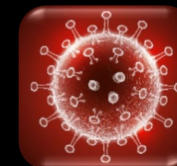


Jia's COVID-19 Update

Winter is coming ☹️

Dr. Jia Hu
October 19, 2020



Mental health &
**COVID-19
WEBINAR**

COVID-19 WEBINAR

DISCLOSURES



Mental health &
COVID-19
WEBINAR

Dr. Jia Hu

- Medical Officer of Health – Alberta Health Services
- Corporate Medical Director – Canadian Pension Plan Investment Board (via Cleveland Clinic Canada)
- Pharma – Research funding only; any other stuff (like ad boards or presentations) I do for free
- Family doctor (East FCC locum, LTC – Rouleau Manor, walk-ins) – on hiatus during the pandemic

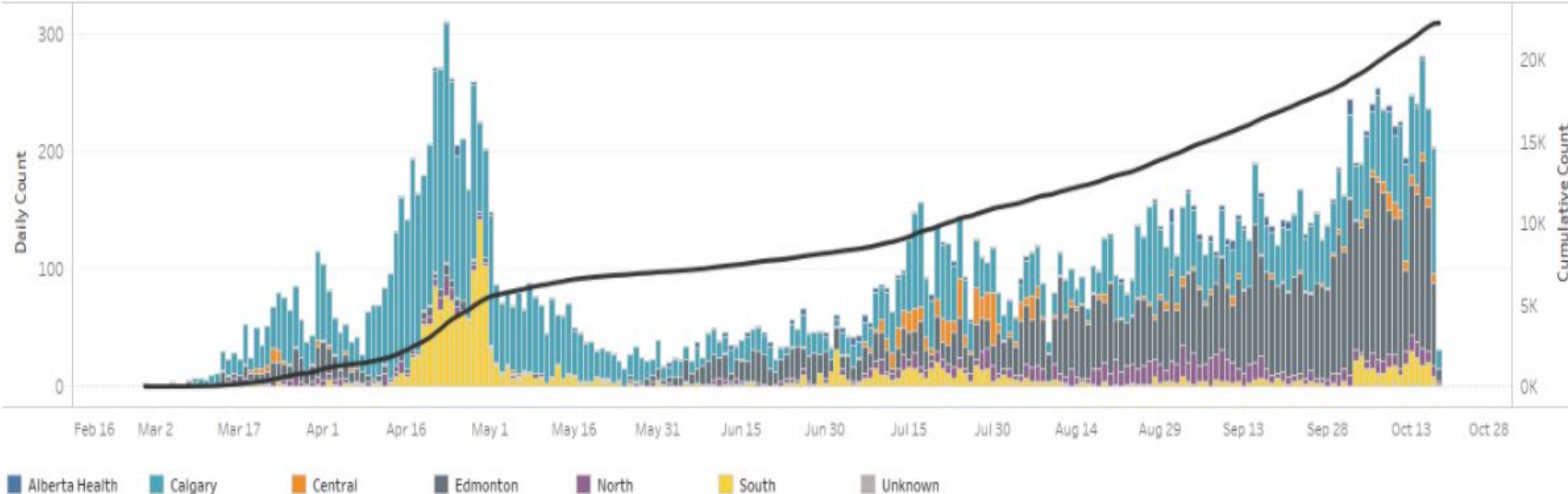
COVID-19 WEBINAR

COMMUNITY TRANSMISSION



Mental health &
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WEBINAR**

Are we at the fall second wave? Edmonton cases are surging, Calgary still okay... for now



