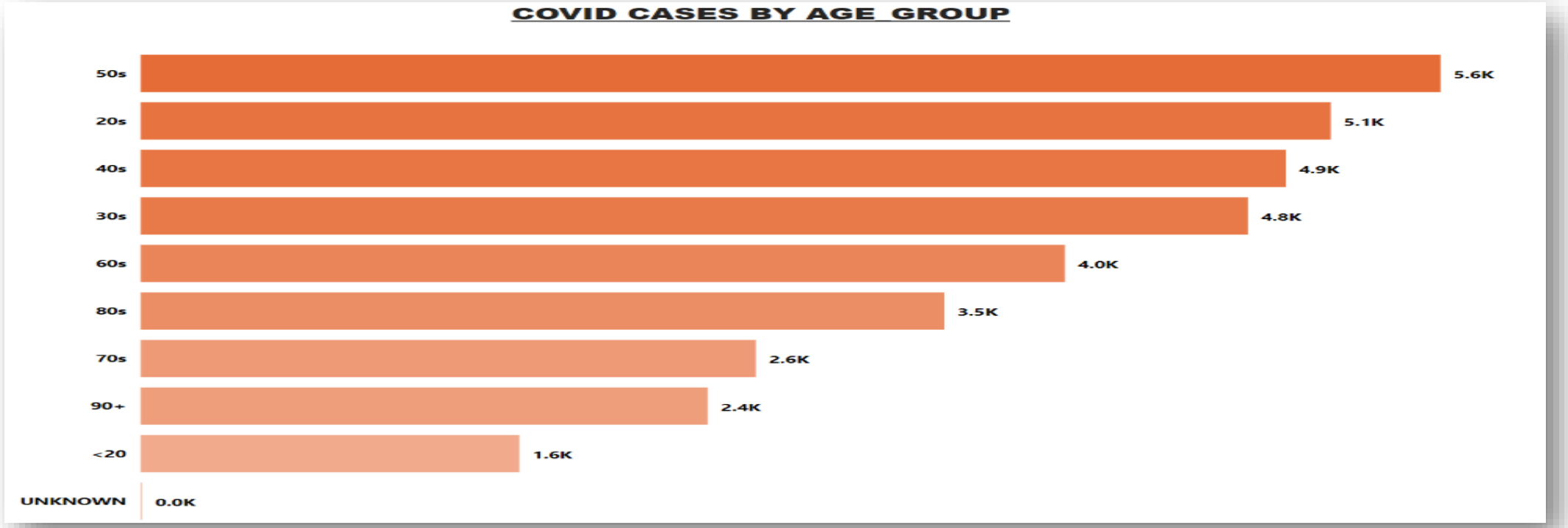


DATA ANALYSIS

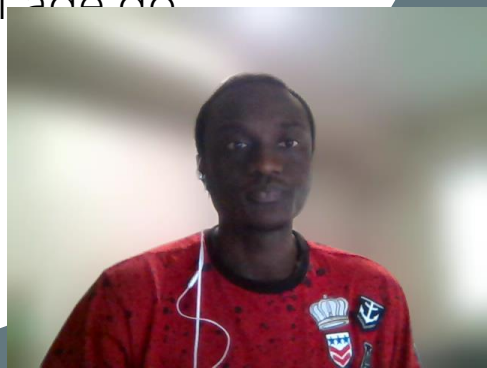
In this report, we will walk through the COVID-19 in some provinces in Canada, health units and affected population. We will get an understanding of how this pandemic has slowed activities and led to mass urgency for health personnel and the country.

