

etable10: Comparing Estimates From This Study to Estimates from Swedo et al.

State	Years used		Direct estimates, % [†] (BRFSS respondents who answered ACEs questions)				Swedo et al. [§] (BRFSS respondents who answered ACEs questions)				Difference				
	2019	2020	0	1	2 to 3	4+	year	0	1	2 to 3	4+	0	1	2 to 3	4+
	Alabama	yes	yes	35.52	23.04	22.62	18.81	2020	36.0245	23.614	21.693	18.6685	-0.50	-0.57	0.93
Alaska							2015	31.9332	22.2344	23.4855	22.3469				
Arizona		yes	33.16	23.23	24.75	18.86	2020	33.1638	23.2252	24.7545	18.8564	0.00	0.00	0.00	0.00
Arkansas							2018	36.3825	23.0527	20.9684	19.5964				
California*		yes	32.78	20.58	28.56	18.08	2020	31.7153	20.8529	28.4535	18.9783	1.06	-0.27	0.11	-0.90
Colorado							2014	36.9465	24.126	23.7841	15.1433				
Connecticut							2017	40.242	24.1458	22.6201	12.9922				
Delaware	yes		33.2	23.5	25.37	17.93	2019	33.2011	23.4972	25.3696	17.9322	0.00	0.00	0.00	0.00
DC	yes		31.08	26.02	27.72	15.18	2020	31.0841	26.017	27.7235	15.1754	0.00	0.00	0.00	0.00
Florida	yes	yes	35.57	24.27	22.19	17.98	2020	37.3245	23.379	22.2197	17.0767	-1.75	0.89	-0.03	0.90
Georgia	yes		35.35	24.55	23.36	16.74	2020	35.3455	24.5519	23.3628	16.7398	0.00	0.00	0.00	0.00
Hawaii	yes		37.3	23.61	23.65	15.45	2020	37.2955	23.6106	23.6482	15.4457	0.00	0.00	0.00	0.00
Idaho	yes		35.26	22.72	22.5	19.52	2020	35.2574	22.7191	22.499	19.5246	0.00	0.00	0.00	0.00
Illinois							2017	41.1603	22.7704	19.7047	16.3646				
Indiana	yes		34.25	23.49	23.21	19.06	2019	34.2459	23.4887	23.2075	19.0579	0.00	0.00	0.00	0.00
Iowa	yes	yes	38.88	22.02	22.08	17.02	2020	39.3615	22.9243	21.1129	16.6012	-0.48	-0.90	0.97	0.42
Kansas*	yes	yes	35.09	23.64	22.35	18.93	2020	35.1486	23.5566	22.8654	18.4295	-0.06	0.08	-0.52	0.50
Kentucky	yes		35.92	21.98	23.01	19.09	2020	35.9215	21.9787	23.0068	19.093	0.00	0.00	0.00	0.00
Louisiana							2016	35.9975	23.0791	23.4317	17.4917				
Maine							2011	36.9109	22.4922	22.1457	18.4512				
Maryland*	yes		38.07	24.71	22.5	14.72	2020	38.0815	24.1961	22.6766	15.0458	-0.01	0.51	-0.18	-0.33
Massachusetts*	yes		39.04	21.79	23.57	15.6	2020	38.4966	21.5219	23.7769	16.2046	0.54	0.27	-0.21	-0.60
Michigan	yes		31.68	23.85	24.71	19.77	2019	31.6827	23.846	24.7062	19.765	0.00	0.00	0.00	0.00
Minnesota							2011	41.9941	23.1785	21.606	13.2215				
Mississippi	yes	yes	39.52	24.6	20.57	15.31	2020	40.447	25.7586	19.0749	14.7195	-0.93	-1.16	1.50	0.59
Missouri	yes	yes	34.41	22.98	22.43	20.19	2020	35.1249	23.1609	21.7442	19.97	-0.71	-0.18	0.69	0.22
Montana	yes		31.76	22.12	23.82	22.3	2020	31.7585	22.1241	23.8161	22.3013	0.00	0.00	0.00	0.00