Canada Wide Stats

2,345

New Cases

20,543

Total Active

191,732

Total Cases

9,699

Total Deaths

161,490

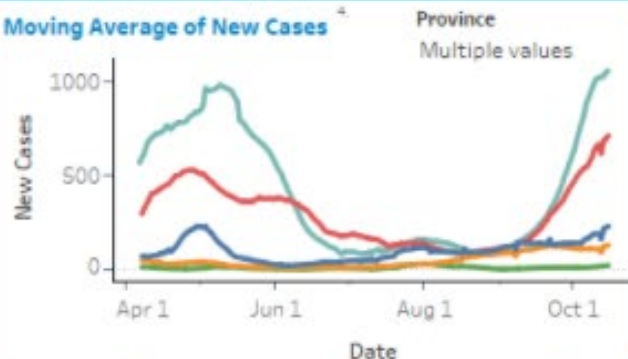
Total Recovered

8,403,144

Total Tested

Province ²	Cases						Deaths			Testing			
	New Cases	New Cases /100,000	14-Day ³ Trend New Cases	14-Day Trend (Rolling)	Active Cases /100,000	Active Cases /100,000 Std.	Fatality Rate	New Deaths	Deaths /100,000	New Tests ⁵	New Tests /100,000	Total Tests /100,000	Positive Testing Rate
Quebec	969	11.3	53%		99.3	170.6	6.67%	28	70.21			20,162	8.03%
Ontario	783	5.3	44%		39.9	66.3	4.86%	5	20.50	38,654	262	29,746	1.80%
Alberta	244	5.5	62%		61.8	72.0	1.34%	1	6.50			24,520	4.36%
Saskatchewan	33	2.8	86%		22.9	25.7	1.12%	0	2.12	1,626	138	15,420	1.39%
British Columbia	142	2.8	18%		29.8	35.1	2.27%	0	4.88	4,800	94	10,375	1.99%
New Brunswick	0	0.0	1433%		11.4	11.8	0.68%	0	0.26	946	121	9,767	1.07%
Manitoba	173	12.5	101%		110.7	76.2	1.23%	1	2.76	2,206	160	15,336	3.49%
Nova Scotia	0	0.0	33%		0.3	0.4	5.95%	0	6.64	645	66	10,640	0.05%
Yukon	0	0.0			0.0	0.0	0.00%	0	0.00	25	61	8,968	0.00%
PEI	0	0.0	200%		3.2	3.8	0.00%	0	0.00	606	382	26,734	0.14%
Nunavut	0	0.0			0.0	0.0	0.00%	0	0.00	16	41	6,959	0.00%
NWT	0	0.0			0.0	0.0	0.00%	0	0.00	164	365	11,004	0.00%
NL	1	0.2	200%		1.7	1.5	1.41%	0	0.77	387	74	9,176	0.17%

Moving Average of New Cases ⁴



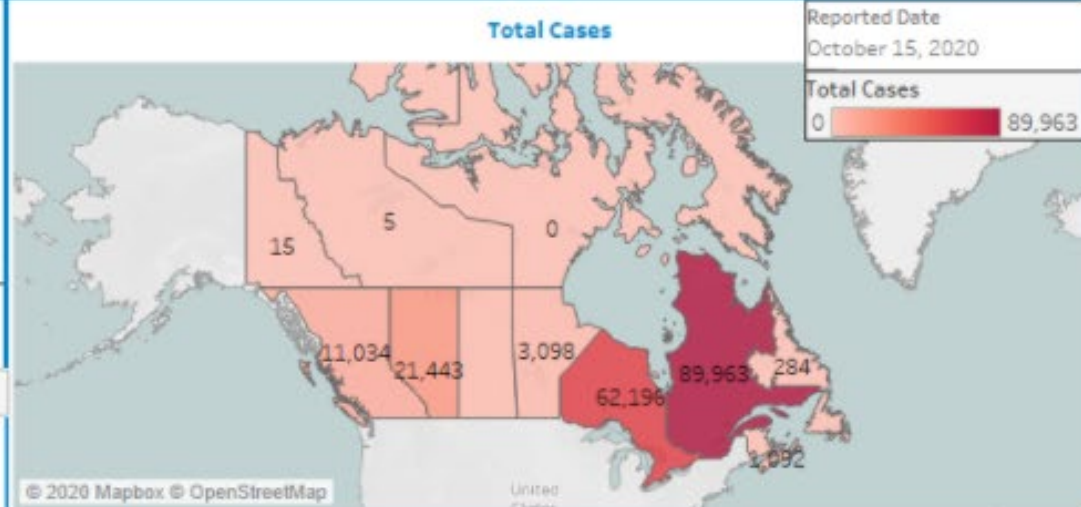
Deaths (14-Day Rolling Avg)



Province: Alberta, British Columbia, Ontario, Quebec, Saskatchewan

1. This dashboard contains latest updated data from Canada, typically updated once per day at 6pm EST.
2. The overall status indicator is intended for use as a synthesis metric to draw attention to significant changes or trends that may require action. Red indicates immediate attention / action may be needed, yellow indicates an important area to watch with potential for attention / action required, and green indicates positive trend data for continuous monitoring. This indicator is based on a formula and must be validated and put into context by your Chief Medical Director prior to data use.
3. Empty cells indicate that province did not report the number of tests conducted.
4. The Graph labeled "Moving Average of New Cases" depicts the top 5 provinces with the most average new cases.
5. Empty cells can either indicate no values or a calculation over 0 which results in a null.

Total Cases



Covid-19 data obtained from [Government of Canada's Coronavirus Disease \(COVID-19\): Outbreak update](#)
Canadian Population data obtain from [Statistics Canada](#)

