

## COVID-19 Alabama County by County Hospital Bed Demand versus Supply

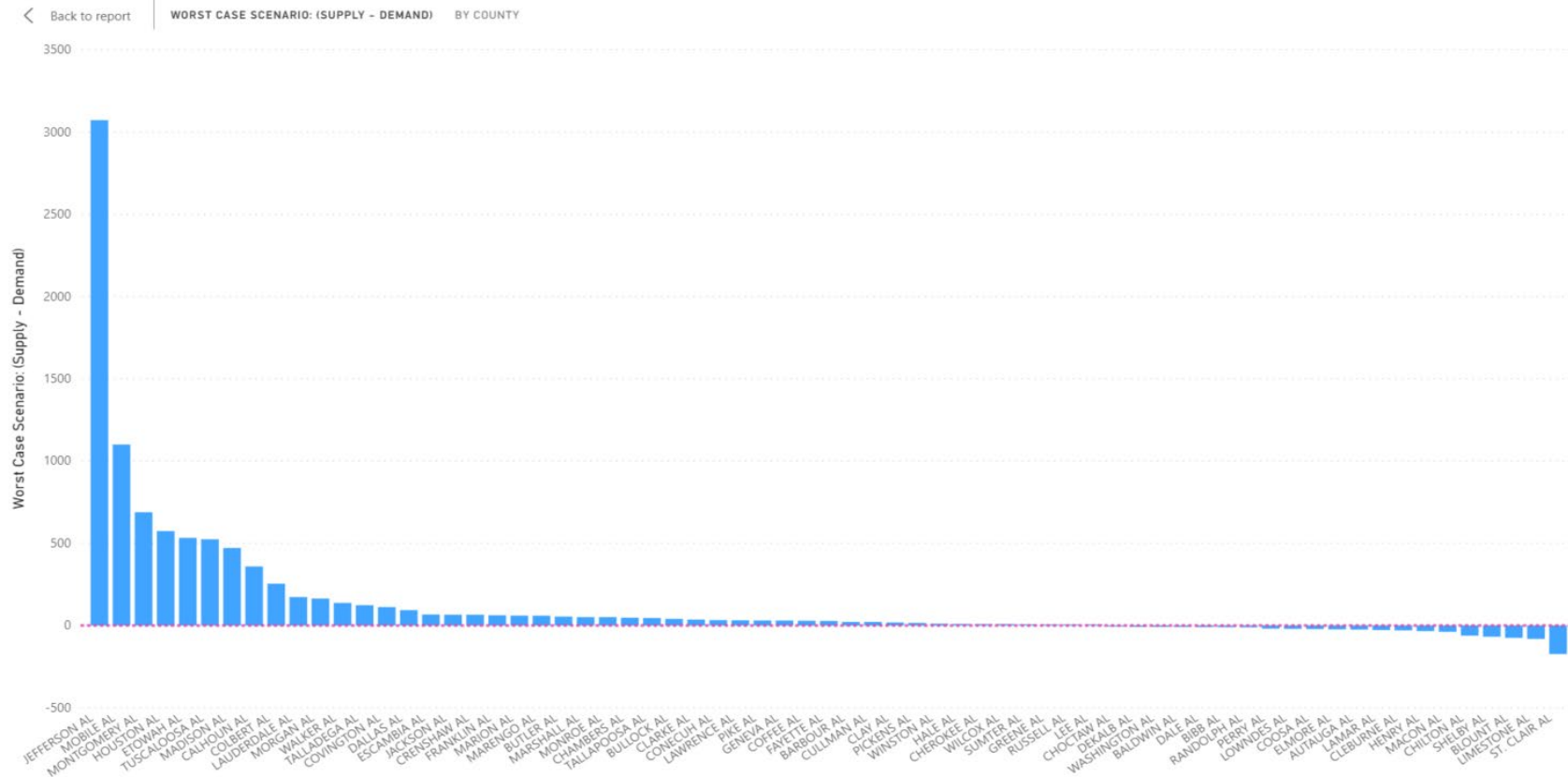


Fig 1: The above figure shows Supply minus Demand at peak using the Imperial-College-COVID19-NPI-modelling-16-03-2020 and the exponential regression model in the article published. All appearing above the red dashed line have capacity even at peak. All Counties that at or falling below the red line are will not be able to meet demand. In this scenario, peak will hit mid-May. Planning for servicing counties that either do not have hospitals or overburdened systems should be made. Some Counties will have capacity to redirect to needed areas.