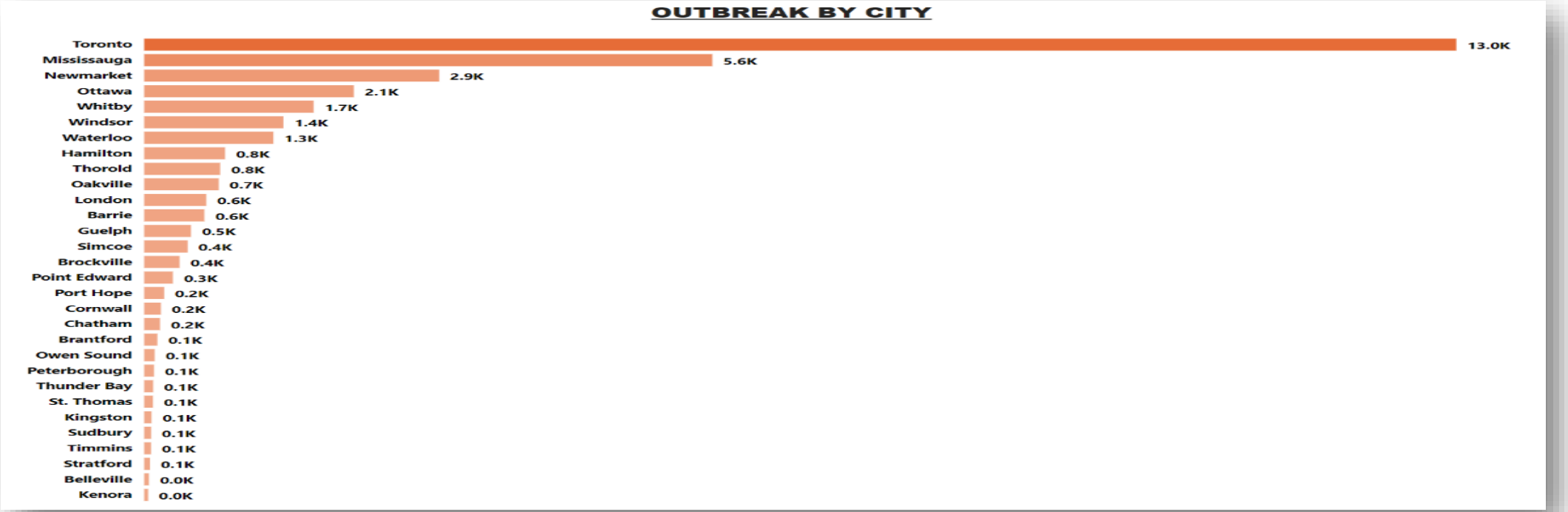
- The basis of my analysis is to find better ways we can combat the spread of the virus, how to ameliorate services and attention given to people, for we are all in this battle to win. This and more will help Canada and the world brace up if the pandemic should resurface. We would see visuals of mainly:
- Affected age groups
- Affected other groups
- Confirmed cases
- Vaccines given
- Correlations if any





- From the visual above, it is clear, and the belief covid-19 affects just the older population is a façade. Descriptively, those in their 50's are still strong but lead with the covid-19 cases, second by the population in their 20's. One would expect the bar to be higher at 70's to 90's but that is not the story our data tells us. Lucky enough, people less than 20years of age do not lead in covid cases, but at 1,600 that is a need for concern and more measures in place publicly.

