

COVID-19  
Canada



THE END OF THE WORLD  
AS WE KNOW IT?

## RESEARCH REPORT NO. 6

TOGETHER, WE ADHERE DIFFERENTLY: CANADIANS DIFFER IN CHANGES IN MASK WEARING OVER TIME AND THE INTENTION TO RECEIVE COVID-19 VACCINES

THIS RESEARCH REPORT IS INTENDED FOR  
POLICY MAKERS AND THE GENERAL PUBLIC

THE PROJECT IS FINANCED BY THE CANADIAN  
INSTITUTES OF HEALTH RESEARCH (CIHR)

## Abstract

Wearing a mask in public – mandatory in all Canadian provinces – is increasingly respected by Canadians. Yet, the changes in adherence are not uniform, as Canadians are adhering to varying degrees throughout the second half of 2020. Thus, we have highlighted three groups that differ in their adherence and its evolution: a Very Low/Increasing group (16.40%), a Medium/Increasing group (49.40%) and a Very High/ Increasing group (34.20%). In addition, the Very Low/ Increasing group (16.40%) is less likely to receive a COVID-19 vaccine than the other two groups, who adhere more to mask wearing in public.

## Definitions of key concepts

Concepts	Survey questions
Adherence to wearing a mask	Currently, I wear a mask in public. 1 = <i>Never</i> – 10 = <i>Always</i>
Intention to get vaccinated against COVID-19	I will get the vaccine shot for COVID-19 as soon as it is available. 1 = <i>Strongly disagree</i> – 10 = <i>Strongly agree</i>



## Research questions

Mask wearing and vaccination against COVID-19 are among the most controversial health measures put forward by the Canadian government. What about the adherence to wearing a mask among Canadians over time? Is adherence to wearing a mask similar for the entire Canadian population or, on the contrary, is it possible to identify different trends – or development profiles – that distinguish between certain groups? Finally, what about the intention to be vaccinated against COVID-19 within the general population, and for groups that differ in their level of adherence to wearing a mask?

## Hypotheses






1. Regarding the changes over time in mask wearing adherence and intention to receive a COVID-19 vaccine for the general population, we expect:
  - An increase in adherence to mask wearing over time. Indeed, as wearing a mask wearing has been made mandatory in most closed/partially covered public places, this behavior very quickly became a new reality for Canadians.
  - A high intention to get a COVID-19 vaccine, based on a recent poll showing that most Canadians are determined or inclined to receive the COVID-19 vaccine (CBC News, 2020).
2. We expect that the growth in adherence to wearing a mask in public is not homogeneous: Canadians have different levels of adherence and show different profiles of change in mask wearing over time.
3. We expect groups with different levels of adherence to wearing a mask to differ in their intention to get a COVID-19 vaccine. Specifically, Canadians who adhere the most to mask wearing would report greater intention to get a COVID-19 vaccine as compared to Canadians who adhere the least.



## Method

Data were extracted from a large longitudinal survey of a representative Canadian sample ( $N_{\text{wave1}} = 3617$ , see Table 1 for details). Respondents to the survey completed an in-depth questionnaire on multiple occasions over a year. For more methodological details, please see the survey's technical report (de la Sablonnière et al., 2020). The data for this report are from the 5<sup>th</sup> – 10<sup>th</sup> waves of this longitudinal survey.

**Table 1.** Methodological and demographic information

 Measurement time	 Sample Size	 % (n) Women	 Mean age (range)	 Survey Dates
5	2154	48.7% (1048)	49 (18-92)	1 June – 23 June 2020
6	2116	48.8% (1033)	49 (18-92)	15 June – 13 July 2020
7	2072	49.1% (1017)	50 (18-92)	13 July – 8 August 2020
8	1871	49.4% (924)	50 (18-92)	17 August – 13 September 2020
9	1821	48.4% (882)	52 (18-92)	21 September – 19 October 2020
10	1883	48.4% (911)	50 (18-86)	25 November – 28 December 2020