Worldwide Stats

304,963

New Cases

38,197,063

Total Cases

5,291

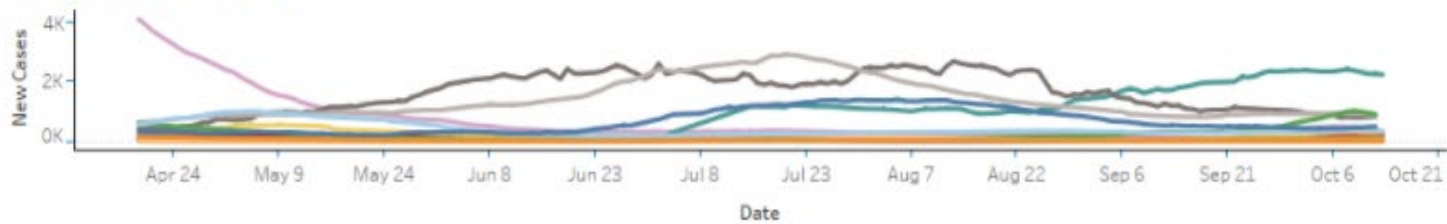
New Deaths

1,087,035

Total Deaths

Filter Geographies
Multiple values

Moving Average of New Cases



1. This dashboard contains latest updated data from major cities.
2. The overall status indicator is intended for use as a synthesis metric to draw attention to significant changes or trends that may require action. Red indicates immediate attention / action may be needed, yellow indicates an important area to watch with potential for attention / action required, and green indicates positive trend data for continuous monitoring. This indicator is based on a formula and must be validated and put into control by your Chief Medical Director prior to data use.
3. The rate in which each city updates varies and thus can affect the displayed data. Data used is subject to frequent change which can affect the data displayed.
4. Hong Kong is no longer reported testing data due to mass testing right now. Therefore new testing data will not be reported. Only total tests will be reported.
5. San Francisco is under reporting data due to state wide data challenges.
6. Mumbai and Philadelphia do not report over the weekend.
7. Peel Region and Indian River County report deaths on a weekly basis. Therefore the value under 'New Deaths' is the sum of new deaths over the last week.
8. Surrey does not have a trend line shown. Once enough data is collected, a trend line will be shown.

Covid-19 data obtained from NYCHealth, Gov. of HK, Chicago Data Portal, DataSF, NHS England, Greater London Authority, CMAJ GitHub Covid-19 Canada, Our World In Data, County of Los Angeles Public Health, Gov. of Michigan, USA Facts, MumbaiMirror, GitHub Covid19br, NSW Gov., Gov. of the Grand Duchy of Luxembourg, Region of Peel
Population data obtain from United States Census, USA Facts, MacroTrends, Gov of HK Census, Office for National Statistics, Public Health for LA county, Worldometer, Statistics Canada, Region of Peel, GitHub Covid19br, NSW Gov., Toronto Public Health

Active cases / 100,000

Edmonton Zone: ~110
Calgary Zone: ~ 47

Montreal: ~260
Chicago: ~180
London: ~140
Toronto: ~120
LA County: ~115
San Francisco: ~47
NYC: ~30
Hong Kong: ~2

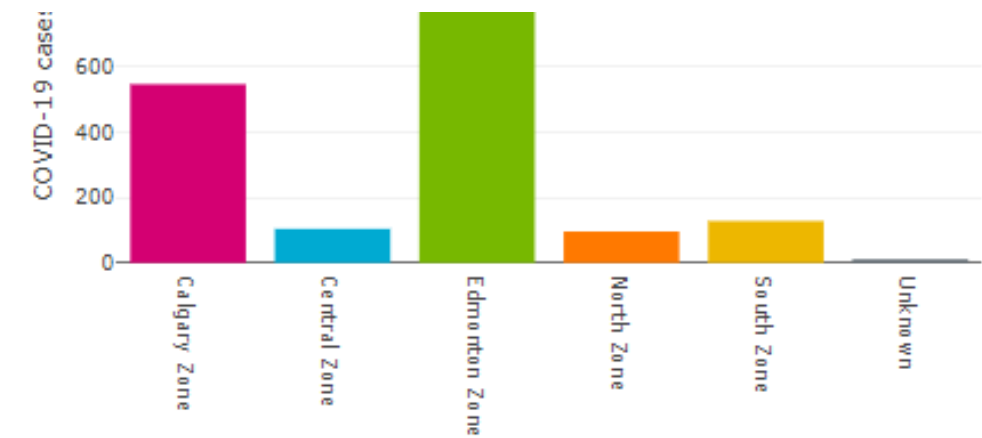
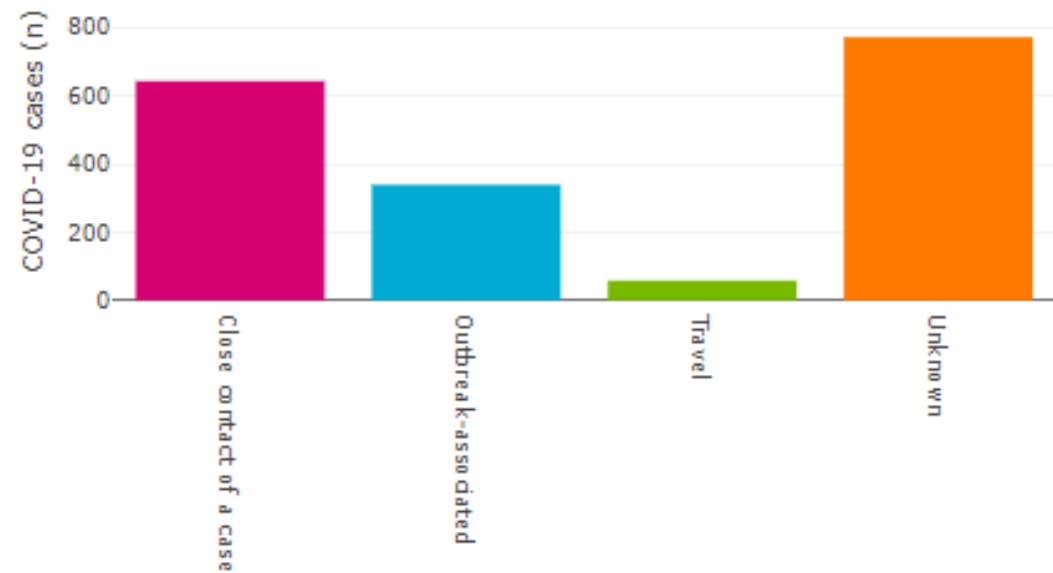
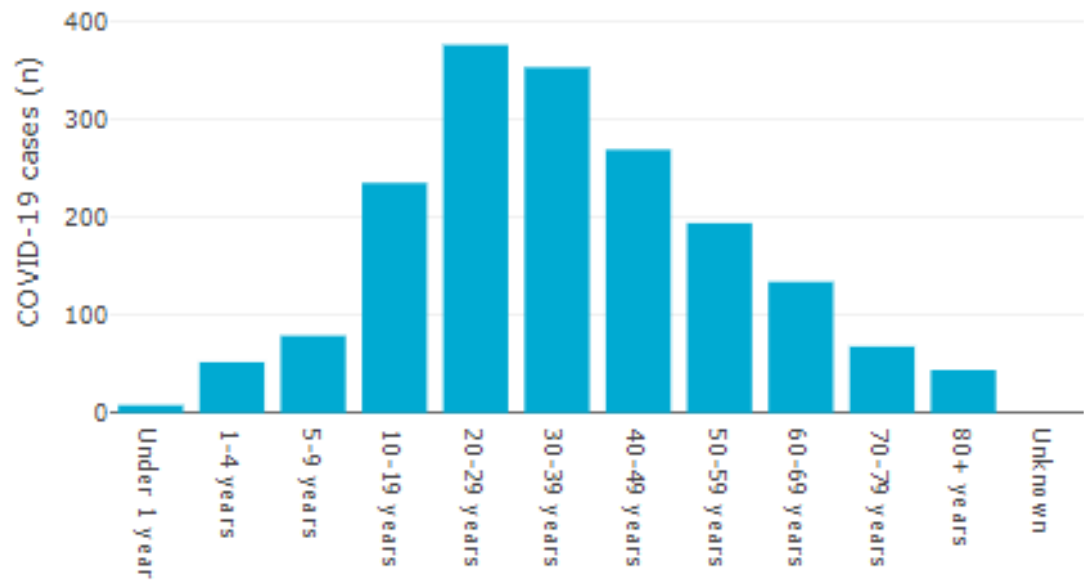
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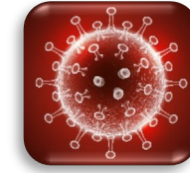
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Breakdown of Alberta's new cases: Oct. 9-15