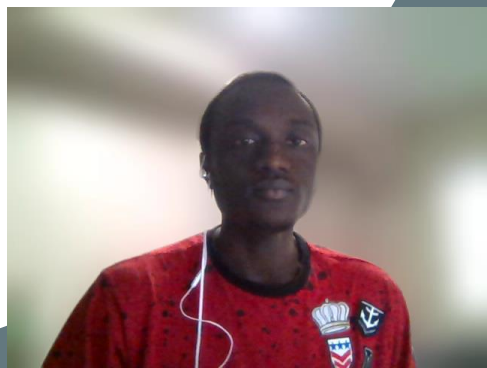


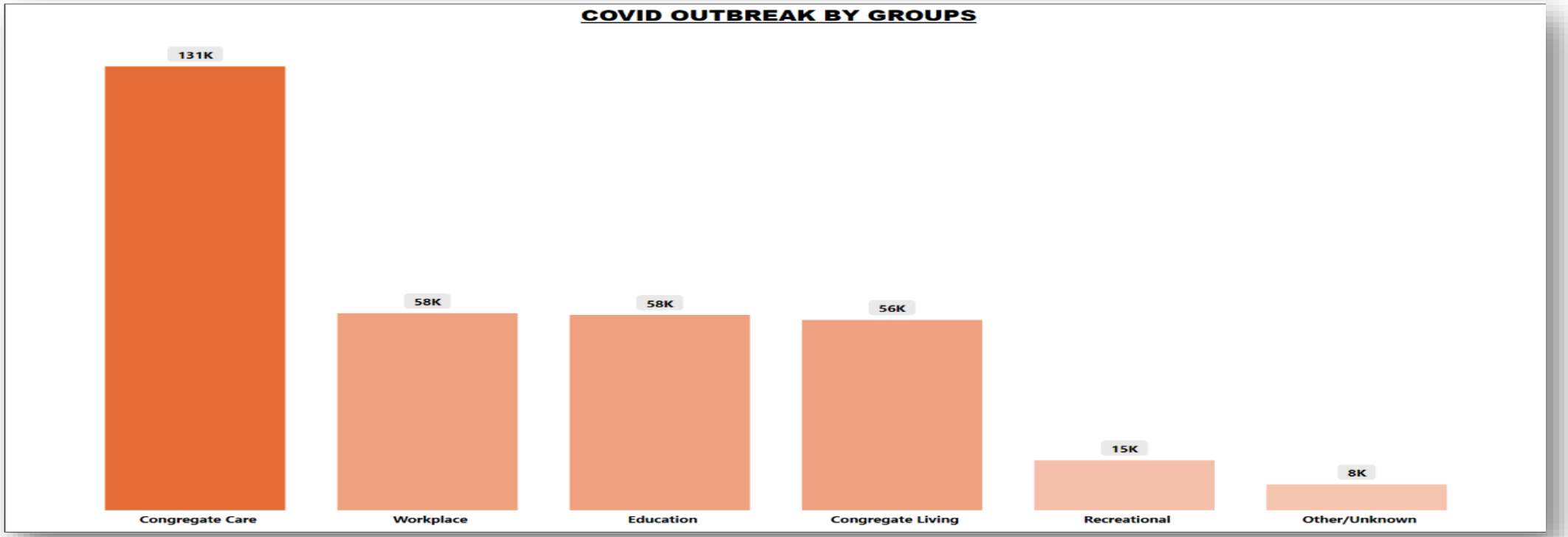


- With our focus on the seven cities hit bad by the virus (Toronto, Mississauga, Newmarket, Ottawa, Whitby, Windsor and Waterloo). Toronto suffered a huge hit with an affected population of over thirteen thousands.

The question arises of :

- May be due to overpopulation at busy places or the cities
- Not enough facilities to handle such cases
- No due diligence and what measures were put in place to combat the virus.
- Lack of vaccines at a time when the virus was high

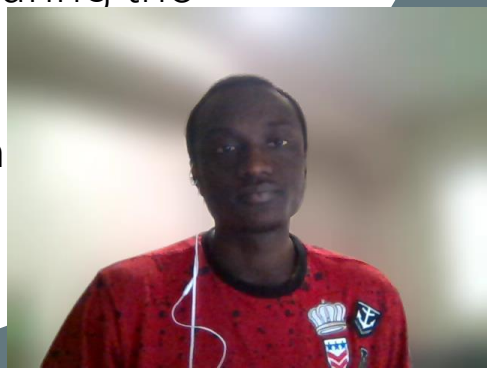




- Let us continue the analysis with a view of some groups in the country. Considering the occurrence of the virus and movement of people, what group of people suffered the most.

We can see those at the congregate care made up a huge 131,171 cases recorded during the outbreak.

