

Additional file 1

- Table S1. Overview of the different phases of CONNECT.	2
- Table S2. Weighting procedure.	3
- Table S3. Time trends in the number of social contacts, by location of contacts A) mean number of contacts, B) median number of contacts.	4
- Table S4. Association between the mean number of social contacts and the stringency index.	6
- Table S5. Time trends in the total number of social contacts by key socio-demographic characteristics.	7
- Table S6. Time trends in the number of social contacts at school/daycare among children-students according to school level.	10
- Table S7. Time trends in social contacts at work among workers and according to the type of employment (2016 National occupation classification).	11
- Table S8. Time trends in the proportion of workers who reported working remotely, according to the type of employment (2016 National occupation classification).	12
- Figure S1. Example of the social contact diary.	13
- Figure S2. Quebec COVID-19 epidemiology, related physical distancing measures, and CONNECT data periods.	14
- Figure S3. Flowchart of participant identification for CONNECT 1, CONNECT 2, and CONNECT 3,4,5...15	
- Figure S4. Mean number of social contacts according to the intensity of public health measures in Quebec as summarized by the stringency index.	16

Table S1. Overview of the different phases of CONNECT.

	CONNECT1 Pre-COVID	CONNECT2 1st wave	CONNECT3,4,5 Summer 2020 and 2nd wave
Data collection dates	Feb 1 st 2018 – March 17 th 2019	April 21 st 2020 – May 25 th 2020	July 3 rd 2020 – February 26 th 2021
Funding	Canadian Immunization Network (CIRN)	Canadian Institute of Health Research (CIHR) Foundation Scheme Grant	Institut national de Santé publique du Québec (INSPQ)
Number of participants included in analysis	Quebec: 1291	Quebec: 546	Quebec: 4970

Table S2. Weighting procedure.

New series of weights were calculated for each CONNECT phase (Pre-COVID, 1st wave, summer 2020 and 2nd wave) using multiple steps:

Steps	Procedure
1. Age and sex distribution	Weights W1 were calculated to replicate the sex-by-age distribution of the Quebec population, using the Canadian census data (8 age categories as presented in Table 1 by sex).
2. Household composition	Weights W2 were calculated from W1 to replicate the Quebec household composition distribution in 4 categories, based on the age of youngest member (0-5, 6-14, 15-17, ≥ 18 years old, as presented in Table 1). We adjusted the weights to get close to the household composition without impacting the age distribution.
3. Quebec regions	Weights W3 were calculated from W2 to replicate the distribution of Quebec regions (Greater Montreal*, Other regions).
4. Final adjustment	Weights W4 were adjusted so that the sum of weights=n We verified that W4-weighted distributions were generally representative of the Quebec population for key socio-demographic characteristics not considered in the weighting procedure (e.g. employment rate, ethnicity, mother tongue, country of origin)
5. Days of the week	Weights W4 were multiplied by 5/7 or 2/7 for week or weekend days respectively, to obtain the daily number of social contacts on a weekly basis.

* Greater Montreal: Regions of Montréal, Laval, Montérégie, Lanaudière, Laurentides.

Table S3. Time trends in the number of social contacts* by location of contacts.

A) Mean number of social contacts

	Pre-COVID n=1291		Spring 2020 n=546		Diff [†] p	Summer 2020 n=988		Diff [†] p	September 2020 n=431		Diff [†] p	Fall 2020 n=1052		Diff [†] p	Holidays 2020-21 n=1569		Diff [†] p	January 2021 n=501		Diff [†] p	February 2021 n=429		Diff [†] p
	mean	95% CI	mean	95% CI		mean	95% CI		mean	95% CI		mean	95% CI		mean	95% CI		mean	95% CI		mean	95% CI	
Total	7.8	(7.2-8.5)	3.1	(2.6-3.5)	-4.8 <.001	4.2	(3.8-4.6)	1.2 <.001	5.0	(4.3-5.8)	0.8 0.07	4.1	(3.7-4.5)	-0.9 0.04	2.9	(2.7-3.1)	-1.2 <.001	3.5	(3.0-3.9)	0.5 0.02	4.0	(3.3-4.6)	0.5 0.23
Home (total)	2.3	(2.1-2.4)	1.7	(1.5-1.8)	-0.6 <.001	2.3	(2.1-2.4)	0.6 <.001	1.9	(1.8-2.1)	-0.3 0.004	1.7	(1.7-1.8)	-0.2 0.04	1.8	(1.7-1.8)	0.0 0.75	1.7	(1.5-1.8)	-0.1 0.08	1.7	(1.6-1.8)	0.0 0.58
with household members	1.2	(1.1-1.3)	1.3	(1.2-1.5)	0.1 0.09	1.3	(1.2-1.3)	-0.1 0.30	1.3	(1.2-1.4)	0.1 0.44	1.4	(1.3-1.5)	0.1 0.46	1.4	(1.3-1.4)	-0.0 0.84	1.4	(1.3-1.5)	0.1 0.24	1.4	(1.2-1.5)	-0.1 0.40
with visitors	1.1	(1.0-1.2)	0.3	(0.2-0.4)	-0.8 <.001	1.0	(0.9-1.1)	0.7 <.001	0.6	(0.5-0.7)	-0.4 <.001	0.4	(0.3-0.4)	-0.3 <.001	0.4	(0.4-0.4)	0.0 0.35	0.2	(0.2-0.3)	-0.2 <.001	0.3	(0.3-0.4)	0.1 0.005
Work [‡]	2.7	(2.1-3.2)	1.2	(0.8-1.6)	-1.5 <.001	1.2	(0.8-1.5)	-0.0 0.99	1.5	(0.9-2.2)	0.4 0.30	1.1	(0.8-1.4)	-0.5 0.18	0.8	(0.6-1.1)	-0.3 0.15	1.0	(0.7-1.3)	0.2 0.43	0.9	(0.5-1.4)	-0.1 0.79
School [¶]	1.6	(1.2-2.0)	0.0	(0.0-0.0)	-1.6 <.001	0.2	(0.1-0.3)	0.2 <.001	0.9	(0.6-1.3)	0.7 <.001	0.9	(0.7-1.2)	-0.0 0.94	0.0	(0.0-0.1)	-0.9 <.001	0.6	(0.3-0.8)	0.5 <.001	1.0	(0.6-1.5)	0.5 0.08
Transport	0.0	(0.0-0.1)	0.0	(0.0-0.0)	-0.0 <.001	0.0	(0.0-0.0)	0.0 0.13	0.1	(0.0-0.1)	0.1 0.03	0.0	(0.0-0.0)	-0.0 0.11	0.0	(0.0-0.0)	-0.0 0.003	0.0	(0.0-0.0)	0.0 0.19	0.0	(0.0-0.0)	-0.0 0.62
Leisure	0.5	(0.4-0.6)	0.0	(0.0-0.1)	-0.5 <.001	0.2	(0.2-0.3)	0.2 <.001	0.2	(0.1-0.3)	-0.0 0.28	0.1	(0.0-0.1)	-0.1 <.001	0.1	(0.1-0.1)	0.0 0.03	0.1	(0.1-0.1)	-0.0 0.66	0.1	(0.0-0.1)	-0.0 0.76
Other	0.7	(0.6-0.8)	0.2	(0.1-0.2)	-0.6 <.001	0.3	(0.3-0.4)	0.2 <.001	0.3	(0.2-0.4)	-0.0 0.35	0.2	(0.2-0.3)	-0.0 0.36	0.1	(0.1-0.2)	-0.1 <.001	0.1	(0.1-0.2)	0.0 0.90	0.2	(0.1-0.3)	0.0 0.30

Pre-COVID: February 1st 2018 to March 17th 2019; **Spring 2020:** April 21st to May 25th 2020; **Summer 2020:** July 3rd to August 31st 2020; **Fall 2020:** October 1st to December 16th 2020;

Holidays 2020-2021: December 17th 2020 to January 8th 2021. **1st wave:** Spring 2020; **2nd wave:** September 2020 to February 2021.