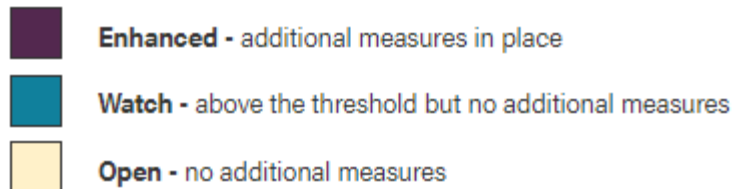
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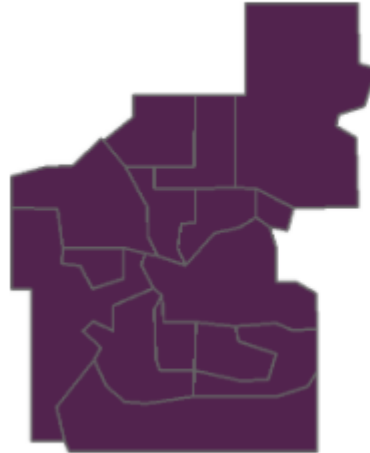


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More areas on 'Watch' or 'Enhanced'

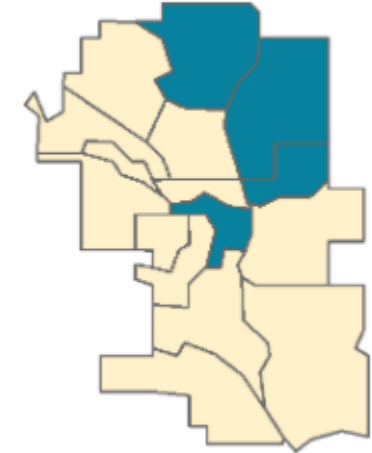


Edmonton



[See current measures for all Edmonton regions](#)

Calgary



[See current measures for all Calgary regions](#)

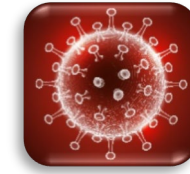
Enhanced: Risk levels require enhanced public health measures that are informed by local context

Watch: at least 10 active cases and over 50 active cases per 100,000; no addition measures but being monitored closely

Open: less than 50 active cases per 100,00; low level of risk with no additional restrictions