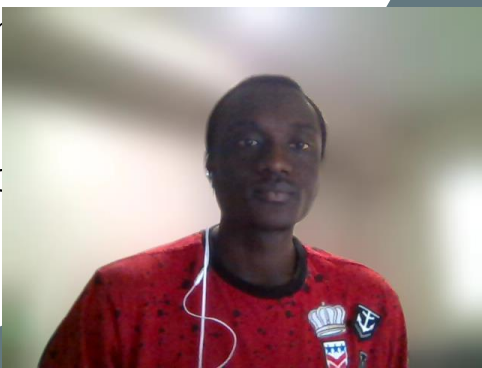
While those at places where people still come together followed at over fifty-eight an eight thousands for (workplace & education, and congregate living) respectively

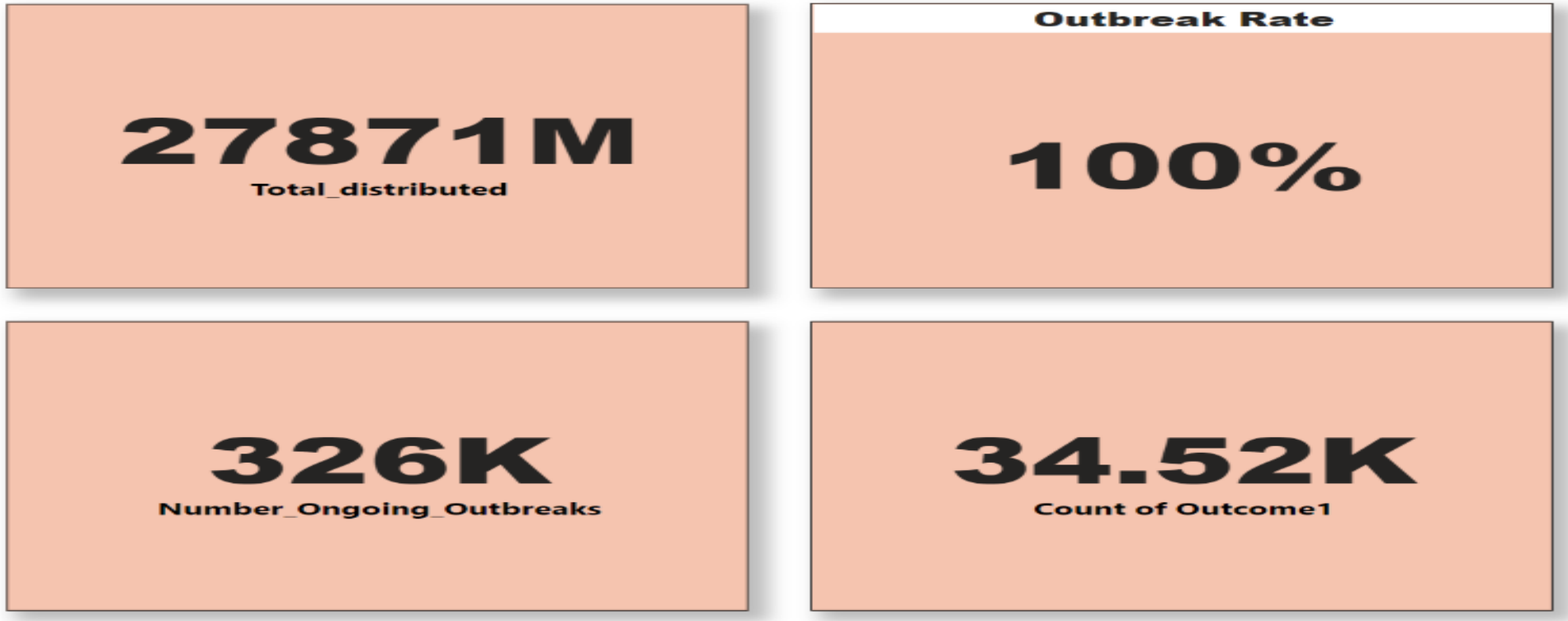


VACCINES DISTRIBUTED BY PROVINCE

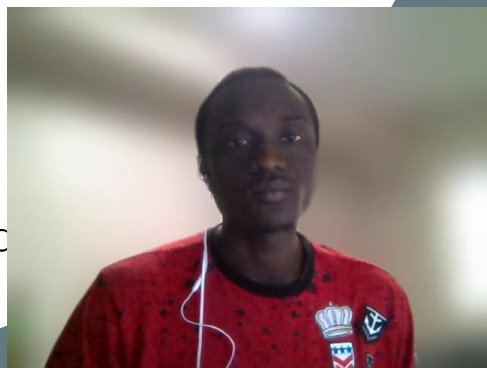
Province_Name	Total_Astrazeneca_distributed	Total_janssen_distributed	Total_medicago_distributed	Total_moderna_distributed	Total_novavax_distributed	Total_Pfizerbiontech_distributed
Ontario	477657K	1686K	0K	3178891K	1390K	6916604K
Quebec	301076K	20K	0K	1708971K	411K	4073572K
British Columbia	181883K	2192K	0K	1033063K	676K	2299116K
Alberta	130646K	1765K	0K	805924K	510K	2118482K
Saskatchewan	43130K	883K	0K	224853K	214K	590644K
Manitoba	37998K	599K	0K	311901K	525K	664945K
Nova Scotia	25369K	322K	0K	208503K	56K	464606K
New Brunswick	24626K	137K	0K	176562K	28K	375463K
Newfoundland and Labrador	16930K	49K	0K	141919K	18K	241459K
Prince Edward Island	4193K	99K	0K	32676K	20K	80344K
Federal allocation	178K	6K	0K	86127K	12K	2791K
Yukon	8K	35K	0K	33096K	6K	1816K
Northwest Territories	0K	0K	0K	35210K	56K	4067K
Nunavut	0K	0K	0K	26211K	0K	4710K
Total	**1243694K**	**7792K**	**0K**	**8003908K**	**3923K**	**17838619K**

- We have seen affected groups of people and cities, now we dive into how the virus was tackled for many.
- Ontario and Quebec have the lion share of most vaccines, this explains why most cities in Ontario like Whitby, New Market, and Mississauga had high cases during the outbreak. This will h monitor and reduce the spread to these and other cities
- By the table, Pfizerbiontech had the highest distribution count as compared to other vac fight against Covid-19