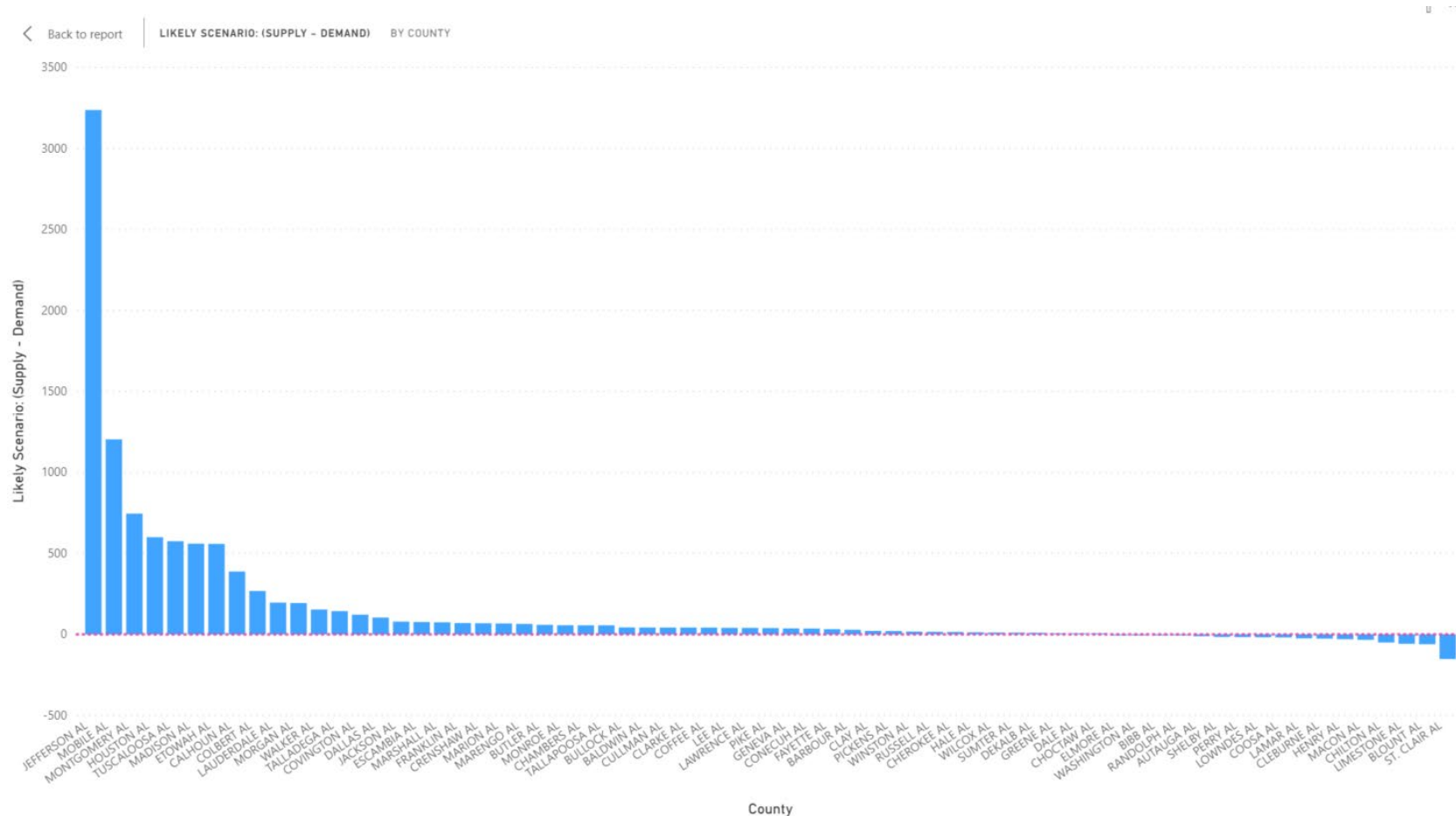


Fig 2: In the more likely scenario where some precautions are taken to flatten the curve, data suggests some Counties will still be unable to meet the needed demand. The peak will hit in early June. Planning for servicing counties that either do not have hospitals or overburdened systems should be made. Some Counties will have capacity to redirect to needed areas.