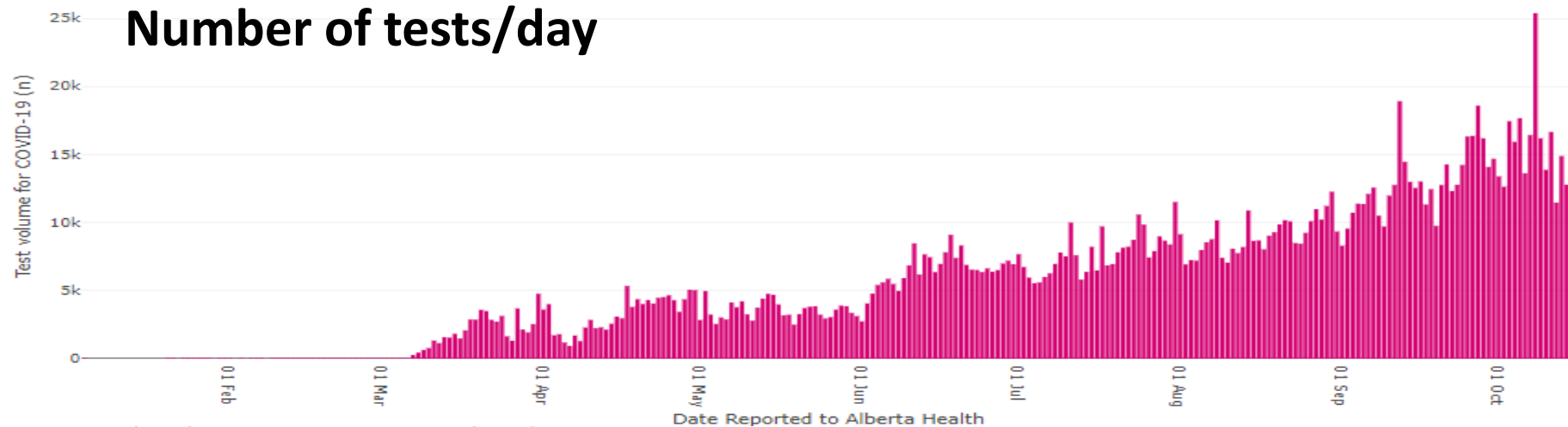
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Testing volumes are increasing and % positivity is trending up



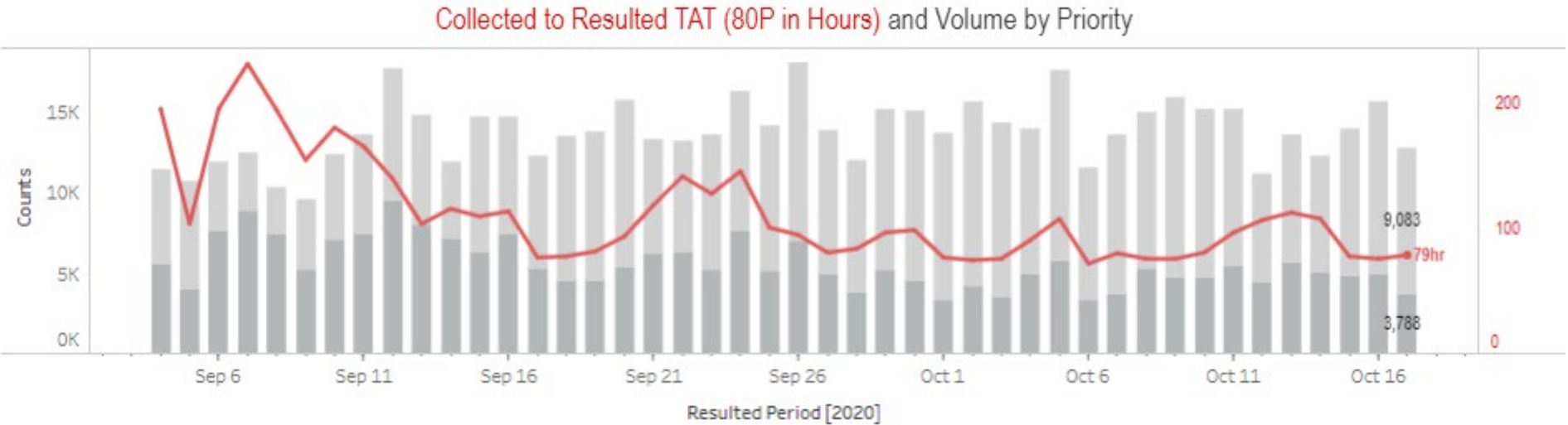
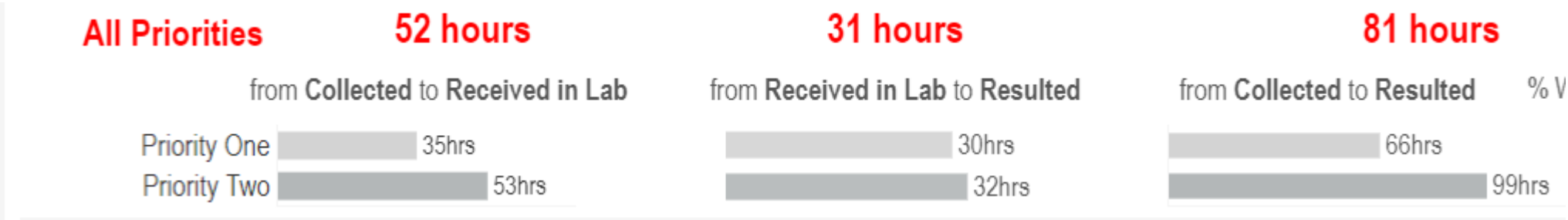
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Increased volumes lead to increased lab turnaround times (~80 hours)