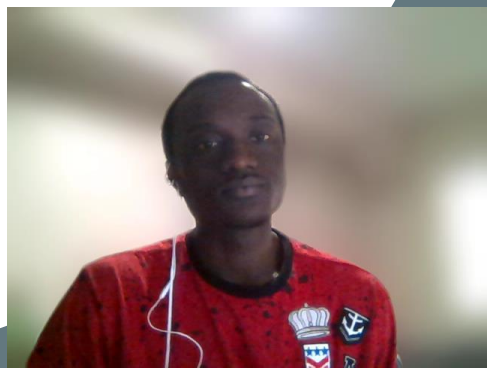


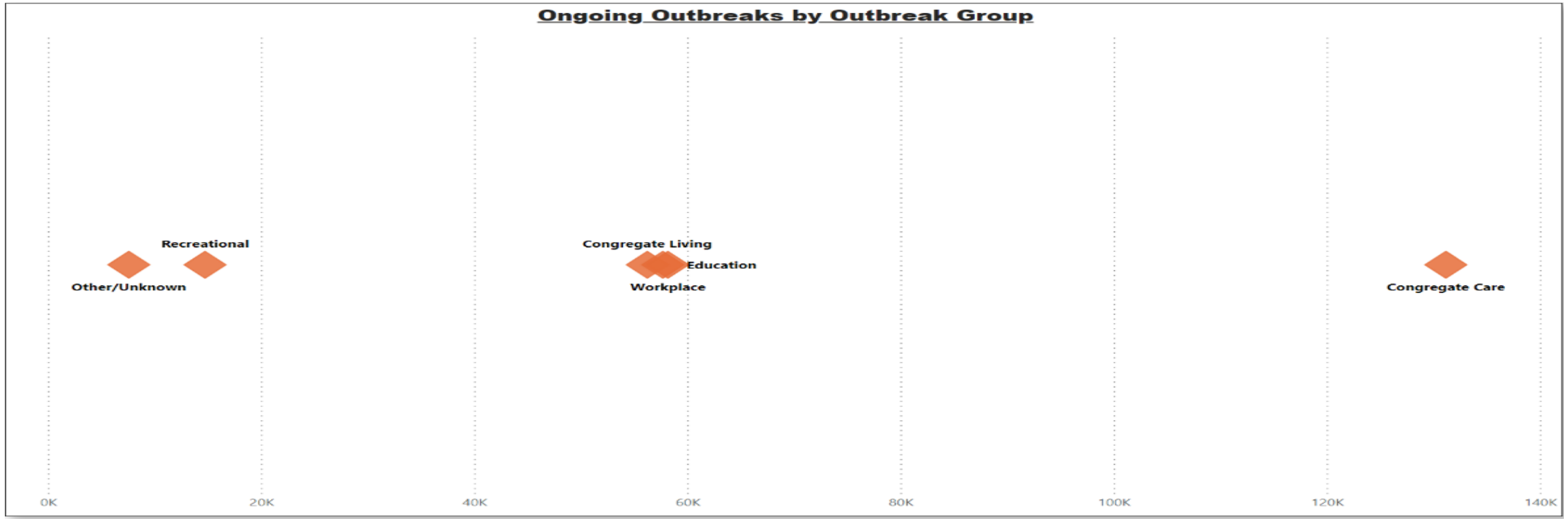
- Totally 27,871,000 vaccines were distributed to fight the spread of Covid-19 as of February 20, 2020.
- The outbreak rate for confirmed cases came at 100%
- We saw 326,000 outbreaks for the virus on the go
- We later looked at what outcome the cases fall at, we noticed 34,52 cases were declared



CORRELATION

- The correlation coefficient gives us a summary of the overall trend in a scatter plot, in a single number between -1 and 1.
- The sign tells if the trend is upward or downward
- The magnitude tells if our data lies tight around a straight line (large), if it scatters around then the magnitude is small.
- Positive correlation is between 0 and 1
- Negative correlation is between 0 and -1
- Straight slope is 0