*Mean number of social contacts weighted to represent daily contacts over one usual week, estimated at the population level.

[†] Diff: Absolute difference with the preceding period and p-value of this difference.

[‡] Work: Contacts at work are truncated to a maximum of 40 contacts per day.

[¶] School: Contacts at school include contacts of workers in schools (truncated to a maximum of 40 per day).

B) Median number of social contacts

	Pre-COVID n=1291	Spring 2020 n=546	Summer 2020 n=988	September 2020 n=431	Fall 2020 n=1052	Holidays 2020-21 n=1569	January 2021 n=501	February 2021 n=429
	median (Q1-Q3)	median (Q1-Q3)	median (Q1-Q3)	median (Q1-Q3)	median (Q1-Q3)	median (Q1-Q3)	median (Q1-Q3)	median (Q1-Q3)
Total	4 (2-9)	2 (1-3)	3 (1-5)	2 (1-5)	2 (1-4)	2 (1-3)	2 (1-4)	2 (1-4)
Home (total)	2 (1-3)	1 (0-3)	2 (1-3)	1 (1-3)	1 (1-3)	1 (1-3)	1 (1-3)	1 (1-3)
with household members	1 (0-2)	1 (0-2)	1 (0-2)	1 (0-2)	1 (0-2)	1 (0-2)	1 (0-2)	1 (0-2)
with visitors	0 (0-1)	0 (0-0)	0 (0-1)	0 (0-1)	0 (0-0)	0 (0-0)	0 (0-0)	0 (0-0)
Work [£]	0 (0-0)	0 (0-0)	0 (0-0)	0 (0-0)	0 (0-0)	0 (0-0)	0 (0-0)	0 (0-0)
School [¶]	0 (0-0)	0 (0-0)	0 (0-0)	0 (0-0)	0 (0-0)	0 (0-0)	0 (0-0)	0 (0-0)
Transport	0 (0-0)	0 (0-0)	0 (0-0)	0 (0-0)	0 (0-0)	0 (0-0)	0 (0-0)	0 (0-0)
Leisure	0 (0-0)	0 (0-0)	0 (0-0)	0 (0-0)	0 (0-0)	0 (0-0)	0 (0-0)	0 (0-0)
Other	0 (0-1)	0 (0-0)	0 (0-0)	0 (0-0)	0 (0-0)	0 (0-0)	0 (0-0)	0 (0-0)

Pre-COVID: February 1st 2018 to March 17th 2019; **Spring 2020:** April 21st to May 25th 2020; **Summer 2020:** July 3rd to August 31st 2020; **Fall 2020:** October 1st to December 16th 2020; **Holidays 2020-2021:** December 17th 2020 to January 8th 2021. **1st wave:** Spring 2020; **2nd wave:** September 2020 to February 2021.

[£] Work: Contacts at work are truncated to a maximum of 40 contacts per day.

[¶] School: Contacts at school include contacts of workers in schools (truncated to a maximum of 40 per day).

Table S4. Association between the mean number of social contacts and the stringency index.

	Stringency index [£]														
	0 (Pre-COVID)			40.0 - 49.9			50.0 - 59.9*			60.0 - 69.9*			≥ 70*		
	mean	95%CI		mean	95%CI	Diff [†] <i>p</i>	mean	95%CI	Diff [†] <i>p</i>	mean	95%CI	Diff [†] <i>p</i>	mean	95% CI	Diff [†] <i>p</i>
Total	7.8	(7.2-8.5)		4.6	(4.1-5.1)	-3.2 .<.0001	4.1	(3.8-4.5)	-0.5 0.09	3.5	(3.2-3.8)	-0.6 0.01	2.9	(2.6-3.1)	-0.7 0.0005
Home (total)	2.3	(2.1-2.4)		2.2	(2.0-2.3)	-0.1 0.23	1.9	(1.8-2.0)	-0.3 0.0002	1.7	(1.6-1.7)	-0.2 0.0008	1.8	(1.7-1.8)	0.1 0.15
with household members	1.2	(1.1-1.3)		1.3	(1.2-1.4)	0.1 0.13	1.3	(1.3-1.4)	0.0 0.54	1.4	(1.3-1.4)	0.0 0.57	1.4	(1.3-1.5)	0.0 0.65
with visitors	1.1	(1.0-1.2)		0.9	(0.8-0.9)	-0.2 0.002	0.5	(0.5-0.6)	-0.3 .<.0001	0.3	(0.3-0.3)	-0.2 .<.0001	0.4	(0.3-0.4)	0.1 0.03
Work [£]	2.7	(2.1-3.2)		1.3	(0.9-1.7)	-1.3 .<.0001	1.1	(0.9-1.4)	-0.2 0.41	1.0	(0.8-1.3)	-0.1 0.54	0.9	(0.7-1.1)	-0.2 0.34
School [¶]	1.6	(1.2-2.0)		0.5	(0.4-0.7)	-1.1 .<.0001	0.7	(0.5-0.9)	0.2 0.14	0.5	(0.4-0.7)	-0.2 0.18	0.0	(0.0-0.0)	-0.5 .<.0001
Transport	0.0	(0.0-0.1)		0.0	(0.0-0.1)	0.0 0.57	0.0	(0.0-0.0)	0.0 0.21	0.0	(0.0-0.0)	0.1 0.02	0.0	(0.0-0.0)	0.0 0.09
Leisure	0.5	(0.4-0.6)		0.2	(0.2-0.3)	-0.3 .<.0001	0.1	(0.1-0.1)	-0.1 .<.0001	0.1	(0.1-0.1)	0.0 0.06	0.1	(0.1-0.1)	0.0 0.99
Other	0.7	(0.6-0.8)		0.3	(0.3-0.4)	-0.4 .<.0001	0.2	(0.2-0.3)	-0.1 0.04	0.2	(0.2-0.2)	-0.1 0.02	0.1	(0.1-0.2)	-0.1 0.006

[£] Stringency index: Higher values indicate stricter measures; the association between social contacts and the stringency index was examined irrespective of periods.

* For stringency index >50, the mean number of contacts for all locations was significantly lower than the pre-COVID period (stringency index = 0).

[†] Diff: Absolute difference with the preceding stringency index category and p-value of this difference.

[£] Work: Contacts at work are truncated to a maximum of 40 contacts per day.

[¶] School: Contacts at school include contacts of workers in schools (truncated to a maximum of 40 per day).