Nebraska							2011	43.9968	22.9301	20.6829	12.3902				
Nevada	yes		30.16	20.96	26.79	22.1	2020	30.1556	20.9587	26.7866	22.0991	0.00	0.00	0.00	0.00
New Hampshire							2016	52.5832	21.9841	17.7845	7.6483				
New Jersey*	yes		38.5	25.85	24.12	11.54	2020	38.3459	25.5279	24.2611	11.8651	0.15	0.32	-0.14	-0.33
New Mexico	yes		32.04	22.27	24.59	21.1	2019	32.0424	22.2689	24.5885	21.1002	0.00	0.00	0.00	0.00
New York*	yes		39.06	24.47	22.88	13.59	2019	39.0542	24.4124	23.0507	13.4826	0.01	0.06	-0.17	0.11
North Carolina							2014	39.7769	24.6951	20.2923	15.2358				
North Dakota	yes	yes	40.81	22.97	20.5	15.72	2020	40.9324	22.3729	20.2918	16.4029	-0.12	0.60	0.21	-0.68
Ohio*	yes		33.2	22.94	25.5	18.36	2019	32.3537	22.8178	26.0628	18.7657	0.85	0.12	-0.56	-0.41
Oklahoma*	yes	yes	35.94	23.25	20.2	20.61	2020	38.6384	22.5054	19.3789	19.4773	-2.70	0.74	0.82	1.13
Oregon							2018	31.4513	22.488	23.3571	22.7035				
Pennsylvania	yes		35.87	22.43	22.82	18.88	2019	35.8735	22.4272	22.8211	18.8782	0.00	0.00	0.00	0.00
Rhode Island	yes	yes	35.42	23.7	23.25	17.64	2020	36.4597	24.1894	23.1004	16.2505	-1.04	-0.49	0.15	1.39
South Carolina	yes	yes	34.22	24.1	22.7	18.98	2020	35.3163	25.1182	21.2013	18.3642	-1.10	-1.02	1.50	0.62
South Dakota	yes		39.73	23.25	22.25	14.78	2020	39.7255	23.2539	22.2451	14.7755	0.00	0.00	0.00	0.00
Tennessee	yes		33.18	21.61	23.4	21.8	2019	33.1841	21.6086	23.4026	21.8047	0.00	0.00	0.00	0.00
Texas	yes		37.48	24.03	22.35	16.14	2020	37.4769	24.0282	22.3527	16.1423	0.00	0.00	0.00	0.00
Utah	yes		32.21	21.52	26.05	20.23	2020	32.2058	21.5153	26.0538	20.2251	0.00	0.00	0.00	0.00
Vermont							2011	40.4066	24.1649	20.8948	14.5337				
Virginia	yes	yes	37.92	24.66	22.32	15.1	2020	38.2995	24.4637	21.4808	15.756	-0.38	0.20	0.84	-0.66
Washington							2011	33.1288	22.8017	24.569	19.5005				
West Virginia	yes		41.6	19.96	19.81	18.63	2019	41.6042	19.9612	19.8076	18.6269	0.00	0.00	0.00	0.00
Wisconsin	yes	yes	35.81	23.56	23.75	16.88	2020	35.5335	24.1089	23.5648	16.7928	0.28	-0.55	0.19	0.09
Wyoming	yes		36.03	22.48	21.51	19.98	2020	36.0311	22.4847	21.5053	19.9789	0.00	0.00	0.00	0.00

Years used 2019 2020		Modelled estimates, % [¶] (BRFSS respondents who answered ACEs questions)					Swedo et al. [§] (BRFSS respondents who answered ACEs questions)					Difference			
		State	0	1	2 to 3	4+	year	0	1	2 to 3	4+	0	1	2 to 3	4+
yes	yes	Alabama	36.57	23.62	21.77	19.66	2020	36.0245	23.614	21.693	18.6685	0.55	0.01	0.08	0.99
		Alaska					2015	31.9332	22.2344	23.4855	22.3469				
	yes	Arizona	32.71	22.66	25.2	18.41	2020	33.1638	23.2252	24.7545	18.8564	-0.45	-0.57	0.45	-0.45
