Supplemental Materials for:

The impact of social distancing on early SARS-CoV-2 transmission in the United States

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Supplemental Table 1: Changes in mobility by state

Largest percent change in mobility compared to baseline (baseline = 0) for each state. Negative values represent reductions in mobility and positive values represent increases in mobility. Note: Residential mobility was calculated as the maximum (largest increase) in mobility since movement in this category increased during the study, whereas movement in all other categories were calculated as the minimum (largest decrease) in mobility since movement in these categories decreased during the study. Q1 = first quartile. Q3 = third quartile. SD = standard deviation.

	Mobility category					
	Grocery and Pharmacy	Retail and Recreation	Transit Stations	Workplace	Residential	Parks
State	Maximum decrease	Maximum decrease	Maximum decrease	Maximum decrease	Maximum increase	Maximum decrease
Alabama	-12.0%	-40.6%	-34.9%	-41.6%	16.0%	-7.0%
Alaska	-16.7%	-42.0%	-51.0%	-41.3%	16.4%	7.7%
Arizona	-17.4%	-41.6%	-42.7%	-45.7%	16.4%	-25.4%
Arkansas	-8.1%	-31.7%	-28.7%	-36.7%	12.4%	8.9%
California	-23.0%	-55.4%	-58.4%	-51.4%	22.6%	-50.1%
Colorado	-27.3%	-49.7%	-59.7%	-51.9%	21.0%	-36.3%
Connecticut	-25.1%	-49.4%	-57.7%	-52.1%	21.7%	-4.4%
Delaware	-25.0%	-44.9%	-53.6%	-49.0%	19.3%	-25.3%
Florida	-26.4%	-49.6%	-60.9%	-48.4%	19.1%	-54.9%
Georgia	-15.7%	-42.3%	-53.3%	-49.0%	18.9%	-12.3%
Hawaii	-32.6%	-55.0%	-71.1%	-51.3%	22.1%	-67.6%
Idaho	-13.3%	-40.4%	-32.1%	-43.0%	15.3%	13.1%
Illinois	-18.7%	-50.1%	-53.1%	-50.3%	19.9%	-27.7%
Indiana	-19.7%	-44.1%	-30.4%	-46.6%	17.6%	3.9%
Iowa	-7.0%	-44.1%	-29.7%	-40.0%	16.1%	10.1%
Kansas	-17.0%	-40.7%	-27.9%	-43.3%	16.1%	17.4%
Kentucky	-10.6%	-39.3%	-36.7%	-45.3%	16.1%	10.4%
Louisiana	-14.4%	-44.4%	-49.6%	-45.4%	17.6%	-24.4%
Maine	-21.7%	-49.0%	-54.3%	-45.9%	17.4%	-15.0%
Maryland	-23.4%	-45.4%	-56.6%	-53.3%	22.9%	-4.4%
Massachusetts	-29.4%	-53.6%	-71.6%	-56.6%	23.6%	-18.6%
Michigan	-26.7%	-57.4%	-55.9%	-58.6%	23.0%	0.1%
Minnesota	-23.7%	-49.4%	-59.1%	-49.0%	21.0%	-2.4%
Mississippi	-11.0%	-36.9%	-33.1%	-41.6%	15.7%	-15.3%
Missouri	-13.7%	-42.0%	-36.0%	-44.0%	16.0%	-1.1%
Montana	-18.4%	-47.6%	-38.9%	-42.3%	15.6%	-6.3%
Nebraska	-14.9%	-40.3%	-26.4%	-40.1%	16.7%	-3.0%
Nevada	-18.6%	-46.6%	-57.9%	-55.0%	20.0%	-45.3%
New Hampshire	-24.7%	-45.9%	-53.3%	-47.6%	19.7%	-14.1%
New Jersey	-28.0%	-63.7%	-69.9%	-60.0%	26.0%	-28.6%
New Mexico	-14.3%	-42.7%	-34.6%	-45.4%	17.1%	-20.6%
New York	-27.0%	-65.6%	-70.4%	-60.0%	25.1%	-38.6%
North Carolina	-12.9%	-40.4%	-49.7%	-46.1%	16.4%	4.9%

	Mobility category					
	Grocery and Pharmacy	Retail and Recreation	Transit Stations	Workplace	Residential	Parks
State	Maximum decrease	Maximum decrease	Maximum decrease	Maximum decrease	Maximum increase	Maximum decrease
North Dakota	-18.7%	-47.0%	-37.7%	-37.7%	17.9%	-14.4%
Ohio	-19.6%	-45.1%	-33.4%	-48.1%	18.1%	19.7%
Oklahoma	-9.7%	-35.0%	-25.0%	-41.6%	15.3%	-5.4%
Oregon	-20.7%	-48.3%	-46.0%	-46.0%	16.9%	-15.7%
Pennsylvania	-23.7%	-50.4%	-55.7%	-52.1%	20.3%	-13.1%
Rhode Island	-23.9%	-49.0%	-66.1%	-50.0%	20.7%	-0.7%
South Carolina	-12.4%	-41.9%	-38.1%	-44.3%	15.7%	-28.3%
South Dakota	-12.3%	-44.1%	-32.0%	-38.3%	16.9%	-2.0%
Tennessee	-11.0%	-40.0%	-37.6%	-44.7%	15.9%	-11.3%
Texas	-18.6%	-42.4%	-46.7%	-47.3%	19.9%	-35.1%
Utah	-14.7%	-39.0%	-46.1%	-47.0%	17.4%	12.0%
Vermont	-31.9%	-55.7%	-61.0%	-53.4%	20.6%	-13.0%
Virginia	-17.1%	-42.1%	-53.4%	-48.4%	19.1%	3.3%
Washington	-21.7%	-47.7%	-58.0%	-53.1%	20.3%	-13.3%
West Virginia	-18.4%	-41.7%	-34.4%	-42.0%	14.6%	-8.9%
Wisconsin	-24.1%	-51.3%	-40.4%	-44.6%	18.9%	12.4%
Wyoming	-15.9%	-40.3%	-23.1%	-37.1%	15.1%	-25.4%
minimum	-32.6%	-65.6%	-71.6%	-60.0%	12.4%	-67.6%
maximum	-7.0%	-31.7%	-23.1%	-36.7%	26.0%	19.7%
median	-18.6%	-44.6%	-48.1%	-46.4%	17.7%	-11.8%
Q1	-23.8%	-49.4%	-57.4%	-51.0%	16.1%	-25.1%
Q3	-14.3%	-41.6%	-34.6%	-43.1%	20.3%	-0.1%
mean	-19.1%	-45.9%	-46.7%	-47.1%	18.5%	-12.2%
SD	6.3%	6.7%	13.5%	5.7%	2.9%	19.2%

Supplemental Table 2: Results of cross-correlation between daily mobility and daily SARS-CoV-2 case count

Results of cross-correlation between daily mobility measurements (in six different lifestyle categories) and the daily case count of new severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) cases in the United States. The lag of mobility reflects the number of days until there was minimal correlation (correlation near zero as it switched from negative to positive, or vice versa), or maximum positive correlation. The days of data is the number of daily observations included in for each state. Q1 = first quartile. Q3 = third quartile. SD = standard deviation.

		Mobility category											
		Grocery and Pharmacy		Retail and Recreation		Transit Stations		Workplace		Residential		Parks	
State	Days of data	Minimal correlation	Maximum positive correlation	Minimal correlation	Maximum positive correlation	Minimal correlation	Maximum positive correlation	Minimal correlation	Maximum positive correlation	Minimal correlation	Maximum positive correlation	Minimal correlation	Maximum positive correlation
Alabama	48	-18	-25	-21	-26	-18	-26	-18	-26	-19	-1	-18	-26
Alaska	53	-10	-22	-12	-26	-9	-20	-10	-20	-10	0	-15	-24
Arizona	55	-22	-42	-24	-44	-23	-43	-23	-44	-24	-2	-23	-43
Arkansas	53	-32	-40	-33	-42	-28	-42	-29	-42	-31	-2	-15	-28
California	55	-24	-42	-21	-43	-25	-43	-24	-43	-25	-5	-24	-43
Colorado	54	-24	-43	-29	-45	-26	-45	-24	-45	-26	-5	-31	-46
Connecticut	51	-19	-37	-22	-38	-21	-37	-20	-37	-21	-2	-24	-38
Delaware	53	-27	-41	-27	-44	-27	-44	-26	-44	-27	-7	-21	-40
Florida	55	-15	-24	-17	-26	-17	-26	-17	-26	-17	0	-16	-25
Georgia	53	-18	-29	-21	-36	-20	-36	-20	-36	-20	-2	-20	-30
Hawaii	45	-6	-15	-5	-15	-4	-14	-5	-15	-6	0	-7	-15
Idaho	52	-11	-19	-12	-20	-11	-20	-12	-20	-12	0	-12	-29
Illinois	55	-29	-43	-31	-46	-29	-46	-28	-45	-29	-6	-39	-47
Indiana	52	-26	-42	-32	-45	-23	-43	-22	-44	-23	-5	-19	0
Iowa	53	-34	-43	-36	-45	-33	-44	-33	-44	-34	-12	-12	0
Kansas	53	-32	-42	-35	-44	-33	-44	-33	-44	-34	-8	-21	0
Kentucky	53	-24	-41	-27	-44	-24	-42	-25	-42	-25	-4	-32	-21
Louisiana	51	-12	-20	-14	-21	-12	-21	-12	-21	-13	0	-14	-21
Maine	52	-13	-30	-17	-31	-13	-20	-13	-31	-14	0	-18	-21
Maryland	54	-24	-42	-26	-44	-26	-45	-25	-45	-25	-5	-24	-42
Massachusetts	47	-20	-36	-22	-36	-22	-36	-21	-36	-22	-3	-20	-32
Michigan	58	-9	-19	-11	-22	-10	-22	-10	-21	-10	0	-16	-22
Minnesota	53	-34	-43	-36	-45	-35	-45	-34	-45	-35	-15	-11	0
Mississippi	48	-23	-39	-27	-42	-23	-38	-23	-38	-24	-3	-21	-33
Missouri	50	-14	-22	-16	-24	-15	-24	-15	-24	-16	-1	-12	0
Montana	52	-8	-17	-10	-19	-8	-17	-8	-17	-9	0	-26	-43
Nebraska	54	-35	-44	-37	-46	-36	-46	-33	-46	-36	-13	-10	0
Nevada	54	-15	-24	-16	-24	-16	-24	-16	-24	-16	-1	-17	-24

		Mobility category											
		Grocery and Pharmacy		Retail and Recreation		Transit Stations		Workplace		Residential		Parks	
State	Days of data	Minimal correlation	Maximum positive correlation	Minimal correlation	Maximum positive correlation	Minimal correlation	Maximum positive correlation	Minimal correlation	Maximum positive correlation	Minimal correlation	Maximum positive correlation	Minimal correlation	Maximum positive correlation
New Hampshire	55	-21	-42	-26	-46	-22	-44	-22	-44	-23	-2	-35	-49
New Jersey	54	-16	-36	-18	-36	-18	-36	-18	-36	-18	-2	-16	-27
New Mexico	53	-26	-42	-28	-44	-25	-42	-26	-44	-27	-8	-26	-44
New York	55	-14	-26	-15	-27	-15	-27	-15	-27	-15	0	-16	-29
North Carolina	50	-25	-41	-28	-43	-24	-41	-23	-41	-24	-2	-21	-41
North Dakota	49	-29	-41	-31	-42	-29	-42	-28	-42	-30	-12	-9	0
Ohio	54	-28	-37	-31	-39	-28	-39	-28	-39	-29	-5	-9	0
Oklahoma	52	-16	-22	-18	-23	-16	-23	-16	-23	-17	-1	0	-49
Oregon	55	-14	-21	-16	-22	-15	-22	-15	-22	-15	0	-13	-37
Pennsylvania	53	-19	-27	-20	-28	-20	-28	-20	-28	-20	-4	-21	-28
Rhode Island	58	-25	-39	-28	-44	-27	-44	-27	-43	-28	-7	-22	-32
South Carolina	55	-16	-23	-19	-43	-18	-25	-18	-25	-18	0	-18	-28
South Dakota	52	-24	-33	-25	-34	-25	-33	-23	-33	-25	-8	-18	0
Tennessee	51	-32	-42	-35	-43	-30	-43	-30	-42	-32	-2	-21	-31
Texas	53	-20	-40	-22	-44	-21	-43	-21	-30	-22	-4	-23	-45
Utah	50	-29	-40	-32	-42	-20	-41	-20	-41	-31	-3	-4	0
Vermont	52	-8	-20	-9	-21	-8	-21	-8	-21	-8	0	-14	-26
Virginia	54	-27	-42	-29	-44	-28	-44	-28	-44	-28	-6	-27	-42
Washington	73	-8	-24	-13	-27	-14	-28	-17	-27	-13	0	-9	-37
West Virginia	49	-16	-23	-18	-24	-16	-24	-15	-24	-16	0	-9	-22
Wisconsin	55	-22	-44	-23	-46	-22	-46	-22	-46	-22	-2	-10	0
Wyoming	45	-7	-40	-38	-40	-34	-40	-35	-40	-36	-28	-10	0
minimum	45	-35	-44	-38	-46	-36	-46	-35	-46	-36	-28	-39	-49
maximum	73	-6	-15	-5	-15	-4	-14	-5	-15	-6	0	0	0
median	53	-21	-38	-23	-41	-22	-39	-22	-38	-23	-2	-18	-28
Q1	51	-26	-42	-29	-44	-27	-43	-26	-44	-28	-5	-22	-40
Q3	54	-14	-24	-17	-26	-16	-24	-16	-25	-16	0	-12	-17
mean	53	-20	-33	-23	-36	-21	-35	-21	-35	-22	-4	-18	-25
SD	4	8	9	8	10	8	10	7	10	8	5	8	16

Supplemental Table 3: Summary of regression models testing time invariant predictors of cumulative SARS-CoV-2 cases

Summary of Bayesian, negative binomial regression models testing non-time varying, state-level predictors of the total cumulative number of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) cases per state at the end of the study period. IRR = Incidence Rate Ratios. CI = credible interval. n = number of observations in model. LOO IC = leave-one-out cross-validation information criterion. SE = standard error. * 95% CI does not cross one.

	Predictors					
Model	Variable	IRR	95% CI	n	R^2 Bayes	LOO IC ± SE
0	Intercept	21,571.81	(15,152.51 – 32,132.44)	50	0.00	1,092.1 ± 27.8
1	Intercept	13,047.48	(9,945.00 – 17,657.83)	50	0.50	1,055.1 ± 27.0
	Population size*	3.77	(2.44 – 6.08)			
2	Intercept	15,222.58	(11,243.07 – 21,285.65)	50	0.52	1,070.0 ± 27.4
	Population density*	2.97	(1.84 – 5.19)			
3	Intercept	21,784.93	(14,393.88 – 34,243.78)	50	0.00	1091.9 ± 27.6
	In poverty*	2.97	(1.84 – 5.19)			
4	Intercept	22,088.96	(15,054.36 – 33,708.12)	50	0.00	1,091.8 ± 27.6
	Without health insurance	0.72	(0.10 – 5.25)			
5	Intercept	24,392.73	(9,328.74 – 64,157.17)	50	0.00	1,091.7 ± 27.5
	Labor force: essential	0.77	(0.11 – 5.59)			
6	Intercept	21,535.80	(14,971.78 – 32,458.07)	50	0.00	1,092.0 ± 27.8
	Labor force: health care	1.01	(0.14 – 6.92)			
7	Intercept	1,851.35	(453.21 – 8,750.64)	50	0.02	1,074.2 ± 28.9
	Urban*	19.12	(3.04 – 106.43)			
8	Intercept	1,171.95	(503.56 – 3,278.89)	50	0.08	1,052.8 ± 29.5
	Urban area*	53.22	(12.77 – 180.82)			
9	Intercept	25,051.45	(17,200.56 – 37,136.16)	50	0.00	1,084.4 ± 28.9
	Urban cluster*	0.13	(0.02 – 0.97)			
10	Intercept	17,244.62	(12,051.46 – 26,238.71)	50	0.00	1081.7 ± 24.6
	Population commuting*	8.29	(1.41 – 49.34)			
11	Intercept	14,237.04	(10,731.18 – 19,591.39)	50	0.52	1,065.7 ± 25.0
	Transit ridership*	2.67	(1.59 – 5.61)			
12	Intercept	17,689.25	(12,810.39 – 25,484.94)	50	0.14	1,083.3 ± 28.4
	Number of airports*	1.74	(1.29 – 2.44)			
13	Intercept	14,973.65	(11,128.37 – 20,982.59)	50	0.50	1,067.0 ± 24.5
	Airline passenger count*	2.86	(1.87 – 4.62)			
14	Intercept	13,416.74	(7,157.39 – 25,842.78)	50	0.01	1,086.5 ± 26.9
	Race: non-White	5.04	(0.80 – 31.90)			
15	Intercept	18,975.86	(12,345.31 – 30,692.49)	50	0.00	1,090.0 ± 27.6
	Race: Black	2.54	(0.38 – 16.73)			
16	Intercept	17,983.16	(11,546.89 – 29,186.62)	50	0.00	1,089.4 ± 27.7
	Race: Hispanic/Latino	3.12	(0.51 – 18.24)			
17	Intercept	21,627.19	(15,259.14 – 32,059.77)	50	0.00	1,091.7 ± 27.8

	Predictors					
Model	Variable	IRR	95% CI	n	R^2 Bayes	LOO IC ± SE
	Race: Indigenous American	0.66	(0.10 – 4.66)			
18	Intercept	15,587.73	(11,506.12 – 21,943.77)	50	0.66	1,067 ± 20.9
	Educational facilities*	1.99	(1.44 – 3.31)			
19	Intercept	22,066.52	(15,466.67 – 33,250.34)	49	0.04	1,074.1 ± 28.4
	Gathering restrictions	1.27	(0.89 – 2.32)			
20	Intercept	17,523.44	(12,493.48 – 25,766.35)	38	0.68	822.6 ± 20.7
	Stay-at-home order*	1.98	(1.42 – 3.08)			
21	Intercept	18,543.75	(13,309.80 – 26,924.58)	47	0.47	1,017.9 ± 22.7
	Business closure (any)*	2.25	(1.43 – 4.03)			
22	Intercept	19,637.28	(13,464.28 – 30,776.33)	34	0.64	741.1 ± 18
	Non-essential services closed*	1.98	(1.34 – 3.75)			
23	Intercept	1,142.79	(460.62 – 3,295.88)	50	0.08	1,017.9 ± 22.6
	Urban area*	53.8	(13.23 – 182.37)			
	In poverty	1.22	(0.18 – 8.56)			
24	Intercept	1,324.97	(638.16 – 3,097.43)	50	0.30	741.1 ± 18
	Urban area*	36.47	(10.83 – 107.26)			
	Number of airports*	1.68	(1.30 – 2.22)			

Supplemental Table 4: Summary of regression models testing association between mobility and daily SARS-CoV-2 cases

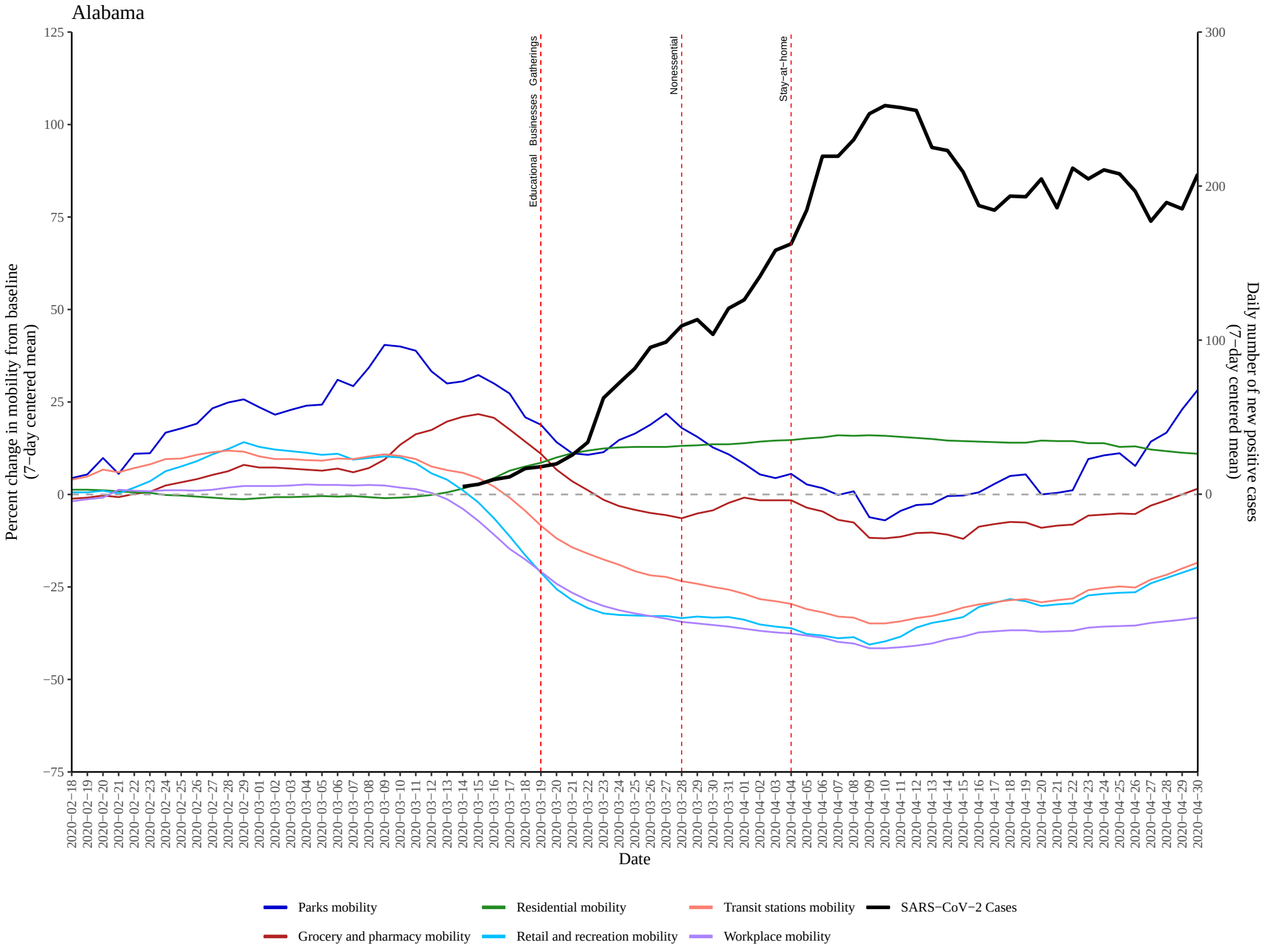
Summary of negative binomial mixed effect regression models testing lagged, time-varying mobility measures as predictors of the daily count of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) cases. Mobility predictors were lagged so that mobility and the number of daily cases were maximally correlated, resulting in individual lag times per state and per mobility category. Time invariant predictors included the proportion of the population living in an urban and the number of airports in each state. The state was used as a random intercept and the number of days since a state ran 10 tests was used as the random slope. IRR = Incidence Rate Ratios. CI = credible interval. ICC = intraclass correlation coefficient. N = number of states included as random intercepts. n = number of daily observations in model. LOO IC = leave-one-out cross-validation information criterion. SE = standard error. * 95% CI does not cross one.

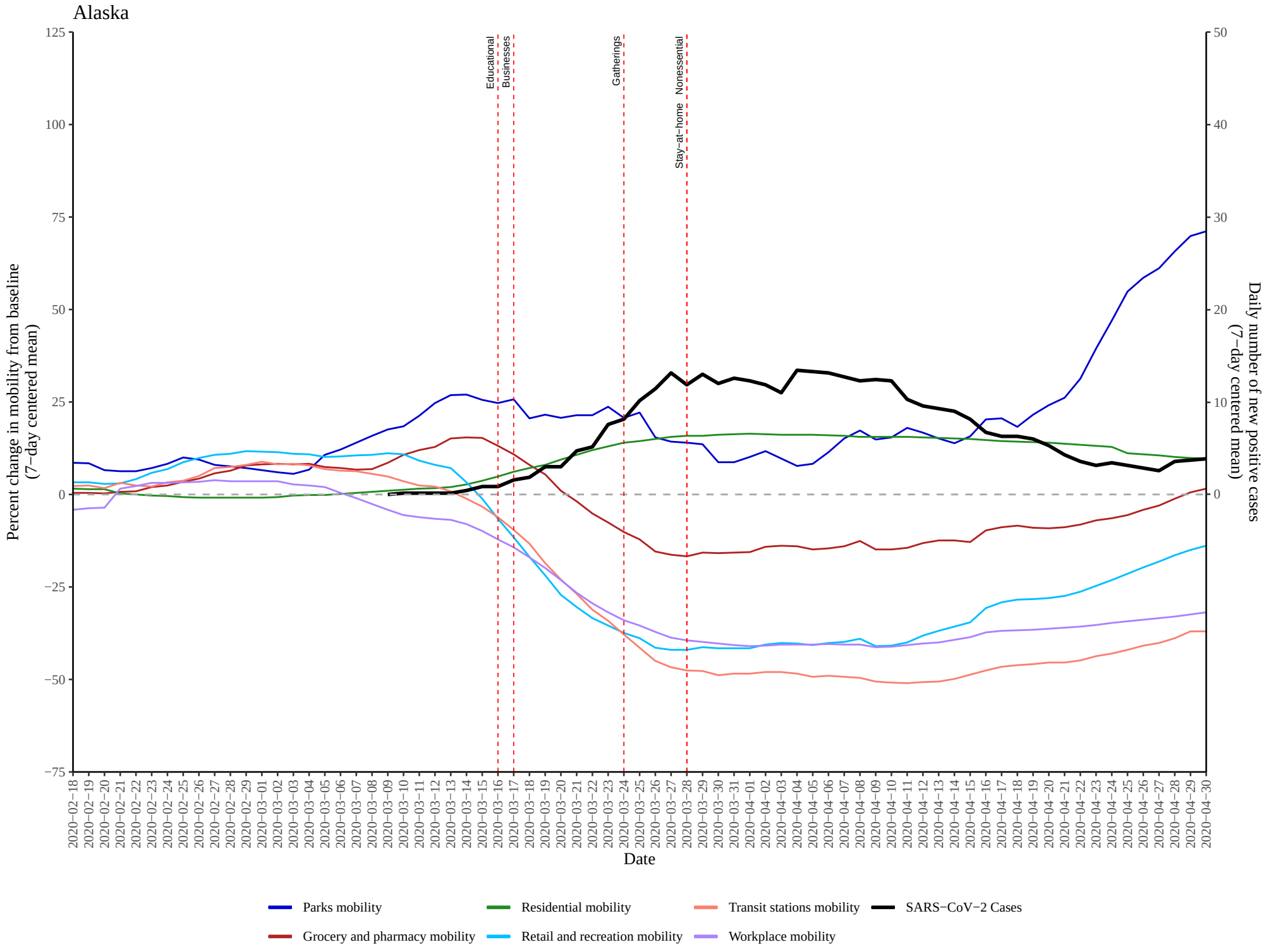
	Predictors			Random Effects							
Model	Variable	IRR	95% HDI	σ2	τ00	ICC	N	n	Marginal R2	Conditional R2	LOOIC ± SE
0	Intercept	32.72	(14.97 – 75.42)	3,299,469.5	546.7	1	50	2,655	0.00	0.69	29,548.9 ± 188.2
7	Intercept	175.38	(114.84 – 272.18)	1,927,850.2	757.1	1	50	972	0.00	0.99	8,786.0 ± 107.4
	Grocery/ Pharmacy*	2.24	(2.01 – 2.50)								
8	Intercept	31.90	(13.48 – 82.15)	1,913,665.0	13,699.6	0.99	50	972	0.01	0.99	8,786.7 ± 107.5
	Urban area*	17.80	(4.00 – 69.45)								
	Grocery/ Pharmacy*	2.25	(2.01 – 2.50)								
9	Intercept	36.85	(16.04 – 93.75)	1,866,772.7	49,070.1	0.97	50	972	0.03	0.99	8,787.2 ± 107.5
	Urban area*	14.18	(3.28 – 53.18)								
	Number of airports*	1.44	(1.04 – 2.04)								
	Grocery/ Pharmacy*	2.25	(2.02 – 2.51)								
10	Intercept	209.34	(131.51 – 326.61)	2,075,859.0	585.5	1	50	858	0.00	0.99	7,624.1 ± 99.3
	Retail/ Recreation *	1.46	(1.31 – 1.61)								
11	Intercept	38.61	(16.00 – 101.65)	2,060,046.6	14,609.2	0.99	50	858	0.01	0.99	7,623.6 ± 99.3
	Urban area*	16.52	(3.70 – 64.10)								
	Retail/ Recreation*	1.46	(1.32 – 1.61)								
12	Intercept	44.15	(17.93 – 115.94)	2,016,243.2	47,027.5	0.98	50	858	0.03	0.99	7,623.6 ± 99.3
	Urban area*	13.33	(3.03 – 54.99)								
	Number of airports	1.40	(0.99 – 1.99)								
	Retail/ Recreation*	1.46	(1.32 – 1.62)								
13	Intercept	210.74	(135.24 – 327.67)	1,967,749.3	615.5	1	50	914	0.00	0.99	8,105.4 ± 100.7
	Transit Stations*	1.46	(1.28 – 1.66)								
14	Intercept	38.17	(15.92 – 100.03)	1,951,329.6	14,271.0	0.99	50	914	0.01	0.99	8,105.0 ± 100.7
	Urban area*	17.49	(3.96 – 67.41)								

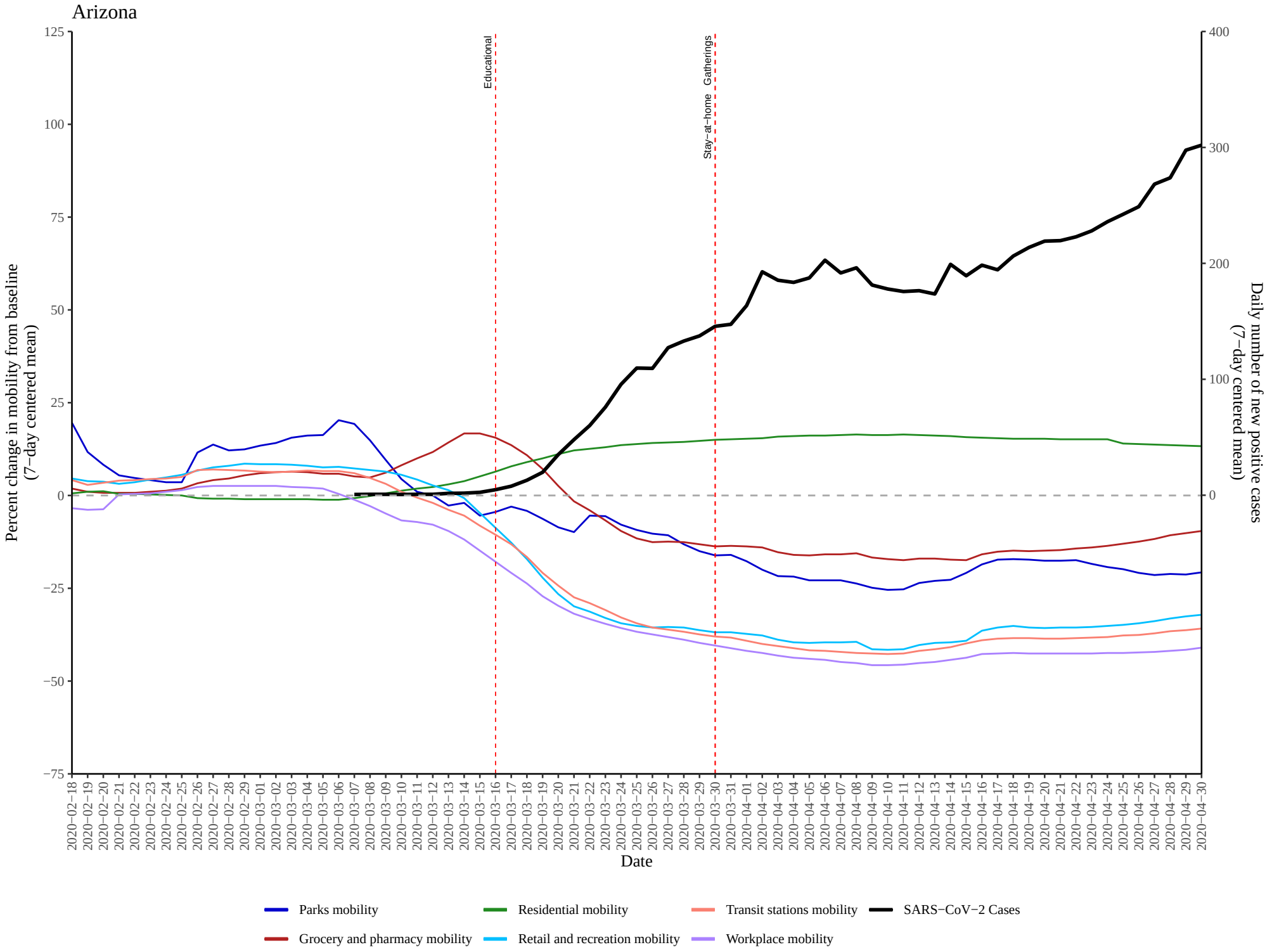
	Predictors			Random Effects							
Model	Variable	IRR	95% HDI	σ2	τ00	ICC	N	n	Marginal R2	Conditional R2	LOOIC ± SE
	Transit Stations*	1.46	(1.28 – 1.66)								
15	Intercept	43.61	(17.81 – 116.12)	1,910,585.1	44,880.9	0.98	50	914	0.03	0.99	8,106.4 ± 100.7
	Urban area*	14.19	(3.11 – 56.05)								
	Number of airports	1.39	(0.97 – 1.99)								
	Transit Stations*	1.46	(1.28 – 1.66)								
16	Intercept	207.85	(134.09 – 318.84)	1,959,394.8	649.8	1	50	916	0.00	0.99	8,179.0 ± 100.5
	Workplace*	1.72	(1.51 – 1.96)								
17	Intercept	39.93	(16.53 – 102.81)	1,943,803.0	13,775.1	0.99	50	916	0.01	0.99	8,178.9 ± 100.4
	Urban area*	16.24	(3.73 – 64.12)								
	Workplace*	1.72	(1.51 – 1.96)								
18	Intercept	46.52	(19.24 – 121.71)	1,893,857.0	53,098.6	0.97	50	916	0.03	0.99	8,178.4 ± 100.4
	Urban area*	12.54	(2.84 – 50.29)								
	Number of airports*	1.45	(1.02 – 2.08)								
	Workplace*	1.72	(1.51 – 1.97)								
4	Intercept	8.01	(4.80 – 13.12)	1,158,622.1	8,552.5	0.99	50	2,445	0.01	0.95	24,600.7 ±182
	Residential *	8,182,226.08	(5,525,456.16 – 11,957,313.16)								
5	Intercept	2.08	(0.93 – 4.88)	1,129,295.2	32,371.6	0.97	50	2,445	0.03	0.95	24,600.5 ± 182
	Urban area*	10.19	(2.87 – 34.08)								
	Residential*	8,124,185.58	(5,486,830.03 – 11,883,576.39)								
6	Intercept	2.39	(1.12 – 5.60)	1,082,365.3	71,067.8	0.94	50	2,445	0.07	0.95	24,601.4 ± 182
	Urban area*	7.15	(2.02 – 22.82)								
	Number of airports*	1.53	(1.14 – 2.07)								
	Residential*	8,051,575.63	(5,488,097.66 – 11,874,990.68)								
1	Intercept	180.48	(108.34 – 298.33)	1,493,708.6	4,090.8	1	50	1,383	0.00	0.98	14,547.8 ± 142.3
	Parks	1.04	(0.90 – 1.19)								
2	Intercept	27.29	(10.71 – 74.63)	1,462,541.9	21,176.1	0.99	50	1,383	0.01	0.98	14,547.3 ± 142.3
	Urban area*	23.39	(4.85 – 97.00)								
	Parks	1.04	(0.90 – 1.20)								
3	Intercept	31.22	(12.30 – 84.58)	1,398,805.2	61,954.5	0.96	50	1,383	0.04	0.98	14,547.1 ± 142.4
	Urban area*	18.42	(3.93 – 76.49)								
	Number of airports*	1.52	(1.04 – 2.27)								
	Parks	1.04	(0.90 – 1.20)								