Table S5. Time trends in the total number of social contacts by key socio-demographic characteristics.

	Pre-COVID n=1291		Spring 2020 n=546			Summer 2020 n=988			September 2020 n=431			Fall 2020 n=1052			Holidays 2020-21 n=1569			January 2021 n=501			February 2021 n=429		
	mean	95% CI	mean	95% CI	Diff† <i>p</i>	mean	95% CI	Diff† <i>p</i>	mean	95% CI	Diff† <i>p</i>	mean	95% CI	Diff† <i>p</i>	mean	95% CI	Diff† <i>p</i>	mean	95% CI	Diff† <i>p</i>	mean	95% CI	Diff† <i>p</i>
Total	7.8	(7.2-8.5)	3.1	(2.6-3.5)	-4.8 <.001	4.2	(3.8-4.6)	1.2 <.001	5.0	(4.3-5.8)	0.8 0.07	4.1	(3.7-4.5)	-0.9 0.04	2.9	(2.7-3.1)	-1.2 <.001	3.5	(3.0-3.9)	0.5 0.02	4.0	(3.3-4.6)	0.5 0.2
Age																							
0-17 yrs old	7.7	(7.0-8.4)	3.9	(3.3-4.5)	-3.8 <.001	5.2	(4.5-5.8)	1.3 0.005	8.6	(6.9-10.4)	3.4 <.001	6.5	(5.7-7.3)	-2.1 0.03	3.6	(3.4-3.8)	-2.9 <.001	4.9	(4.3-5.5)	1.3 <.001	7.3	(5.7-8.9)	2.4 0.007
18-65 yrs old	9.0	(8.0-10.0)	3.3	(2.6-3.9)	-5.7 <.001	4.4	(3.8-4.9)	1.1 0.02	4.8	(3.8-5.8)	0.5 0.43	4.1	(3.6-4.5)	-0.8 0.18	3.1	(2.7-3.4)	-1.0 0.001	3.6	(3.0-4.2)	0.5 0.12	3.3	(2.5-4.2)	-0.3 0.62
≥ 65 yrs old	3.5	(3.0-4.0)	1.2	(0.7-1.6)	-2.4 <.001	2.8	(2.0-3.6)	1.6 <.001	1.6	(1.2-2.0)	-1.1 0.02	1.4	(1.1-1.6)	-0.3 0.29	1.2	(1.0-1.5)	-0.1 0.48	1.4	(0.8-1.9)	0.1 0.67	1.6	(1.2-2.0)	0.3 0.44
<i>p-value</i> ^y	<0.001		<0.001			<0.001			<0.001			<0.001			<0.001			<0.001		<0.001			
Sex																							
Male	7.4	(6.4-8.3)	2.9	(2.5-3.3)	-4.4 <.001	3.9	(3.3-4.4)	1.0 0.005	4.5	(3.8-5.2)	0.6 0.18	3.9	(3.4-4.4)	-0.6 0.18	3.2	(2.9-3.5)	-0.7 0.02	3.6	(3.1-4.1)	0.4 0.12	3.7	(3.0-4.4)	0.1 0.74
Female	8.1	(7.3-8.8)	3.5	(2.9-4.0)	-4.6 <.001	4.8	(4.2-5.3)	1.3 0.001	6.2	(4.5-7.8)	1.4 0.12	4.1	(3.7-4.5)	-2.1 0.02	3.0	(2.7-3.2)	-1.1 <.001	3.6	(3.0-4.2)	0.6 0.06	3.6	(2.9-4.3)	0.0 0.92
<i>p-value</i> ^y	0.26		0.12			0.02			0.06			0.53			0.21			0.99		0.85			
Region																							
Urban	7.5	(6.9-8.1)	3.2	(2.8-3.6)	-4.4 <.001	4.4	(3.9-4.8)	1.2 <.001	5.1	(4.3-5.8)	0.7 0.12	4.0	(3.6-4.4)	-1.1 0.01	3.1	(2.8-3.3)	-0.9 <.001	3.5	(3.1-3.8)	0.4 0.08	3.7	(3.1-4.2)	0.2 0.55
Rural	8.8	(6.9-10.8)	3.5	(2.6-4.4)	-5.4 <.001	4.9	(3.7-6.1)	1.4 0.06	3.8	(2.3-5.3)	-1.1 0.26	4.2	(3.3-5.0)	0.4 0.67	3.2	(2.9-3.5)	-1.0 0.03	4.0	(3.1-5.0)	0.8 0.10	3.9	(2.6-5.3)	-0.1 0.92
<i>p-value</i> ^y	0.19		0.51			0.42			0.14			0.74			0.60			0.28		0.70			
Region																							
Greater Mtl ^e	8.0	(7.0-8.9)	2.9	(2.4-3.5)	-5.0 <.001	3.9	(3.5-4.3)	0.9 0.006	4.8	(3.9-5.6)	0.9 0.06	3.9	(3.4-4.3)	-0.9 0.07	2.9	(2.5-3.3)	-0.9 0.001	3.4	(2.7-4.0)	0.5 0.21	3.8	(2.9-4.7)	0.4 0.49
Other regions	7.1	(6.3-8.0)	3.2	(2.3-4.1)	-4.0 <.001	4.5	(3.6-5.4)	1.4 0.03	5.0	(3.5-6.4)	0.4 0.63	4.4	(3.6-5.2)	-0.5 0.52	2.7	(2.5-3.0)	-1.7 <.001	3.4	(2.8-3.9)	0.6 0.05	3.8	(2.9-4.6)	0.4 0.43
<i>p-value</i> ^y	0.19		0.67			0.17			0.85			0.26			0.46			0.96		0.99			
Material deprivation																							
Q1-Most privileged	7.3	(6.3-8.2)	2.8	(2.3-3.2)	-4.5 <.001	4.9	(4.1-5.6)	2.1 <.001	5.2	(3.9-6.6)	0.4 0.62	3.6	(3.1-4.1)	-1.7 0.02	3.0	(2.7-3.3)	-0.6 0.02	3.2	(2.4-3.9)	0.2 0.60	3.2	(2.7-3.8)	0.0 0.92
Q2	7.2	(6.0-8.4)	2.9	(2.0-3.8)	-4.3 <.001	4.1	(3.4-4.7)	1.2 0.04	3.9	(3.1-4.8)	-0.1 0.85	4.0	(3.3-4.6)	0.0 0.99	3.5	(2.8-4.2)	-0.5 0.36	3.6	(2.8-4.3)	0.1 0.90	3.8	(2.9-4.6)	0.2 0.69
Q3	8.1	(6.6-9.7)	3.4	(2.5-4.2)	-4.8 <.001	4.1	(3.3-5.0)	0.8 0.20	6.6	(4.1-9.1)	2.5 0.07	4.4	(3.5-5.3)	-2.2 0.10	3.2	(2.8-3.7)	-1.2 0.03	3.3	(2.8-3.9)	0.1 0.79	3.6	(2.4-4.8)	0.3 0.68
Q4	7.7	(6.4-9.0)	3.9	(2.8-5.0)	-3.8 <.001	4.1	(3.2-4.9)	0.2 0.79	5.0	(3.7-6.4)	1.0 0.22	4.3	(3.5-5.2)	-0.7 0.37	2.9	(2.6-3.1)	-1.5 <.001	4.2	(3.3-5.1)	1.4 0.003	4.1	(2.8-5.5)	-0.1 0.93
Q5-Most deprived	8.5	(6.5-10.4)	3.3	(2.4-4.1)	-5.2 <.001	4.5	(3.3-5.6)	1.2 0.11	3.3	(1.7-5.0)	-1.1 0.27	4.1	(2.9-5.2)	0.8 0.45	3.0	(2.6-3.4)	-1.1 0.08	3.4	(2.3-4.4)	0.4 0.51	4.1	(1.9-6.4)	0.7 0.56
<i>p-value</i> ^y	0.72		0.26			0.59			0.09			0.40			0.41			0.44		0.64			