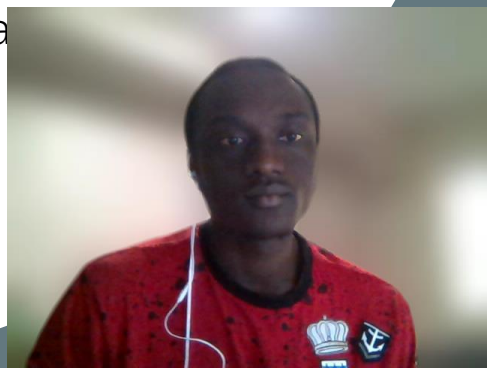


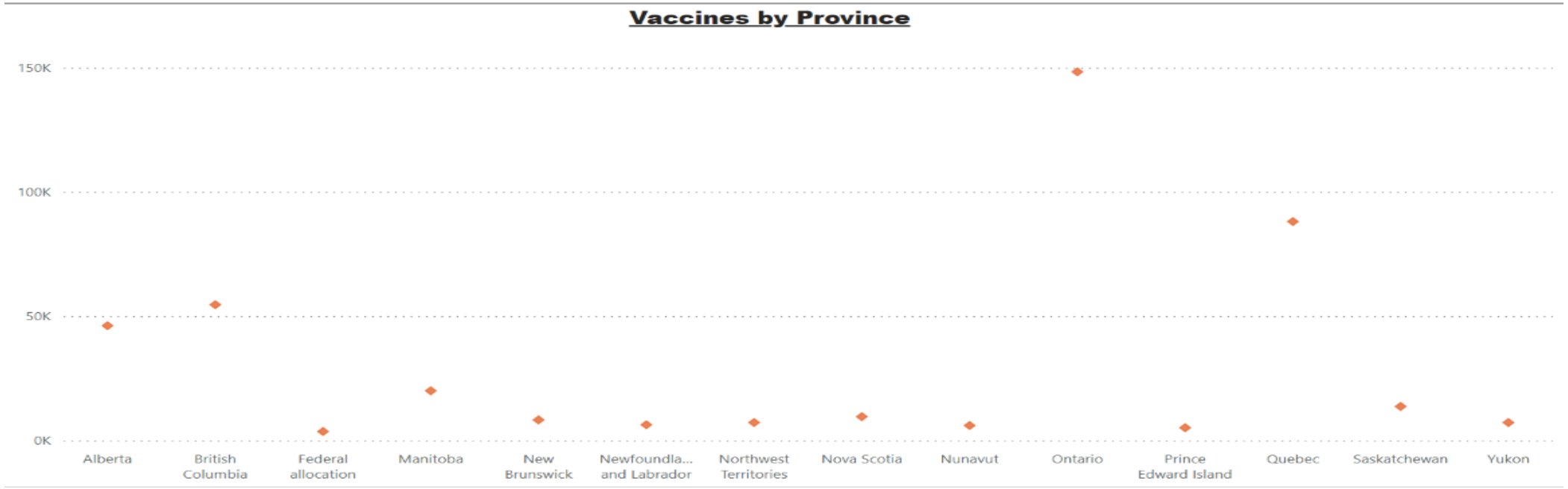
While plotting to find a correlation between some variables like

- Outbreak and Outbreak group, I noticed:

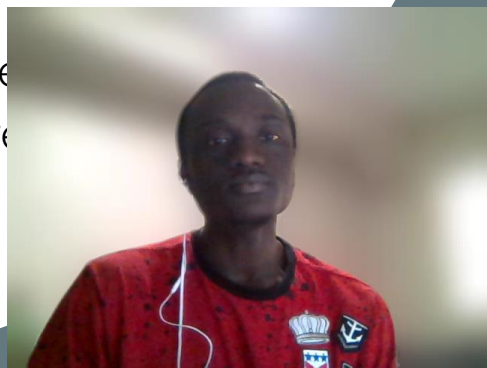
There is really no correlation between COVID-19 outbreak and affected groups, a stra
can easily be drawn. No increase or decrease in one over the other

The coefficient stands at 0 as line is perfectly straight





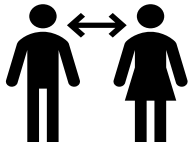
- Looking for a correlation between total vaccines and the provinces that received, seeing it can be because some of the most populated provinces like Ontario, Quebec received the highest vaccines. It could be other reasons
- The plotting shows, the correlation coefficient is tricky which can be seen as positive slope will be driven upward(0 and 1). Another observation, using a straight line here points do not lye on the line.



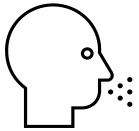
RECOMMENDATIONS

wash hands

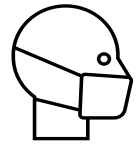
Listen to health guides



Avoid crowds
Social distancing



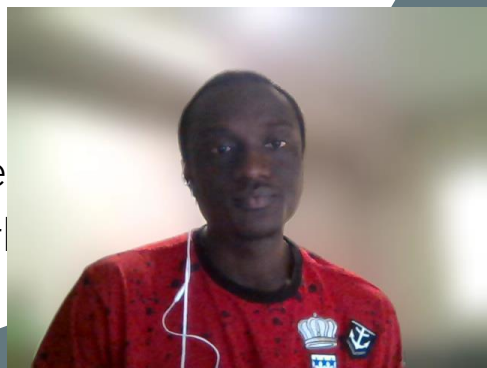
Cover cough



Always have a face mask

1. Continue limiting overpopulation in certain places
2. Children should be given high priority as we do not want a population growing with the virus. Also look out for those above 50years of age, due to weakened immune system
3. Wearing of face covering does not only protect oneself but the country one day after another
4. Noticeably as of now, many health units are well equipped to battle the virus, people and health services should continue to follow health protocols especially at hospitals
5. Sanitize every equipment and out hands while entering and leaving any building