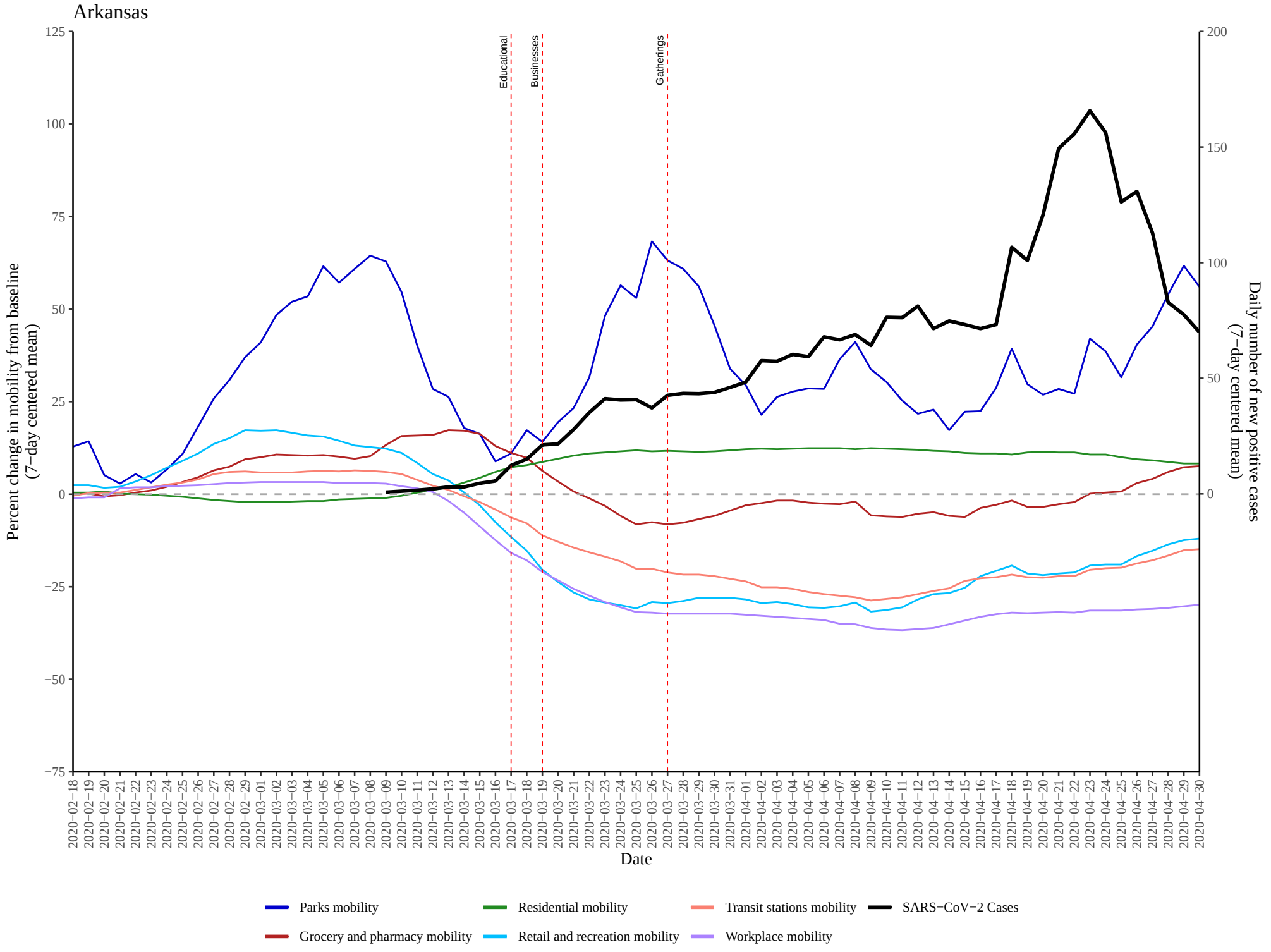
Supplemental Figure 1: Daily number of SARS-CoV-2 cases and changes in mobility relative to baseline by state

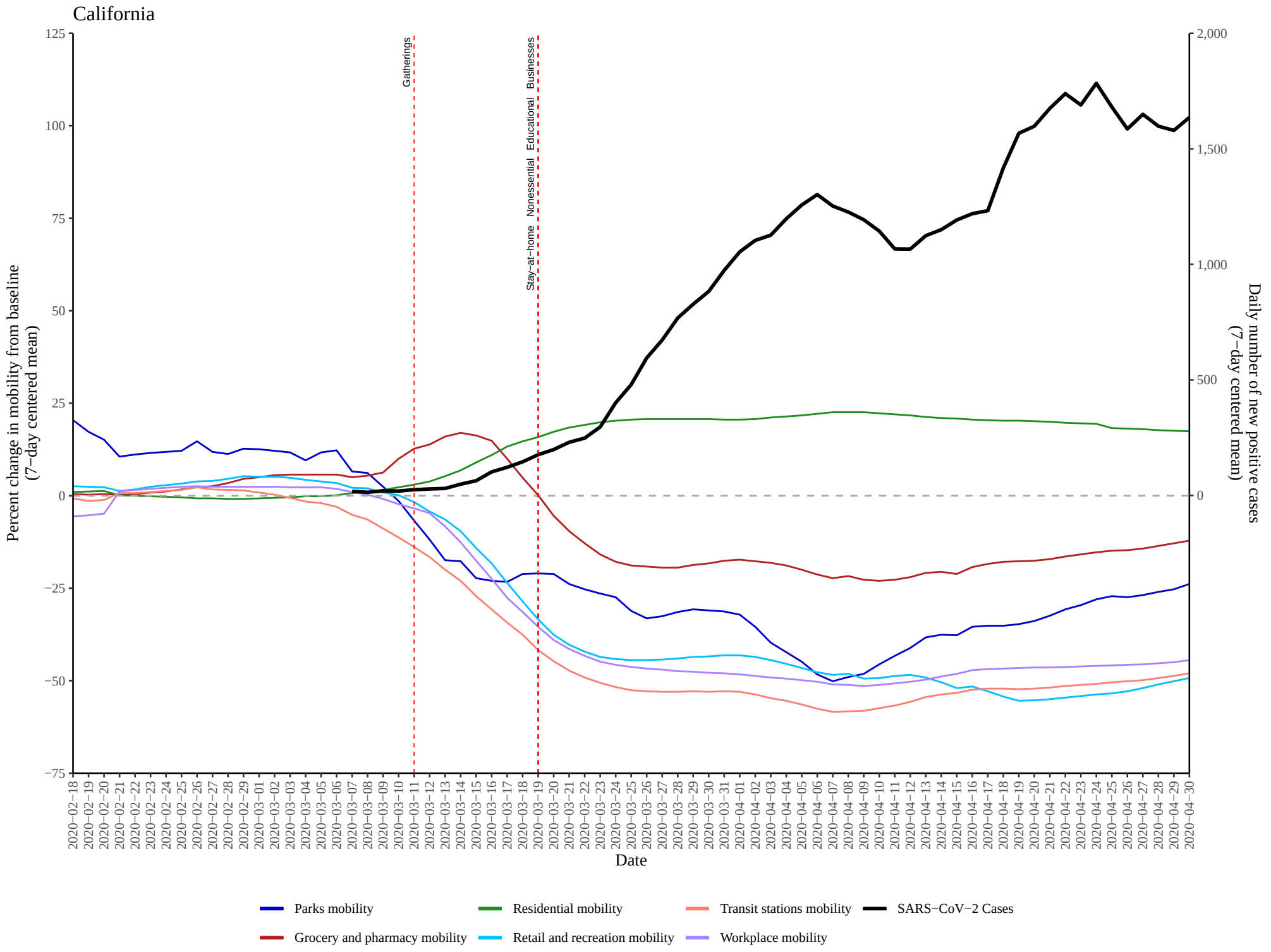
Plots showing the daily number of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) cases (seven-day centered means) and changes in mobility from baseline as measured by anonymized location data aggregated from mobile phones (seven-day centered means; non-lagged). The study period for each state began on the first date it reported results from ≥10 cumulative tests (as shown by the black line of each plot). Mobility data is shown prior to the start of the study period to demonstrate early behavior changes. Vertical lines denote the date on which government issued social distancing orders were put into place. These include the closure of educational facilities ("Educational"), restriction of large gatherings ("Gatherings"), closure of any businesses ("Businesses"), closure of all nonessential businesses ("Nonessential"), and stay-at-home orders ("Stay-at-home"). Note: The right-sided y-axis for cases varies by state to highlight the shape of the individual epidemic curves.

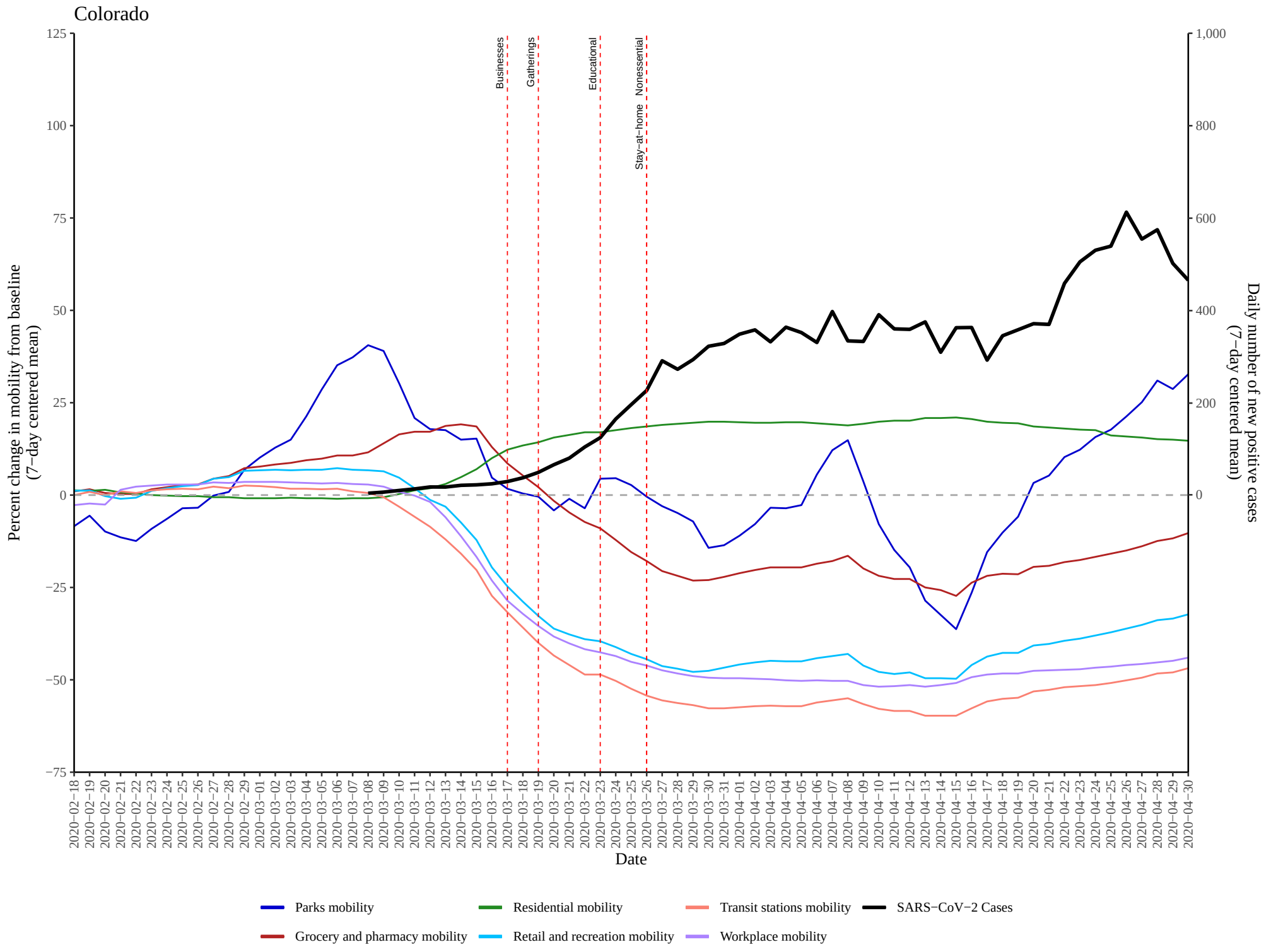

Alabama
Educational
Businesses
Gatherings
Nonessential
Stay−at−home
Percent change in mobility from baseline
(7−day centered mean)
Daily number of new positive cases
(7−day centered mean)
Date
Parks mobility
Residential mobility
Transit stations mobility
SARS−CoV−2 Cases
Grocery and pharmacy mobility
Retail and recreation mobility
Workplace mobility

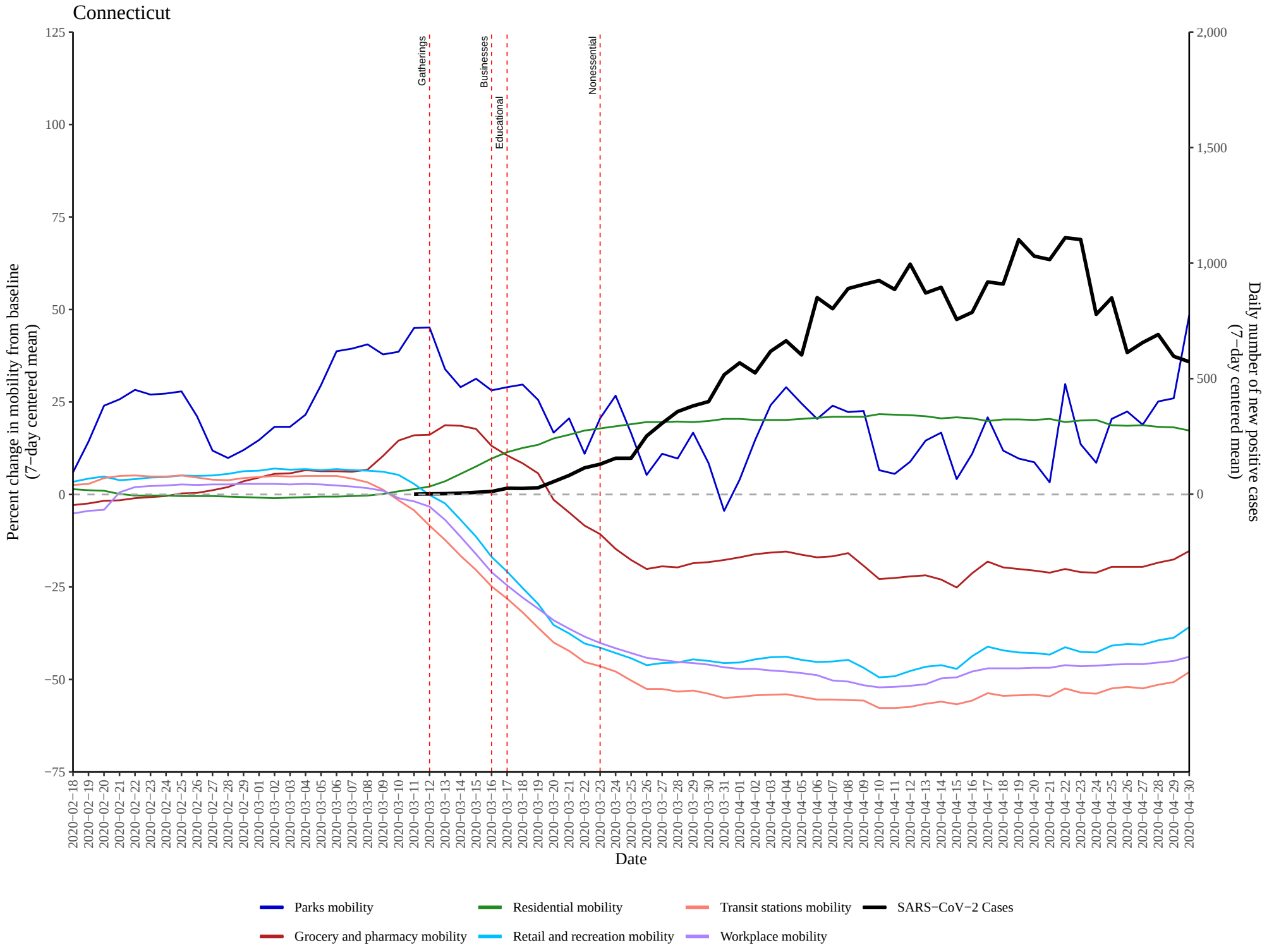

Alaska
Educational Businesses
Gatherings
Stay−at−home
Nonessential
Percent change in mobility from baseline (7−day centered mean)
Daily number of new positive cases (7−day centered mean)
Date
Parks mobility
Residential mobility
Transit stations mobility
SARS−CoV−2 Cases
Grocery and pharmacy mobility
Retail and recreation mobility
Workplace mobility

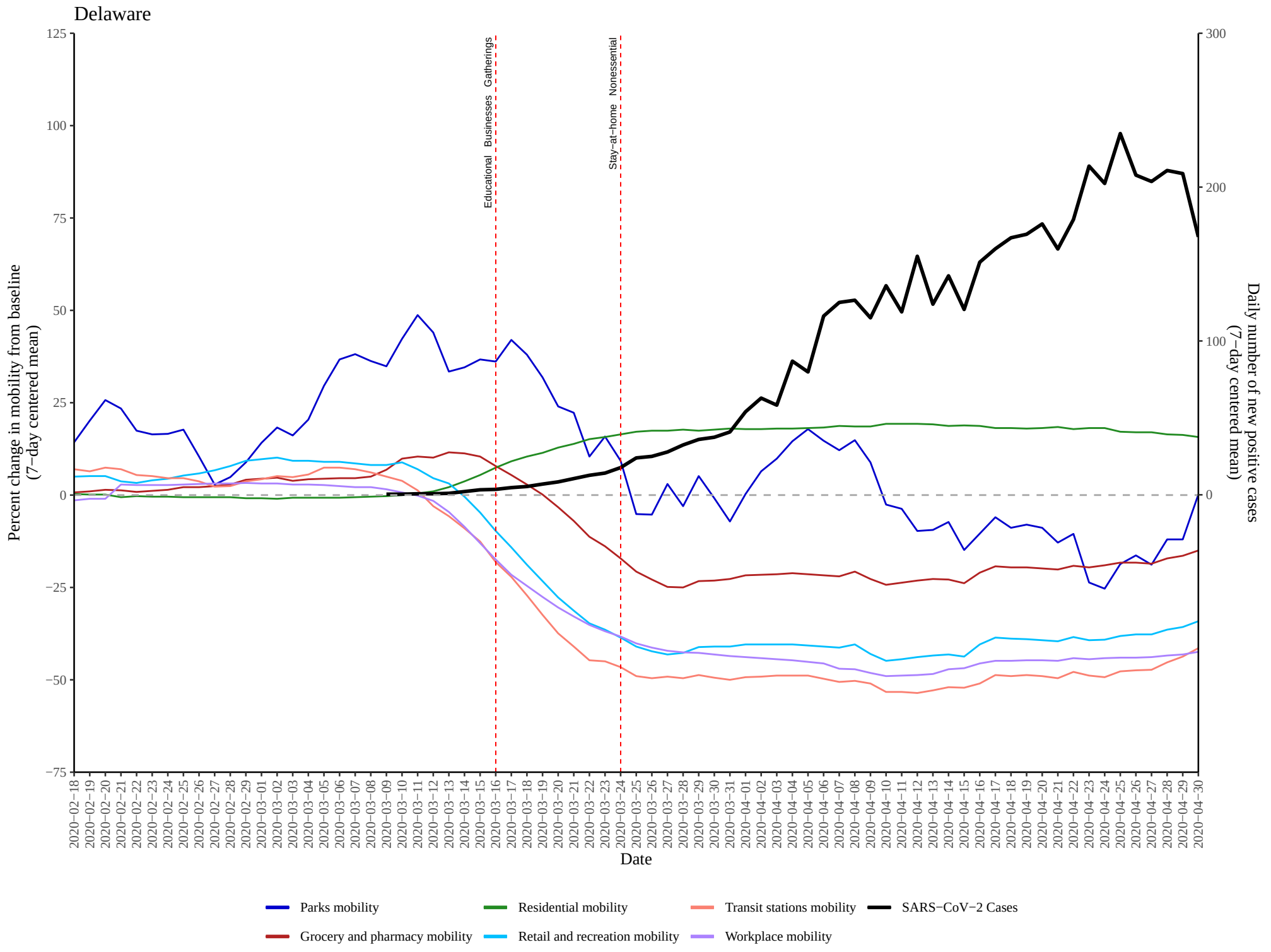

Arizona
Educational
Gatherings
Stay−at−home
Percent change in mobility from baseline
(7−day centered mean)
Daily number of new positive cases
(7−day centered mean)
Date
Parks mobility
Residential mobility
Transit stations mobility
SARS−CoV−2 Cases
Grocery and pharmacy mobility
Retail and recreation mobility
Workplace mobility

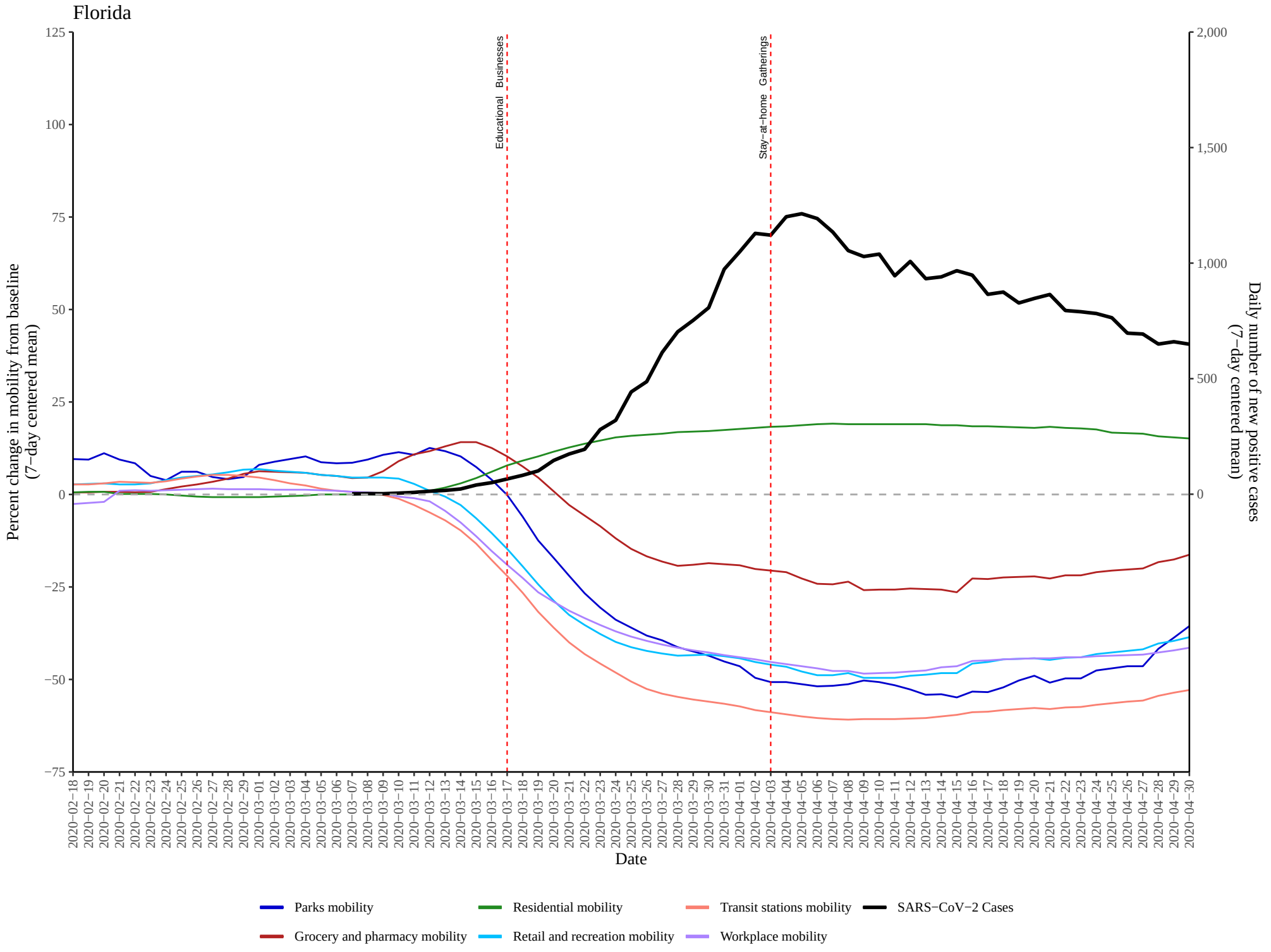

Arkansas
Educational
Businesses
Gatherings
Percent change in mobility from baseline
(7−day centered mean)
Daily number of new positive cases
(7−day centered mean)
Date
Parks mobility
Residential mobility
Transit stations mobility
SARS−CoV−2 Cases
Grocery and pharmacy mobility
Retail and recreation mobility
Workplace mobility

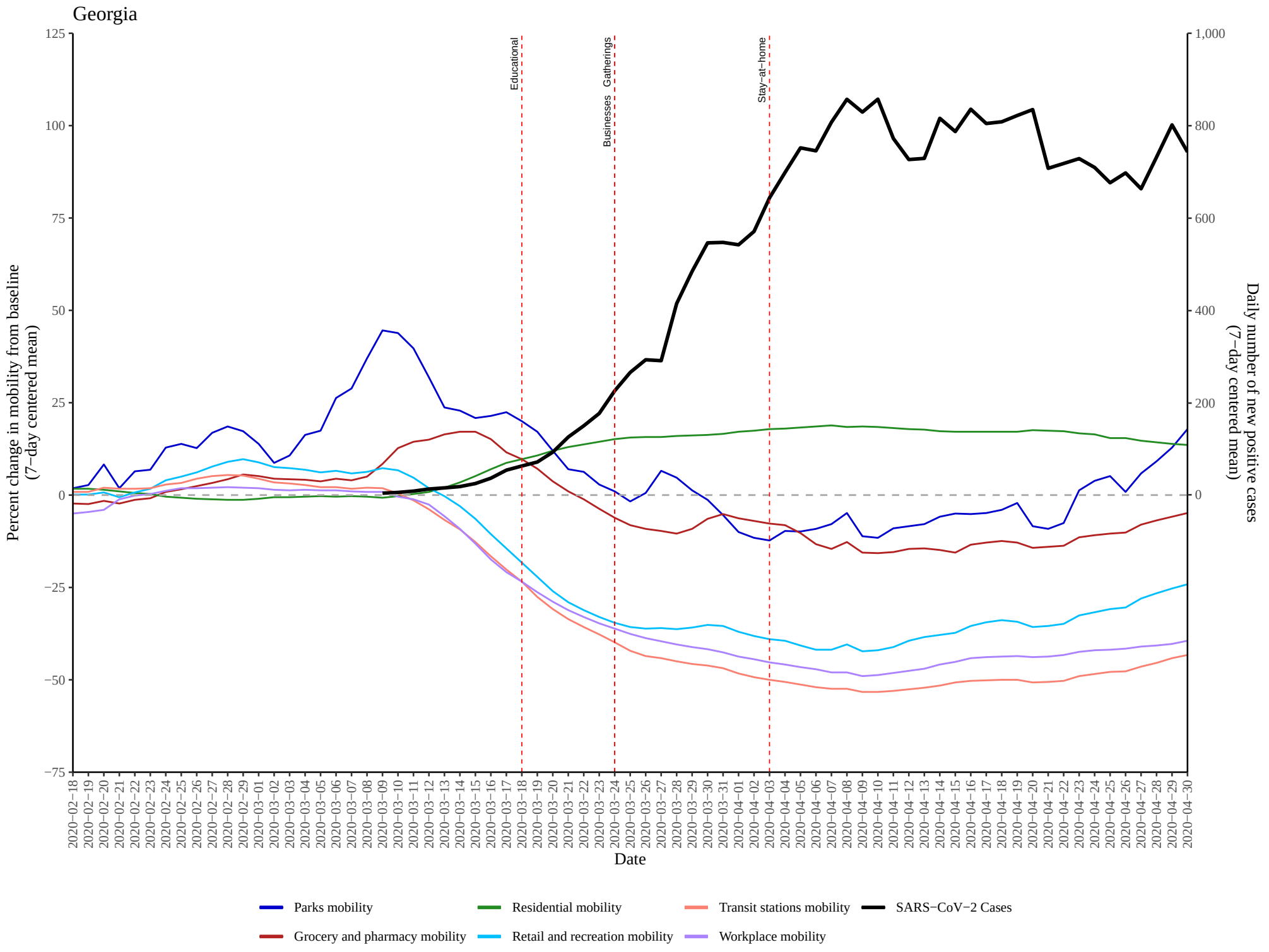

California
Gatherings
Businesses
Educational
Nonessential
Stay−at−home
Percent change in mobility from baseline
(7−day centered mean)
Daily number of new positive cases
(7−day centered mean)
Date
Parks mobility
Residential mobility
Transit stations mobility
SARS−CoV−2 Cases
Grocery and pharmacy mobility
Retail and recreation mobility
Workplace mobility


Colorado
Businesses
Gatherings
Educational
Stay−at−home
Nonessential
Percent change in mobility from baseline
(7−day centered mean)
Daily number of new positive cases
(7−day centered mean)
Date
Parks mobility
Residential mobility
Transit stations mobility
SARS−CoV−2 Cases
Grocery and pharmacy mobility
Retail and recreation mobility
Workplace mobility


Connecticut
Gatherings
Businesses
Educational
Nonessential
Percent change in mobility from baseline
(7−day centered mean)
Daily number of new positive cases
(7−day centered mean)
Date
Parks mobility
Residential mobility
Transit stations mobility
SARS−CoV−2 Cases
Grocery and pharmacy mobility
Retail and recreation mobility
Workplace mobility


Delaware
Educational Businesses Gatherings
Stay−at−home Nonessential
Percent change in mobility from baseline
(7−day centered mean)
Daily number of new positive cases
(7−day centered mean)
Date
Parks mobility
Residential mobility
Transit stations mobility
SARS−CoV−2 Cases
Grocery and pharmacy mobility
Retail and recreation mobility
Workplace mobility


Florida
Educational Businesses
Stay−at−home Gatherings
Percent change in mobility from baseline
(7−day centered mean)
Daily number of new positive cases
(7−day centered mean)
Date
Parks mobility
Residential mobility
Transit stations mobility
SARS−CoV−2 Cases
Grocery and pharmacy mobility
Retail and recreation mobility
Workplace mobility