	Pre-COVID n=1291			Spring 2020 n=546			Summer 2020 n=988			September 2020 n=431			Fall 2020 n=1052			Holidays 2020-21 n=1569			January 2021 n=501			February 2021 n=429		
	mean	95% CI		mean	95% CI	Diff†	mean	95% CI	Diff†	mean	95% CI	Diff†	mean	95% CI	Diff†	mean	95% CI	Diff†	mean	95% CI	Diff†	mean	95% CI	Diff†
			<i>p</i>			<i>p</i>			<i>p</i>			<i>p</i>			<i>p</i>			<i>p</i>			<i>p</i>			<i>p</i>
Social deprivation																								
Q1-Most privileged	7.7	(6.1-9.3)		3.7	(2.5-4.8)	-4.1 <.001	4.7	(3.7-5.8)	1.1 0.18	6.0	(3.8-8.3)	1.3 0.31	3.8	(3.2-4.4)	-2.3 0.06	3.3	(2.8-3.9)	-0.4 0.28	4.2	(3.1-5.4)	0.9 0.17	4.4	(2.9-5.9)	0.1 0.90
Q2	8.4	(6.8-9.9)		3.3	(2.3-4.3)	-5.1 <.001	4.3	(3.6-5.0)	1.0 0.11	4.0	(3.1-4.9)	-0.2 0.67	4.1	(3.4-4.7)	0.1 0.91	3.2	(2.8-3.7)	-0.8 0.04	3.9	(2.9-5.0)	0.7 0.22	3.2	(2.5-3.9)	-0.8 0.23
Q3	7.4	(6.2-8.6)		3.0	(2.3-3.8)	-4.4 <.001	4.1	(3.5-4.8)	1.1 0.03	5.2	(3.7-6.7)	1.1 0.19	4.4	(3.5-5.3)	-0.8 0.34	3.4	(2.8-3.9)	-1.0 0.06	3.6	(2.9-4.3)	0.2 0.60	4.1	(2.6-5.6)	0.5 0.58
Q4	6.9	(5.7-8.1)		3.4	(2.4-4.3)	-3.5 <.001	4.2	(3.7-4.7)	0.9 0.11	5.5	(3.8-7.2)	1.3 0.17	4.4	(3.5-5.3)	-1.1 0.28	3.0	(2.6-3.4)	-1.4 0.004	3.1	(2.7-3.6)	0.1 0.62	3.6	(2.9-4.4)	0.5 0.26
Q5-Most deprived	8.1	(6.8-9.4)		2.9	(2.3-3.5)	-5.2 <.001	4.6	(3.4-5.9)	1.7 0.02	4.1	(3.0-5.3)	-0.5 0.55	3.6	(2.9-4.2)	-0.6 0.38	2.7	(2.4-3.1)	-0.8 0.02	3.2	(2.5-3.9)	0.5 0.20	3.5	(2.4-4.6)	0.3 0.63
<i>p-value</i> ^y	0.54			0.80			0.85			0.25			0.42			0.16			0.29			0.58		
Level of education*																								
No diploma	6.0	(3.2-8.8)		4.1	(0.7-7.5)	-1.9 0.41	7.2	(0.0-15.4)	3.1 0.49	3.3	(0.0-7.1)	-3.9 0.34	6.8	(1.6-12.0)	3.5 0.28	3.4	(0.9-6.0)	-3.4 0.26	2.2	(1.7-2.8)	-1.2 0.37	1.5	(0.9-2.2)	-0.7 0.11
High school	8.8	(5.6-12.0)		5.5	(2.8-8.3)	-3.2 0.13	3.6	(2.1-5.1)	-2.0 0.22	5.9	(1.8-10.1)	2.4 0.28	4.2	(2.4-5.9)	-1.8 0.44	2.5	(1.8-3.2)	-1.6 0.09	4.2	(2.2-6.2)	1.7 0.12	4.5	(1.1-8.0)	0.3 0.87
College, cegep, non-university	8.4	(6.7-10.0)		3.3	(2.1-4.4)	-5.1 <.001	4.2	(3.0-5.3)	0.9 0.27	5.7	(3.0-8.4)	1.6 0.29	4.3	(3.3-5.4)	-1.4 0.33	3.2	(2.6-3.8)	-1.1 0.07	4.4	(3.0-5.8)	1.2 0.11	3.0	(1.9-4.2)	-1.4 0.14
University	10.7	(9.0-12.5)		2.5	(1.7-3.3)	-8.2 <.001	4.0	(3.4-4.6)	1.5 0.003	4.4	(2.9-5.8)	0.4 0.62	4.0	(3.3-4.8)	-0.4 0.66	3.1	(2.5-3.7)	-0.9 0.05	3.5	(2.5-4.5)	0.4 0.47	2.8	(2.0-3.7)	-0.7 0.31
<i>p-value</i> ^y	0.03			0.15			0.80			0.66			0.76			0.52			0.006			0.02		
Household size																								
1-2	6.7	(6.0-7.4)		2.6	(2.1-3.1)	-4.1 <.001	3.8	(3.2-4.3)	1.2 <.001	3.7	(3.0-4.5)	-0.0 0.95	3.2	(2.8-3.7)	-0.5 0.22	2.4	(2.1-2.7)	-0.8 <.001	2.9	(2.5-3.4)	0.5 0.03	2.4	(2.0-2.8)	-0.6 0.06
3-4	9.1	(7.7-10.5)		3.7	(2.9-4.5)	-5.4 <.001	4.7	(4.1-5.3)	1.0 0.05	6.1	(4.6-7.6)	1.4 0.09	4.9	(4.2-5.6)	-1.2 0.16	3.6	(3.0-4.1)	-1.3 0.001	4.2	(3.4-5.0)	0.6 0.14	6.0	(4.5-7.6)	1.8 0.04
≥ 5	9.4	(6.8-11.9)		4.4	(3.4-5.5)	-4.9 <.001	7.8	(5.9-9.7)	3.4 0.002	9.2	(6.7-11.7)	1.4 0.38	6.7	(5.5-7.9)	-2.5 0.08	5.3	(4.3-6.3)	-1.4 0.07	4.9	(4.1-5.7)	-0.4 0.54	7.8	(4.6-11.0)	2.9 0.08
<i>p-value</i> ^y	0.004			0.003			<.001			<.001			<.001			<.001			<.001			<.001		
Household composition																								
With 0-17-yr-olds	9.6	(8.0-11.1)		4.1	(3.3-4.9)	-5.5 <.001	5.5	(4.7-6.3)	1.4 0.005	7.4	(5.9-8.8)	1.9 0.02	6.1	(5.3-6.9)	-1.3 0.11	3.9	(3.3-4.5)	-2.1 <.001	4.3	(3.7-4.9)	0.4 0.25	7.2	(5.6-8.7)	2.9 <.001
Without 0-17-yr-olds	6.8	(6.1-7.4)		2.6	(2.1-3.1)	-4.2 <.001	3.8	(3.2-4.3)	1.2 <.001	3.7	(2.9-4.4)	-0.1 0.84	3.1	(2.7-3.5)	-0.6 0.12	2.5	(2.1-2.8)	-0.6 0.002	3.1	(2.5-3.6)	0.6 0.02	2.3	(1.9-2.8)	-0.7 0.02
<i>p-value</i> ^y	0.002			0.004			0.001			<.001			<.001			<.001			0.004			<.001		
Race																								
Caucasian	7.8	(7.2-8.5)		3.3	(2.9-3.7)	-4.5 <.001	4.6	(4.1-5.0)	1.3 <.001	4.9	(4.2-5.7)	0.4 0.39	4.1	(3.7-4.4)	-0.9 0.04	3.1	(2.9-3.4)	-0.9 <.001	3.7	(3.3-4.1)	0.5 0.02	3.7	(3.2-4.2)	0.0 0.91
Other	6.9	(4.9-8.8)		2.8	(1.6-4.1)	-4.1 <.001	3.1	(2.2-4.0)	0.3 0.74	4.6	(2.7-6.6)	1.5 0.16	3.6	(2.6-4.6)	-1.0 0.36	2.9	(2.0-3.8)	-0.7 0.34	2.7	(1.9-3.5)	-0.2 0.72	3.9	(0.7-7.2)	1.2 0.47
<i>p-value</i> ^y	0.37			0.50			0.005			0.77			0.38			0.64			0.04			0.89		