Most COVID-19 measures are being lifted and some in their totality, we should keep obse
stated measures at every health unit, visiting schools, congregate living spaces and at wor



27871M
Total distributed

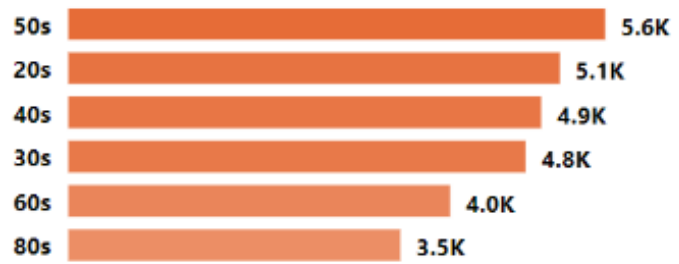
326K
Number Ongoing Outbreaks

34.52K
Count of Outcome1

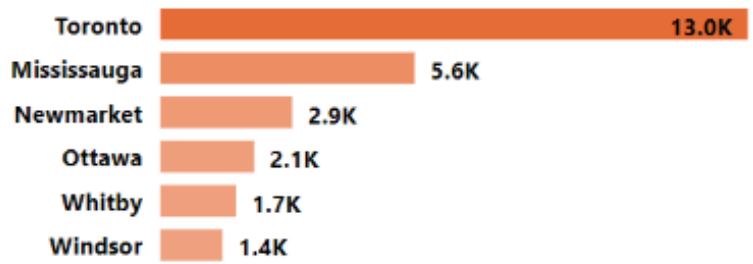
Outbreak percentage

100%

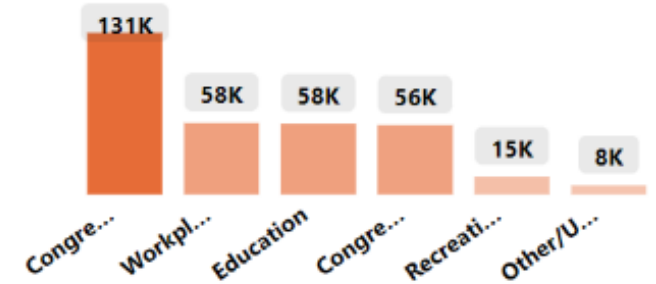
COVID CASES BY AGE GROUP



OUTBREAK BY CITY



COVID OUTBREAK BY GROUPS



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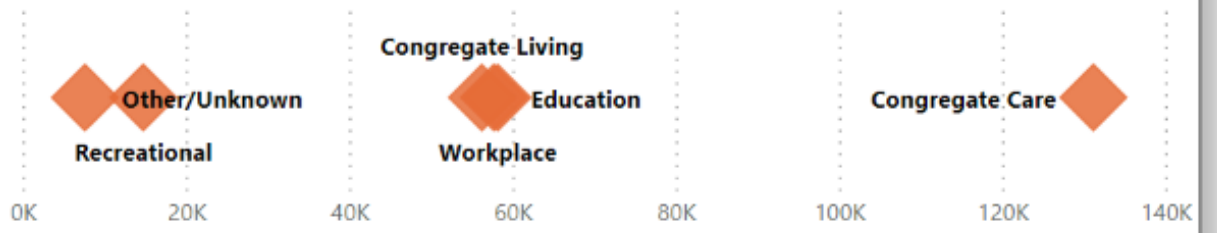
Ongoing Outbreaks by Outbreak Group



Vaccines by Provin

DATA SOURCES

- Confirmed Positive Case of COVID-19 in Ontario here
- Ongoing outbreaks here
- Vaccines distributed here