Georgia
Educational
Businesses
Gatherings
Stay−at−home
Percent change in mobility from baseline
(7−day centered mean)
Daily number of new positive cases
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Date
Parks mobility
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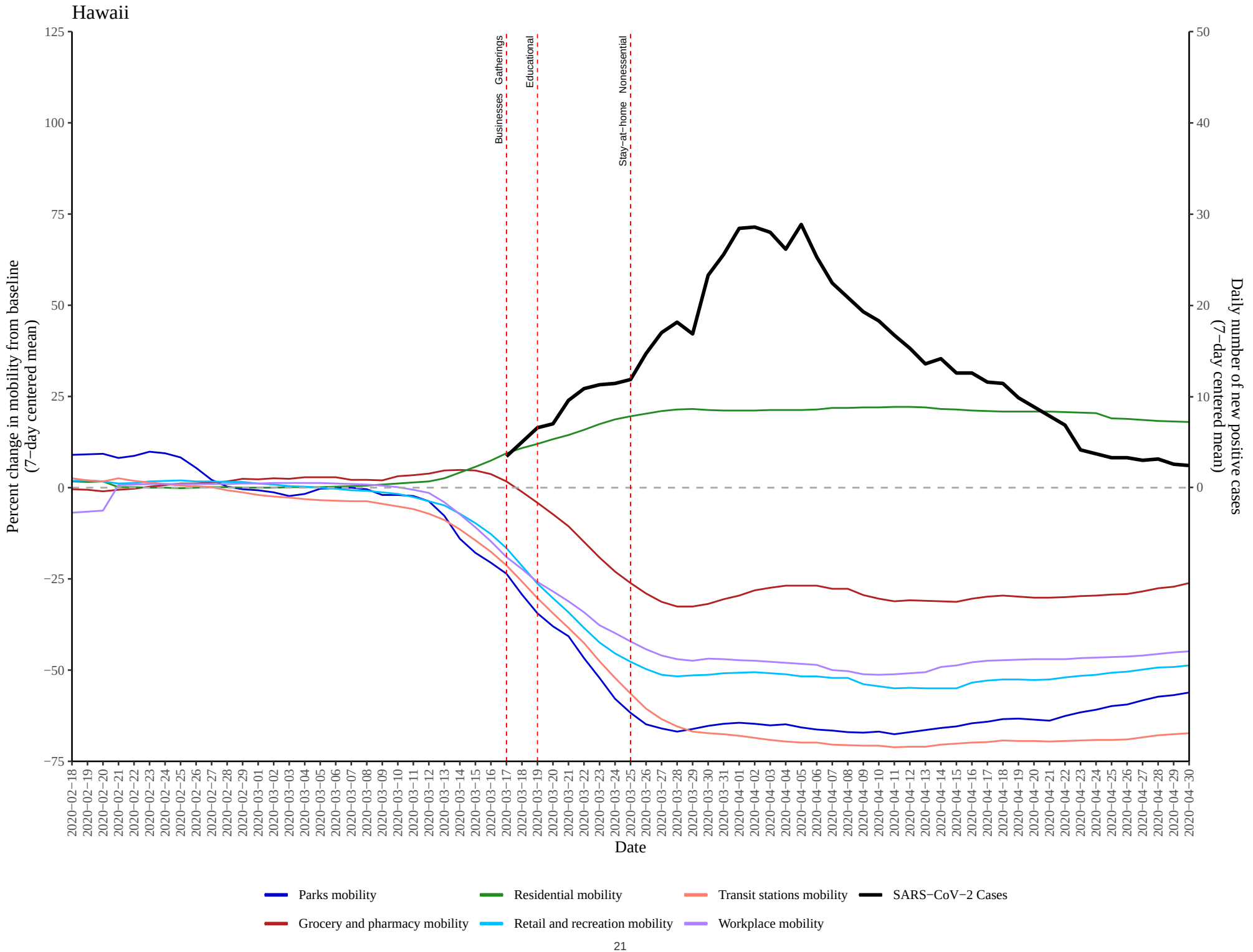
SARS−CoV−2 Cases
Grocery and pharmacy mobility
Retail and recreation mobility
Workplace mobility