Table S6. Time trends in the number of social contacts* at school/daycare among children-students according to school level.

	Pre-COVID School season n=427			Spring 2020 n=167			Summer 2020 n=250			September 2020 n=119			Fall 2020 n=293			Holidays 2020-21 n=442			January 2021 n=145			February 2021 n=112		
	mean	95% CI		mean	95% CI	Diff† p	mean	95% CI	Diff† p	mean	95% CI	Diff† p	mean	95% CI	Diff† p	mean	95% CI	Diff† p	mean	95% CI	Diff† p	mean	95% CI	Diff† p
All students	3.1	(2.5-3.6)		0.0	(0.0-0.0)	-3.0 <.001	0.6	(0.3-1.0)	0.6 <.001	2.9	(1.9-4.0)	2.3 <.001	2.0	(1.5-2.5)	-0.9 0.14	0.1	(0.0-0.2)	-1.9 <.001	1.1	(0.6-1.5)	1.0 <.001	3.0	(1.8-4.2)	1.9 0.004
Daycare	3.6	(3.1-4.2)		0.0	(0.0-0.1)	-3.6 <.001	1.9	(0.7-3.1)	1.9 0.002	2.8	(0.7-4.8)	0.8 0.49	4.2	(2.9-5.5)	1.4 0.24	0.3	(0.1-0.6)	-3.9 <.001	3.3	(1.8-4.8)	3.0 <.001	2.4	(0.9-4.0)	-0.8 0.46
Elementary school	3.8	(2.9-4.7)		0.0	NA	-3.8 NA	0.2	(0.0-0.5)	0.2 NA	6.3	(2.5-10.1)	6.0 0.002	5.2	(3.2-7.2)	-1.1 0.63	0.0	(0.0-0.0)	-5.2 <.001	1.5	(0.4-2.7)	1.5 0.008	5.9	(2.7-9.1)	4.3 0.01
High school	4.2	(2.8-5.7)		0.0	NA	-4.2 NA	0.0	(0.0-0.1)	0.0 NA	4.2	(2.3-6.0)	4.1 <.001	1.8	(1.2-2.4)	-2.4 0.02	0.0	(0.0-0.0)	-1.8 <.001	0.5	(0.1-0.8)	0.5 0.007	3.2	(1.5-5.0)	2.7 0.003
Post-secondary	1.2	(0.6-1.7)		0.0	NA	-1.2 NA	0.4	(0.0-1.1)	0.4 NA	0.1	(0.0-0.2)	-0.3 0.30	0.1	(0.0-0.2)	0.0 0.80	0.1	(0.0-0.2)	-0.0 0.94	0.0	(0.0-0.1)	-0.0 0.67	0.1	(0.0-0.2)	0.0 0.64

Pre-COVID school season: February 1st 2018 to March 17th 2019, excluding July and August 2018; **Spring 2020:** April 21st to May 25th 2020; **Summer 2020:** July 3rd to August 31st 2020; **Fall 2020:** October 1st to December 16th 2020; **Holidays 2020-2021:** December 17th 2020 to January 8th 2021. **1st wave:** Spring 2020; **2nd wave:** September 2020 to February 2021.
NA: Not available because there was 0 contact during Spring 2020 (all schools closed).

* Mean number of social contacts at school weighted to represent the mean daily contact over one usual week, estimated among students only.

† Diff: Absolute difference with the preceding period and p-value of this difference.

The mean numbers of contacts in this table are not exactly the same as those for school in Figure 2A because 1) the pre-COVID estimates are restricted to the school season, 2) the estimates include all students, irrespective of their age, 3) the mean is estimated among students only whereas in Figure 2A the mean is estimated among all 0-17-year-olds, some of whom do not attend school.

Table S7. Time trends in social contacts at work* among workers and according to the type of employment (2016 National occupation classification).