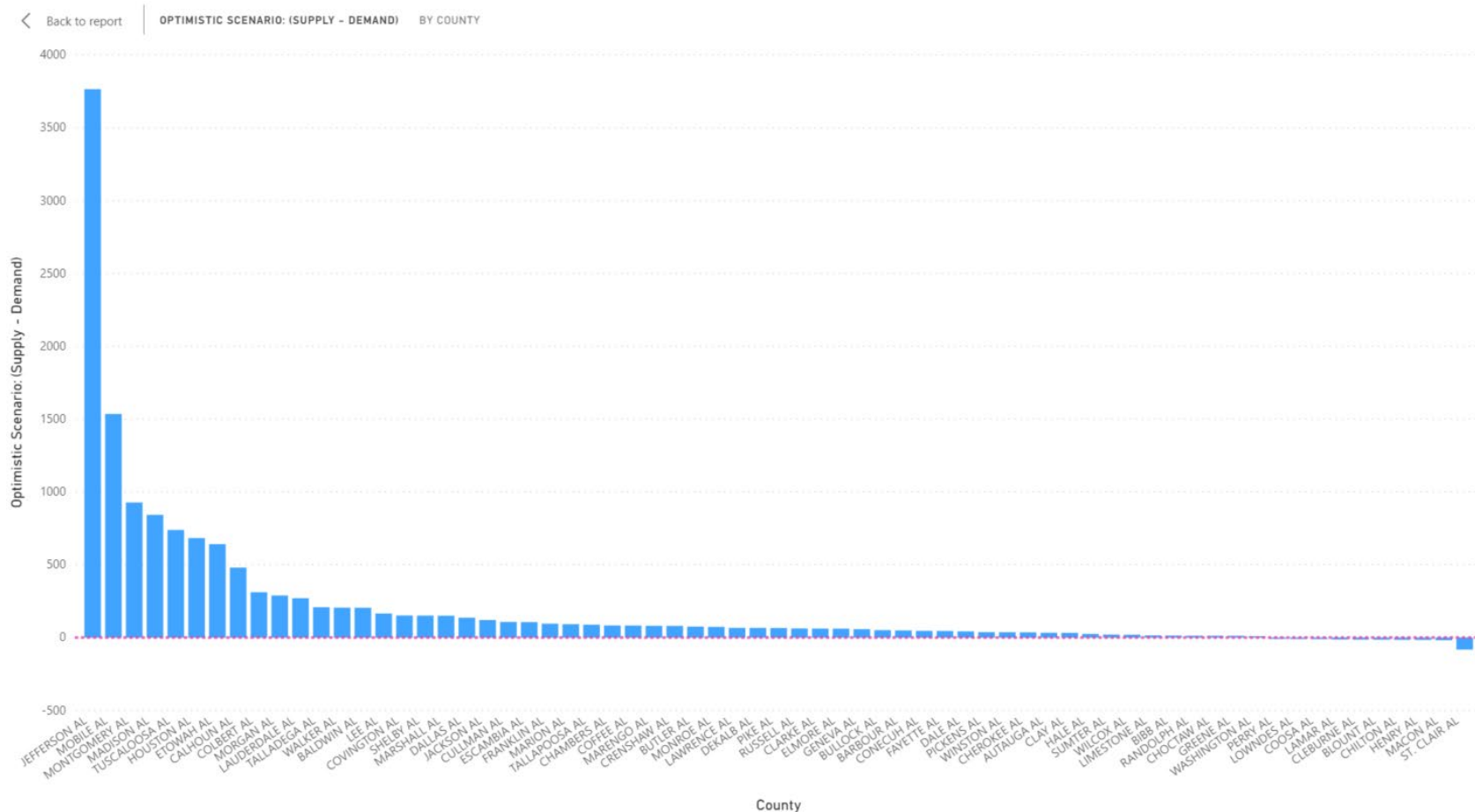


Fig 3: In the scenario where all precautions are taken to flatten the curve, data suggests almost all Counties will be able to meet the needed demand. The peak will hit in June. Planning for servicing counties that either do not have hospitals or overburdened systems should be made. Several Counties will have capacity to redirect to needed areas.