Hawaii
Businesses Gatherings
Educational
Stay−at−home Nonessential
Percent change in mobility from baseline
(7−day centered mean)
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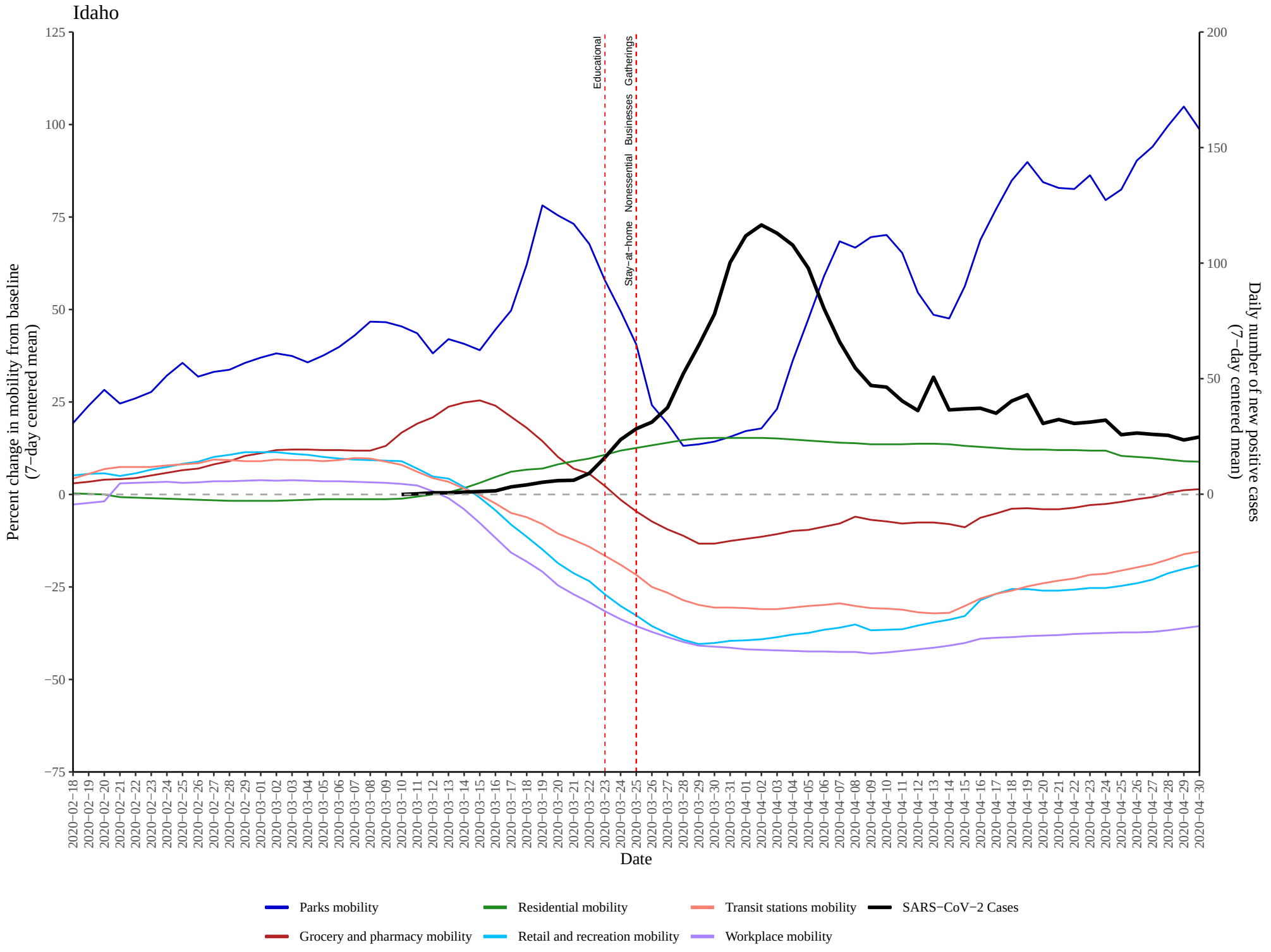
Idaho
Educational
Gatherings
Businesses
Nonessential
Stay−at−home
Percent change in mobility from baseline
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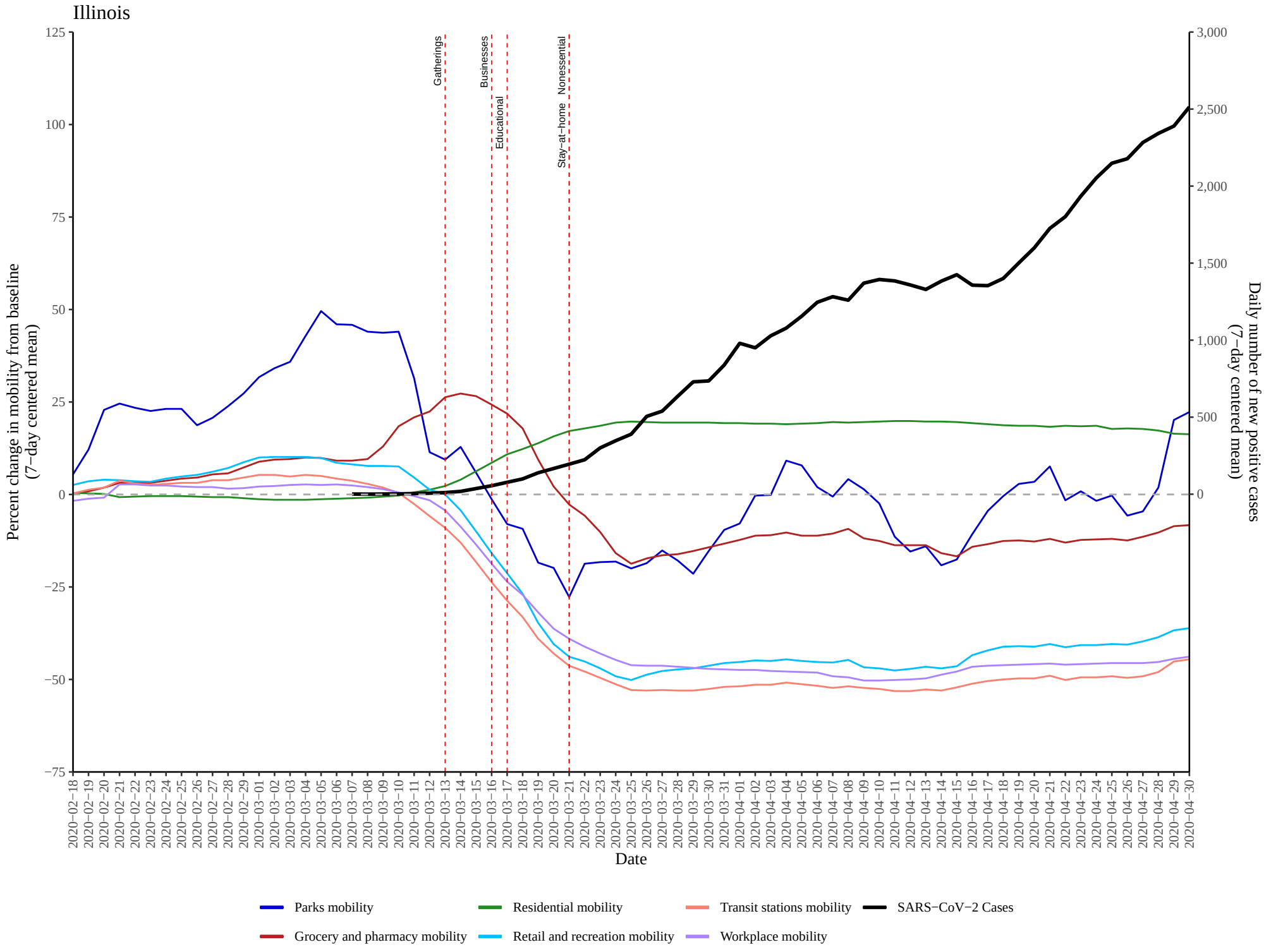
Illinois
Gatherings
Businesses
Educational
Stay−at−home
Nonessential
Percent change in mobility from baseline
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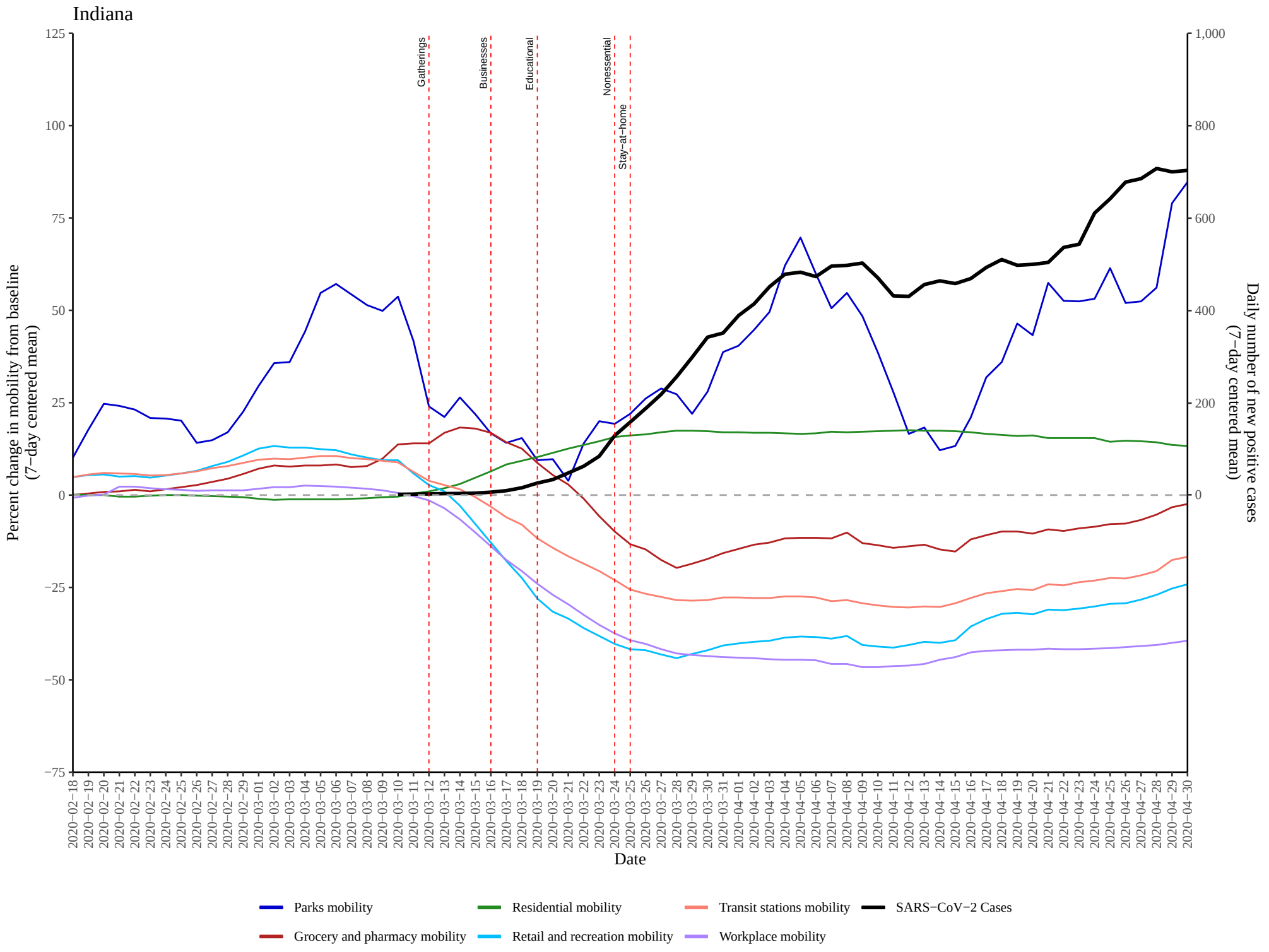
Indiana
Gatherings
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Stay−at−home
Percent change in mobility from baseline
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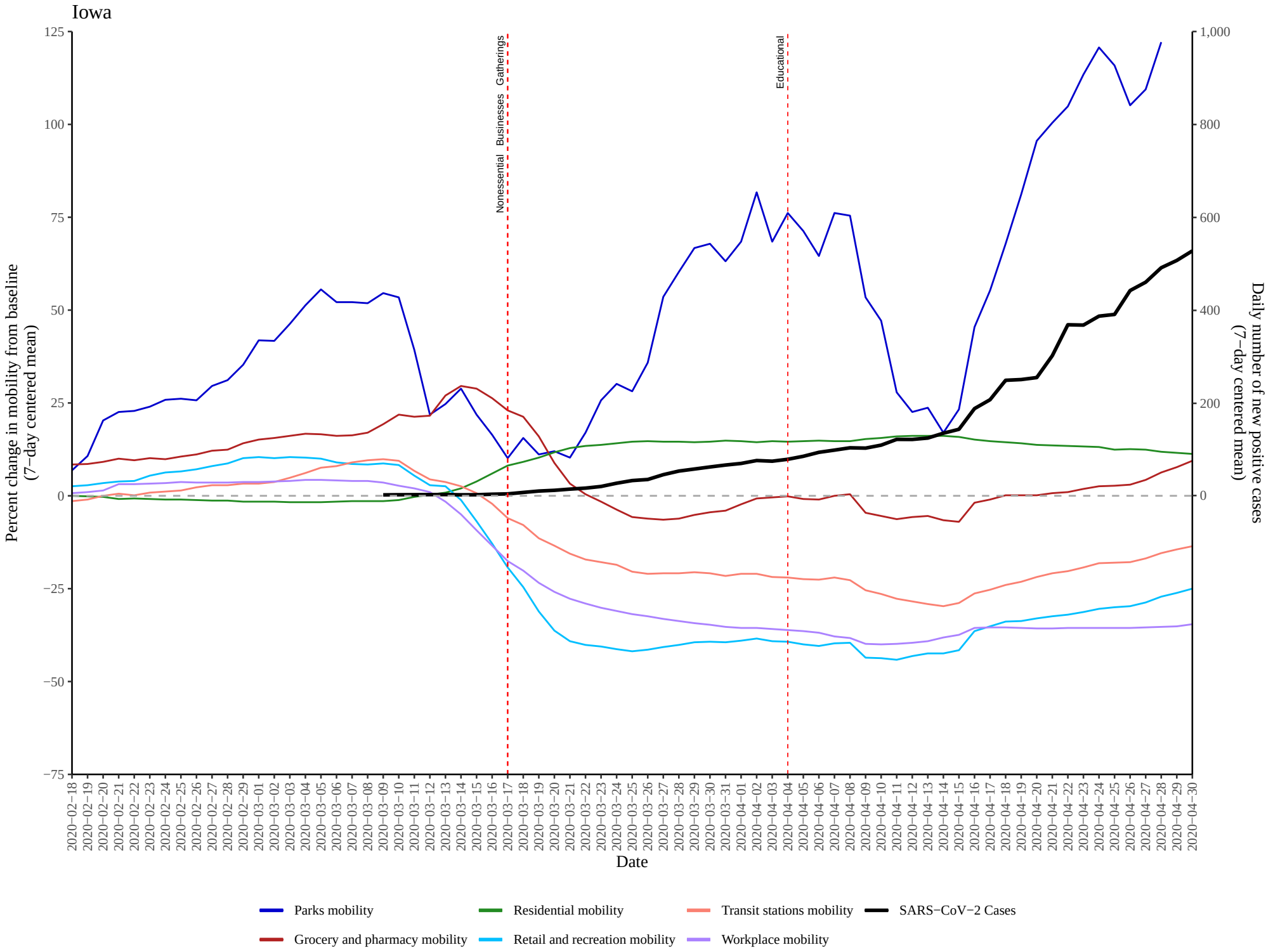
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Nonessential Businesses Gatherings
Educational
Percent change in mobility from baseline
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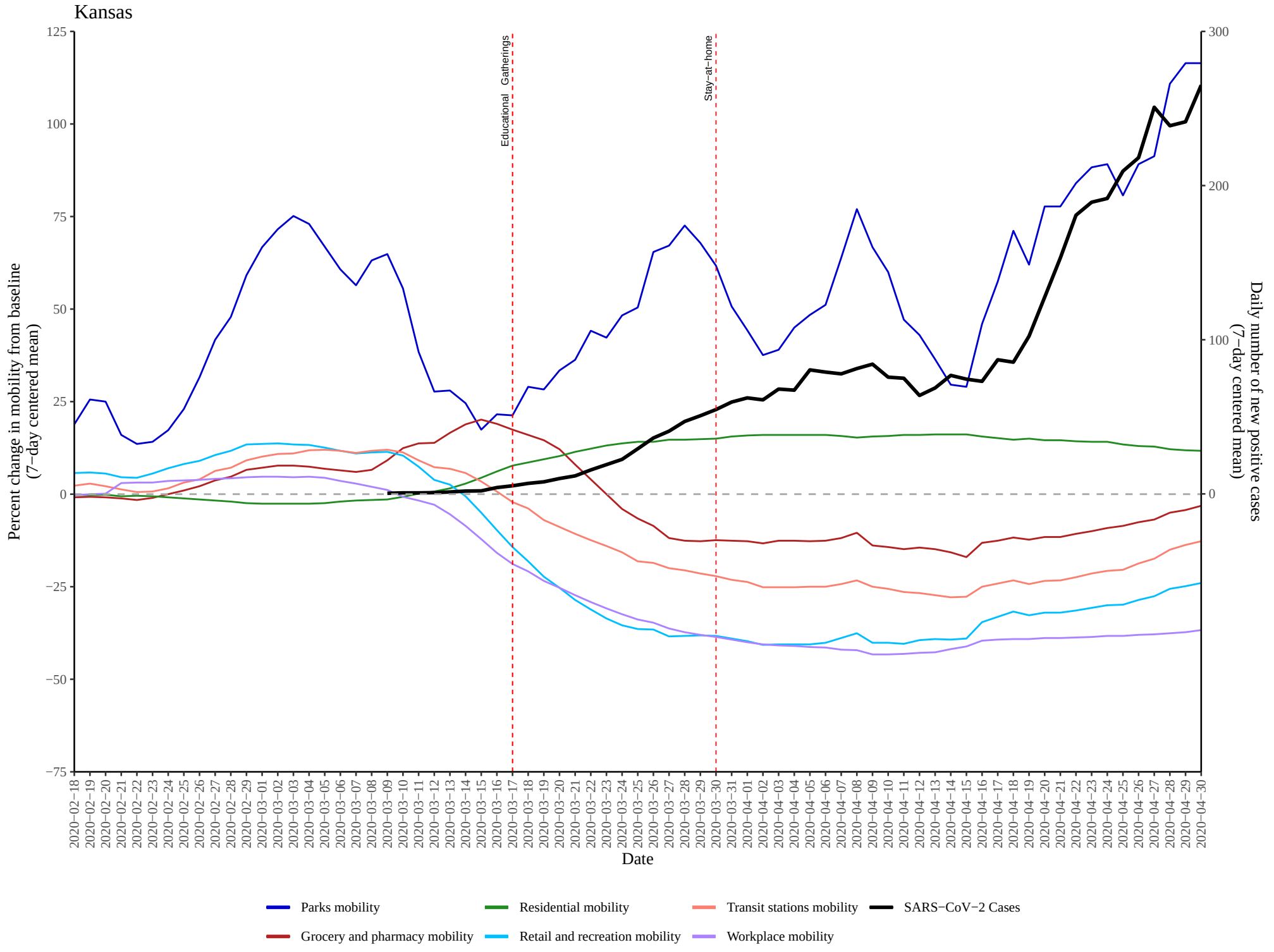
Kansas
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Stay−at−home
Percent change in mobility from baseline
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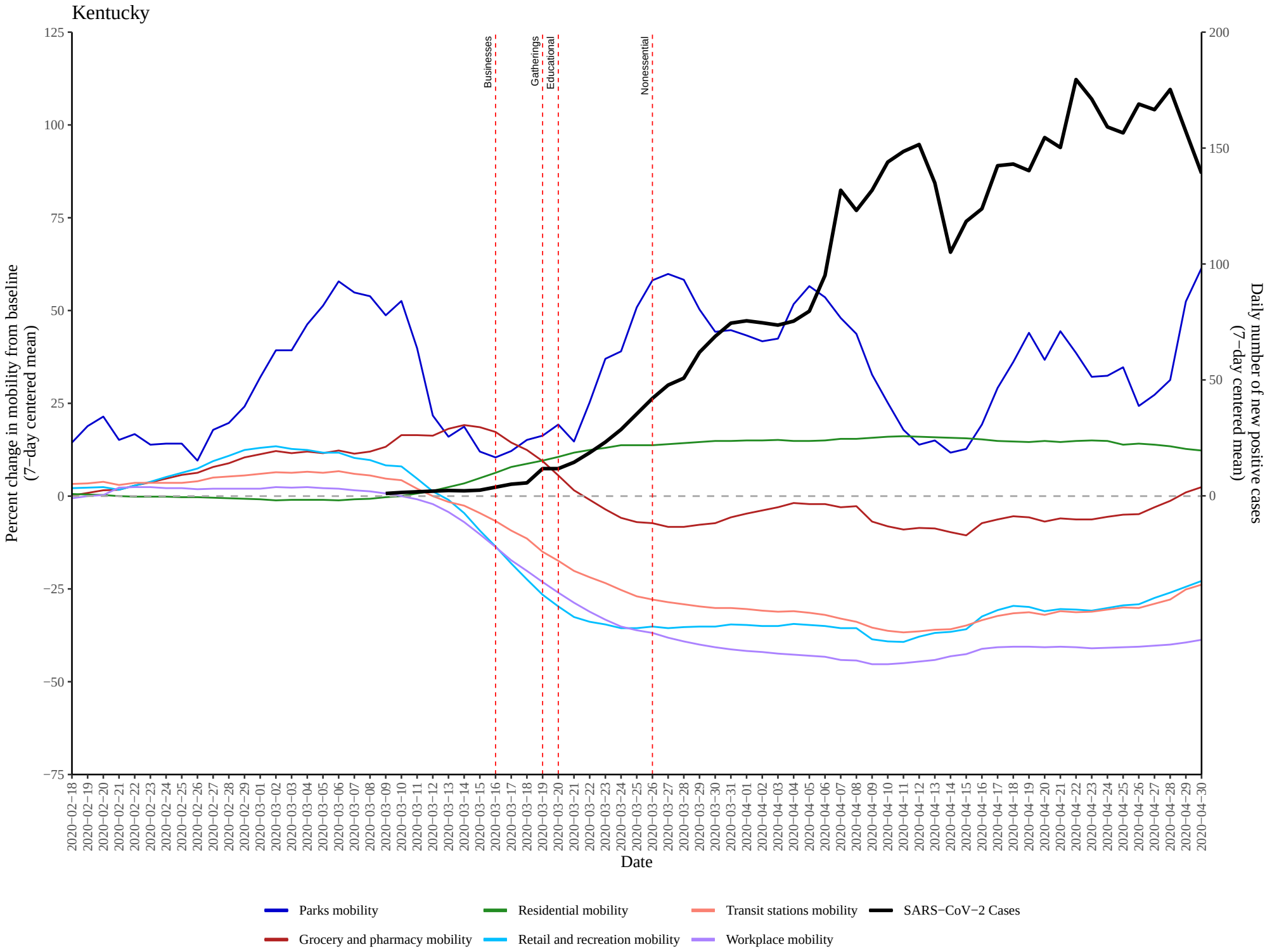
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Nonessential
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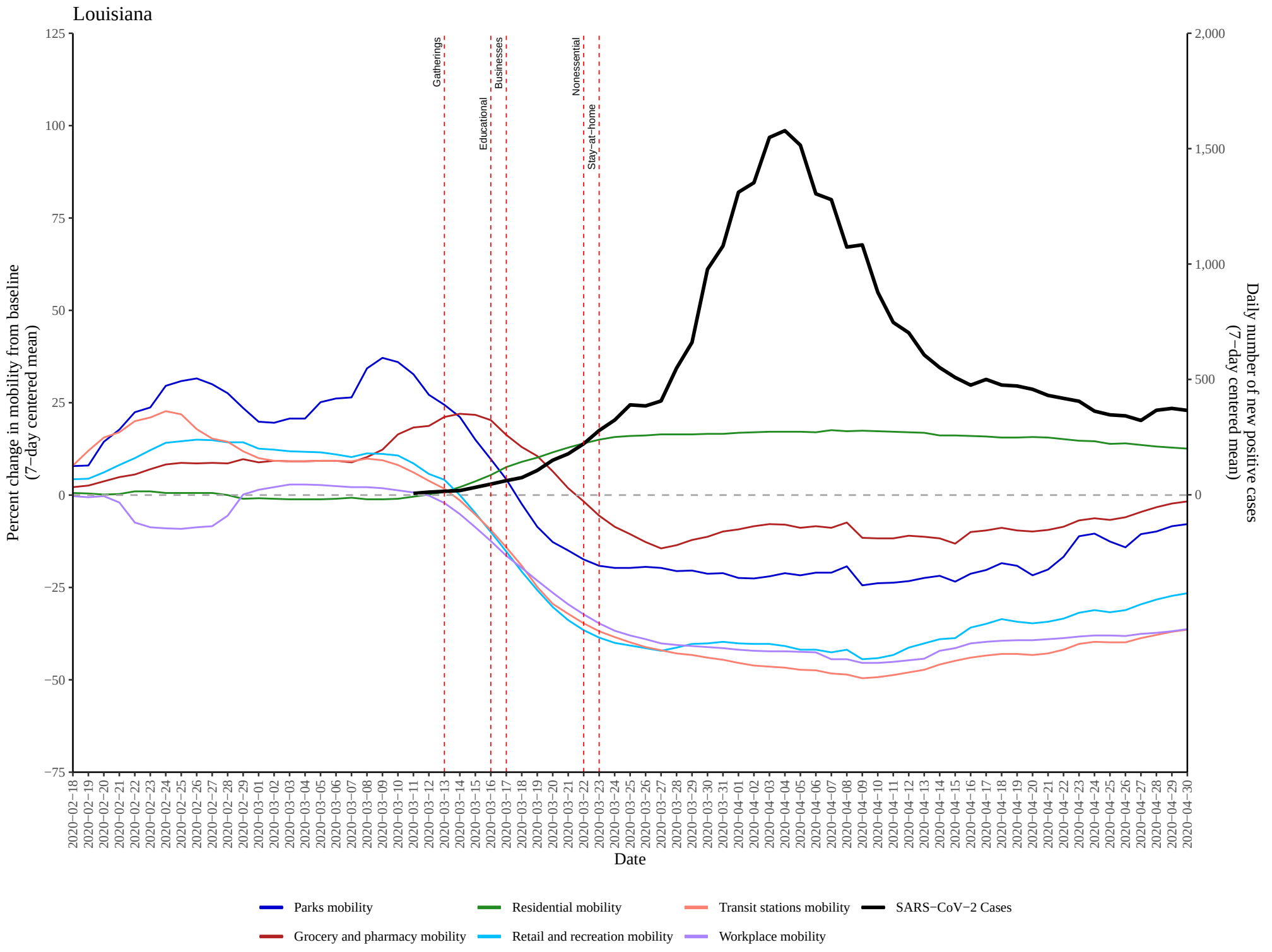
Louisiana
Gatherings
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Businesses
Nonessential
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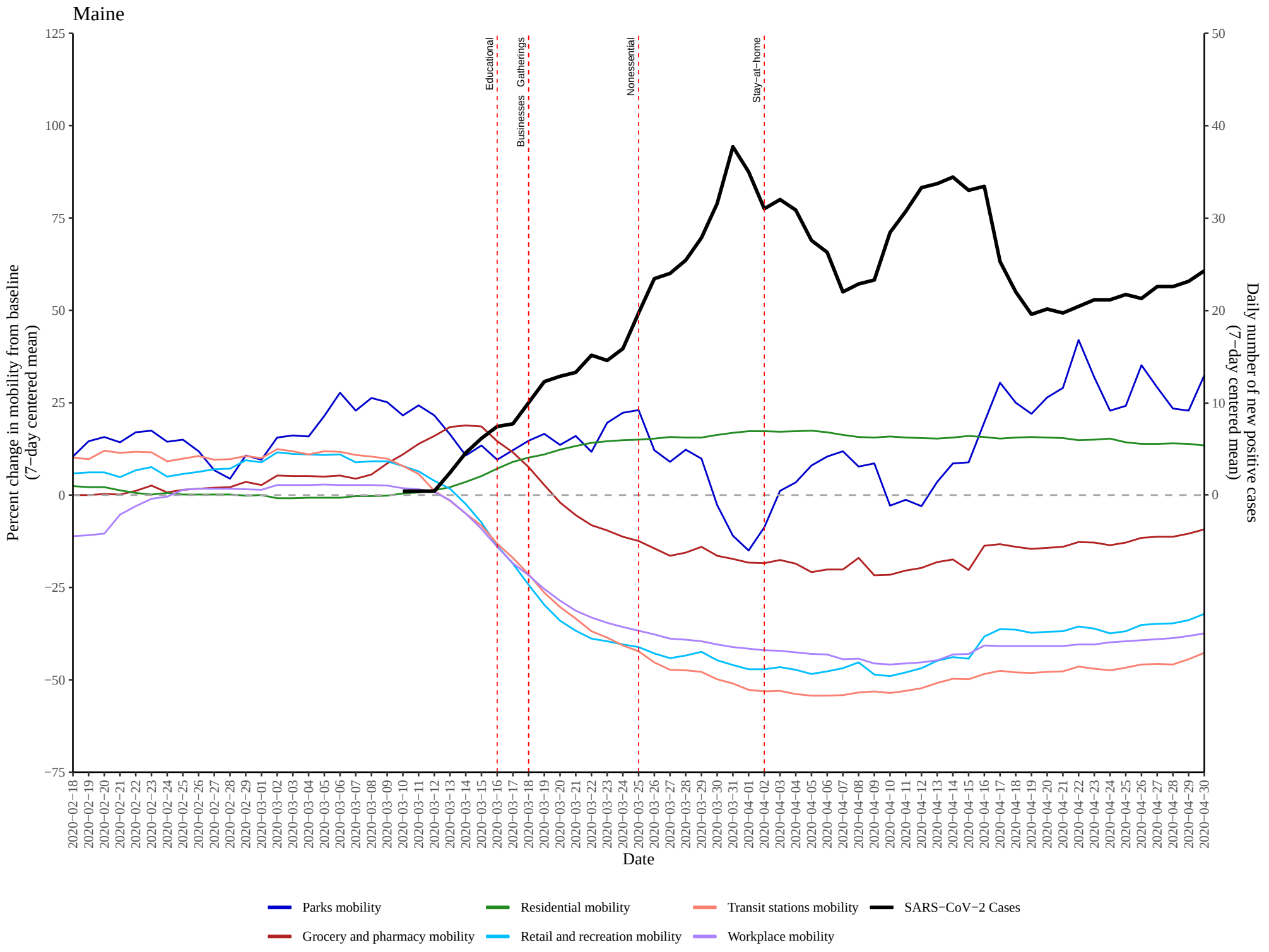
Maine
Educational
Businesses
Gatherings
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Stay−at−home
Percent change in mobility from baseline
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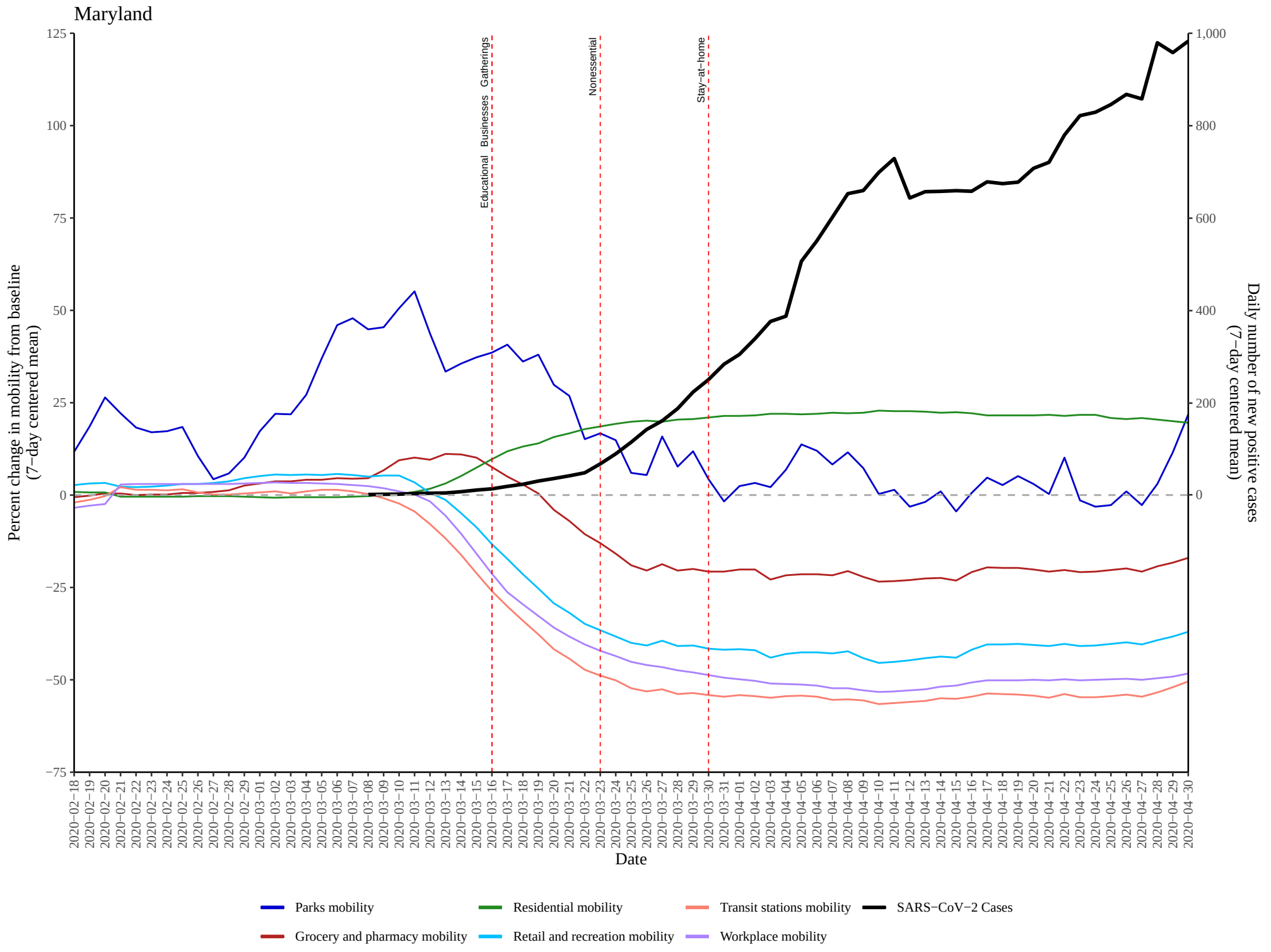
Maryland
Educational Businesses Gatherings
Nonessential
Stay−at−home
Percent change in mobility from baseline
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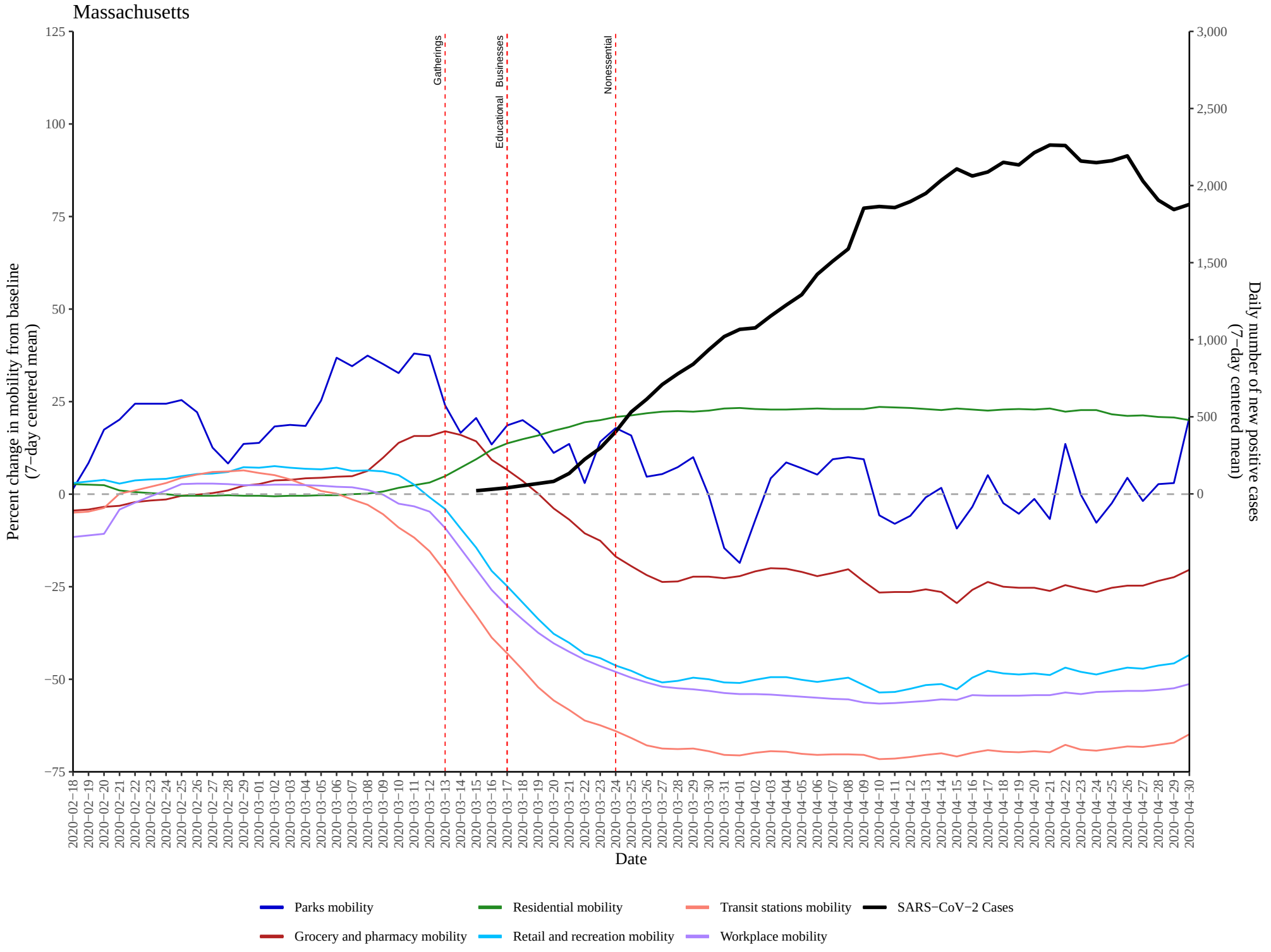
Massachusetts
Gatherings
Educational Businesses
Nonessential
Percent change in mobility from baseline
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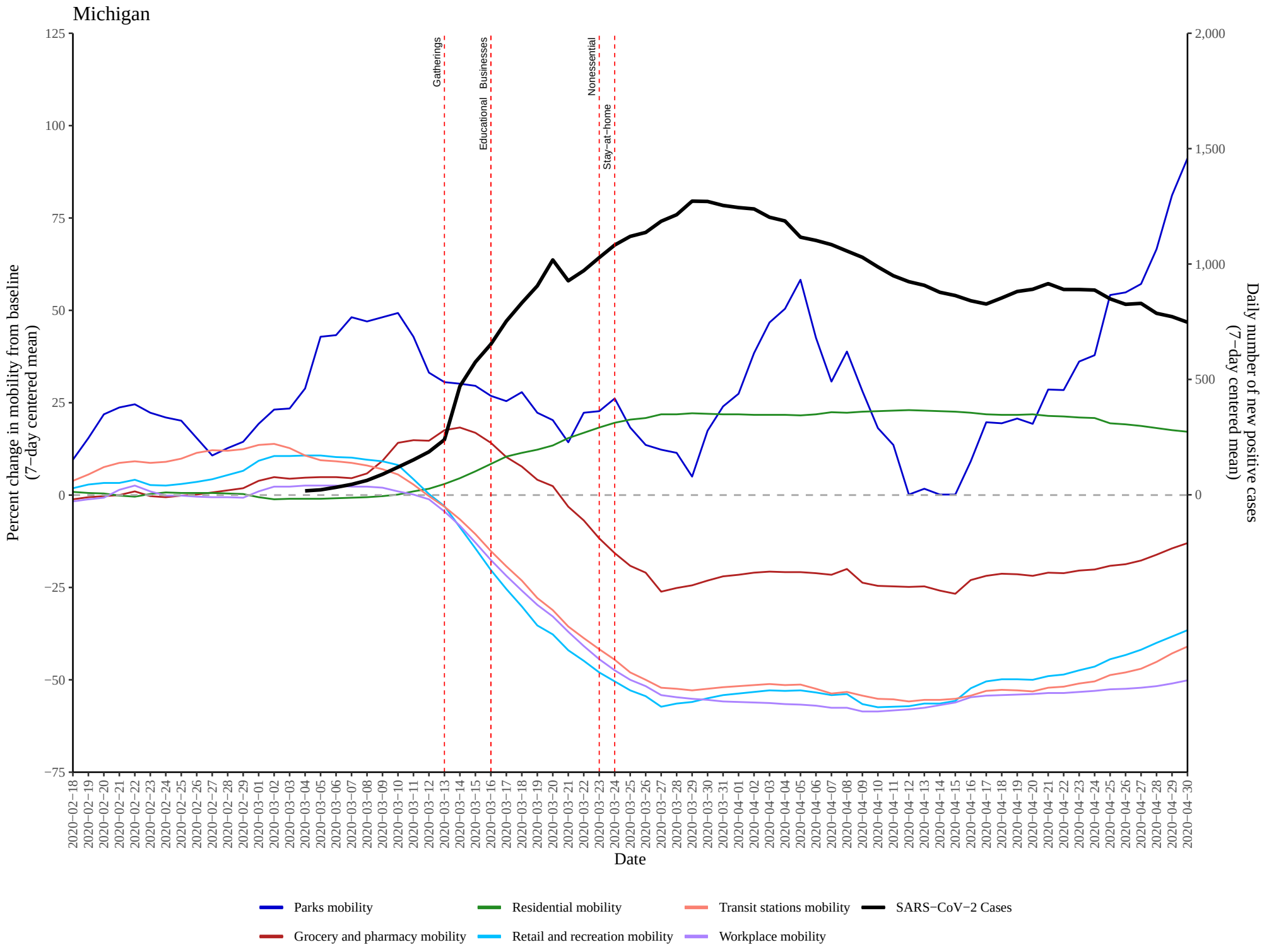
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Stay−at−home
Percent change in mobility from baseline
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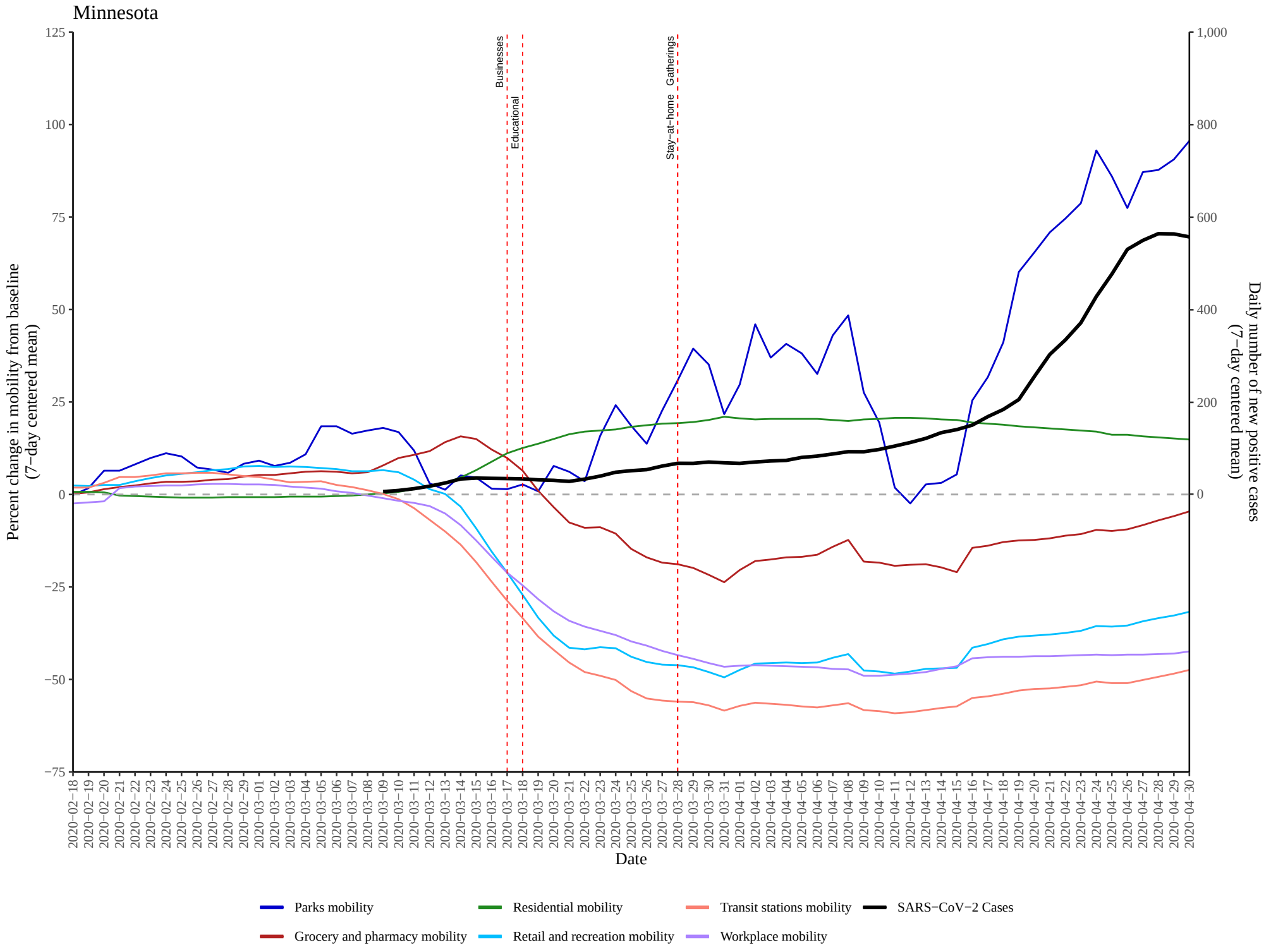
Minnesota
Businesses
Educational
Stay−at−home
Gatherings
Percent change in mobility from baseline
(7−day centered mean)
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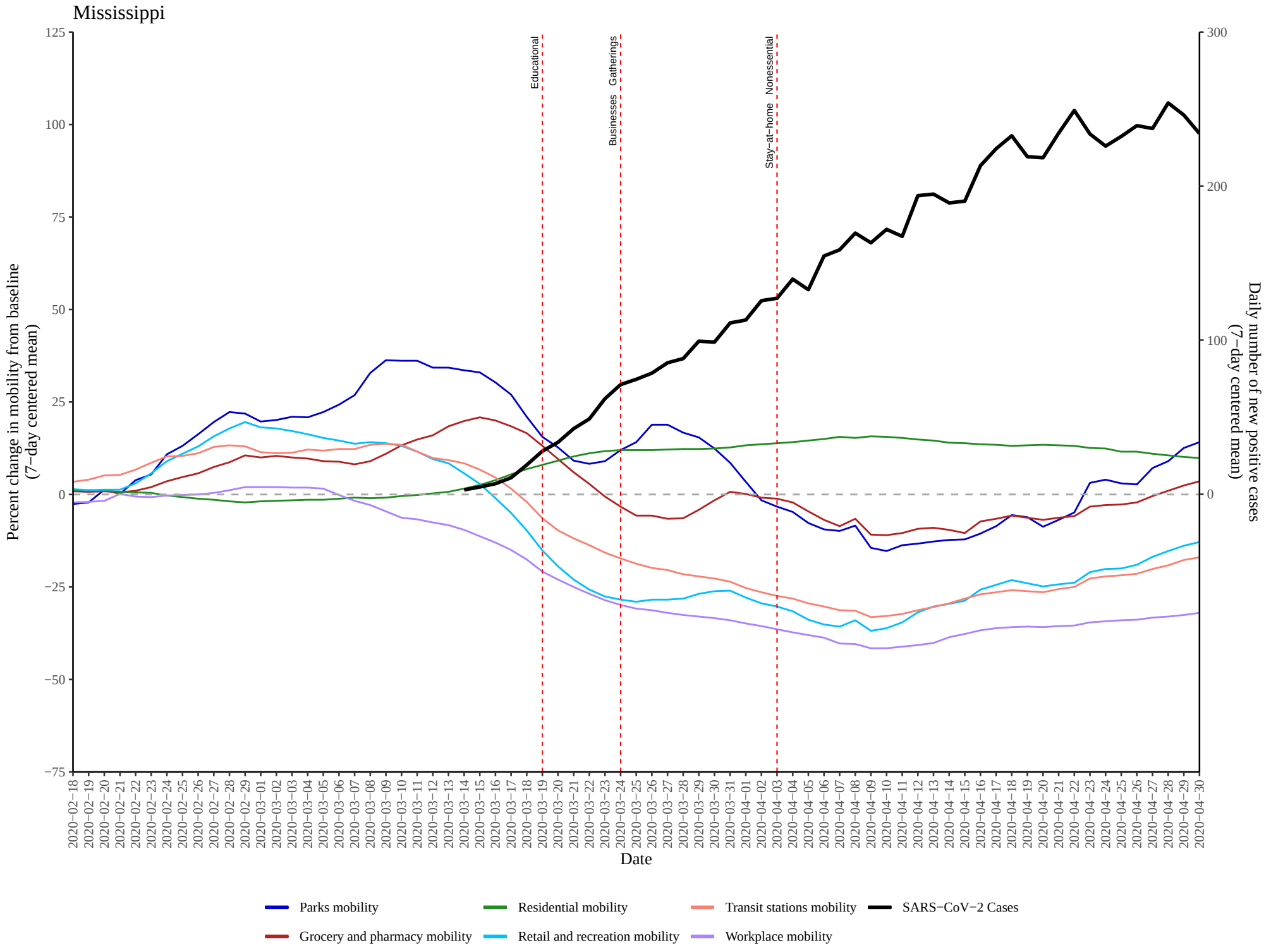
Mississippi
Educational
Businesses
Gatherings
Stay−at−home
Nonessential
Percent change in mobility from baseline
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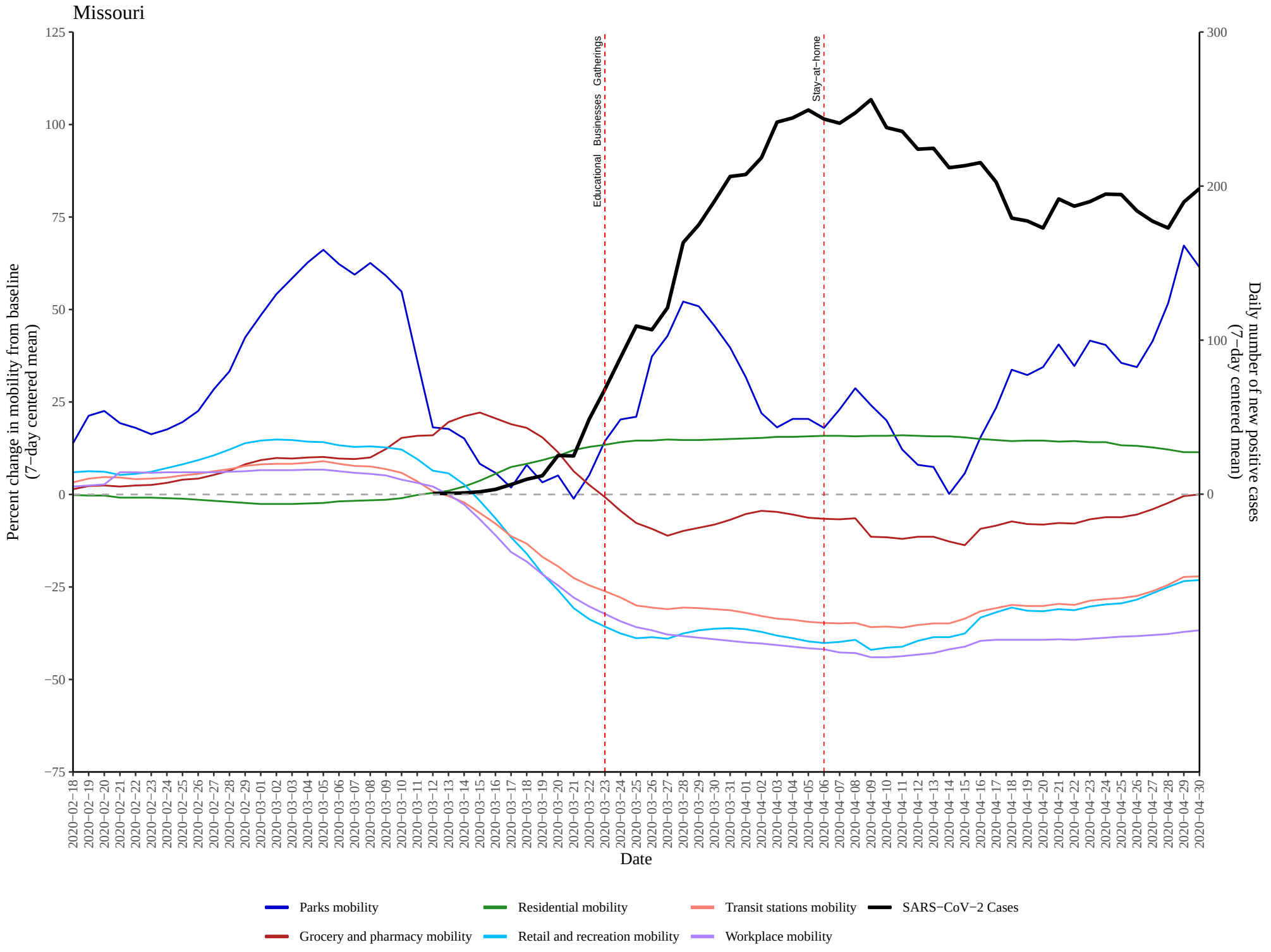
Missouri
Educational Businesses Gatherings
Stay−at−home
Percent change in mobility from baseline
(7−day centered mean)
Daily number of new positive cases
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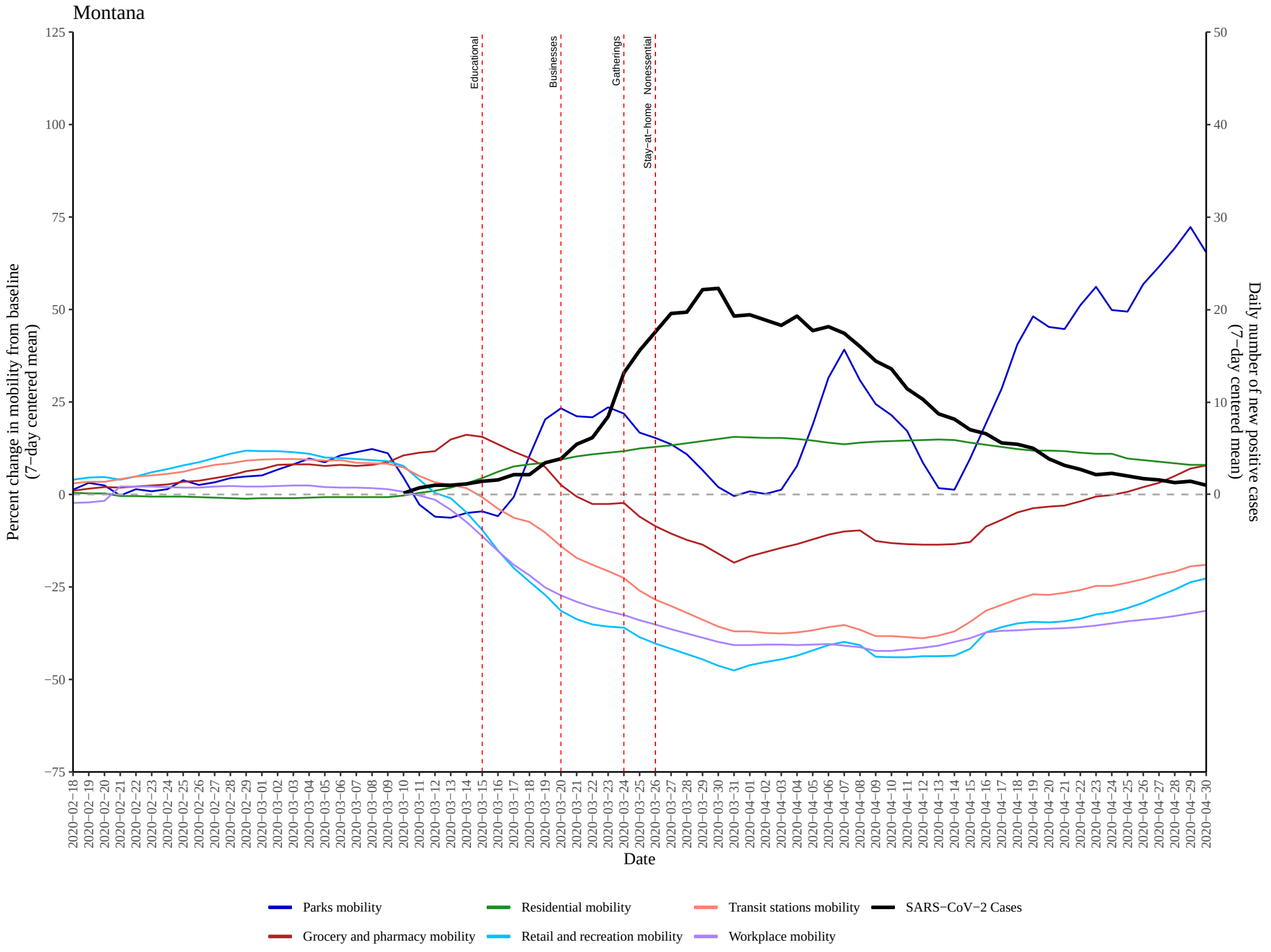
Montana
Educational
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Gatherings
Stay−at−home
Nonessential
Percent change in mobility from baseline
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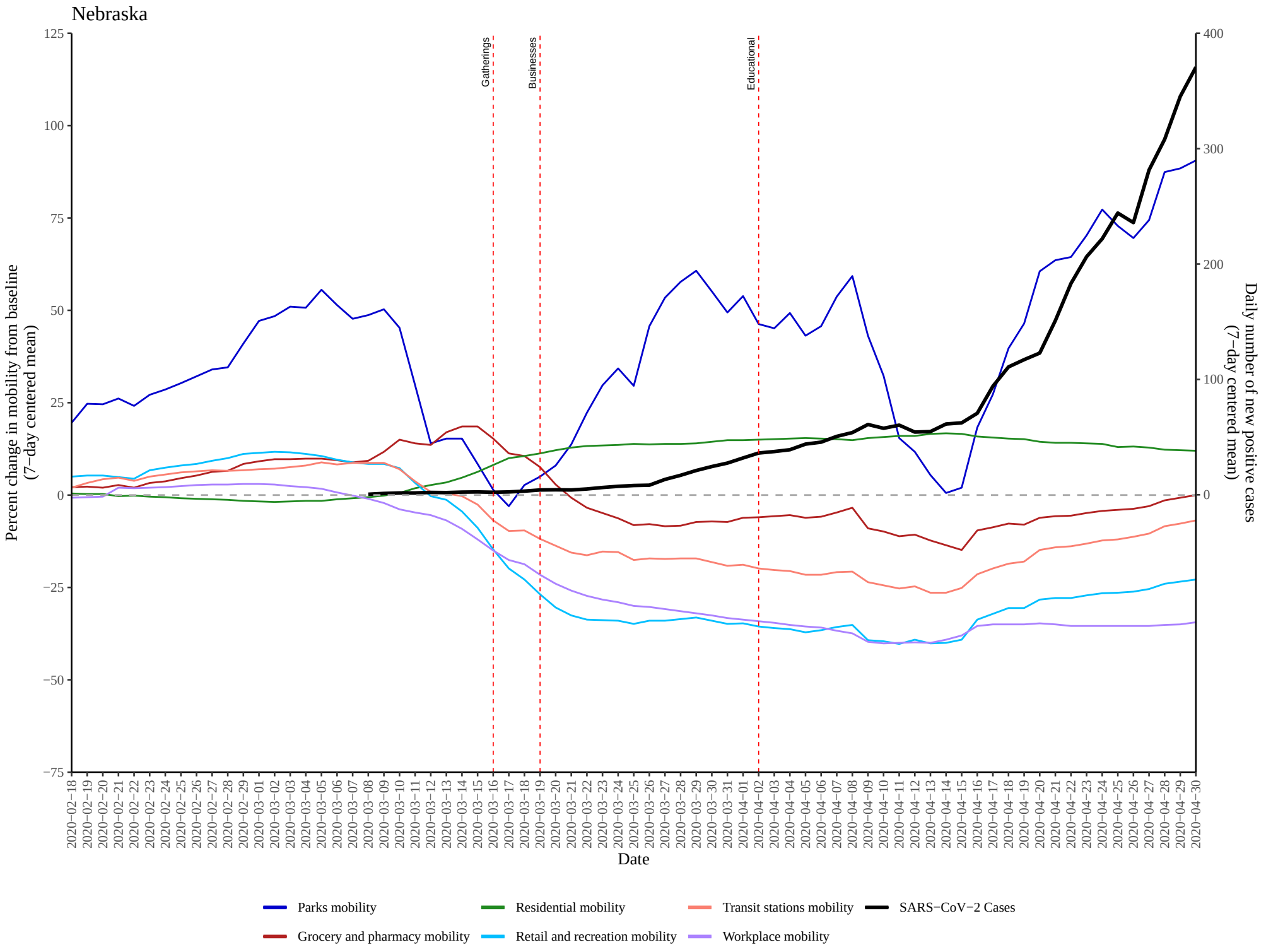
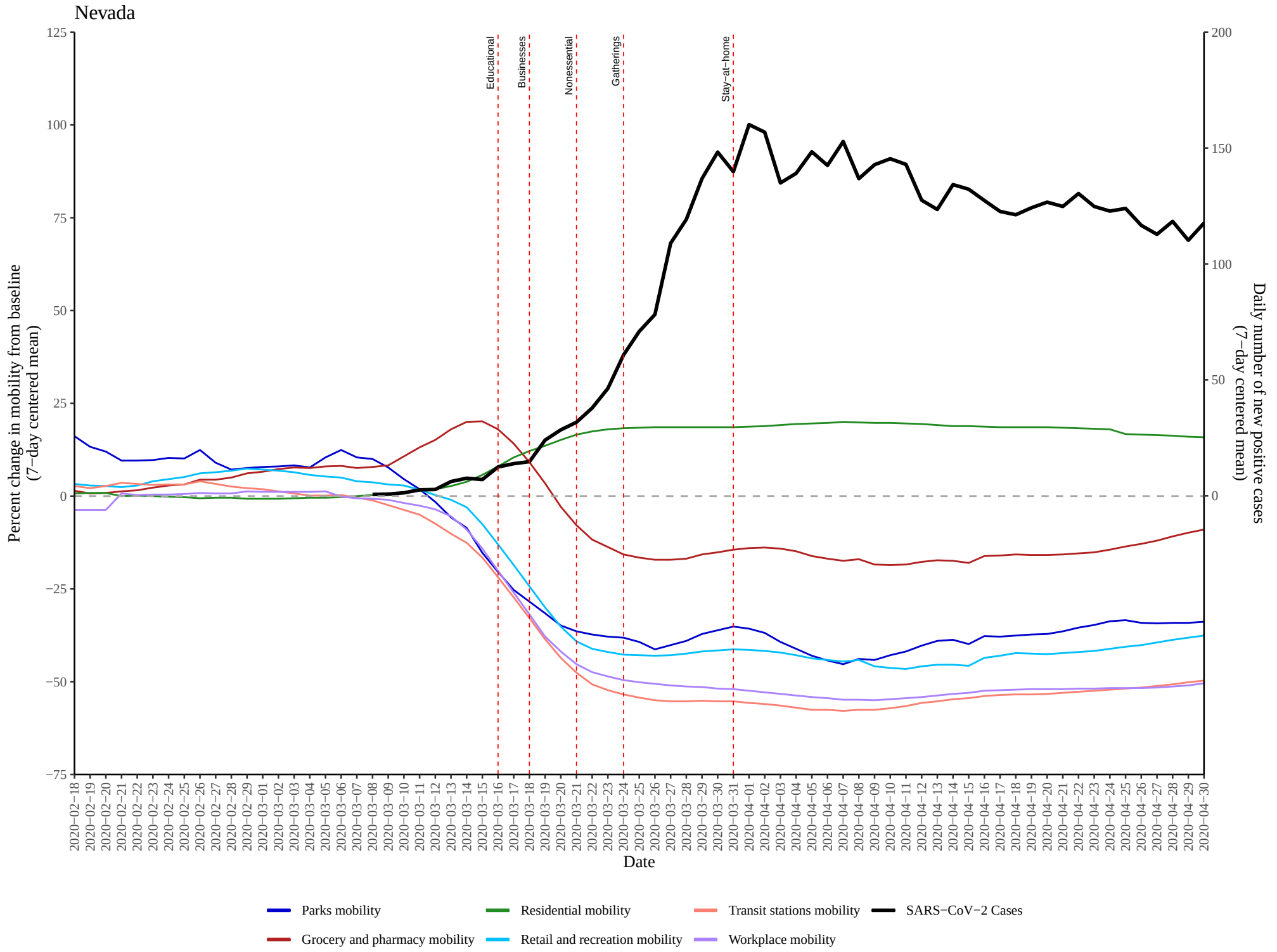
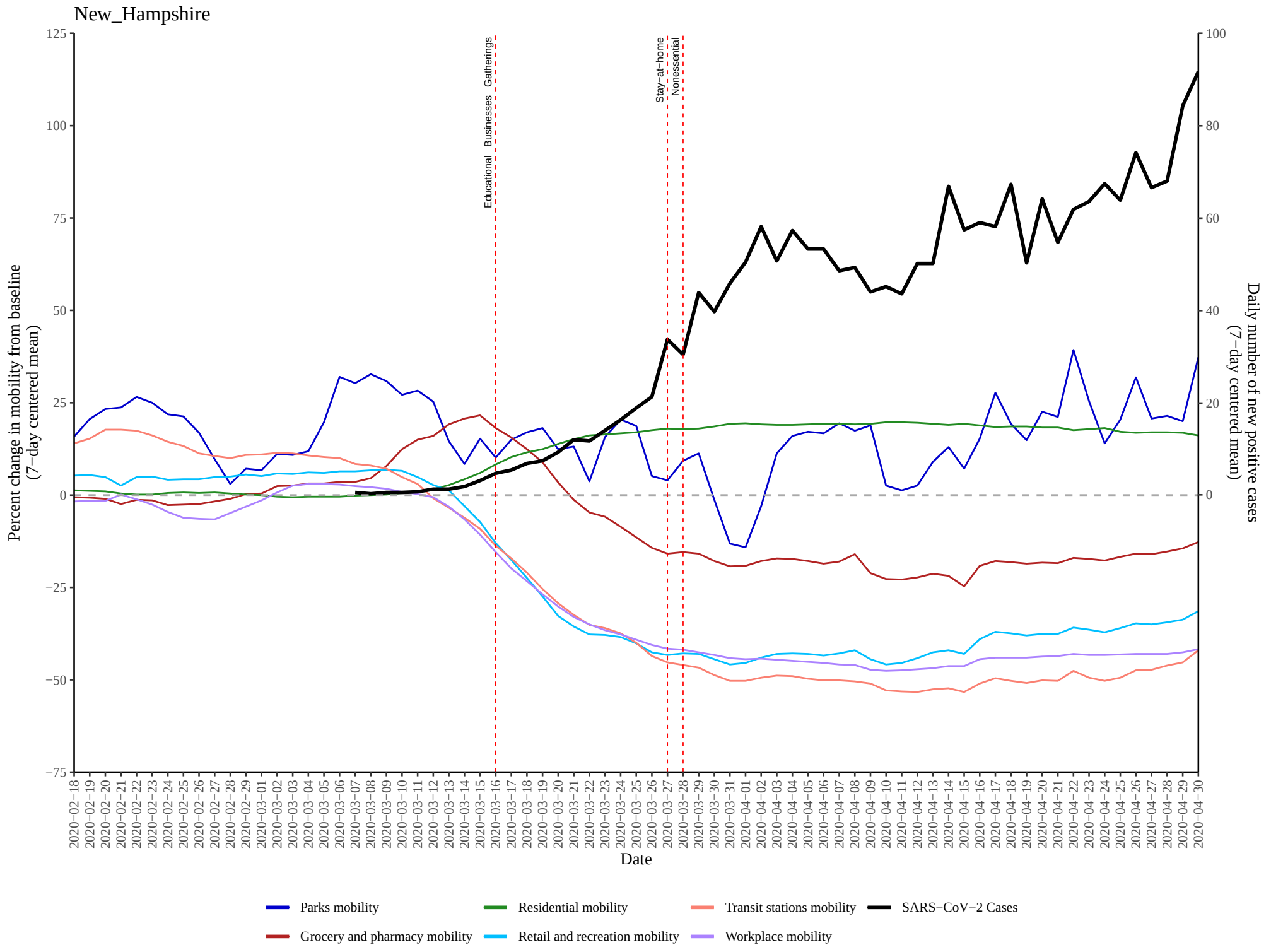
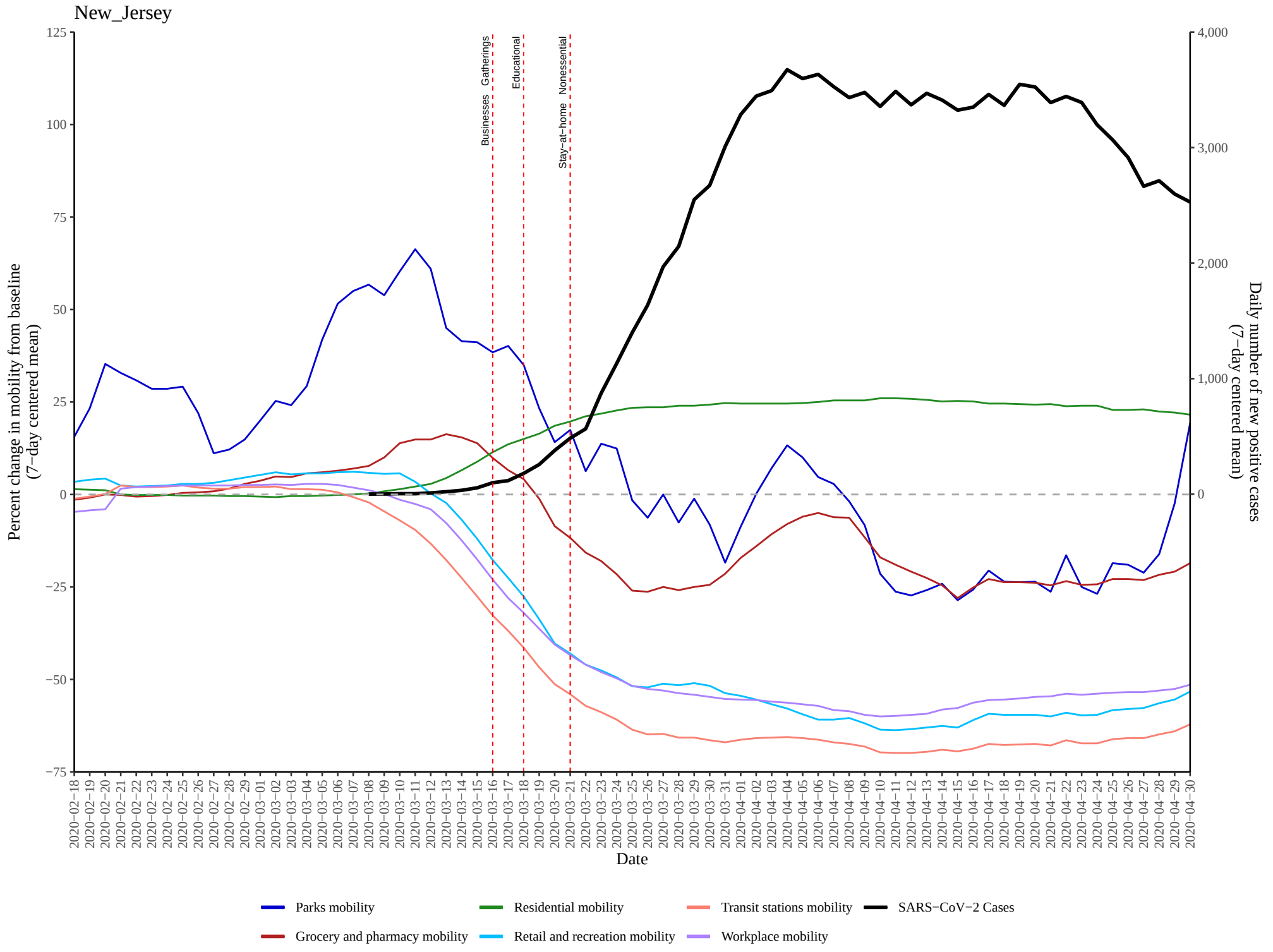
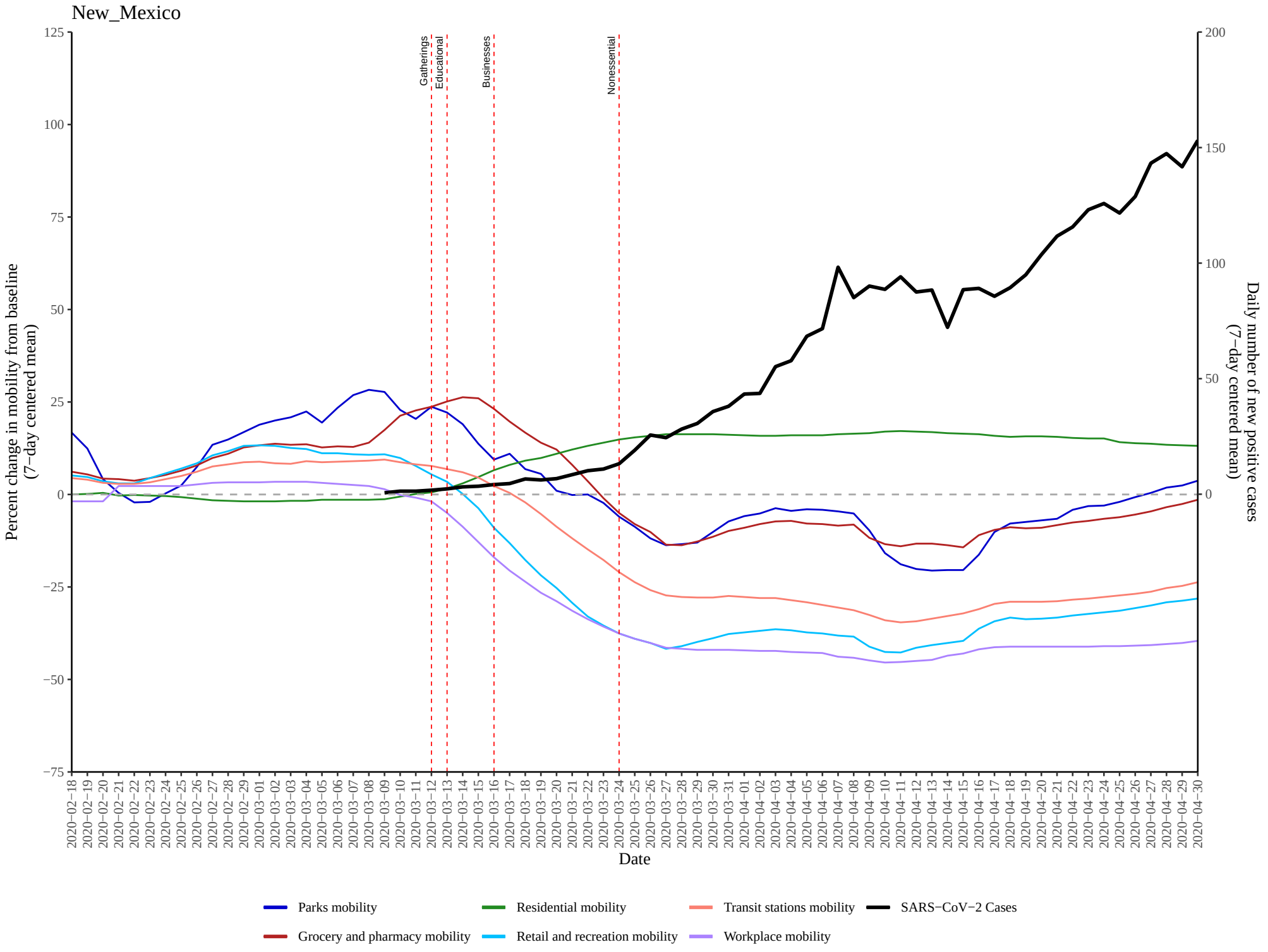
Retail and recreation mobility
Workplace mobility