	Pre-COVID n=355			Spring 2020 n=272			Summer 2020 n=515			September 2020 n=231			Fall 2020 n=531			Holidays 2020-21 n=778			January 2021 n=251			February 2021 n=214		
	mean	95% CI		mean	95% CI	Diff [†] p	mean	95% CI	Diff [†] p	mean	95% CI	Diff [†] p	mean	95% CI	Diff [†] p	mean	95% CI	Diff [†] p	mean	95% CI	Diff [†] p	mean	95% CI	Diff [†] p
All workers	7.3	(6.1-8.6)		2.6	(1.7-3.4)	-4.8 <.001	2.5	(1.7-3.2)	-0.1 0.85	3.0	(1.8-4.1)	0.5 0.46	2.4	(1.9-3.0)	-0.5 0.42	1.8	(1.3-2.3)	-0.6 0.09	2.1	(1.5-2.8)	0.3 0.43	1.9	(1.0-2.9)	-0.2 0.74
0. Management	10.2	(5.7-14.8)		3.2	(0.0-6.4)	-7.0 0.01	4.7	(1.1-8.3)	1.5 0.54	1.1	(0.0-2.7)	-3.6 0.07	2.0	(0.7-3.2)	0.8 0.41	1.8	(0.3-3.2)	-0.2 0.83	2.3	(0.3-4.2)	0.5 0.68	3.7	(0.2-7.2)	1.4 0.49
1. Business, finance & administration	6.5	(4.3-8.7)		0.5	(0.1-0.9)	-6.0 <.001	0.7	(0.2-1.1)	0.2 0.46	2.9	(0.6-5.2)	2.2 0.07	0.6	(0.3-0.9)	-2.2 0.06	0.4	(0.1-0.6)	-0.2 0.26	0.6	(0.0-1.4)	0.3 0.50	1.2	(0.0-2.8)	0.5 0.57
2. Natural & applied sciences	3.4	(1.9-5.0)		0.2	(0.0-0.4)	-3.3 <.001	0.4	(0.1-0.7)	0.3 0.15	0.5	(0.0-1.0)	0.1 0.85	0.7	(0.2-1.2)	0.2 0.57	0.4	(0.1-0.8)	-0.3 0.44	1.1	(0.0-2.6)	0.6 0.43	0.4	(0.1-0.8)	-0.6 0.43
3. Health	10.1	(6.8-13.5)		6.7	(2.6-10.8)	-3.4 0.20	4.2	(2.2-6.2)	-2.5 0.27	5.0	(0.0-11.2)	0.8 0.81	7.9	(4.8-10.9)	2.9 0.42	7.3	(4.4-10.2)	-0.5 0.80	7.3	(3.6-11.1)	0.0 0.99	2.9	(0.0-6.1)	-4.5 0.07
4. Education, law & social, community & gov. services	4.0	(1.9-6.0)		1.6	(0.0-4.1)	-2.4 0.15	0.5	(0.2-0.9)	-1.0 0.43	1.2	(0.0-3.2)	0.7 0.50	1.0	(0.4-1.6)	-0.2 0.85	0.9	(0.0-1.8)	-0.2 0.79	0.1	(0.0-0.3)	-0.7 0.15	0.7	(0.0-1.5)	0.6 0.13
5. Art, culture, recreation & sport	0.7	(0.1-1.3)		0.1	(0.0-0.3)	-0.6 0.09	2.2	(0.2-4.2)	2.1 0.05	1.8	(0.0-4.6)	-0.3 0.84	0.4	(0.0-0.9)	-1.4 0.32	0.4	(0.0-1.0)	-0.1 0.90	NA			NA		
6. Sales & services	10.8	(7.9-13.7)		4.7	(1.7-7.7)	-6.1 0.005	7.4	(3.9-11.0)	2.7 0.25	8.4	(3.5-13.4)	1.0 0.75	4.9	(2.5-7.3)	-3.5 0.21	3.9	(2.0-5.8)	-1.1 0.49	3.2	(1.2-5.2)	-0.7 0.61	5.6	(1.3-9.8)	2.4 0.32
7. Trades, transport & equipment operators	3.4	(1.4-5.3)		3.3	(0.5-6.0)	-0.1 0.95	1.6	(0.5-2.7)	-1.7 0.26	1.5	(0.1-2.9)	-0.1 0.93	3.1	(0.9-5.4)	1.6 0.22	0.9	(0.3-1.5)	-2.2 0.06	1.0	(0.1-1.9)	0.1 0.85	1.1	(0.0-2.6)	0.1 0.92
8. Natural resources, agriculture & related production	6.0	(0.0-16.5)		4.3	(0.0-12.1)	-1.7 0.79	1.1	(0.1-2.1)	-3.2 0.43	1.0	(1.0-1.0)	-0.1 0.87	0.9	(0.0-2.1)	-0.1 0.93	1.3	(0.4-2.2)	0.4 0.64	1.5	(0.0-3.7)	0.2 0.86	NA		.
9. Manufacturing & utilities	16.9	(3.9-29.9)		1.8	(0.2-3.4)	-15.1 0.02	0.5	(0.0-1.1)	-1.3 0.14	6.0	(0.0-16.6)	5.5 0.31	8.5	(2.0-15.0)	2.6 0.66	1.3	(0.2-2.4)	-7.2 0.03	4.4	(0.5-8.2)	3.1 0.13	0.9	(0.0-1.8)	-3.5 0.08

Pre-COVID: February 1st 2018 to March 17th 2019; **Spring 2020:** April 21st to May 25th 2020; **Summer 2020:** July 3rd to August 31st 2020; **Fall 2020:** October 1st to December 16th 2020; **Holidays 2020-2021:** December 17th 2020 to January 8th 2021. **1st wave:** Spring 2020; **2nd wave:** September 2020 to February 2021.

* Mean number of social contacts at work weighted to represent the mean daily contact over one usual week, estimated among workers.

† Diff: Absolute difference with the preceding period and p-value of this difference.

NA: Not available because there was no participant in these types of employment for these specific periods.

Table S8. Time trends in the proportion of workers who reported working remotely, according to the type of employment (2016 National occupation classification).

	Spring 2020 n=179			Summer 2020 n=364			September 2020 n=180			Fall 2020 n=406			Holidays 2020-21 n=395			January 2021 n=182			February 2021 n=179		
	%	95% CI		%	95% CI	Diff [†] p	%	95% CI	Diff [†] p	%	95% CI	Diff [†] p	%	95% CI	Diff [†] p	%	95% CI	Diff [†] p	%	95% CI	Diff [†] p
All workers*	54.9	(47.1-62.7)		41.7	(36.0-47.3)	-13.2 0.007	44.2	(36.4-52.0)	2.6 0.60	49.0	(44.0-54.1)	4.8 0.31	44.1	(38.8-49.3)	-5.0 0.18	41.7	(34.2-49.3)	-2.3 0.62	57.0	(49.4-64.6)	15.3 0.005
0. Management	73.9	(55.7-92.0)		43.1	(29.2-57.1)	-30.7 0.009	55.3	(35.0-75.6)	12.1 0.33	63.2	(49.9-76.6)	8.0 0.52	54.9	(40.1-69.7)	-8.4 0.41	30.8	(12.2-49.4)	-24.1 0.05	64.1	(46.6-81.6)	33.4 0.01
1. Business, finance & administration	70.9	(54.8-87.0)		60.7	(48.1-73.3)	-10.1 0.33	63.5	(47.6-79.5)	2.8 0.79	57.1	(47.1-67.0)	-6.5 0.50	64.6	(53.4-75.8)	7.5 0.32	77.9	(62.9-92.9)	13.3 0.16	68.9	(52.5-85.3)	-8.9 0.43
2. Natural & applied sciences	88.3	(77.1-99.5)		70.6	(56.7-84.5)	-17.8 0.05	56.7	(37.1-76.2)	-13.9 0.26	68.6	(56.6-80.5)	11.9 0.31	66.7	(54.4-79.1)	-1.8 0.84	69.4	(50.7-88.2)	2.7 0.82	77.4	(64.6-90.1)	8.0 0.49
3. Health	16.5	(0.0-33.6)		5.0	(0.0-10.8)	-11.5 0.21	30.1	(0.0-67.4)	25.1 0.19	14.8	(2.4-27.2)	-15.2 0.45	9.0	(0.0-18.8)	-5.8 0.47	5.4	(0.0-15.8)	-3.6 0.63	16.4	(0.0-46.0)	10.9 0.49
4. Education, law & social, community & gov. services	69.3	(44.1-94.5)		52.0	(33.8-70.2)	-17.3 0.28	48.6	(25.7-71.4)	-3.4 0.82	53.1	(38.2-68.0)	4.5 0.75	72.3	(56.5-88.1)	19.2 0.08	68.2	(47.0-89.5)	-4.1 0.76	61.8	(35.2-88.4)	-6.4 0.71
5. Art, culture, recreation & sport	54.9	(20.6-89.3)		68.9	(50.8-87.0)	14.0 0.48	49.1	(12.7-85.5)	-19.8 0.34	78.0	(60.2-95.8)	28.9 0.16	69.4	(43.5-95.3)	-8.6 0.59	100.0	(100.0-100.0)	30.6 0.02	89.0	(67.6-110.4)	-11.0 0.32
6. Sales & services	33.5	(9.6-57.4)		21.7	(9.9-33.5)	-11.8 0.39	15.8	(2.2-29.5)	-5.8 0.53	27.7	(14.6-40.8)	11.8 0.22	20.8	(9.8-31.8)	-6.9 0.43	19.2	(4.7-33.7)	-1.6 0.86	31.0	(11.4-50.6)	11.8 0.34