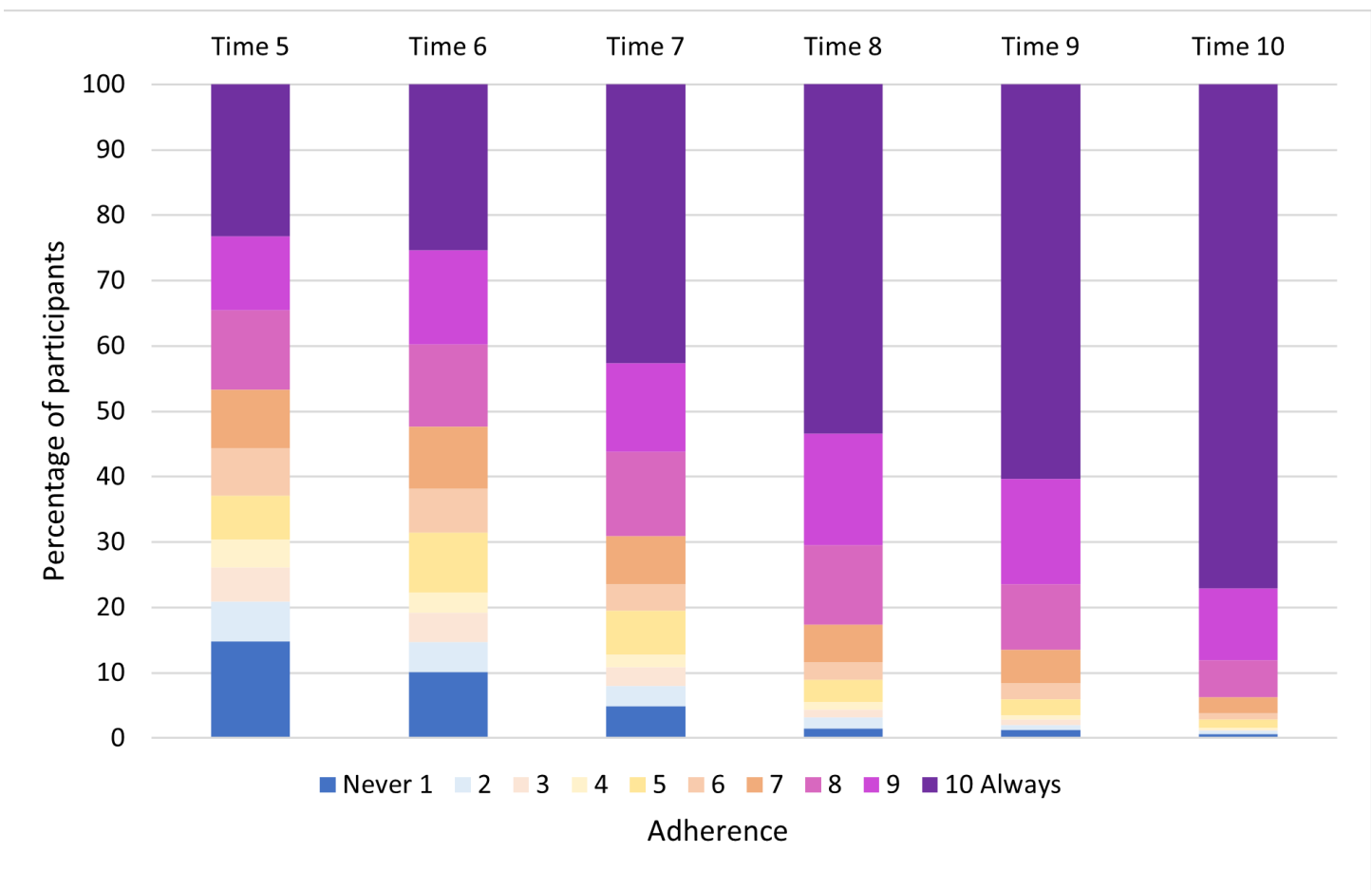
## Results

The results confirmed our hypotheses.