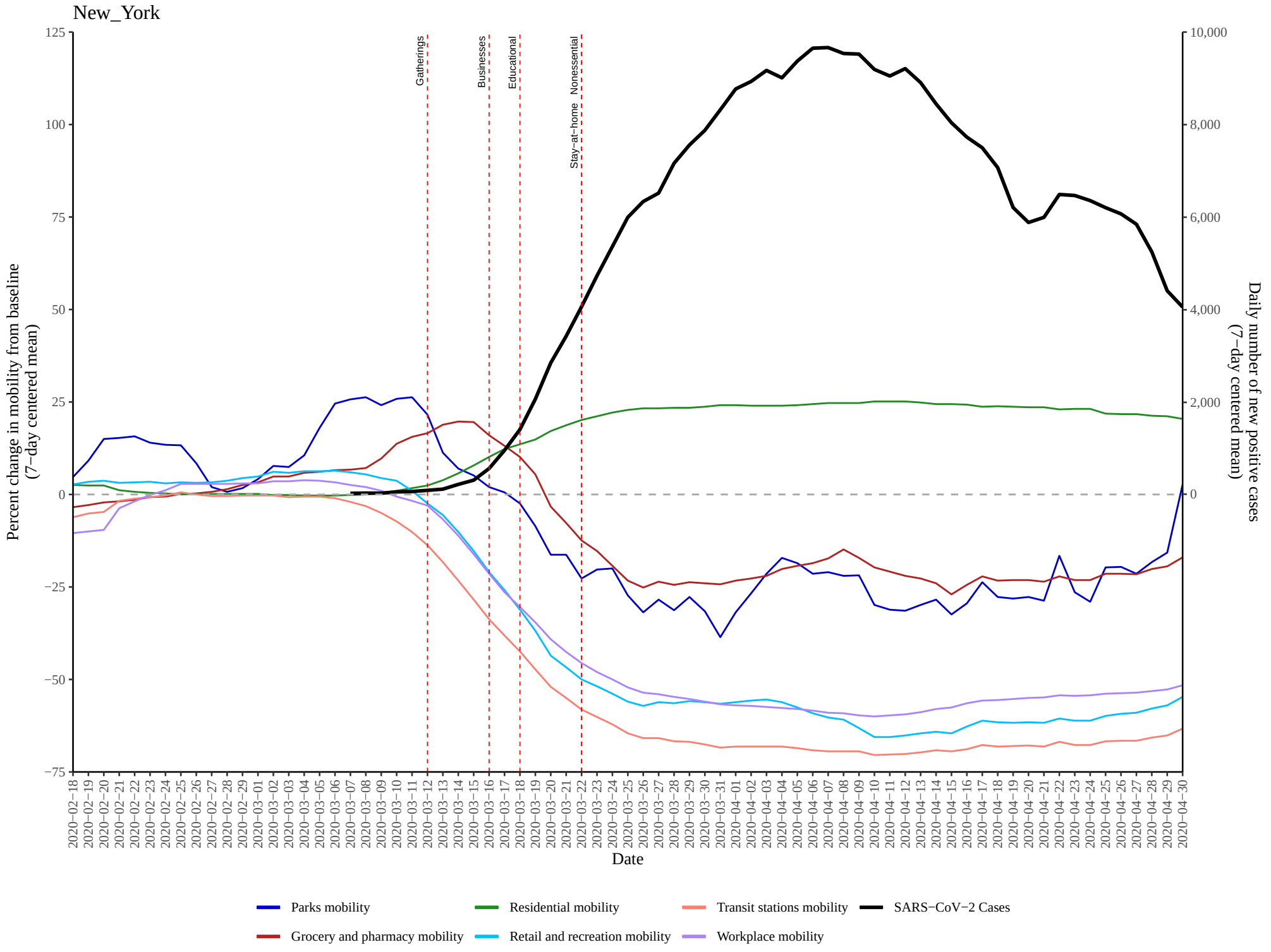

Nebraska
Gatherings
Businesses
Educational
Percent change in mobility from baseline
(7−day centered mean)
Daily number of new positive cases
(7−day centered mean)
Date
Parks mobility
Residential mobility
Transit stations mobility
SARS−CoV−2 Cases
Grocery and pharmacy mobility
Retail and recreation mobility
Workplace mobility

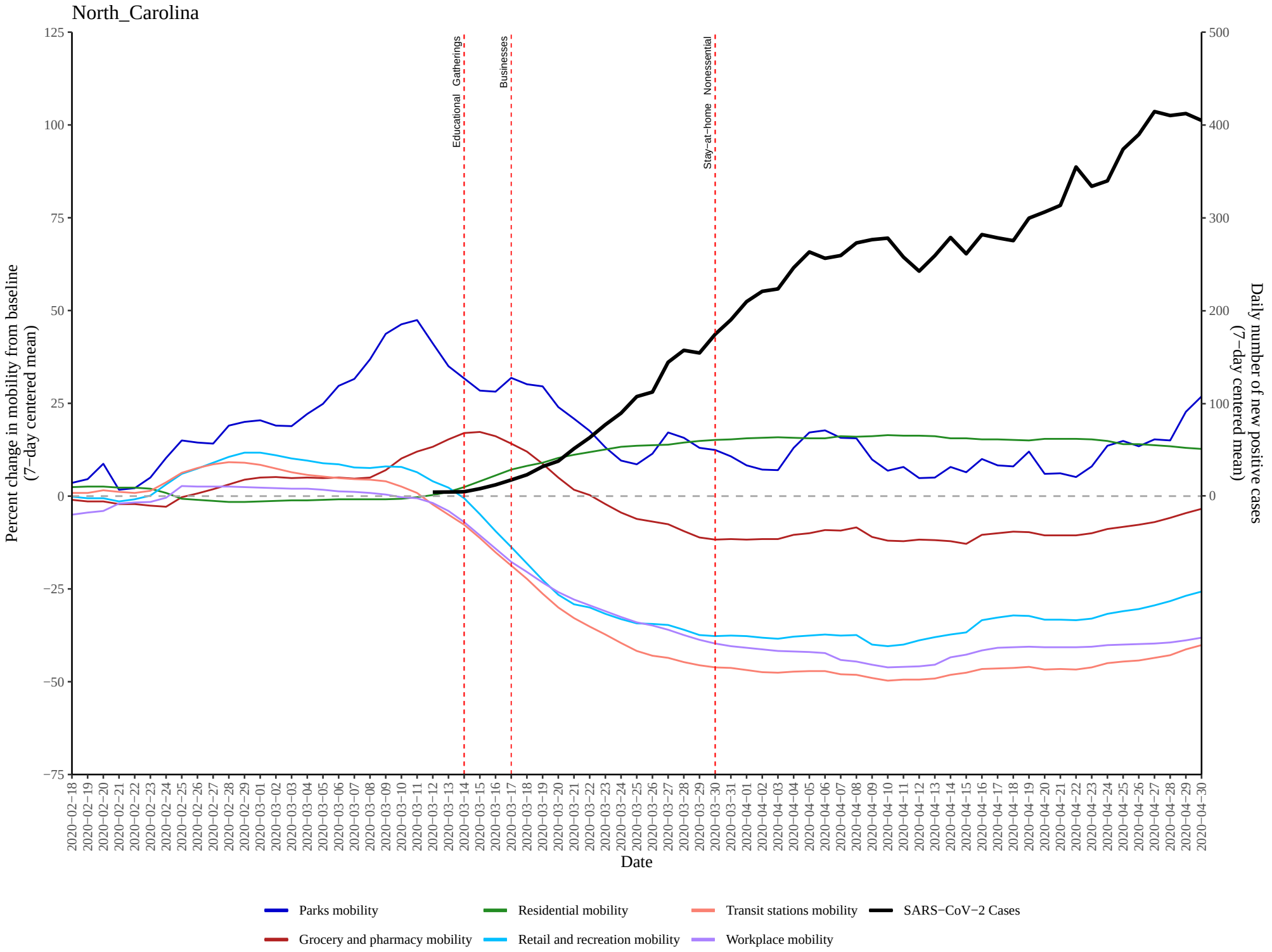

Nevada
Educational
Businesses
Nonessential
Gatherings
Stay−at−home
Percent change in mobility from baseline
(7−day centered mean)
Daily number of new positive cases
(7−day centered mean)
Date
Parks mobility
Residential mobility
Transit stations mobility
SARS−CoV−2 Cases
Grocery and pharmacy mobility
Retail and recreation mobility
Workplace mobility

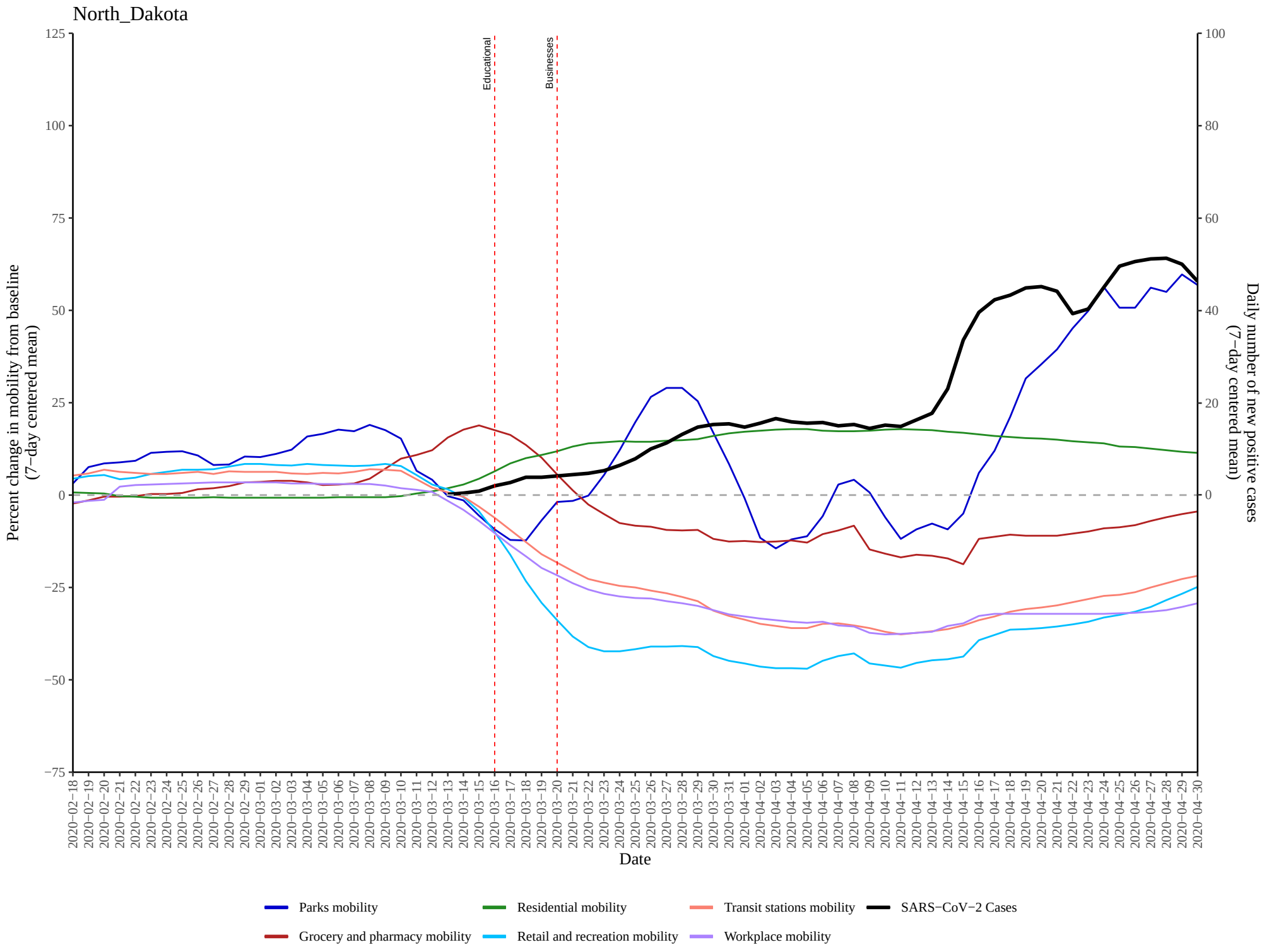

New_Hampshire
Educational Businesses Gatherings
Stay−at−home Nonessential
Percent change in mobility from baseline
(7−day centered mean)
Daily number of new positive cases
(7−day centered mean)
Date
Parks mobility
Residential mobility
Transit stations mobility
SARS−CoV−2 Cases
Grocery and pharmacy mobility
Retail and recreation mobility
Workplace mobility

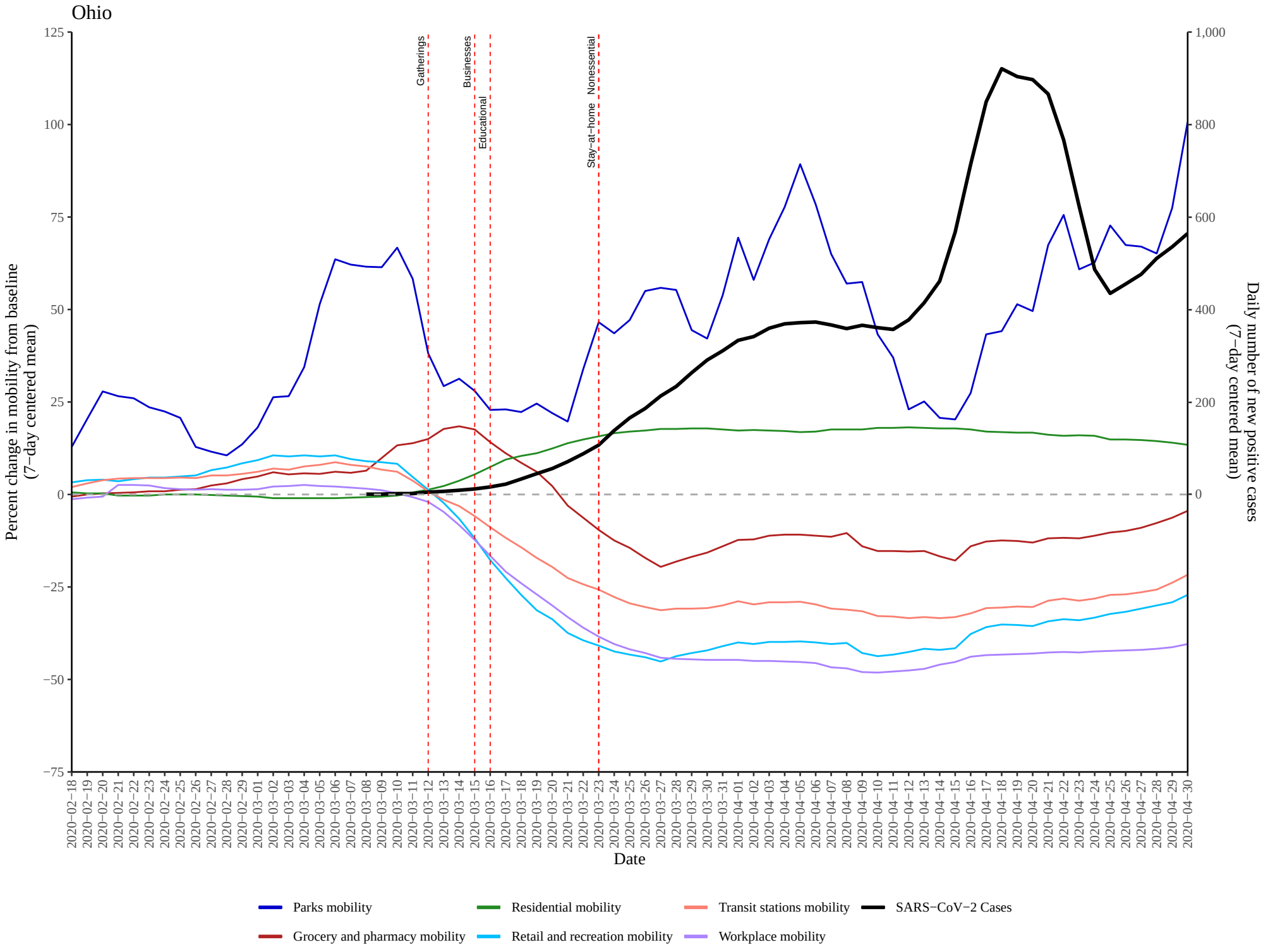

New_Jersey
Businesses
Gatherings
Educational
Stay−at−home
Nonessential
Percent change in mobility from baseline
(7−day centered mean)
Daily number of new positive cases
(7−day centered mean)
Date
Parks mobility
Residential mobility
Transit stations mobility
SARS−CoV−2 Cases
Grocery and pharmacy mobility
Retail and recreation mobility
Workplace mobility

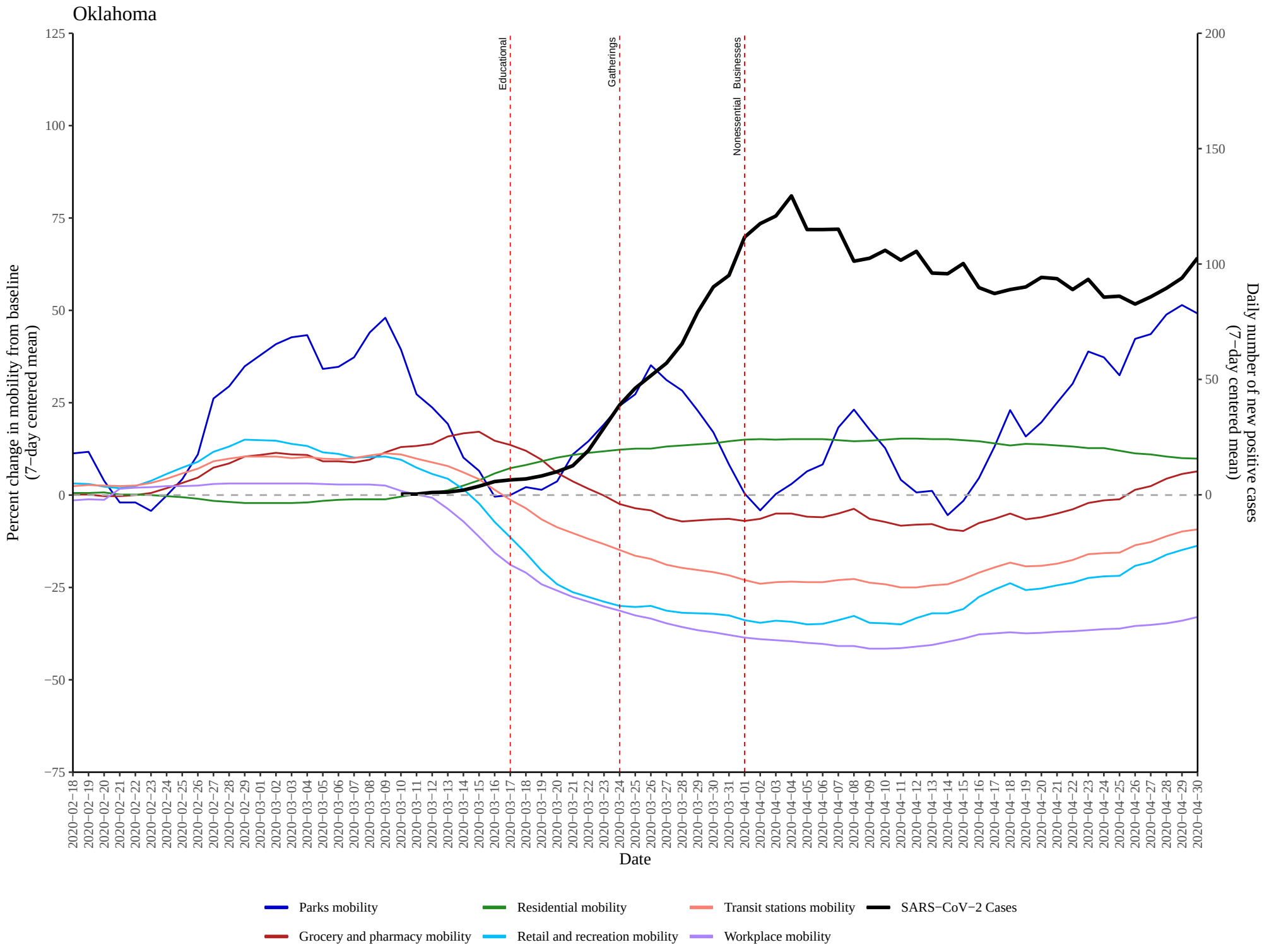

New_Mexico
Gatherings
Educational
Businesses
Nonessential
Percent change in mobility from baseline
(7−day centered mean)
Daily number of new positive cases
(7−day centered mean)
Date
Parks mobility
Residential mobility
Transit stations mobility
SARS−CoV−2 Cases
Grocery and pharmacy mobility
Retail and recreation mobility
Workplace mobility