Behaviour Change / Vaccine Uptake Campaign

EDUCATIONAL BODIES



UNIVERSITY OF
CALGARY



UNIVERSITY OF CALGARY
HASKAYNE SCHOOL OF BUSINESS



UNIVERSITY OF CALGARY
CUMMING SCHOOL OF MEDICINE



UNIVERSITY OF
TORONTO

PUBLIC HEALTH / GOVERNMENT



Alberta Health
Services



ALBERTA INNOVATES



fraserhealth
Better health. Best in health care.



Partners
In Health

TORONTO
Public Health

Ontario 
MINISTRY OF HEALTH

ANALYTICS/COMMUNICATIONS/MARKETING AGENCIES

**ANGUS
REID**
INSTITUTE

KANTAR

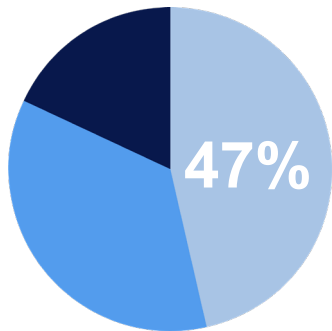
Deloitte.

_M=RGENCE
CREATIVITY FOR THE COMMON GOOD

Critical Mass

Less than half of Canadians consistently follow COVID-19 public health recommendations

INFECTION FIGHTERS

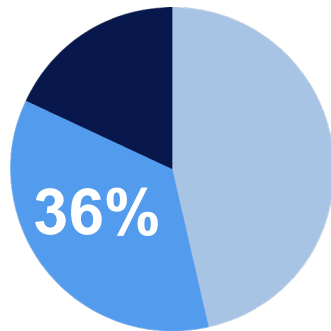


*Regimented
COVID-19
safety across
a variety of
precautions*

94% say current provincial restrictions either about right or don't go far enough

99% engaged in
0-2 spreading behaviours

INCONSISTENT

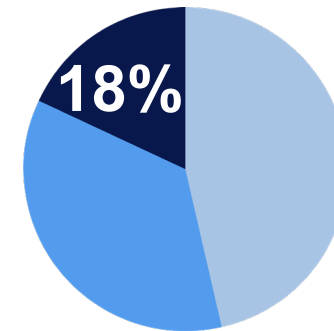


*Strict on
hygiene/
distancing;
loose on
travel/ social
circles*

82% say current provincial restrictions either about right or don't go far enough

32% engaged in
3-5 spreading behaviours

CYNICAL SPREADERS



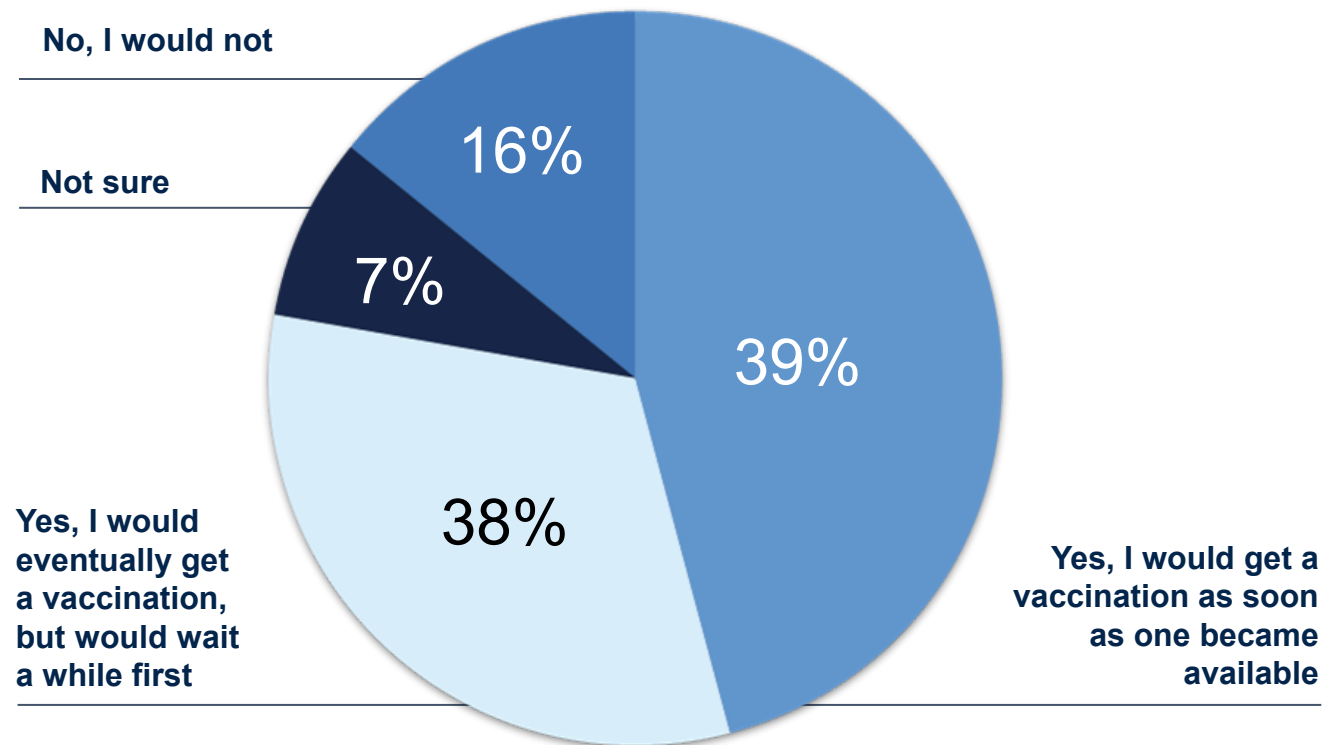
*Disregard
most, if not all,
COVID-19
safety
precautions*