**Hypothesis 1.** We find that among the Canadian population in general:

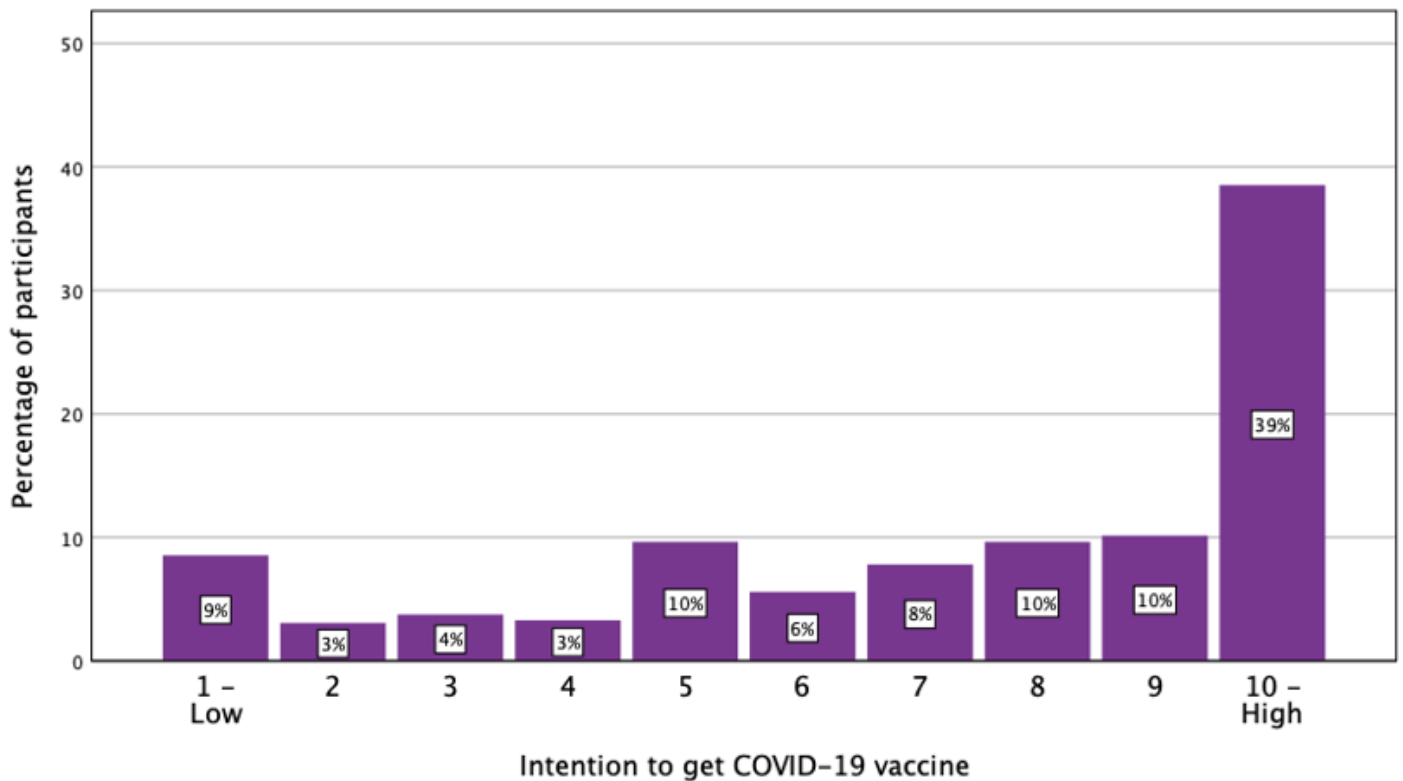
- Overall, adherence to mask wearing increased over time, from June 2020 (M = 6.31, SD = 3.26) to December 2020 (M = 9.47, SD = 1.34). A closer look at participants' responses at each measurement time shows that the variability in responses decreased over time, indicating that wearing a mask in public has become increasingly normative among Canadians (Graph 1). It is important to acknowledge that some participants may have reported wearing the mask in public more frequently than they actually do, to demonstrate their conformity to health measures – a well-known phenomenon in psychological research called “social desirability”.

**Graph 1.** Change in adherence to mask wearing



- Overall, Canadians report high intentions to get a COVID-19 vaccine ( $M = 7.29$ ,  $SD = 3.01$ ). There was a high variability in intentions, though having a strong intention to get the COVID-19 vaccine is the most common response (almost 40% of participants, as shown in Graph 2).

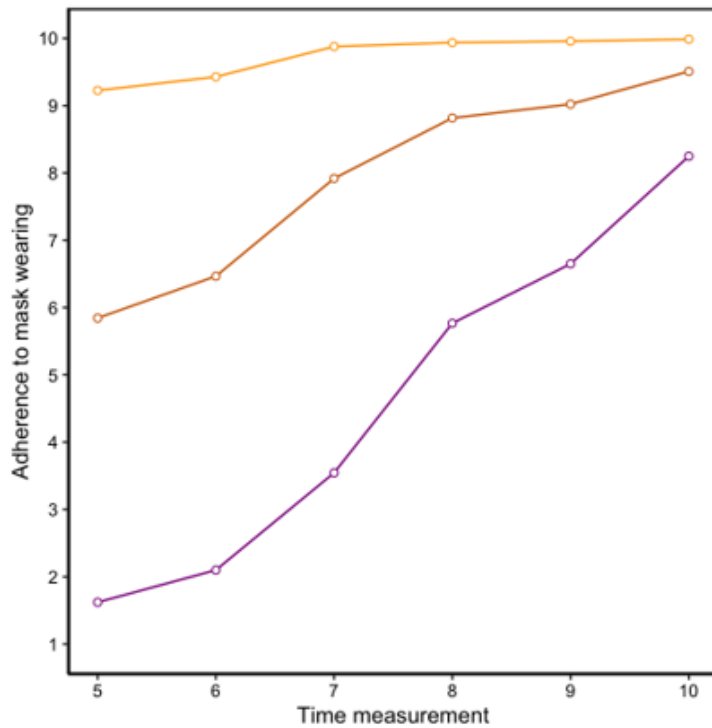
**Graph 2.** Intention to get COVID-19 vaccine