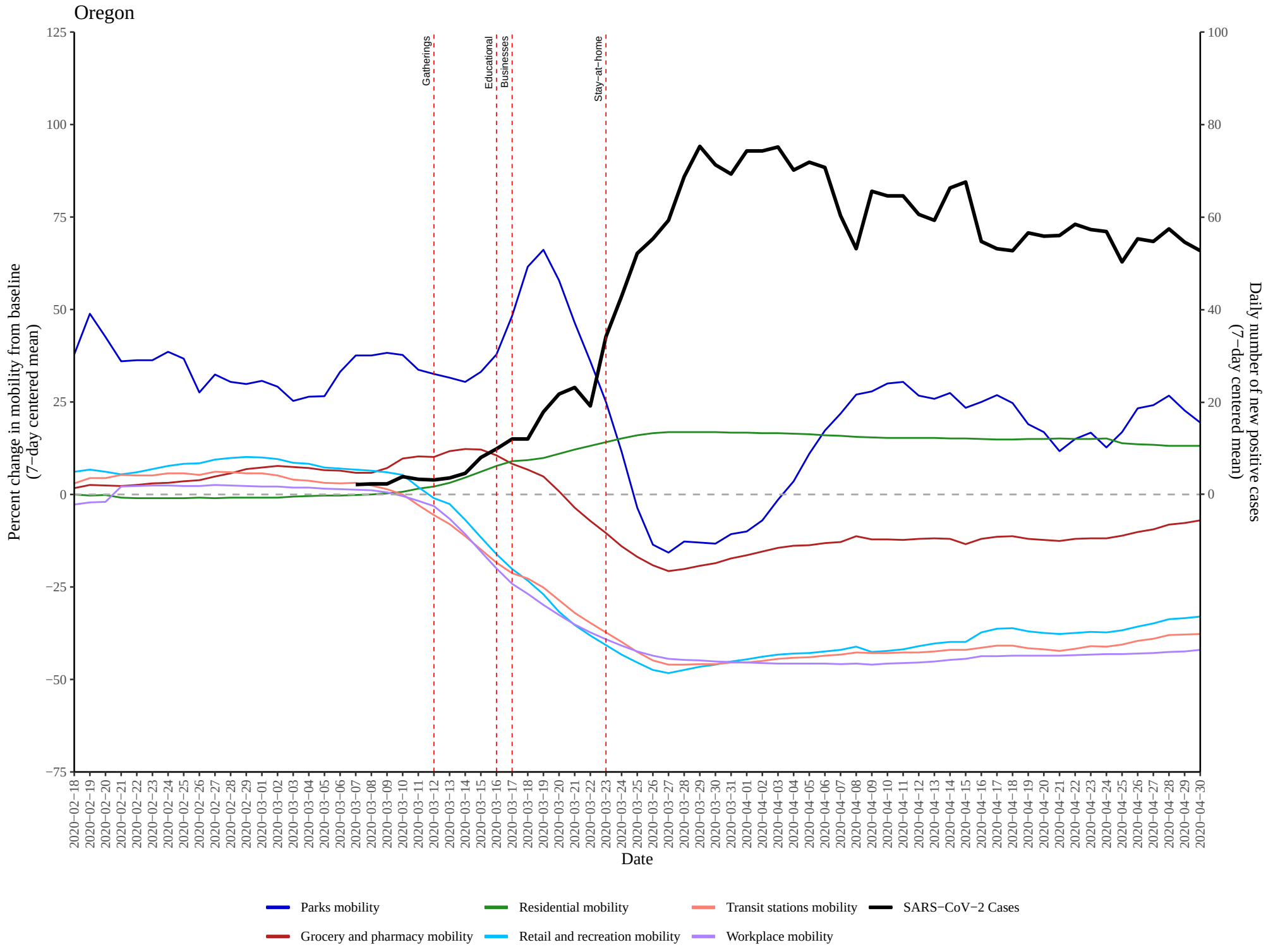

New_York
Gatherings
Businesses
Educational
Stay−at−home
Nonessential
Percent change in mobility from baseline
(7−day centered mean)
Daily number of new positive cases
(7−day centered mean)
Date
Parks mobility
Residential mobility
Transit stations mobility
SARS−CoV−2 Cases
Grocery and pharmacy mobility
Retail and recreation mobility
Workplace mobility

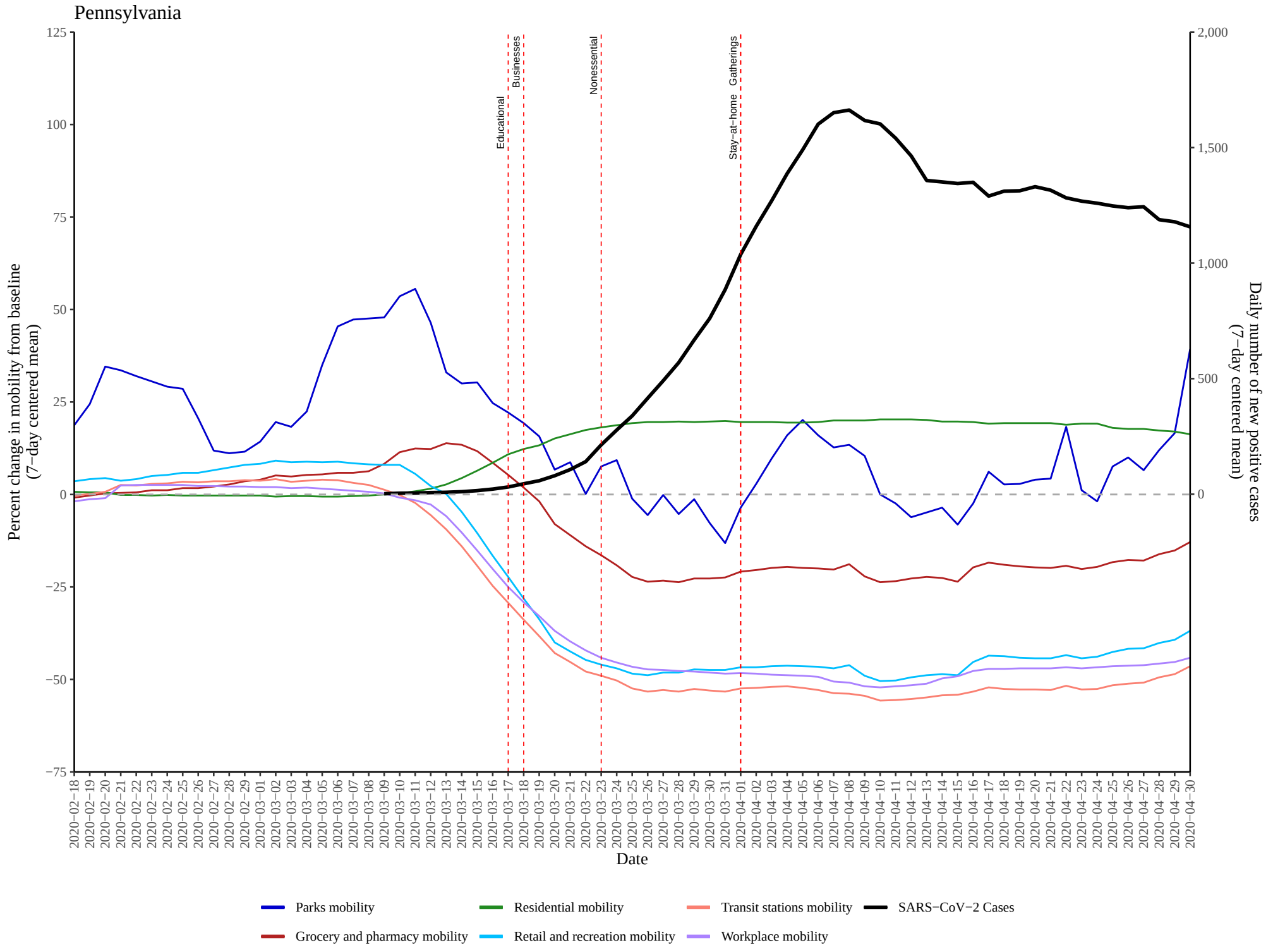

North_Carolina
Educational Gatherings
Businesses
Stay−at−home Nonessential
Percent change in mobility from baseline
(7−day centered mean)
Daily number of new positive cases
(7−day centered mean)
Date
Parks mobility
Residential mobility
Transit stations mobility
SARS−CoV−2 Cases
Grocery and pharmacy mobility
Retail and recreation mobility
Workplace mobility

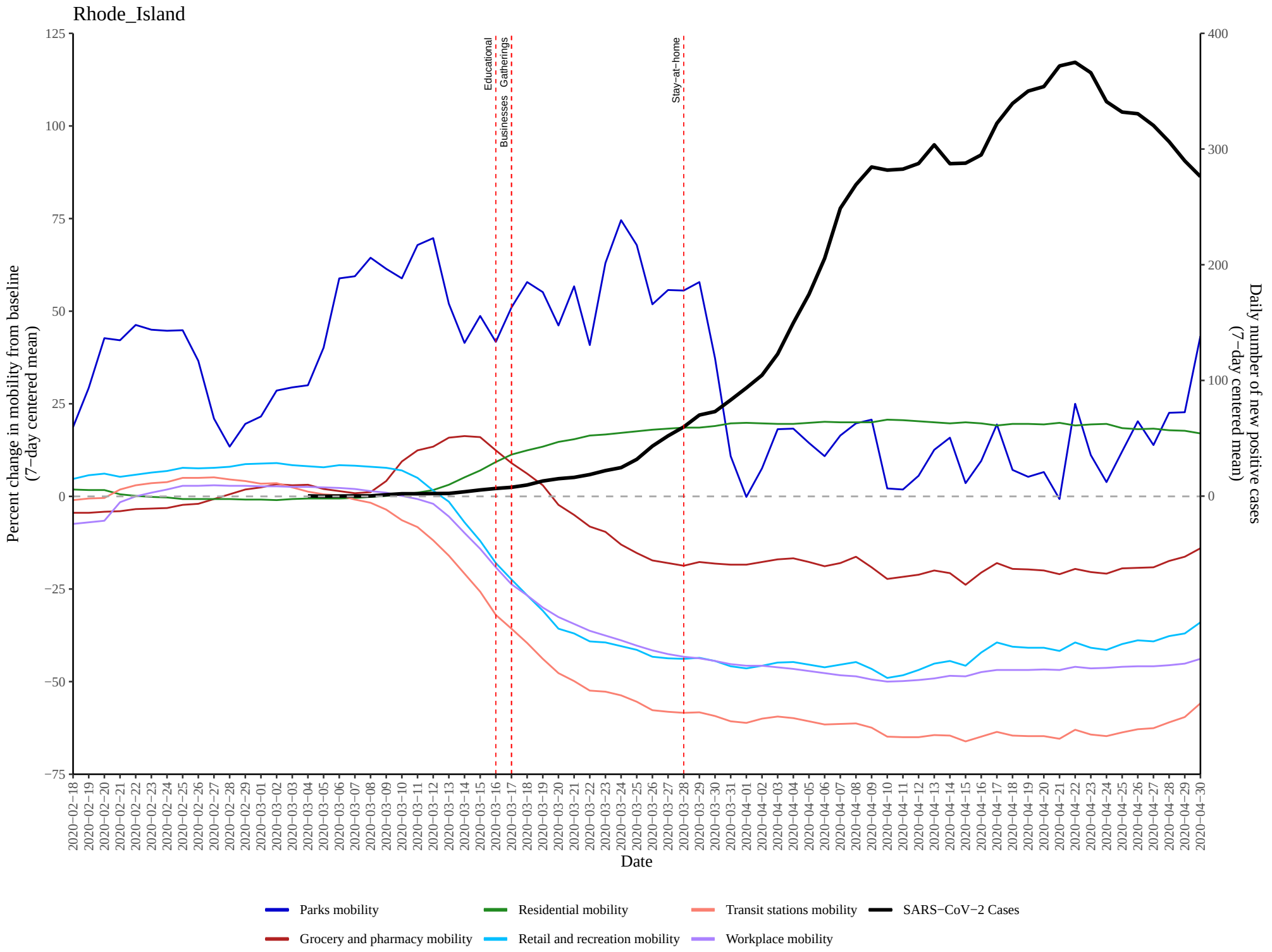

North_Dakota
Educational
Businesses
Percent change in mobility from baseline
(7−day centered mean)
Daily number of new positive cases
(7−day centered mean)
Date
Parks mobility
Residential mobility
Transit stations mobility
SARS−CoV−2 Cases
Grocery and pharmacy mobility
Retail and recreation mobility
Workplace mobility

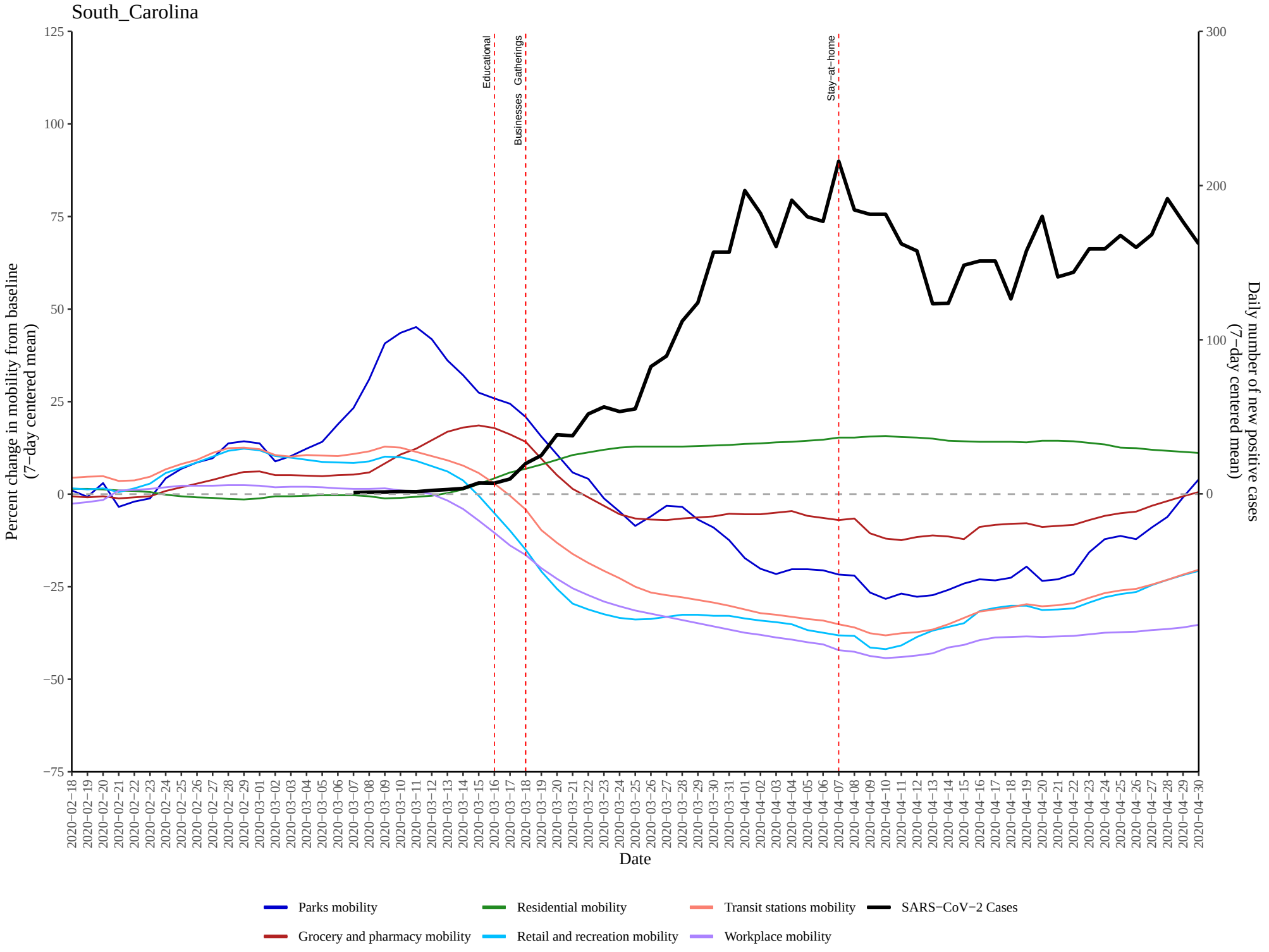

Ohio
Gatherings
Businesses
Educational
Stay−at−home
Nonessential
Percent change in mobility from baseline
(7−day centered mean)
Daily number of new positive cases
(7−day centered mean)
Date
Parks mobility
Residential mobility
Transit stations mobility
SARS−CoV−2 Cases
Grocery and pharmacy mobility
Retail and recreation mobility
Workplace mobility

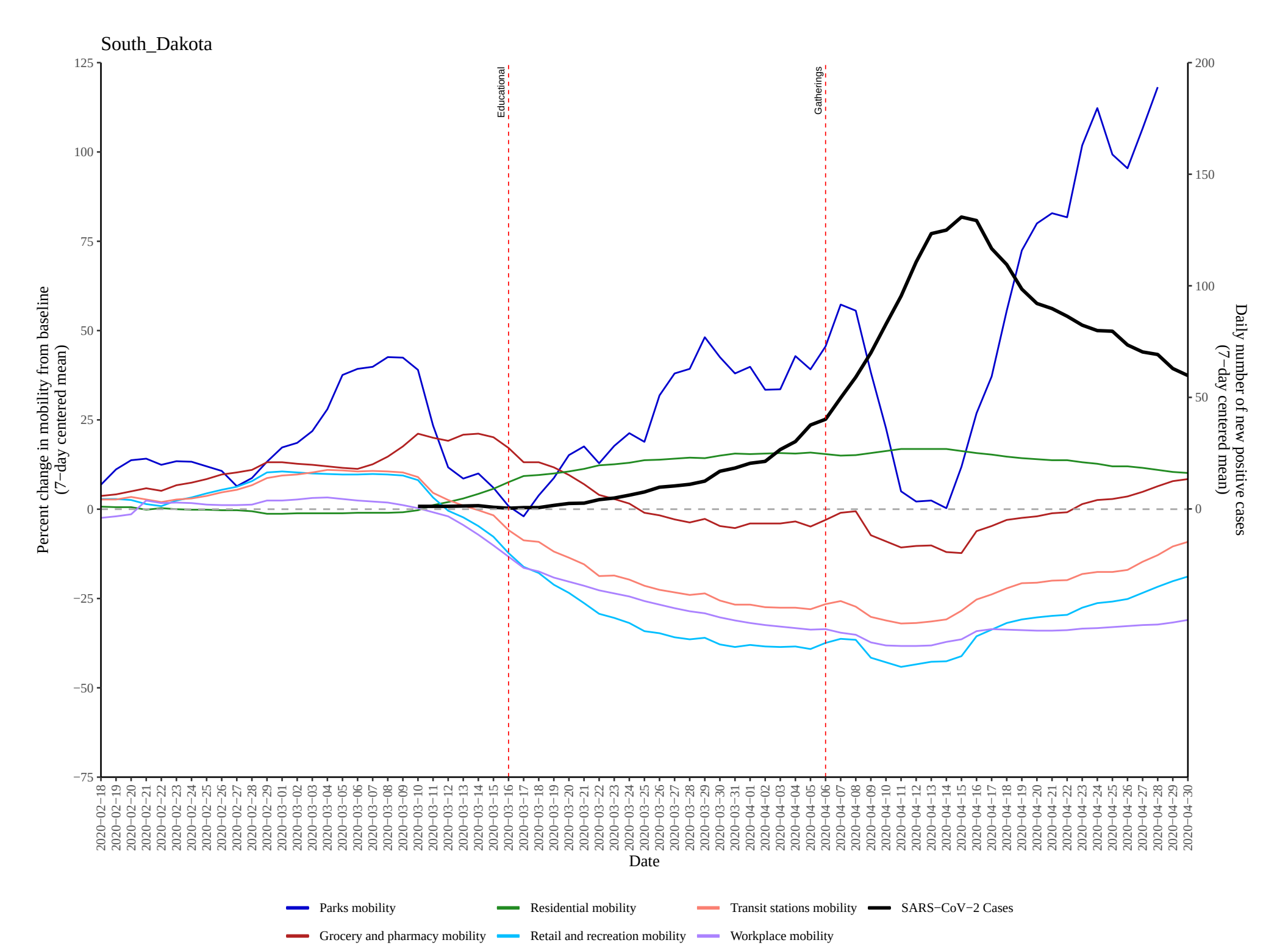

Oklahoma
Educational
Gatherings
Nonessential Businesses
Percent change in mobility from baseline
(7−day centered mean)
Daily number of new positive cases
(7−day centered mean)
Date
Parks mobility
Residential mobility
Transit stations mobility
SARS−CoV−2 Cases
Grocery and pharmacy mobility
Retail and recreation mobility
Workplace mobility

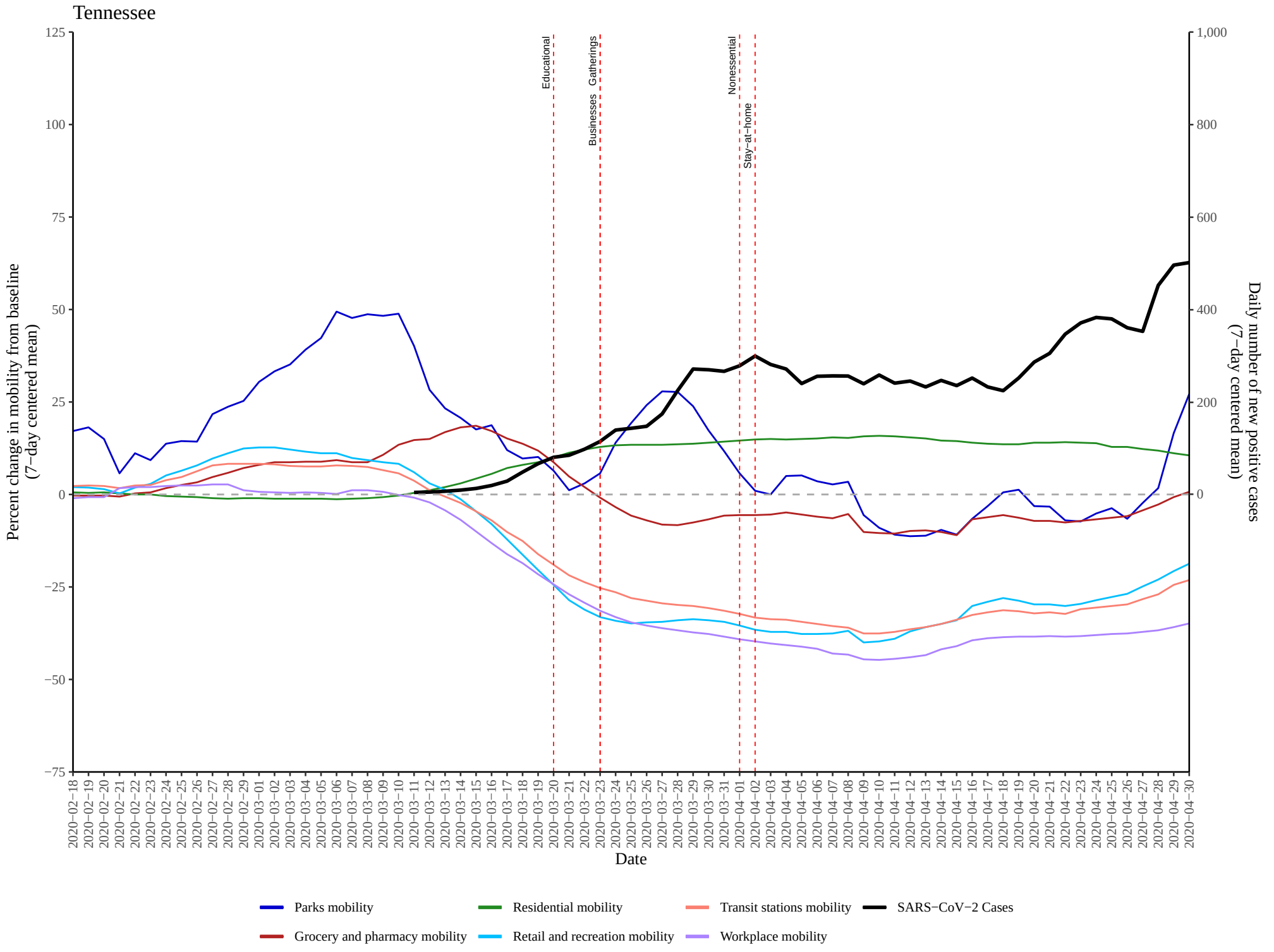

Oregon
Gatherings
Educational Businesses
Stay−at−home
Percent change in mobility from baseline (7−day centered mean)
Daily number of new positive cases (7−day centered mean)
Date
Parks mobility
Residential mobility
Transit stations mobility
SARS−CoV−2 Cases
Grocery and pharmacy mobility
Retail and recreation mobility
Workplace mobility

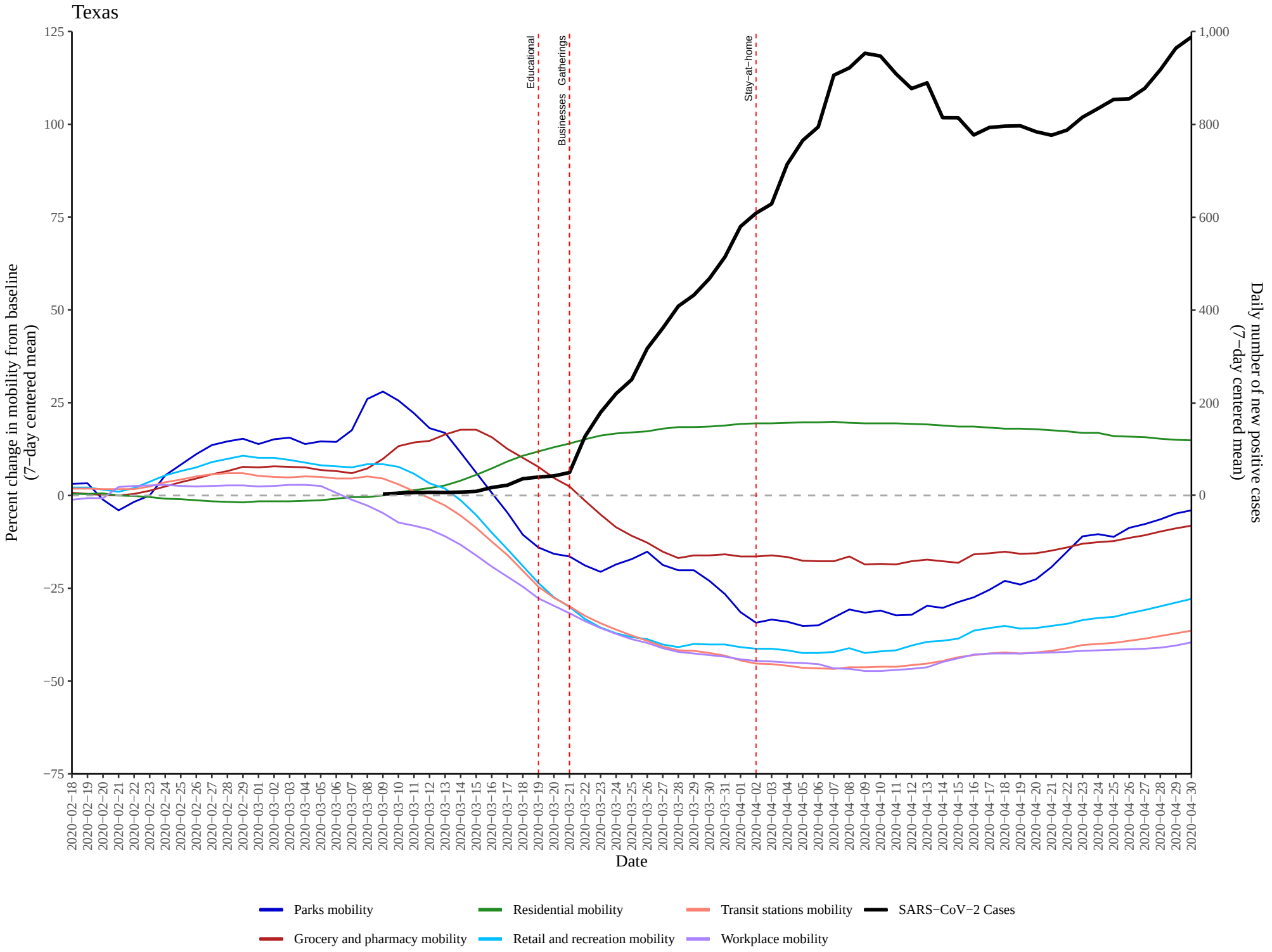

Pennsylvania
Educational
Businesses
Nonessential
Gatherings
Stay−at−home
Percent change in mobility from baseline
(7−day centered mean)
Daily number of new positive cases
(7−day centered mean)
Date
Parks mobility
Residential mobility
Transit stations mobility
SARS−CoV−2 Cases
Grocery and pharmacy mobility
Retail and recreation mobility
Workplace mobility

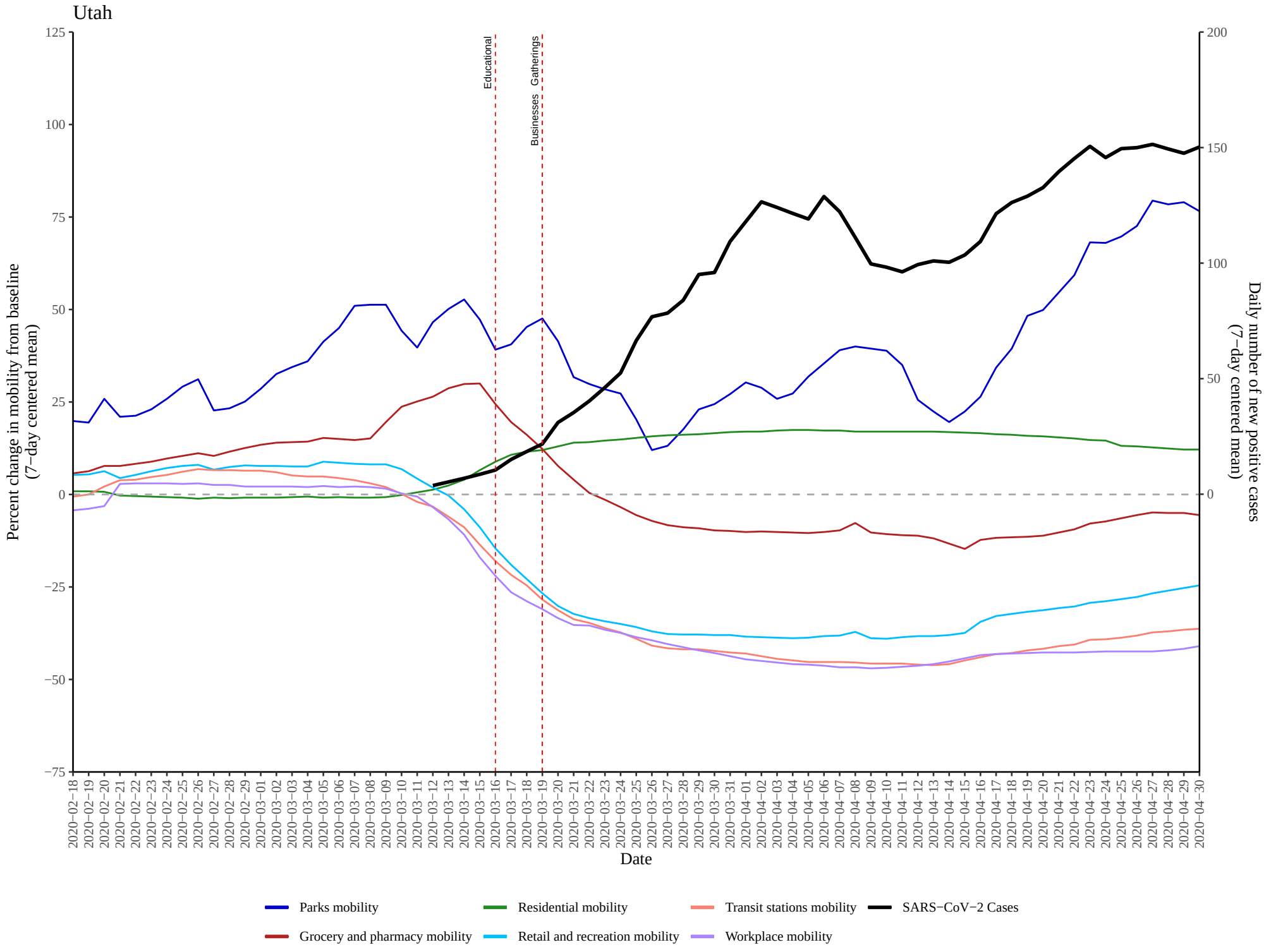

Rhode_Island
Educational Gatherings
Businesses
Stay−at−home
Percent change in mobility from baseline
(7−day centered mean)
Daily number of new positive cases
(7−day centered mean)
Date
Parks mobility
Residential mobility
Transit stations mobility
SARS−CoV−2 Cases
Grocery and pharmacy mobility
Retail and recreation mobility
Workplace mobility