		Arkansas					2018	36.3825	23.0527	20.9684	19.5964				
	yes	California*	31.46	21.62	30.03	16.61	2020	31.7153	20.8529	28.4535	18.9783	-0.26	0.77	1.58	-2.37
		Colorado					2014	36.9465	24.126	23.7841	15.1433				
		Connecticut					2017	40.242	24.1458	22.6201	12.9922				
yes		Delaware	34.48	23.13	24.83	18.47	2019	33.2011	23.4972	25.3696	17.9322	1.28	-0.37	-0.54	0.54
	yes	DC	27.46	25.59	27.77	15.13	2020	31.0841	26.017	27.7235	15.1754	-3.62	-0.43	0.05	-0.05
yes	yes	Florida	33.67	23.49	20.77	19.4	2020	37.3245	23.379	22.2197	17.0767	-3.65	0.11	-1.45	2.32
	yes	Georgia	36.12	24.84	22.67	17.44	2020	35.3455	24.5519	23.3628	16.7398	0.77	0.29	-0.69	0.70
	yes	Hawaii	34.76	24.39	23.44	15.65	2020	37.2955	23.6106	23.6482	15.4457	-2.54	0.78	-0.21	0.20
	yes	Idaho	34.79	25.4	23	19.02	2020	35.2574	22.7191	22.499	19.5246	-0.47	2.68	0.50	-0.50
		Illinois					2017	41.1603	22.7704	19.7047	16.3646				
yes		Indiana	37.83	24.44	24.25	18.01	2019	34.2459	23.4887	23.2075	19.0579	3.58	0.95	1.04	-1.05
yes	yes	Iowa	39.1	22.63	22.87	16.23	2020	39.3615	22.9243	21.1129	16.6012	-0.26	-0.29	1.76	-0.37
yes	yes	Kansas*	35.02	22.18	20.56	20.72	2020	35.1486	23.5566	22.8654	18.4295	-0.13	-1.38	-2.31	2.29
	yes	Kentucky	39.18	22.47	22.67	19.43	2020	35.9215	21.9787	23.0068	19.093	3.26	0.49	-0.34	0.34
		Louisiana					2016	35.9975	23.0791	23.4317	17.4917				
		Maine					2011	36.9109	22.4922	22.1457	18.4512				
	yes	Maryland*	39.55	23.21	22.14	15.09	2020	38.0815	24.1961	22.6766	15.0458	1.47	-0.99	-0.54	0.04
	yes	Massachusetts*	38.99	24.42	22.36	16.82	2020	38.4966	21.5219	23.7769	16.2046	0.49	2.90	-1.42	0.62
yes		Michigan	26.62	22.48	22.65	21.82	2019	31.6827	23.846	24.7062	19.765	-5.06	-1.37	-2.06	2.06
		Minnesota					2011	41.9941	23.1785	21.606	13.2215				
yes	yes	Mississippi	39.56	24.17	20.1	15.78	2020	40.447	25.7586	19.0749	14.7195	-0.89	-1.59	1.03	1.06
yes	yes	Missouri	32.08	22.78	22.33	20.29	2020	35.1249	23.1609	21.7442	19.97	-3.04	-0.38	0.59	0.32
	yes	Montana	31.38	20.48	23.13	22.99	2020	31.7585	22.1241	23.8161	22.3013	-0.38	-1.64	-0.69	0.69
		Nebraska					2011	43.9968	22.9301	20.6829	12.3902				
	yes	Nevada	30.5	20.3	24.57	24.32	2020	30.1556	20.9587	26.7866	22.0991	0.34	-0.66	-2.22	2.22
		New Hampshire					2016	52.5832	21.9841	17.7845	7.6483				
	yes	New Jersey*	39.57	25.75	24.63	11.02	2020	38.3459	25.5279	24.2611	11.8651	1.22	0.22	0.37	-0.85
yes		New Mexico	35.38	21.95	25.7	19.99	2019	32.0424	22.2689	24.5885	21.1002	3.34	-0.32	1.11	-1.11
yes		New York*	40.16	25.63	22.75	13.72	2019	39.0542	24.4124	23.0507	13.4826	1.11	1.22	-0.30	0.24
		North Carolina					2014	39.7769	24.6951	20.2923	15.2358				