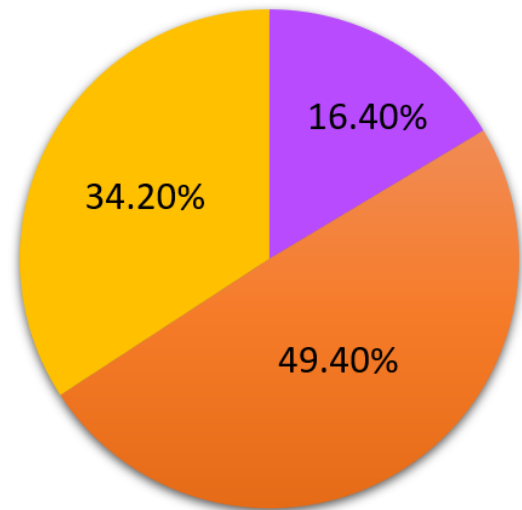
**Hypothesis 2.** Based on our data, we:

- Identify three groups within the Canadian population that differ in their initial adherence to mask wearing and in the rate of change in their adherence over time. As Graph 3 shows, though the three groups differ in their initial level of adherence, all groups increasingly adhere to mask wearing over time. Accordingly, we named the groups: 1) Very High/Increasing, 2) Medium/Increasing, and 3) Very Low/Increasing.
- Estimate the percentage of participants within each group. Graph 4 shows that the majority of participants (49.40%) belong to the Medium/Increasing group, which initially moderately adhered to wearing a mask. Then, 34.20% of participants belong to the Very High/Increasing group which has always adhered very strongly. Finally, only 16.40% of the sample belong to the Very Low/Increasing group, which initially almost never wore a mask in public.

**Graph 3.** Identification of groups



**Graph 4.** Distribution of participants in each group

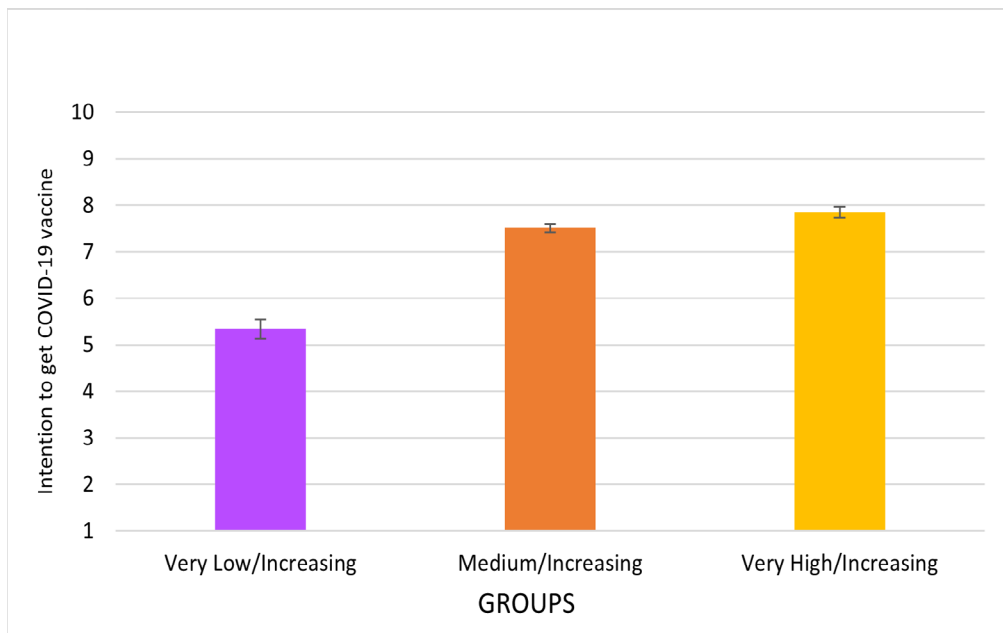


**GROUPS**    ■ Very high/Increasing    ■ Medium/Increasing    ■ Very low/Increasing

**Hypothesis 3.** To examine whether the three groups differ in their intention to receive a COVID-19 vaccine. Our analysis shows that:

- The Very High/Increasing (M = 7.85, SD = 2.79) and Medium/Increasing (M = 7.51, SD = 2.74) groups have higher intention to be vaccinated against COVID-19 as compared to the Very Low/Increasing group (M = 5.34, SD = 3.49).