Spring 2020: April 21st to May 25th 2020; **Summer 2020:** July 3rd to August 31st 2020; **Fall 2020:** October 1st to December 16th 2020; **Holidays 2020-2021:** December 17th 2020 to January 8th 2021. **1st wave:** Spring 2020; **2nd wave:** September 2020 to February 2021.

* Very few workers in the domains of trades, transport & equipment operators (#7), Natural resources agriculture & related production (#8), and Manufacturing & utilities (#9) reported working remotely.

† Diff: Absolute difference with the preceding period and p-value of this difference.

Figure S1. Example of the social contact diary.

DATE DAY 1

Year				Month		Day	

List of persons with whom you have been in contact during this first day, from 5 am today to 5 am tomorrow morning.

Initials or nick-name	Age (or age group) of the contacted person	Sex		Person's relation with yourself				Place of contact <i>(check all that apply)</i>						Total duration of contact with the person					Did you touch his/her skin?		How often do you have contact with this person in general?					Ethnicity of this person					
		Female	Male	Household member	Family member not living in household	Friend/Colleague	Other	Home / Car / Private place	Work	Kindergarten / School / College / University	Public transport	Leisure	Other	less than 5 min	5 - 14 min	15 - 59 min	1h - 4h	more than 4h	Yes	No	Daily or almost daily	A few times a week	A few times a month	A few times a year or less	First time	White	Black	Asian	Hispanic / Latino	Other	Don't know
_____	□□ (-□□)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
_____	□□ (-□□)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
_____	□□ (-□□)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
_____	□□ (-□□)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
_____	□□ (-□□)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
_____	□□ (-□□)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Figure S2. Quebec COVID-19 epidemiology, related physical distancing measures, and CONNECT data periods.

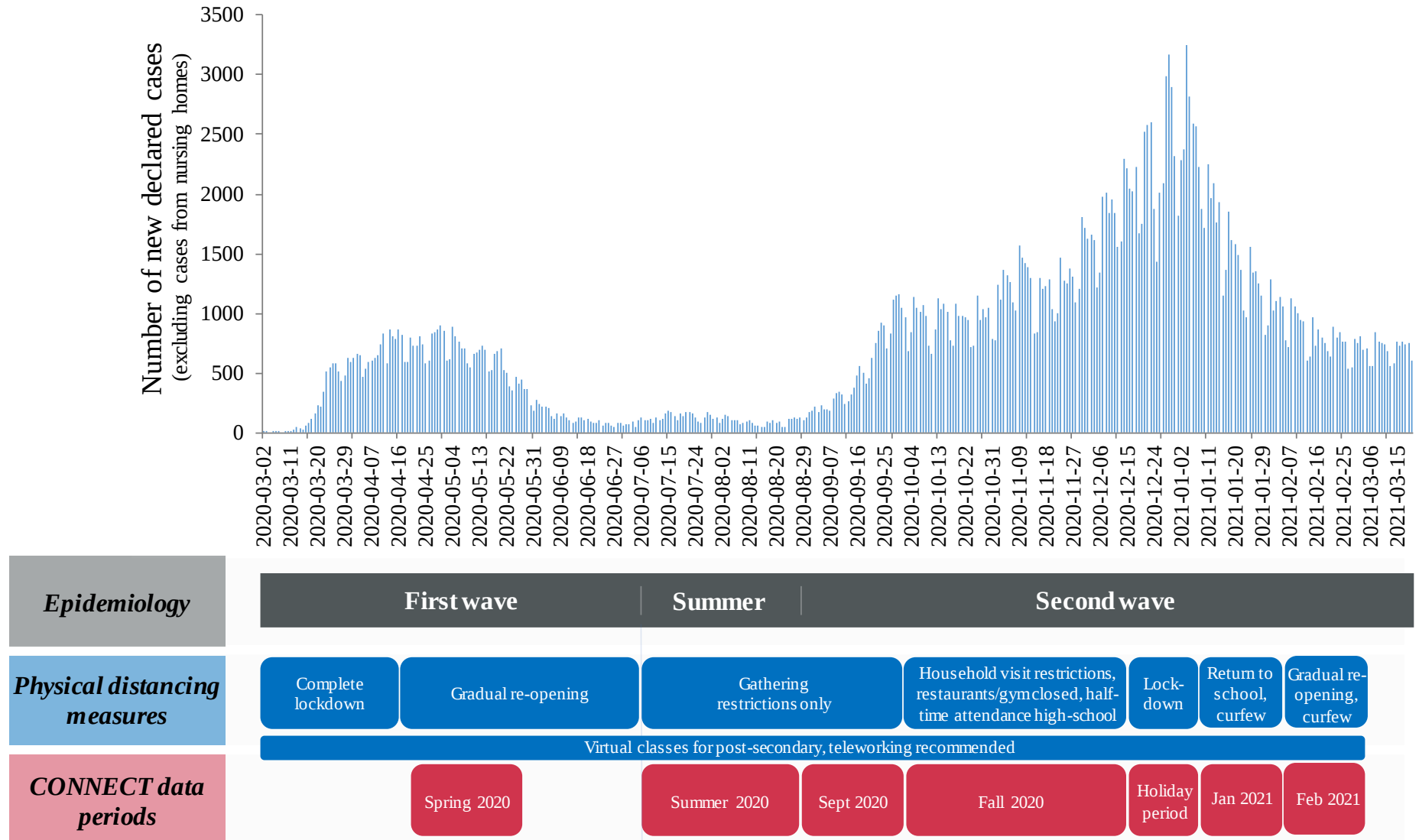
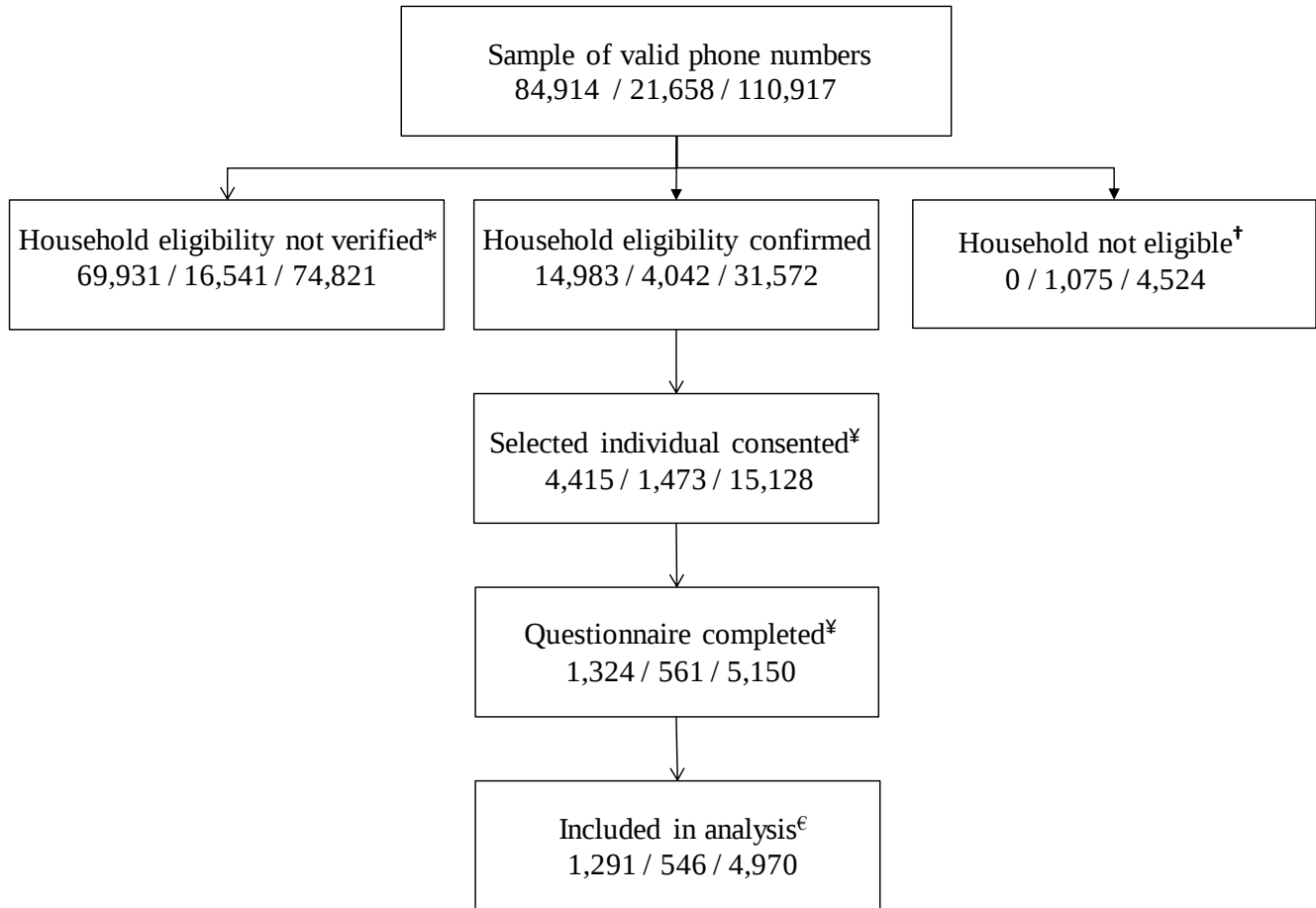