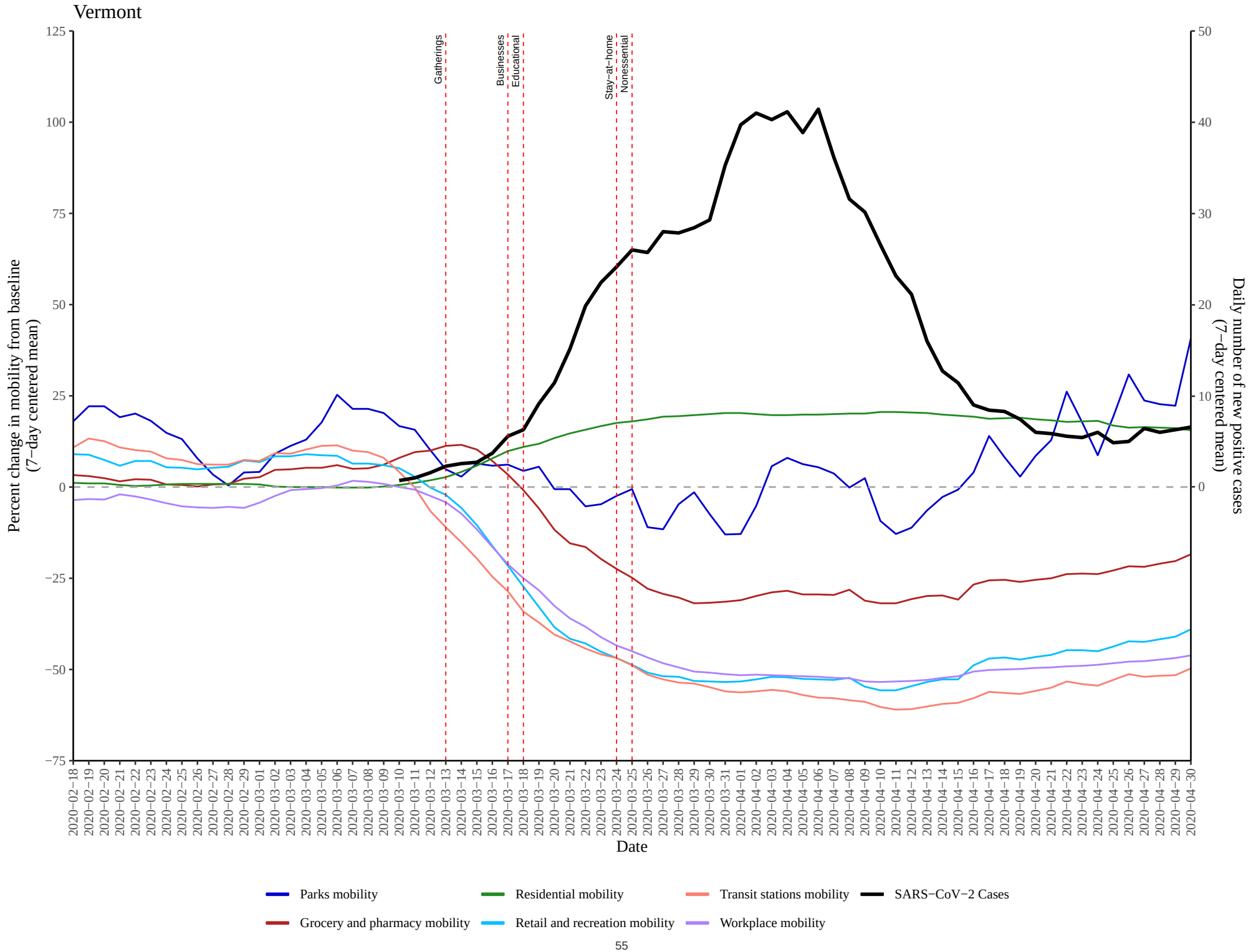

South_Carolina
Educational
Businesses
Gatherings
Stay−at−home
Percent change in mobility from baseline
(7−day centered mean)
Daily number of new positive cases
(7−day centered mean)
Date
Parks mobility
Residential mobility
Transit stations mobility
SARS−CoV−2 Cases
Grocery and pharmacy mobility
Retail and recreation mobility
Workplace mobility

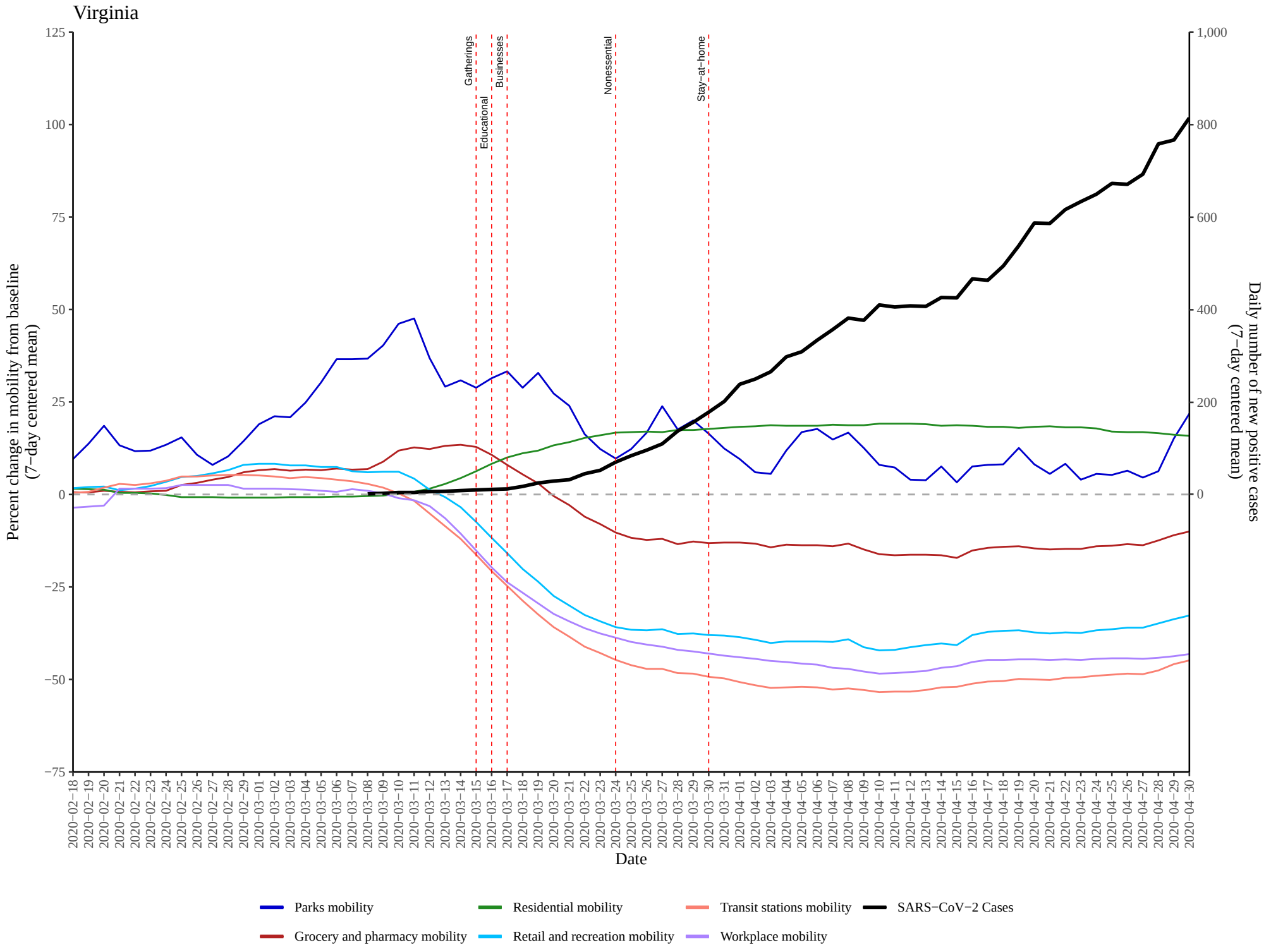

South_Dakota
Educational
Gatherings
Percent change in mobility from baseline
(7−day centered mean)
Daily number of new positive cases
(7−day centered mean)
Date
Parks mobility
Residential mobility
Transit stations mobility
SARS−CoV−2 Cases
Grocery and pharmacy mobility
Retail and recreation mobility
Workplace mobility

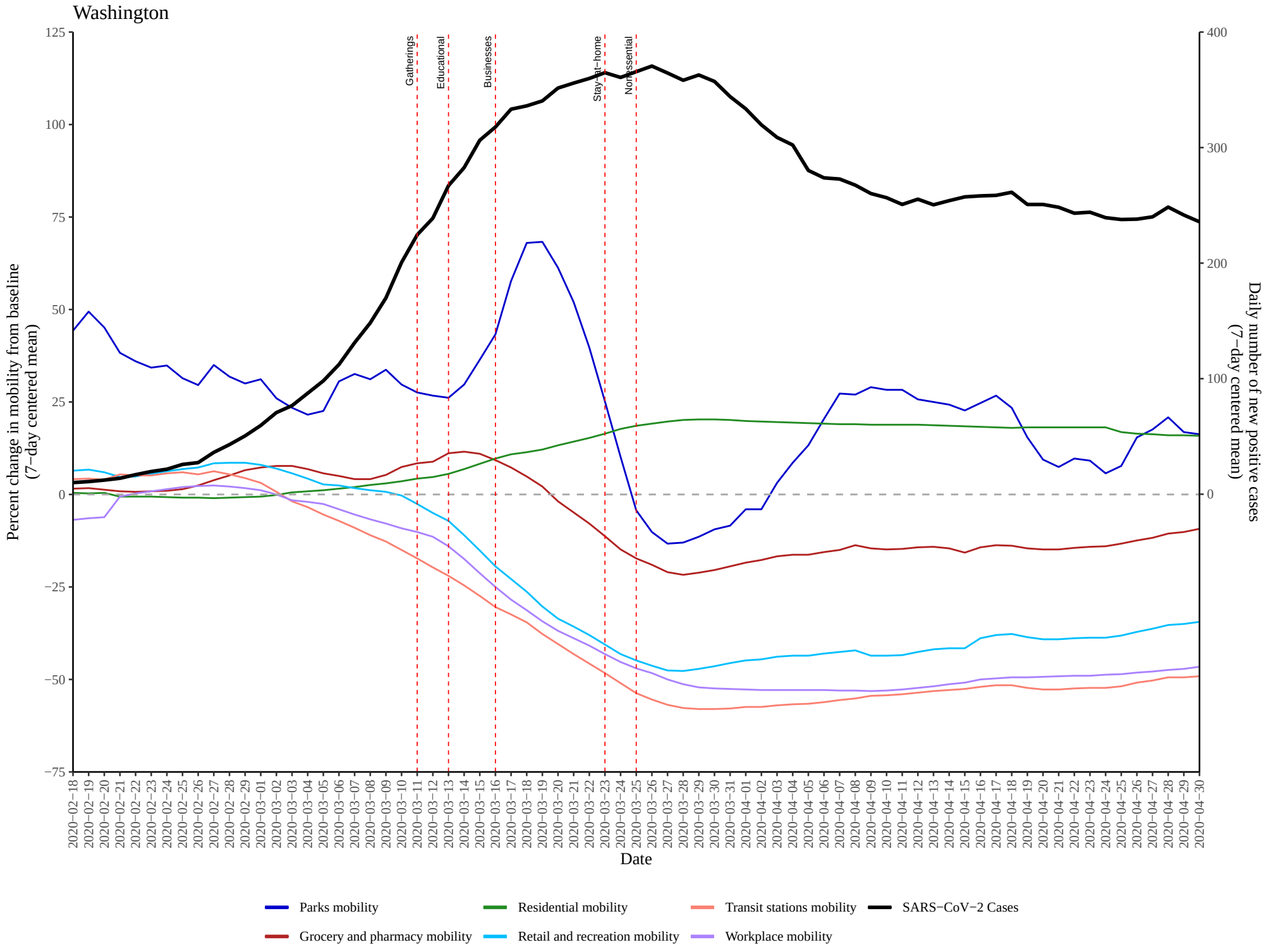

Tennessee
Educational
Businesses
Gatherings
Nonessential
Stay−at−home
Percent change in mobility from baseline
(7−day centered mean)
Daily number of new positive cases
(7−day centered mean)
Date
Parks mobility
Residential mobility
Transit stations mobility
SARS−CoV−2 Cases
Grocery and pharmacy mobility
Retail and recreation mobility
Workplace mobility

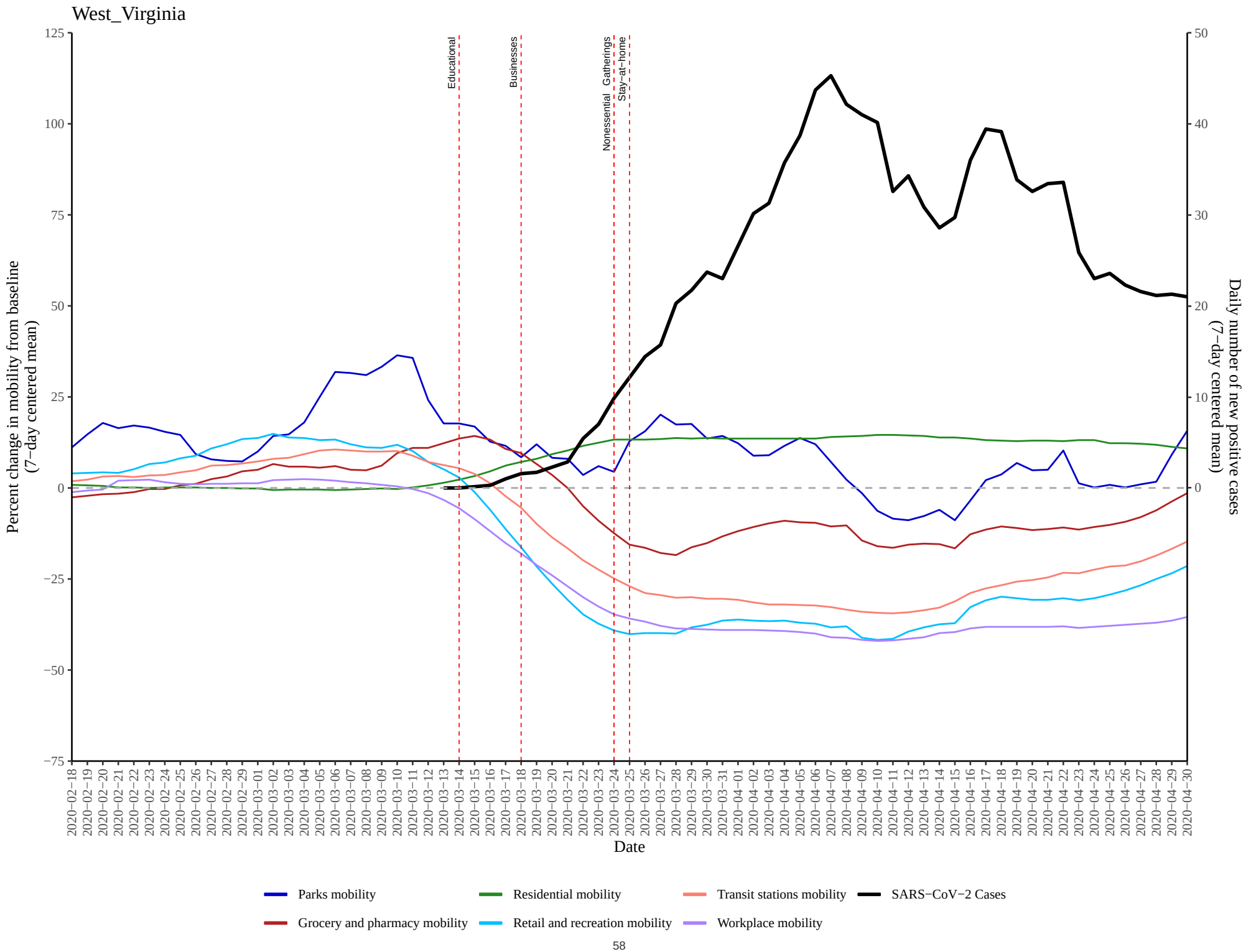

Texas
Educational
Businesses
Gatherings
Stay−at−home
Percent change in mobility from baseline
(7−day centered mean)
Daily number of new positive cases
(7−day centered mean)
Date
Parks mobility
Residential mobility
Transit stations mobility
SARS−CoV−2 Cases
Grocery and pharmacy mobility
Retail and recreation mobility
Workplace mobility

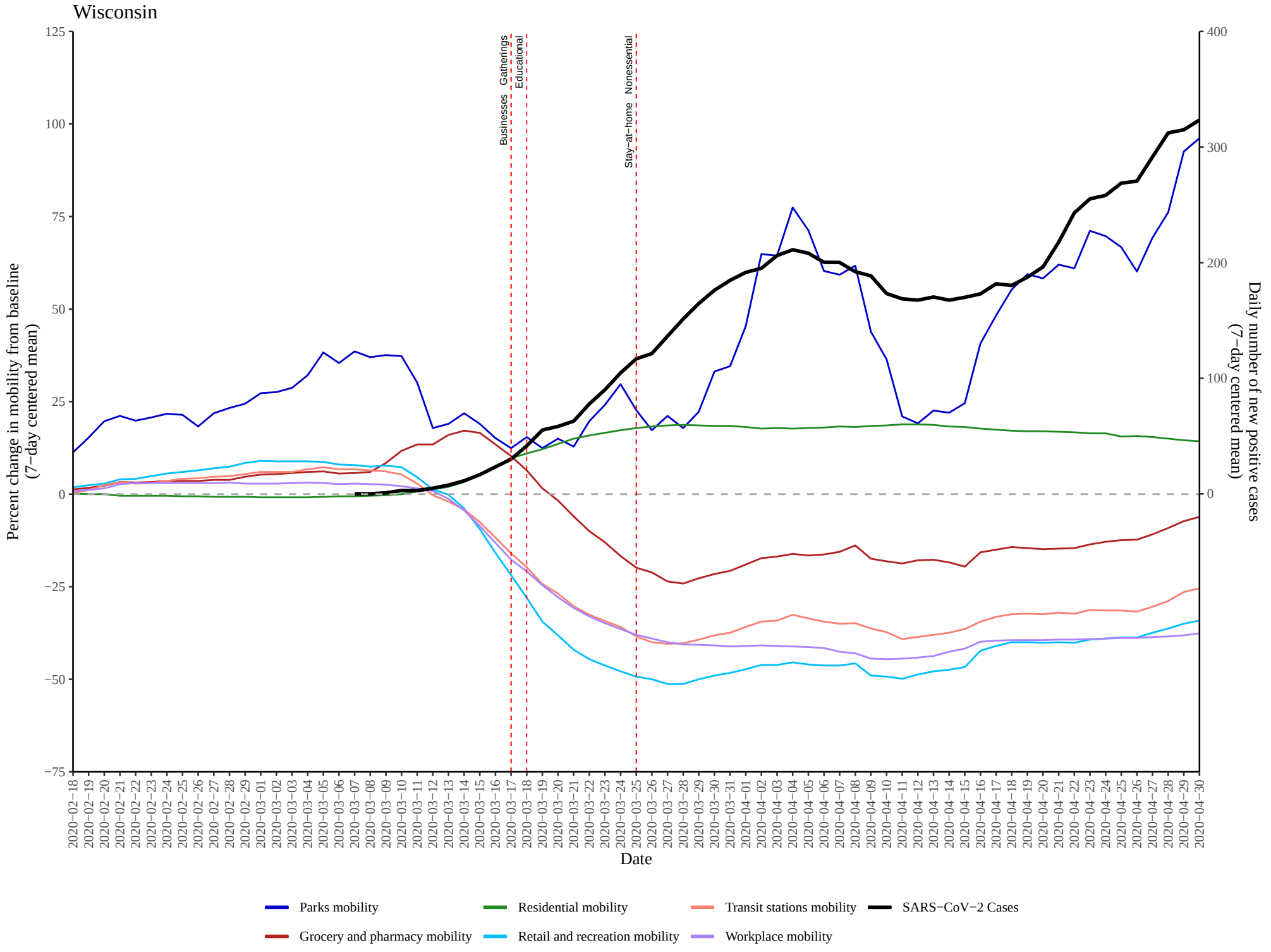

Utah
Educational
Businesses
Gatherings
Percent change in mobility from baseline
(7−day centered mean)
Daily number of new positive cases
(7−day centered mean)
Date
Parks mobility
Residential mobility
Transit stations mobility
SARS−CoV−2 Cases
Grocery and pharmacy mobility
Retail and recreation mobility
Workplace mobility

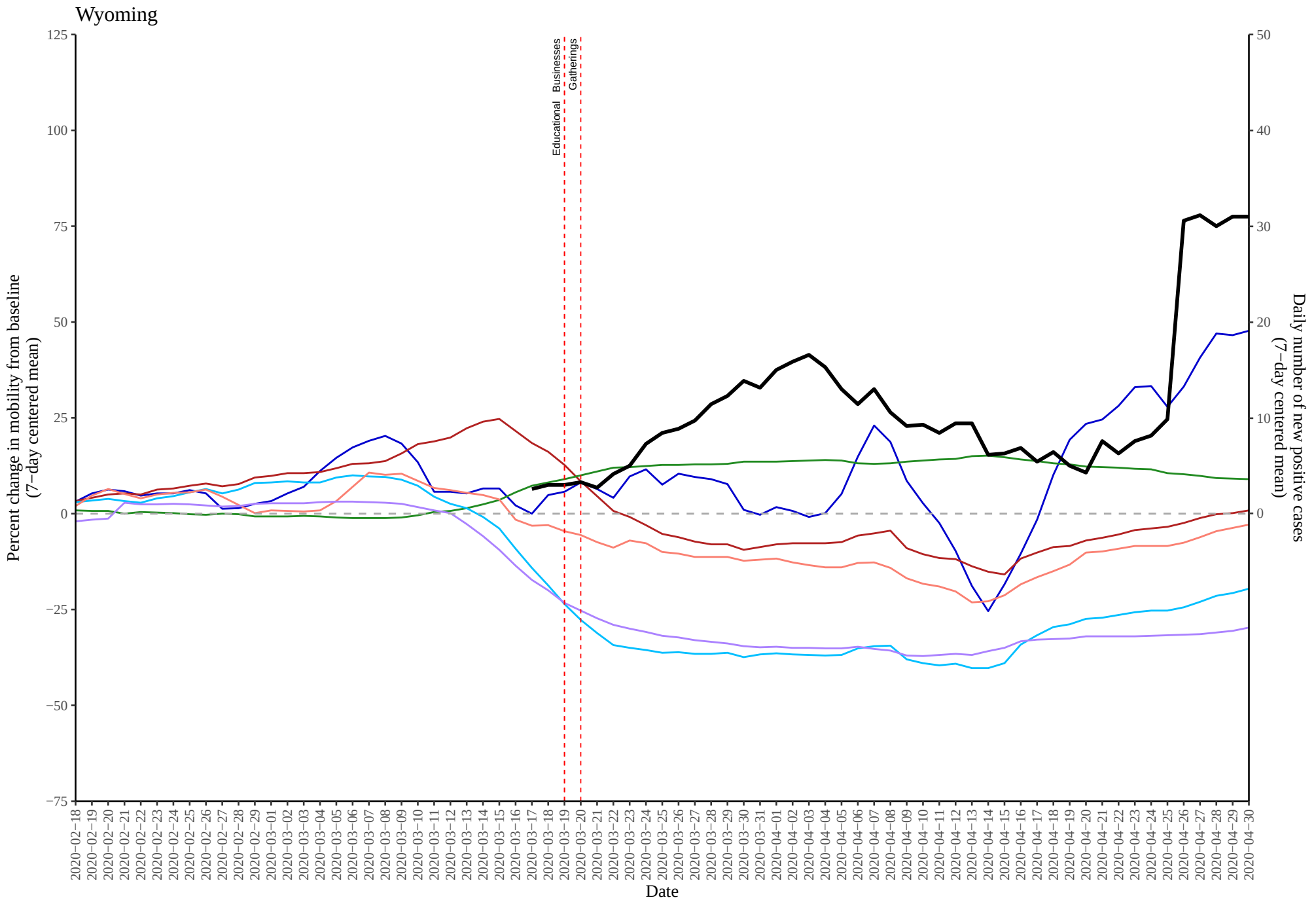

Vermont
Gatherings
Businesses
Educational
Stay−at−home
Nonessential
Percent change in mobility from baseline
(7−day centered mean)
Daily number of new positive cases
(7−day centered mean)
Date
Parks mobility
Residential mobility
Transit stations mobility
SARS−CoV−2 Cases
Grocery and pharmacy mobility
Retail and recreation mobility
Workplace mobility


Virginia
Gatherings
Educational
Businesses
Nonessential
Stay−at−home
Percent change in mobility from baseline
(7−day centered mean)
Daily number of new positive cases
(7−day centered mean)
Date
Parks mobility
Residential mobility
Transit stations mobility
SARS−CoV−2 Cases
Grocery and pharmacy mobility
Retail and recreation mobility
Workplace mobility


Washington
Gatherings
Educational
Businesses
Stay−at−home
Nonessential
Percent change in mobility from baseline
(7−day centered mean)
Daily number of new positive cases
(7−day centered mean)
Date
Parks mobility
Residential mobility
Transit stations mobility
SARS−CoV−2 Cases
Grocery and pharmacy mobility
Retail and recreation mobility
Workplace mobility


West_Virginia
Educational
Businesses
Nonessential Gatherings
Stay−at−home
Percent change in mobility from baseline
(7−day centered mean)
Daily number of new positive cases
(7−day centered mean)
Date
Parks mobility
Residential mobility
Transit stations mobility
SARS−CoV−2 Cases
Grocery and pharmacy mobility
Retail and recreation mobility
Workplace mobility


Wisconsin
Businesses
Gatherings
Educational
Stay−at−home
Nonessential
Percent change in mobility from baseline
(7−day centered mean)
Daily number of new positive cases
(7−day centered mean)
Date
Parks mobility
Residential mobility
Transit stations mobility
SARS−CoV−2 Cases
Grocery and pharmacy mobility
Retail and recreation mobility
Workplace mobility


Wyoming
Educational
Businesses
Gatherings
Percent change in mobility from baseline
(7−day centered mean)
Daily number of new positive cases
(7−day centered mean)
Date
Parks mobility
Residential mobility
Transit stations mobility
SARS−CoV−2 Cases
Grocery and pharmacy mobility
Retail and recreation mobility
Workplace mobility

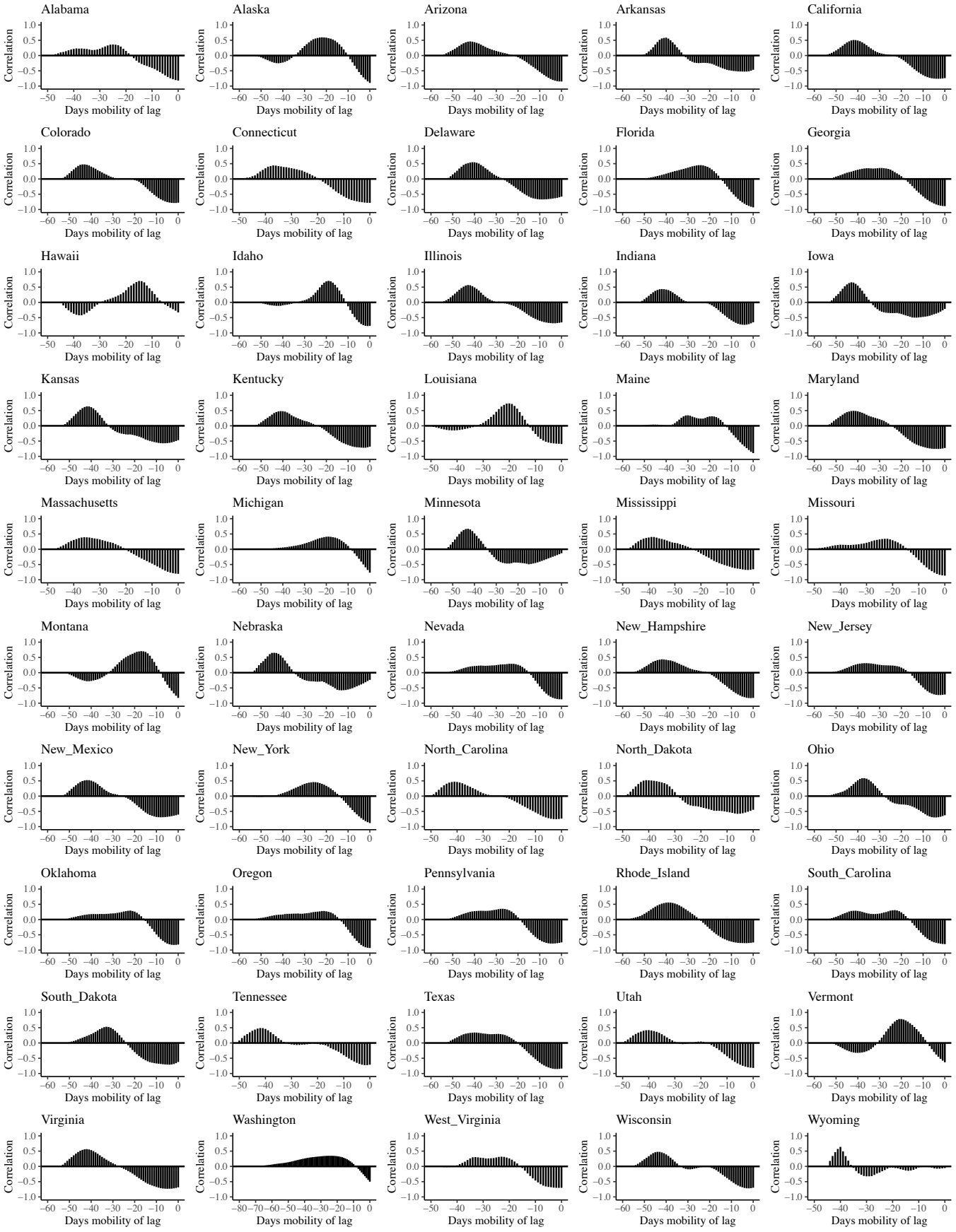
Supplemental Figure 2: Proportional change in mobility at the time of government-issued social distancing orders, relative to the maximum degree change over the study period

Proportional change in mobility at the time various government-issued social distancing orders (SDOs) were put in place relative to the maximum change in mobility achieved in that state over the entire study period (February 29 – April 30, 2020. Mobility was measured as one of four categories based on the type of locations used by the public: residential areas (e.g. houses, apartments), retail and recreation locations, transit stations, and workplaces. Residential mobility increased over the course of the study period, while all other mobility categories decreased. Social distancing orders included: 1) closure of educational facilities, B) any restrictions on gatherings, C) closure of any businesses, D) closure of all nonessential businesses, and E) stay-at-home orders.