yes	yes	North Dakota	43.42	23	20.4	15.81	2020	40.9324	22.3729	20.2918	16.4029	2.49	0.63	0.11	-0.59
yes		Ohio*	34.92	25.61	27.22	16.64	2019	32.3537	22.8178	26.0628	18.7657	2.57	2.79	1.16	-2.13
yes	yes	Oklahoma*	34.14	22.86	19.71	21.1	2020	38.6384	22.5054	19.3789	19.4773	-4.50	0.35	0.33	1.62
		Oregon					2018	31.4513	22.488	23.3571	22.7035				
yes		Pennsylvania	32.67	21.37	21.29	20.41	2019	35.8735	22.4272	22.8211	18.8782	-3.20	-1.06	-1.53	1.53
yes	yes	Rhode Island	38.62	24.16	20.28	20.6	2020	36.4597	24.1894	23.1004	16.2505	2.16	-0.03	-2.82	4.35
yes	yes	South Carolina	35.13	23.91	21.6	20.08	2020	35.3163	25.1182	21.2013	18.3642	-0.19	-1.21	0.40	1.72
	yes	South Dakota	37.63	22.07	24.27	12.75	2020	39.7255	23.2539	22.2451	14.7755	-2.10	-1.18	2.02	-2.03
yes		Tennessee	30.19	23.02	23.7	21.51	2019	33.1841	21.6086	23.4026	21.8047	-2.99	1.41	0.30	-0.29
	yes	Texas	37.42	22.8	23.13	15.37	2020	37.4769	24.0282	22.3527	16.1423	-0.06	-1.23	0.78	-0.77
	yes	Utah	28.03	20.42	28.64	17.63	2020	32.2058	21.5153	26.0538	20.2251	-4.18	-1.10	2.59	-2.60
		Vermont					2011	40.4066	24.1649	20.8948	14.5337				
yes	yes	Virginia	37.18	23.69	23.7	13.72	2020	38.2995	24.4637	21.4808	15.756	-1.12	-0.77	2.22	-2.04
		Washington					2011	33.1288	22.8017	24.569	19.5005				
yes		West Virginia	41.52	21.2	19.4	19.03	2019	41.6042	19.9612	19.8076	18.6269	-0.08	1.24	-0.41	0.40
yes	yes	Wisconsin	38.16	22.16	24.16	16.47	2020	35.5335	24.1089	23.5648	16.7928	2.63	-1.95	0.60	-0.32
	yes	Wyoming	34.56	24.21	20.96	20.53	2020	36.0311	22.4847	21.5053	19.9789	-1.47	1.73	-0.55	0.55

Years used		Final estimates, % **					Swedo et al. [§]					Difference			
2019	2020	(All BRFSS respondents, including those who answered and skipped ACEs questions)					(All BRFSS respondents, including those who answered and skipped ACEs questions)								
		State	0	1	2 to 3	4+	year	0	1	2 to 3	4+	0	1	2 to 3	4+
yes	yes	Alabama	38.43	20.26	20.25	21.05	2020	36.0245	23.614	21.693	18.6685	2.41	-3.35	-1.44	2.38
		Alaska	41.23	14.47	20.55	23.75	2015	31.9332	22.2344	23.4855	22.3469	9.30	-7.76	-2.94	1.40
	yes	Arizona	35.17	16.45	22.81	25.57	2020	33.1638	23.2252	24.7545	18.8564	2.01	-6.78	-1.94	6.71
		Arkansas	40.42	19.68	18.04	21.86	2018	36.3825	23.0527	20.9684	19.5964	4.04	-3.37	-2.93	2.26
	yes	California*	35.96	12.35	26	25.69	2020	31.7153	20.8529	28.4535	18.9783	4.24	-8.50	-2.45	6.71
		Colorado	30.6	15.87	26.51	27.02	2014	36.9465	24.126	23.7841	15.1433	-6.35	-8.26	2.73	11.88
		Connecticut	45.07	22.07	20.97	11.9	2017	40.242	24.1458	22.6201	12.9922	4.83	-2.08	-1.65	-1.09