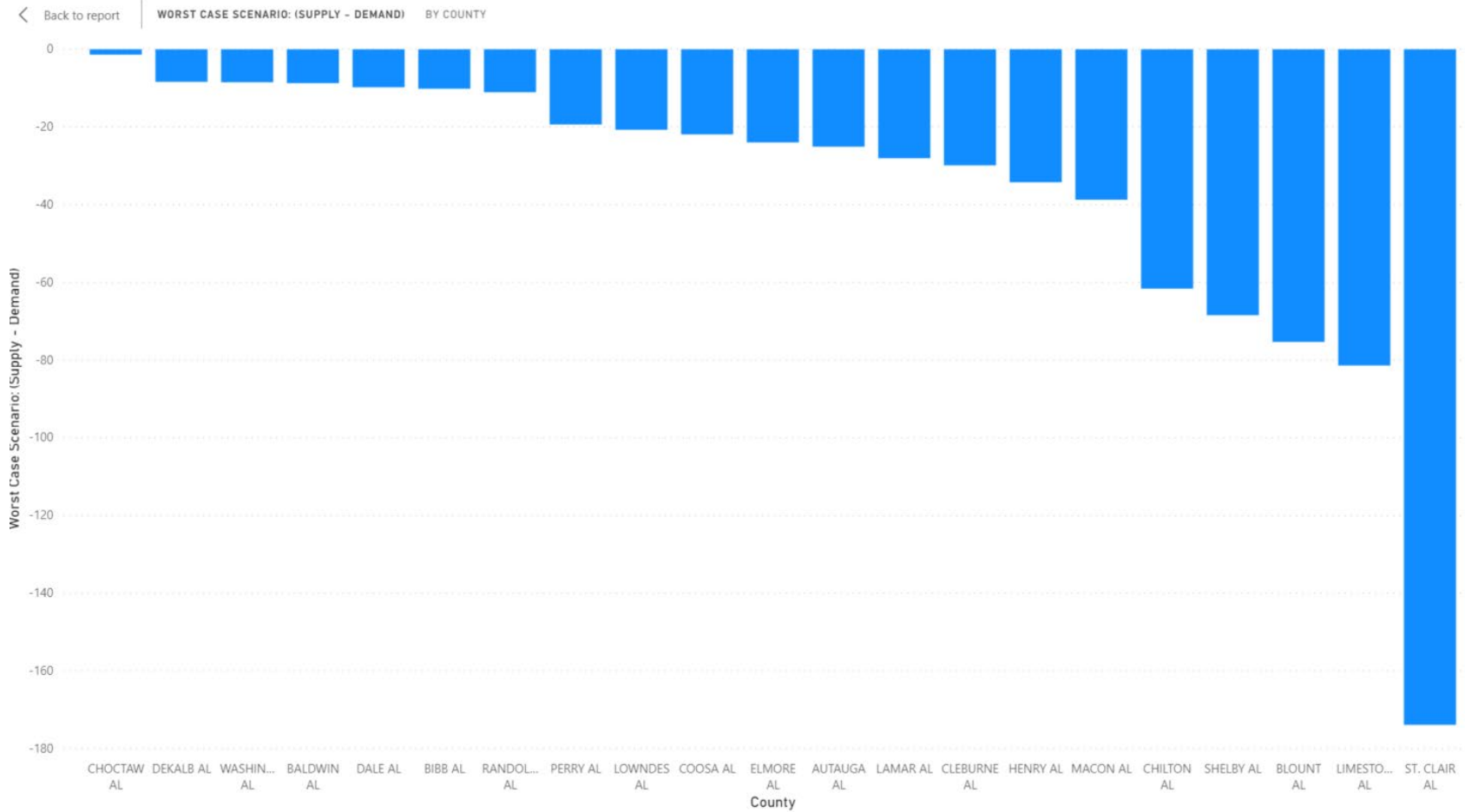


Fig 4: The figure above represents Counties that will run out of beds at peak for the Worst-Case scenario