59% say current provincial restrictions go too far

62% engaged in
3-5 spreading behaviours

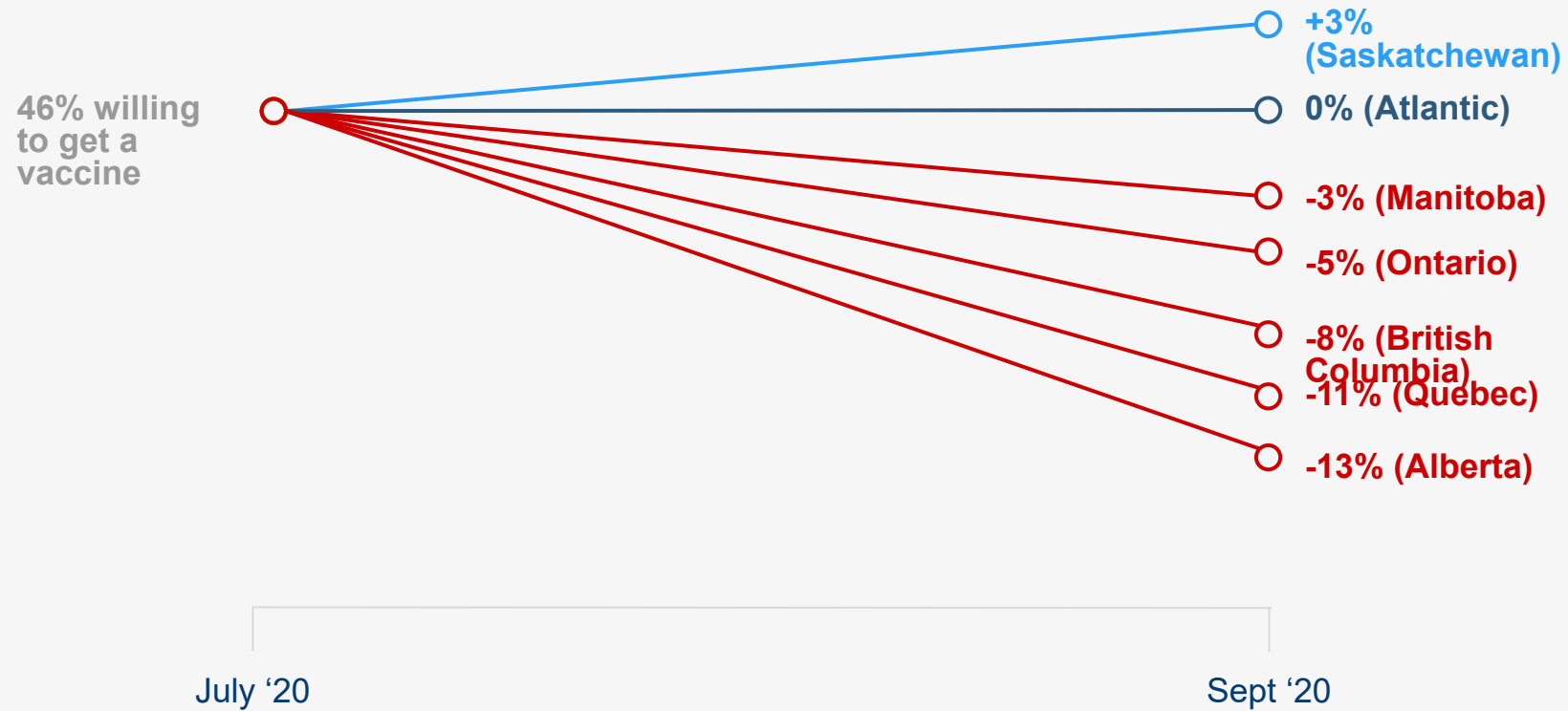
Less than 40% of Canadians would get vaccinated as soon as one is available

If a vaccine against the coronavirus became available to you, would you get vaccinated, or not?