Figure S3. Flowchart of participant identification for CONNECT 1, CONNECT 2, and CONNECT 3,4,5.



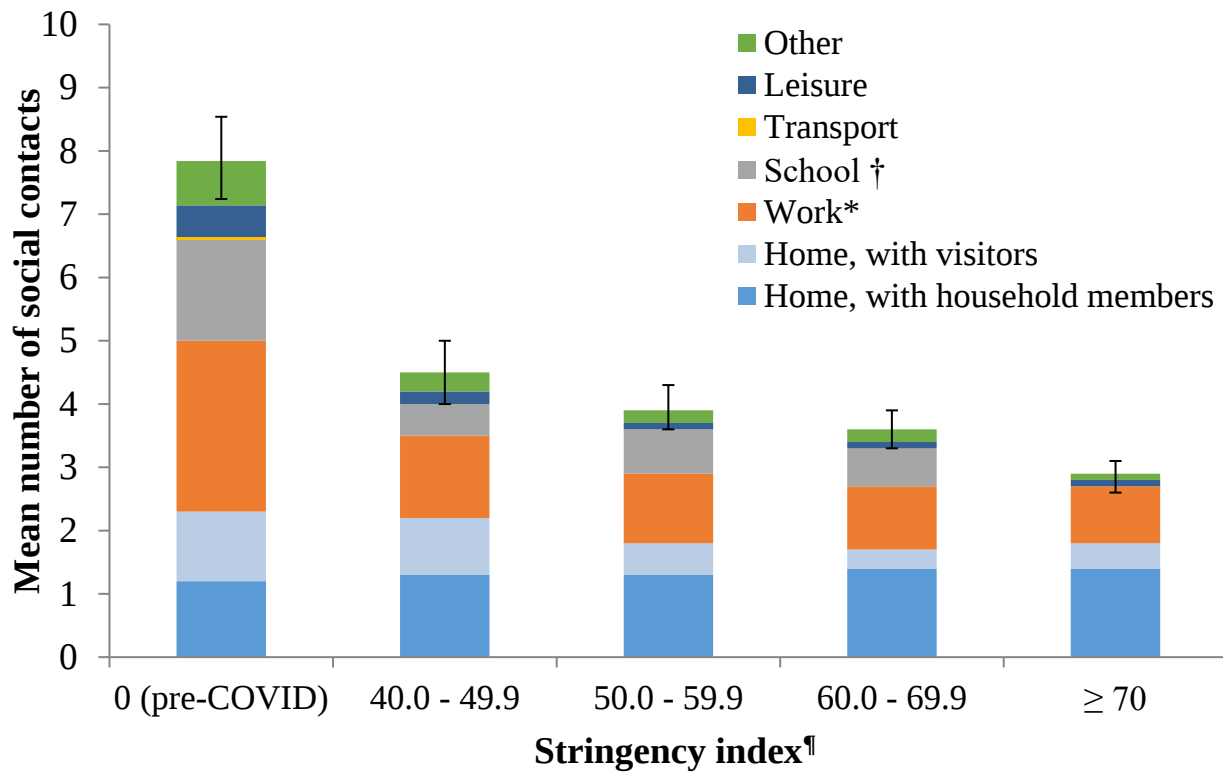
* Household eligibility not verified: no answer, refusal to determine eligibility.

† Household not eligible: out of Quebec.

‡ Participation: questionnaires completed among selected individuals who consented. CONNECT 1: 1,324/4,415 = 30%, CONNECT2: 561/1,473 = 38%, CONNECT3,4,5: 5,150/15,128 = 34%.

§ Participants were excluded from the analysis when the social contact diary was not adequately completed.

Figure S4. Mean number of social contacts according to the intensity of public health measures in Quebec as summarized by the stringency index.



† Contacts for workers in schools were included in the school location.

* Contacts at work were truncated to a maximum of 40 contacts per day.

¶ Stringency index: Higher values indicate stricter measures; the association between social contacts and the stringency index was examined irrespective of periods.

Error bars represent the 95% confidence interval of the total number of social contacts.