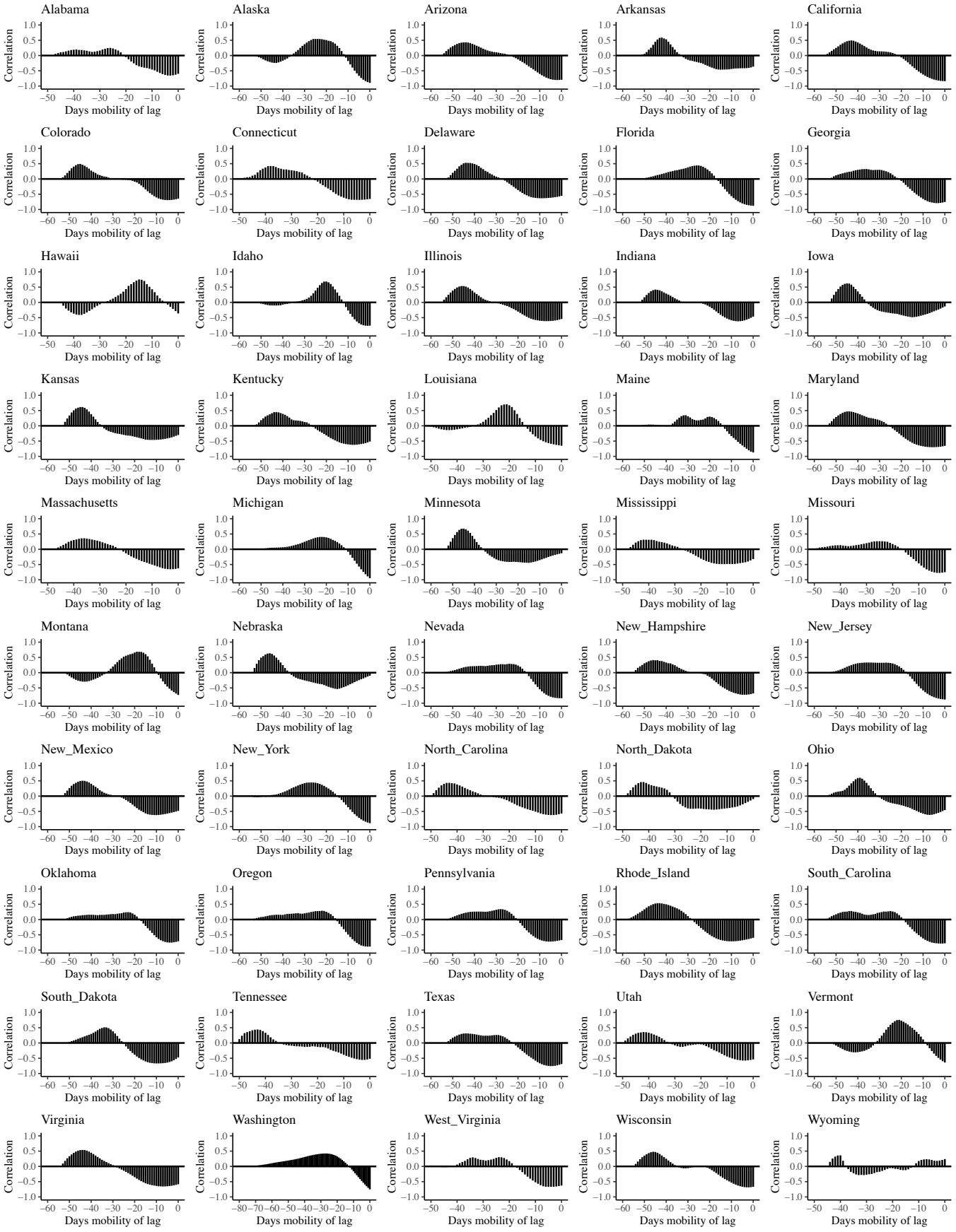
A) Educational facilities closed
B) Large gathering restrictions
C) Any business closure
D) All nonessential services closed
E) Stay−at−home order
Proportional change in mobility at time of SDO
1.00
0.75
0.50
0.25
0.00
Alabama Alaska Arizona Arkansas California Colorado Connecticut Delaware Florida Georgia Hawaii Idaho Illinois Indiana Iowa Kansas Kentucky Louisiana Maine Maryland Massachusetts Michigan Minnesota Mississippi Missouri Montana Nebraska Nevada New_Hampshire New_Jersey New_Mexico New_York North_Carolina North_Dakota Ohio Oklahoma Oregon Pennsylvania Rhode_Island South_Carolina South_Dakota Tennessee Texas Utah Vermont Virginia Washington West_Virginia Wisconsin Wyoming
Mobility Category
Residential
Retail and recreation
Transit stations
Workplace

Supplemental Figure 3: Cross-correlation between daily SARS-CoV-2 cases and mobility
Results of cross-correlation between the daily count of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) cases and daily mobility metrics (proportional change compared to baseline) in the United States, from February 29 – April 30, 2020 (seven-day centered means used for both variables). Mobility was measured using anonymized location data aggregated from mobile phones and stratified by A) parks, B) residential locations, C) grocery stores and pharmacies, D) retail and recreation locations, E) transit stations, and F) workplaces. Lag values along the x-axis describe the number of days that mobility values were lagged to correlate with daily cases. For example, the correlation value on day "-5" corresponds to the correlation between the daily case count on day_t and the mobility value from day_{t-5}.

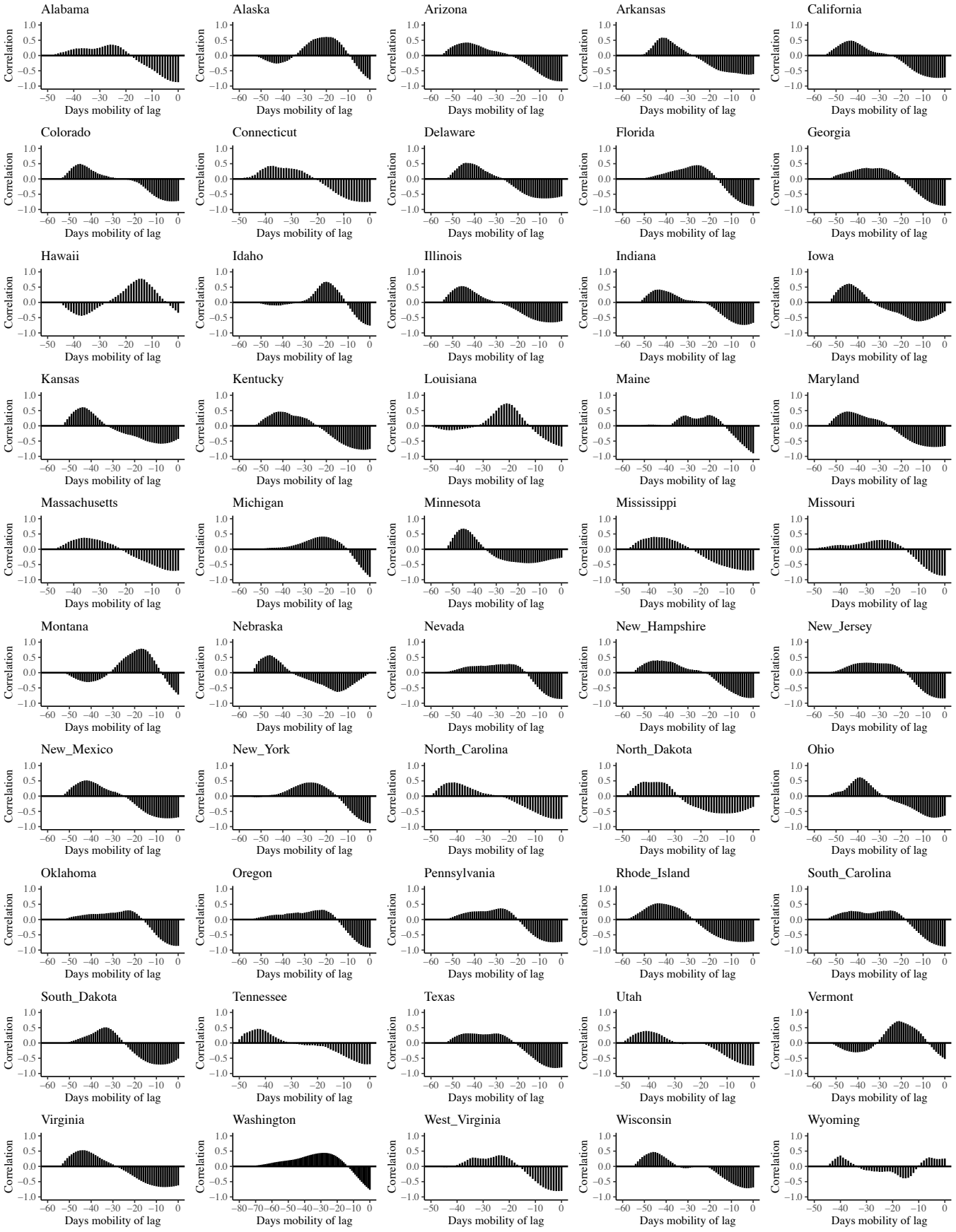
A) Grocery store and pharmacy



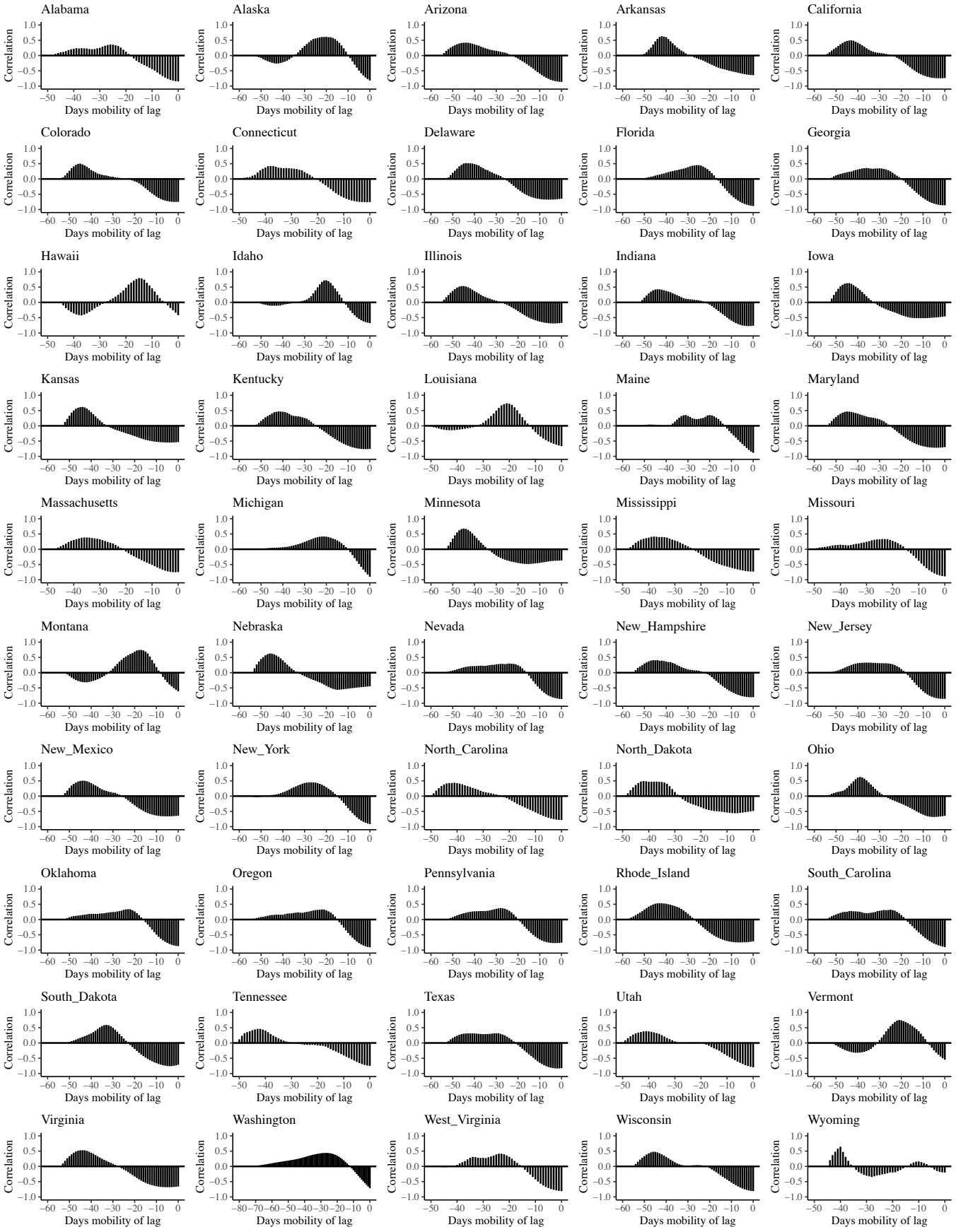
B) Retail and Recreation



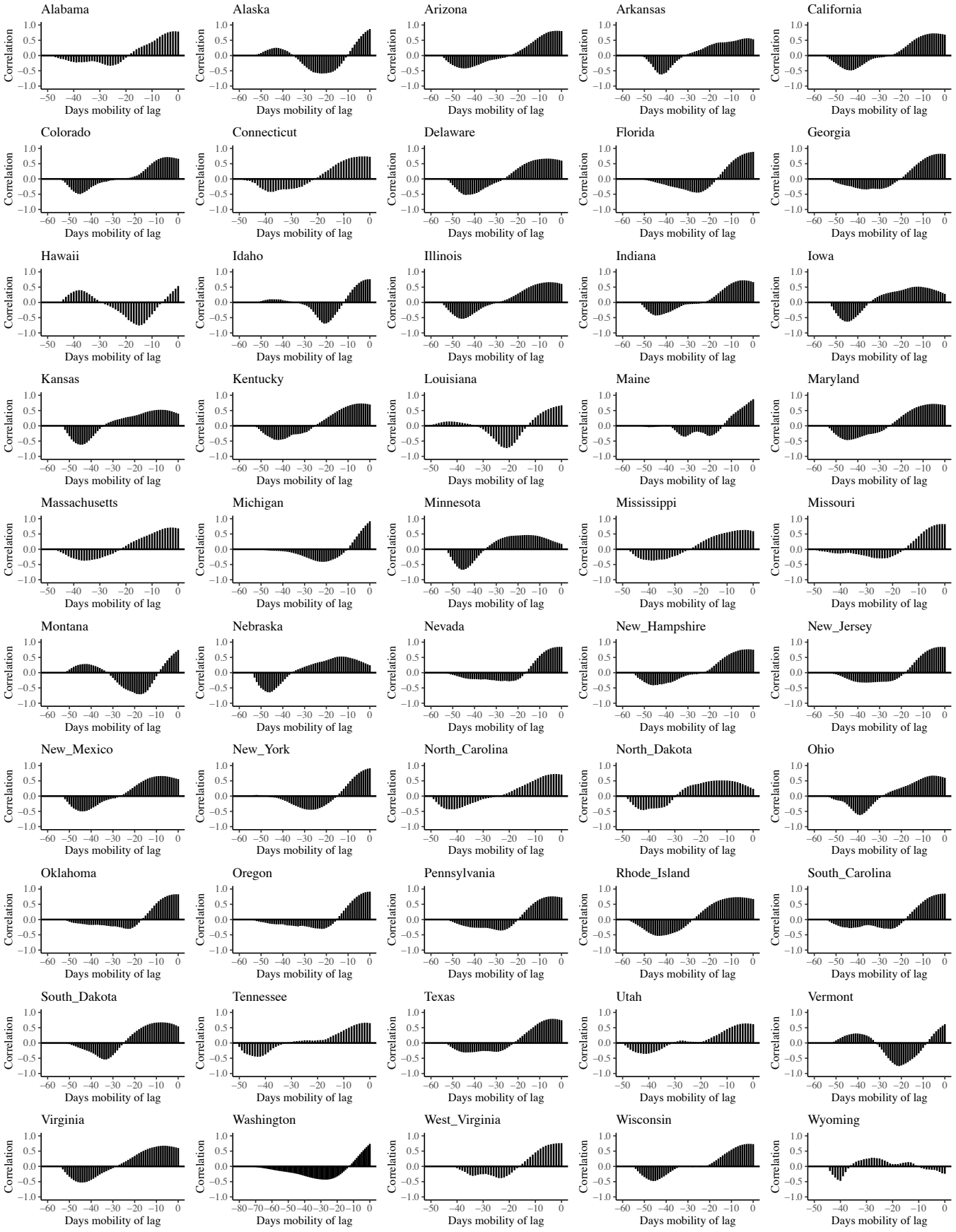
C) Transit stations



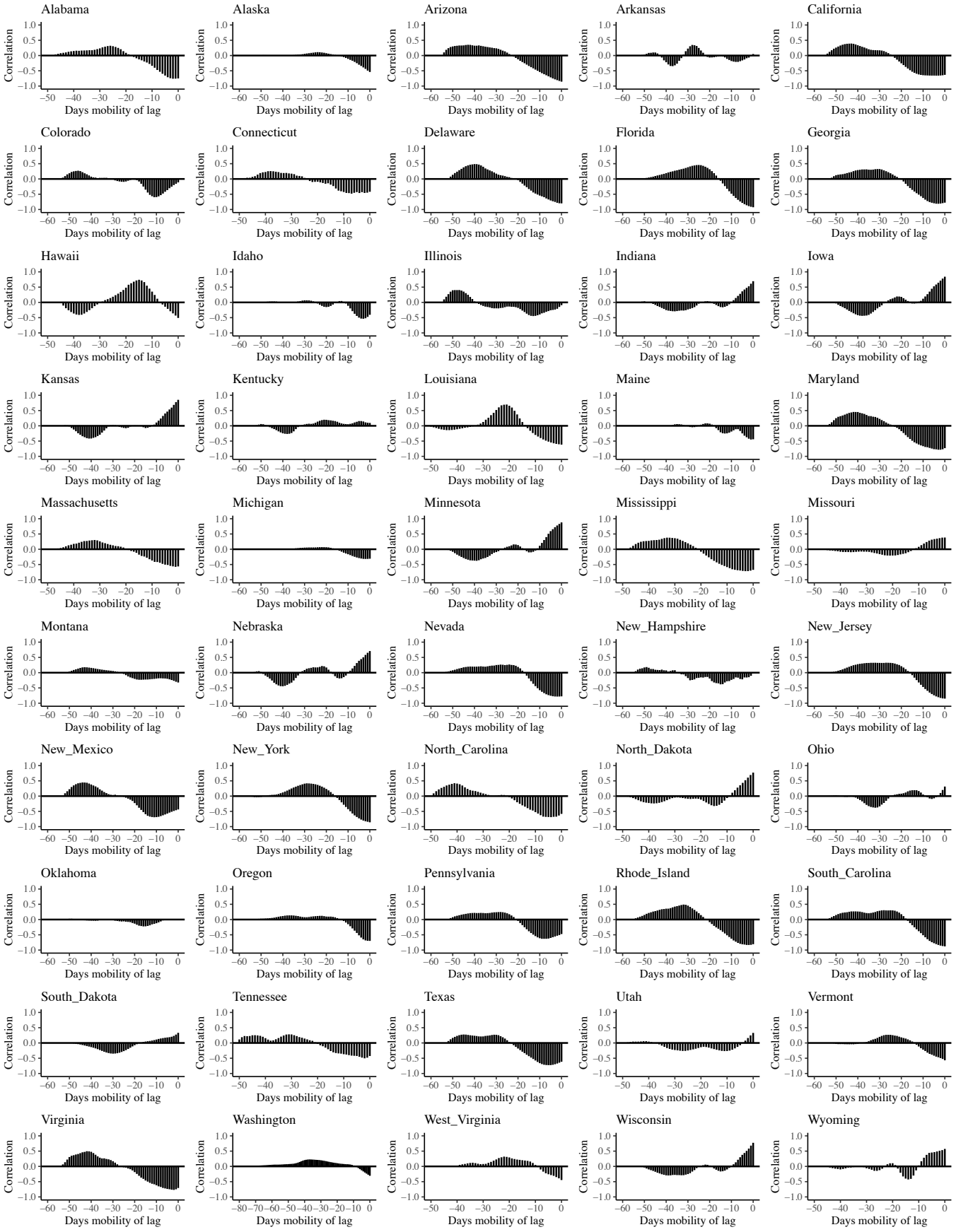
D) Workplace


Alabama
Alaska
Arizona
Arkansas
California
Colorado
Connecticut
Delaware
Florida
Georgia
Hawaii
Idaho
Illinois
Indiana
Iowa
Kansas
Kentucky
Louisiana
Maine
Maryland
Massachusetts
Michigan
Minnesota
Mississippi
Missouri
Montana
Nebraska
Nevada
New_Hampshire
New_Jersey
New_Mexico
New_York
North_Carolina
North_Dakota
Ohio
Oklahoma
Oregon
Pennsylvania
Rhode_Island
South_Carolina
South_Dakota
Tennessee
Texas
Utah
Vermont
Virginia
Washington
West_Virginia
Wisconsin
Wyoming
Correlation
Days mobility of lag

E) Residential

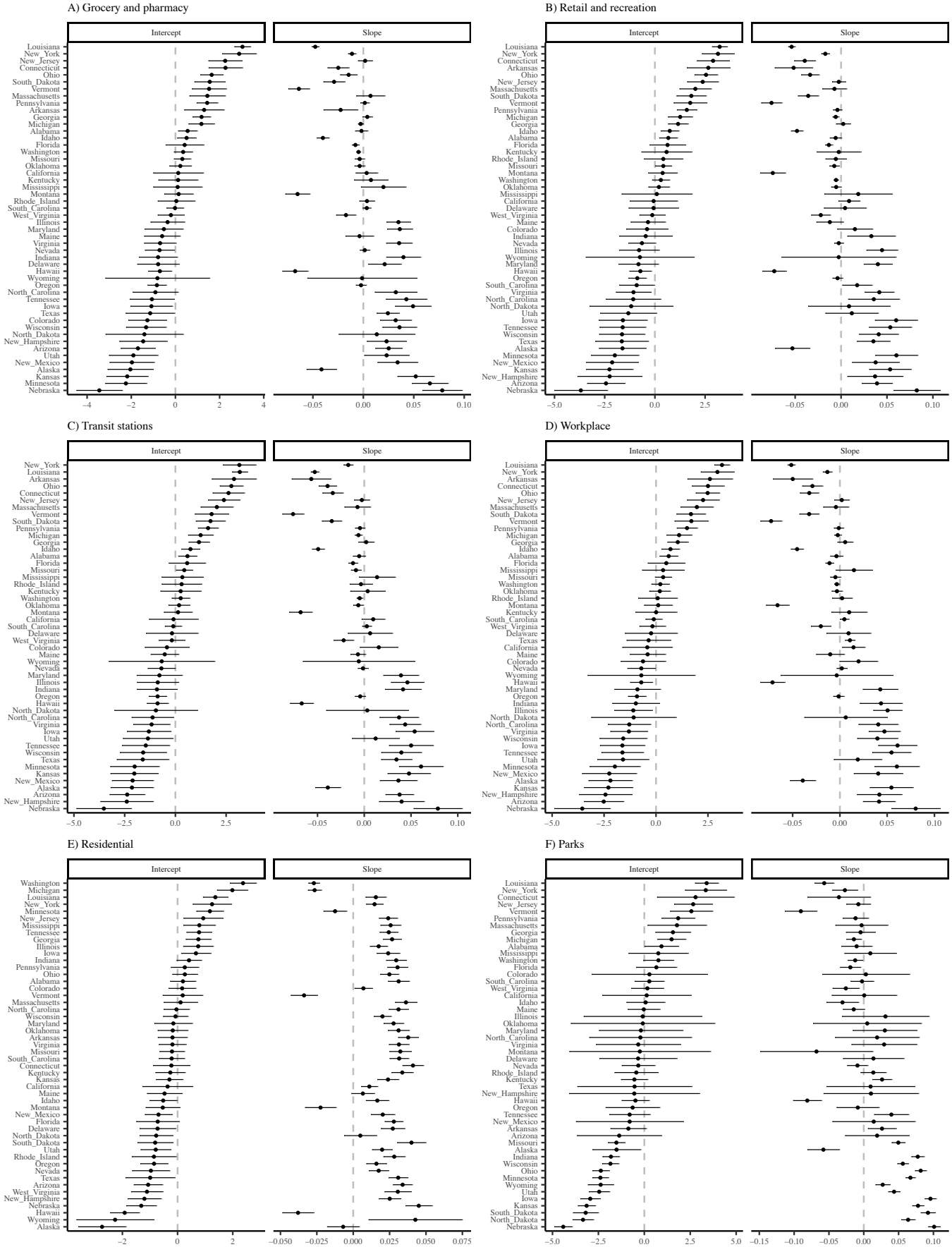


F) Parks

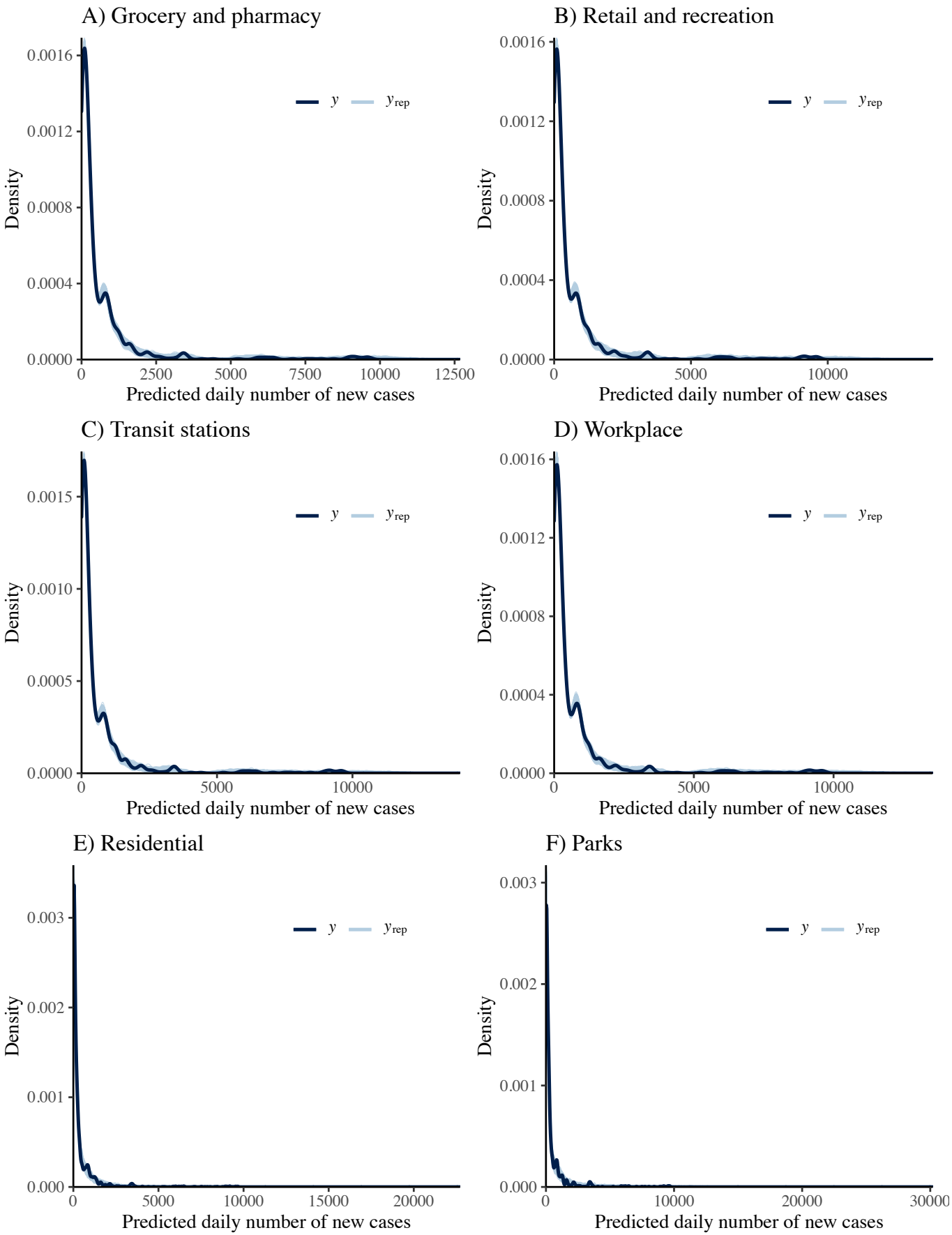

Alabama
Alaska
Arizona
Arkansas
California
Colorado
Connecticut
Delaware
Florida
Georgia
Hawaii
Idaho
Illinois
Indiana
Iowa
Kansas
Kentucky
Louisiana
Maine
Maryland
Massachusetts
Michigan
Minnesota
Mississippi
Missouri
Montana
Nebraska
Nevada
New_Hampshire
New_Jersey
New_Mexico
New_York
North_Carolina
North_Dakota
Ohio
Oklahoma
Oregon
Pennsylvania
Rhode_Island
South_Carolina
South_Dakota
Tennessee
Texas
Utah
Vermont
Virginia
Washington
West_Virginia
Wisconsin
Wyoming
Correlation
Days mobility of lag

Supplemental Figure 4: Plot of mobility model random effects

Plots of random effects from Bayesian, negative binomial mixed effect regression models testing time-varying mobility measures as predictors of the daily count of total positive cases. Time invariant predictors included the proportion of the population living in an urban and the number of airports in each state. The state was used as a random intercept and the number of days since a state ran 10 tests was used as the random slope. Mobility (as measured by anonymized location data aggregated from mobile phones) was included in the model as one of six categories based on the type of locations used by the public: A) grocery stores and pharmacies, B) retail and recreation locations, C) transit stations, D) workplaces, E) residential, and F) parks.


A) Grocery and pharmacy
Intercept
Slope
Louisiana
New_York
New_Jersey
Connecticut
Ohio
South_Dakota
Vermont
Massachusetts
Pennsylvania
Arkansas
Georgia
Michigan
Alabama
Idaho
Florida
Washington
Missouri
Oklahoma
California
Kentucky
Mississippi
Montana
Rhode_Island
South_Carolina
West_Virginia
Illinois
Maryland
Maine
Virginia
Nevada
Indiana
Delaware
Hawaii
Wyoming
Oregon
North_Carolina
Tennessee
Iowa
Texas
Colorado
Wisconsin
North_Dakota
New_Hampshire
Arizona
Utah
New_Mexico
Alaska
Kansas
Minnesota
Nebraska
−4
−2
0
2
4
−0.05
0.00
0.05
0.10
B) Retail and recreation
Intercept
Slope
Louisiana
New_York
Connecticut
Arkansas
Ohio
New_Jersey
Massachusetts
South_Dakota
Vermont
Pennsylvania
Michigan
Georgia
Idaho
Alabama
Florida
Kentucky
Rhode_Island
Missouri
Montana
Washington
Oklahoma
Mississippi
California
Delaware
West_Virginia
Maine
Colorado
Indiana
Nevada
Illinois
Wyoming
Maryland
Hawaii
Oregon
South_Carolina
Virginia
North_Carolina
North_Dakota
Utah
Iowa
Tennessee
Wisconsin
Texas
Alaska
Minnesota
New_Mexico
Kansas
New_Hampshire
Arizona
Nebraska
−5.0
−2.5
0.0
2.5
−0.05
0.00
0.05
0.10
C) Transit stations
Intercept
Slope
New_York
Louisiana
Arkansas
Ohio
Connecticut
New_Jersey
Massachusetts
Vermont
South_Dakota
Pennsylvania
Michigan
Georgia
Idaho
Alabama
Florida
Missouri
Mississippi
Rhode_Island
Kentucky
Washington
Oklahoma
Montana
California
South_Carolina
Delaware
West_Virginia
Colorado
Maine
Wyoming
Nevada
Maryland
Illinois
Indiana
Oregon
Hawaii
North_Dakota
North_Carolina
Virginia
Iowa
Utah
Tennessee
Wisconsin
Texas
Minnesota
Kansas
New_Mexico
Alaska
Arizona
New_Hampshire
Nebraska
−5.0
−2.5
0.0
2.5
−0.05
0.00
0.05
0.10
D) Workplace
Intercept
Slope
Louisiana
New_York
Arkansas
Connecticut
Ohio
New_Jersey
Massachusetts
South_Dakota
Vermont
Pennsylvania
Michigan
Georgia
Idaho
Alabama
Florida
Mississippi
Missouri
Washington
Oklahoma
Rhode_Island
Montana
Kentucky
South_Carolina
West_Virginia
Delaware
Texas
California
Maine
Colorado
Nevada
Wyoming
Hawaii
Maryland
Oregon
Indiana
Illinois
North_Dakota
North_Carolina
Virginia
Wisconsin
Iowa
Tennessee
Utah
Minnesota
New_Mexico
Alaska
Kansas
New_Hampshire
Arizona
Nebraska
−5.0
−2.5
0.0
2.5
−0.05
0.00
0.05
0.10
E) Residential
Intercept
Slope
Washington
Michigan
Louisiana
New_York
Minnesota
New_Jersey
Mississippi
Tennessee
Georgia
Illinois
Iowa
Indiana
Pennsylvania
Ohio
Alabama
Colorado
Vermont
Massachusetts
North_Carolina
Wisconsin
Maryland
Oklahoma
Arkansas
Virginia
Missouri
South_Carolina
Connecticut
Kentucky
Kansas
California
Maine
Idaho
Montana
New_Mexico
Florida
Delaware
North_Dakota
South_Dakota
Utah
Rhode_Island
Oregon
Nevada
Texas
Arizona
West_Virginia
New_Hampshire
Nebraska
Hawaii
Wyoming
Alaska
−2
0
2
−0.050
−0.025
0.000
0.025
0.050
0.075
F) Parks
Intercept
Slope
Louisiana
New_York
Connecticut
New_Jersey
Vermont
Pennsylvania
Massachusetts
Georgia
Michigan
Alabama
Mississippi
Washington
Florida
Colorado
South_Carolina
West_Virginia
California
Idaho
Maine
Illinois
Oklahoma
Maryland
North_Carolina
Virginia
Montana
Delaware
Nevada
Rhode_Island
Kentucky
Texas
New_Hampshire
Hawaii
Oregon
Tennessee
New_Mexico
Arkansas
Arizona
Missouri
Alaska
Indiana
Wisconsin
Ohio
Minnesota
Wyoming
Utah
Iowa
Kansas
South_Dakota
North_Dakota
Nebraska
−5.0
−2.5
0.0
2.5
5.0
−0.15
−0.10
−0.05
0.00
0.05
0.10

Supplemental Figure 5: Posterior predictive checks of mobility models
Posterior predictive density plots from Bayesian, negative binomial mixed effect regression models testing time-varying mobility measures as predictors of the daily count of total positive SARS-CoV-2 cases. Time invariant predictors included the proportion of the population living in an urban and the number of airports in each state. The state was used as a random intercept and the number of days since a state ran 10 tests was used as the random slope. Mobility (as measured by anonymized location data aggregated from mobile phones) was included in the model as one of six categories based on the type of locations used by the public: A) grocery stores and pharmacies, B) retail and recreation locations, C) transit stations, D) workplaces, E) residential, and F) parks. y = empirical values of the outcome variable, y_{rep} = simulated replications (n = 1,000) of the outcome drawn from the model's posterior predictive distribution.


A) Grocery and pharmacy
B) Retail and recreation
C) Transit stations
D) Workplace
E) Residential
F) Parks
Density
Predicted daily number of new cases
y
yrep