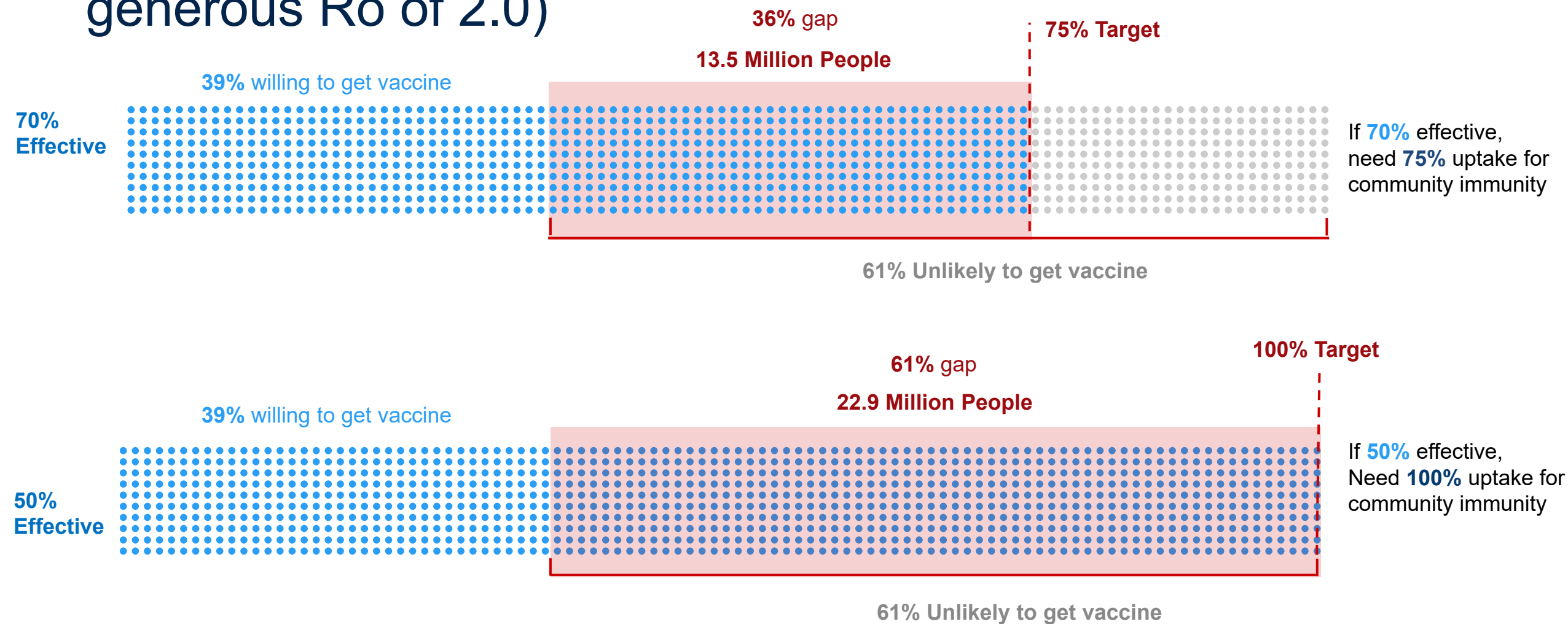


How do we quickly shift the the ~40% “on the fence” and address those who won’t take it at all?

Willingness to be vaccinated is decreasing



Vaccination Gap: Even the best vaccine won't solve the problem if not enough people take it (assumes very generous R_0 of 2.0)



8 workstreams – help needed!



Government Relations

Convince federal government and other provincial governments to recognize the importance of this work so they fund or support



Public Relations

Ensure learnings of this campaign received coverage with a view to ultimately see how editors and leadership can contribute to help get people immunized

DATA ACQUISITION



Traditional

Surveys, focus groups, and interviews to understand attitudes and how to change them along with most effective channels for messaging



Social Media Machine Learning

Deploy algorithms to scrape social media data

- Identify attitudes and themes around COVID-19 vaccine in real-time
- Network analysis to identify influential nodes (pro & anti-vaccine)

INTERVENTIONS



Mass Marketing Campaign

Exploration and refinement of initial multi-channel public health campaign concepts. Campaign feedback through additional focus groups, surveys, and preliminary rollout of campaigns in “test markets”



Community Outreach

Form partnerships with groups in the community who can further amplify message for key segments



Healthcare Sector Outreach

Engage national and provincial healthcare associations to develop engagement and training strategies for all HCWs



Nudges

Incorporating ‘nudge’ theory into all aspects of the campaign; creating specific nudges like pledges, cueing, habit formation, etc.,

Example: Social Media Machine Learning



- Deploy algorithms to scrape social media data
- Identify attitudes and themes around COVID-19 vaccine in real-time
- Network analysis to identify influential nodes (pro & anti-vaccine) for precision targeting of social media interventions