**Graph 5.** Intention to get COVID-19 vaccine according to group adherence



## Conclusion

Canadians increasingly wear masks in public. The mandatory nature of mask wearing in enclosed or partially covered public places since around mid-2020 probably explains a large part of this increase in adherence to this particular health measure over time. The increased adherence to mask wearing could also be a compromise for the gradual relief in other sanitary measures such as staying at home and inviting people over.

This research report nevertheless shows that some Canadians systematically wore a mask in public even before this health measure was made mandatory. Wearing a mask in public was not mandatory at the beginning of the crisis. Therefore Canadians who wore their mask were not supported by current public health measures (for example, in the province of Quebec, wearing a mask in closed public places was made mandatory on July 18, during 7<sup>th</sup> wave of this research report). In contrast, a minority of Canadians have hardly ever worn it in June 2020 and, despite an increase in adherence in the following months, continued to adhere less systematically. The majority of Canadians initially showed moderate levels of adherence mask wearing in public, but have begun adhering to this measure very quickly, as this measure became mandatory.

As for Canadians' vaccination intentions, those who wear a mask in public more frequently are more willing to receive the COVID-19 vaccine as compared to those who wear a mask less frequently. It is important to examine whether there is a common cause for these tendencies, such as poor communication of the importance of fighting COVID-19 (be it via mask wearing or vaccination) or misinformation, which should be strategically addressed by policy makers.



## Recommendations

It is important to inform policy makers who wants to reach collective immunity that:

- There is an increase in mask wearing adherence in public among all Canadians. This increase could be explained by the mandatory nature of mask wearing in public places.
- There is a strong intention to get the COVID-19 vaccine among the Canadian population.
- One way to help achieve collective immunity could be to continue to jointly promote compliance with health measures – such as mask wearing in public – and vaccination campaigns. Our data suggests that there is a link between the adherence of mask wearing in public and the intention to get the COVID-19 vaccine.

## Collaborator

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## To cite this report

Ferrante, V. M., Dorfman, A., Pelletier-Dumas, M., Lacourse, E., Lina, J. M., Stolle., D., Taylor, D. M., & de la Sablonnière, R. (2020). COVID-19 Canada: The end of the world as we know it? (Research Report No. 6). Together, we adhere differently: Canadians differ in changes in mask wearing over time and the intention to receive COVID-19 vaccines. Université de Montréal.

## To visit our website

<https://csdc-cecd.wixsite.com/covid19csi>



# RESEARCH TEAM

## Principal investigator



**Roxane de la Sablonnière, Ph.D.**

Full professor  
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Director and founder of the Social Change and Identity Laboratory since 2005, Roxane studies the challenges people face when they are exposed to dramatic social change, such as the colonization that affected Canada's Aboriginal peoples or immigration.

## Team members



**Jean-Marc Lina, Ph.D.**

Professor  
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École de technologie supérieure de Montréal

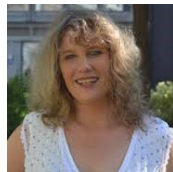
Jean-Marc is the founder and director of the PhysNum laboratory, as well as a researcher at the Center for Advanced Research in Sleep Medicine of the Hôpital du Sacré-Cœur. He studies the dynamics of complex systems including rhythms in social psychology.



**Eric Lacourse, Ph.D.**

Full Professor, Senior methodologist  
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University of Montreal

Éric Lacourse is a full professor in the Department of Sociology at the University of Montreal. He is currently responsible for the bi-disciplinary baccalaureate in psychology and sociology and formerly director of the microprogram in social statistics.



**Dietlind Stolle, Ph.D.**

James McGill Professor  
Department of Political Science  
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Dietlind has directed the Centre for the Study of Democratic Citizenship. She is an expert on trust, social capital, ethnic diversity, attitudinal democratic backsliding and new forms of political participation.



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Author of numerous books on social psychology and a specialist in inter-group relations, Don is particularly interested in the plight of disadvantaged populations, such as indigenous communities.

## Post-doctoral researchers



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A behavioural researcher interested in decision-making processes, Anna focuses on the interactions between emotions, cognitions and behaviours in order to understand how individuals react when faced with difficult social situations.



**Mathieu Pelletier-Dumas, Ph.D.**

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A social psychology researcher in the Social Change and Identity Laboratory, Mathieu is interested in the profound changes that people face (social and personal changes), in identity, and in negative behaviours (discrimination, prejudice, disruptive behaviours in video games).



Partners



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