	yes	Delaware	39.87	17.74	22.07	20.32	2019	33.2011	23.4972	25.3696	17.9322	6.67	-5.76	-3.30	2.39
	yes	DC	35.46	21.71	24.25	18.59	2020	31.0841	26.017	27.7235	15.1754	4.38	-4.31	-3.47	3.41
	yes	Florida	39.59	20.78	18.74	20.89	2020	37.3245	23.379	22.2197	17.0767	2.27	-2.60	-3.48	3.81
	yes	Georgia	38.4	20.05	20.43	21.12	2020	35.3455	24.5519	23.3628	16.7398	3.05	-4.50	-2.93	4.38
	yes	Hawaii	39.36	20.76	20.84	19.04	2020	37.2955	23.6106	23.6482	15.4457	2.06	-2.85	-2.81	3.59
	yes	Idaho	34.63	19.64	20.92	24.8	2020	35.2574	22.7191	22.499	19.5246	-0.63	-3.08	-1.58	5.28
		Illinois	28.78	28.29	23.39	19.54	2017	41.1603	22.7704	19.7047	16.3646	-12.38	5.52	3.69	3.18
	yes	Indiana	38.56	17.48	21.09	22.87	2019	34.2459	23.4887	23.2075	19.0579	4.31	-6.01	-2.12	3.81
	yes	Iowa	40.43	20.88	20.85	17.84	2020	39.3615	22.9243	21.1129	16.6012	1.07	-2.04	-0.26	1.24
	yes	Kansas*	35.64	16.31	22.16	25.89	2020	35.1486	23.5566	22.8654	18.4295	0.49	-7.25	-0.71	7.46
	yes	Kentucky	39.23	12.42	20.47	27.88	2020	35.9215	21.9787	23.0068	19.093	3.31	-9.56	-2.54	8.79
		Louisiana	39.86	19.64	18.98	21.52	2016	35.9975	23.0791	23.4317	17.4917	3.86	-3.44	-4.45	4.03
		Maine	27.55	18.22	24.98	29.25	2011	36.9109	22.4922	22.1457	18.4512	-9.36	-4.27	2.83	10.80
	yes	Maryland*	42.04	15.09	19.68	23.19	2020	38.0815	24.1961	22.6766	15.0458	3.96	-9.11	-3.00	8.14
	yes	Massachusetts*	41.04	15.57	20.43	22.95	2020	38.4966	21.5219	23.7769	16.2046	2.54	-5.95	-3.35	6.75
	yes	Michigan	31.88	21.46	21.92	24.75	2019	31.6827	23.846	24.7062	19.765	0.20	-2.39	-2.79	4.99
		Minnesota	40.91	24.52	17.15	17.42	2011	41.9941	23.1785	21.606	13.2215	-1.08	1.34	-4.46	4.20
	yes	Mississippi	40.81	22.4	19.73	17.06	2020	40.447	25.7586	19.0749	14.7195	0.36	-3.36	0.66	2.34
	yes	Missouri	34.77	21.44	21.5	22.29	2020	35.1249	23.1609	21.7442	19.97	-0.35	-1.72	-0.24	2.32
	yes	Montana	31.99	16.5	24.47	27.04	2020	31.7585	22.1241	23.8161	22.3013	0.23	-5.62	0.65	4.74
		Nebraska	37.26	20.81	23.69	18.25	2011	43.9968	22.9301	20.6829	12.3902	-6.74	-2.12	3.01	5.86
	yes	Nevada	31.91	13.47	21.81	32.81	2020	30.1556	20.9587	26.7866	22.0991	1.75	-7.49	-4.98	10.71
		New Hampshire	38.67	17.81	21.71	21.81	2016	52.5832	21.9841	17.7845	7.6483	-13.91	-4.17	3.93	14.16
	yes	New Jersey*	43.32	19.32	22.1	15.26	2020	38.3459	25.5279	24.2611	11.8651	4.97	-6.21	-2.16	3.39
	yes	New Mexico	33.86	15.01	24.78	26.36	2019	32.0424	22.2689	24.5885	21.1002	1.82	-7.26	0.19	5.26
	yes	New York*	43.67	18.12	18.93	19.28	2019	39.0542	24.4124	23.0507	13.4826	4.62	-6.29	-4.12	5.80
		North Carolina	36.78	18.29	23.5	21.44	2014	39.7769	24.6951	20.2923	15.2358	-3.00	-6.41	3.21	6.20
	yes	North Dakota	41.35	21.25	19.72	17.68	2020	40.9324	22.3729	20.2918	16.4029	0.42	-1.12	-0.57	1.28
	yes	Ohio*	37.46	17.62	22.47	22.45	2019	32.3537	22.8178	26.0628	18.7657	5.11	-5.20	-3.59	3.68
	yes	Oklahoma*	38.06	16.81	17.95	27.18	2020	38.6384	22.5054	19.3789	19.4773	-0.58	-5.70	-1.43	7.70
		Oregon	28.3	19.48	26.28	25.95	2018	31.4513	22.488	23.3571	22.7035	-3.15	-3.01	2.92	3.25
	yes	Pennsylvania	38.02	18.89	20.35	22.74	2019	35.8735	22.4272	22.8211	18.8782	2.15	-3.54	-2.47	3.86
	yes	Rhode Island	39.47	23.78	19.81	16.94	2020	36.4597	24.1894	23.1004	16.2505	3.01	-0.41	-3.29	0.69
	yes	South Carolina	35.43	22.42	20.62	21.53	2020	35.3163	25.1182	21.2013	18.3642	0.11	-2.70	-0.58	3.17
	yes	South Dakota	38.03	17.36	28.27	16.34	2020	39.7255	23.2539	22.2451	14.7755	-1.70	-5.89	6.02	1.56
	yes	Tennessee	34.75	17.79	19.93	27.53	2019	33.1841	21.6086	23.4026	21.8047	1.57	-3.82	-3.47	5.73
	yes	Texas	37.3	16.64	23.75	22.31	2020	37.4769	24.0282	22.3527	16.1423	-0.18	-7.39	1.40	6.17
	yes	Utah	30.09	15.75	29.54	24.62	2020	32.2058	21.5153	26.0538	20.2251	-2.12	-5.77	3.49	4.39
		Vermont	34.14	19.97	22.89	23	2011	40.4066	24.1649	20.8948	14.5337	-6.27	-4.19	2.00	8.47
	yes	Virginia	39.52	22.7	20.98	16.8	2020	38.2995	24.4637	21.4808	15.756	1.22	-1.76	-0.50	1.04
		Washington	27.66	19.46	27.5	25.38	2011	33.1288	22.8017	24.569	19.5005	-5.47	-3.34	2.93	5.88
	yes	West Virginia	42.06	14.68	18.3	24.96	2019	41.6042	19.9612	19.8076	18.6269	0.46	-5.28	-1.51	6.33
	yes	Wisconsin	38.1	21.25	21.13	19.52	2020	35.5335	24.1089	23.5648	16.7928	2.57	-2.86	-2.43	2.73
	yes	Wyoming	34.37	18.84	20.95	25.84	2020	36.0311	22.4847	21.5053	19.9789	-1.66	-3.64	-0.56	5.86

*ACEs module was included in one of BRFSS splits (supplementary table STable1) and, thus, offered only to a fraction of BRFSS respondents

† Based on the BRFSS respondents who in 2019-2020 received and answered ACEs questions.

§ Source: Swedo EA, Aslam MV, Dahlberg LL, Niolon PH, Guinn AS, Simon TR, et al. National and State Prevalence of Adverse Childhood Experiences (ACEs) Among U.S. Adults. In development. 2022.

¶ Estimates obtained by using predictive small area estimation (SAE) models. Predicted estimates are only reported for those BRFSS respondents who in 2019-2020 received and answered ACEs questions. These estimates - when compared to the direct estimates - demonstrate the predictive performance of SAE models.

** For those BRFSS respondents who actually answered the question, we reported the direct BRFSS estimates. For those respondents who did not receive or skipped the question, we reported predicted estimates.