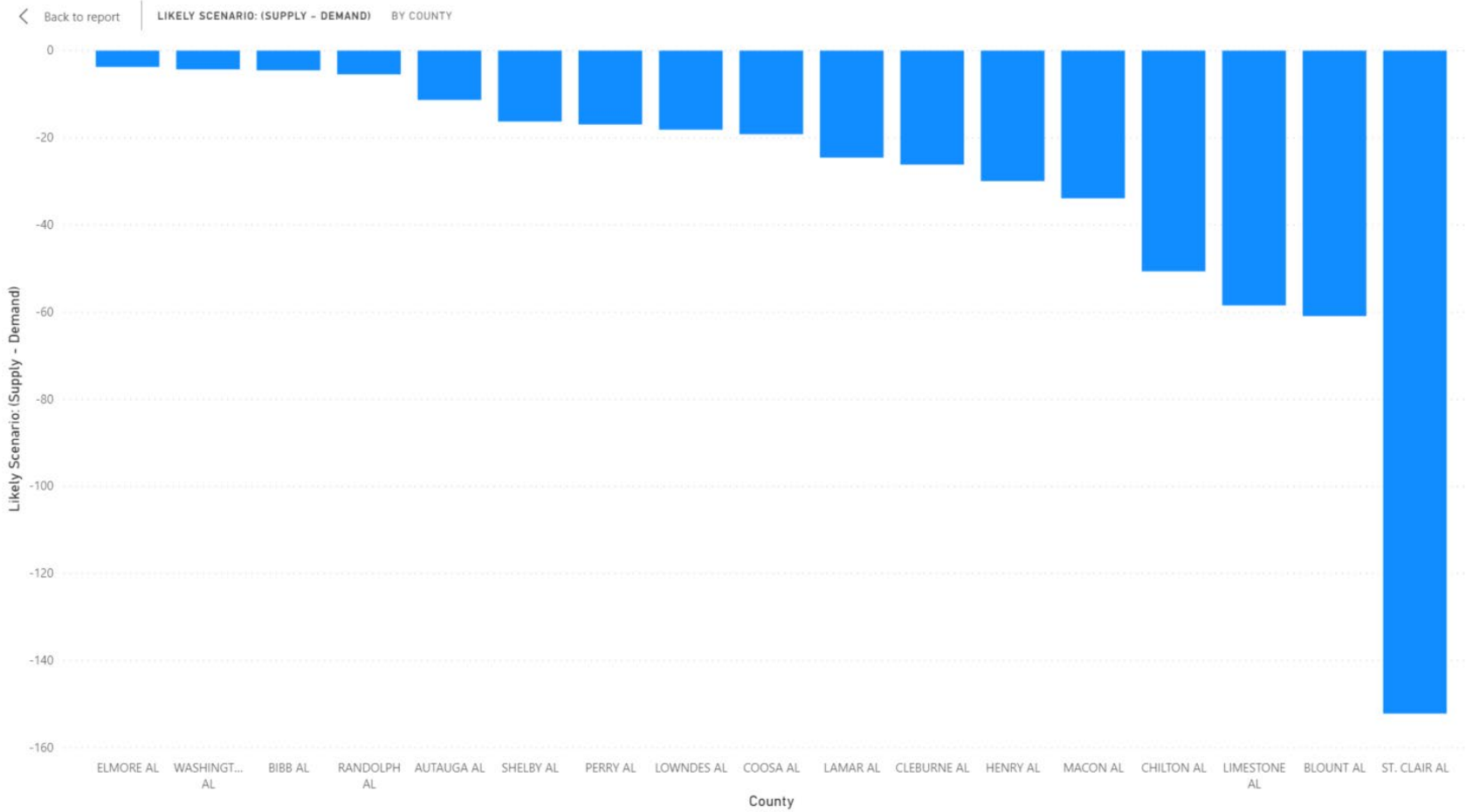


Fig 5: The figure above represents Counties that will run out of beds at peak for the Likely scenario

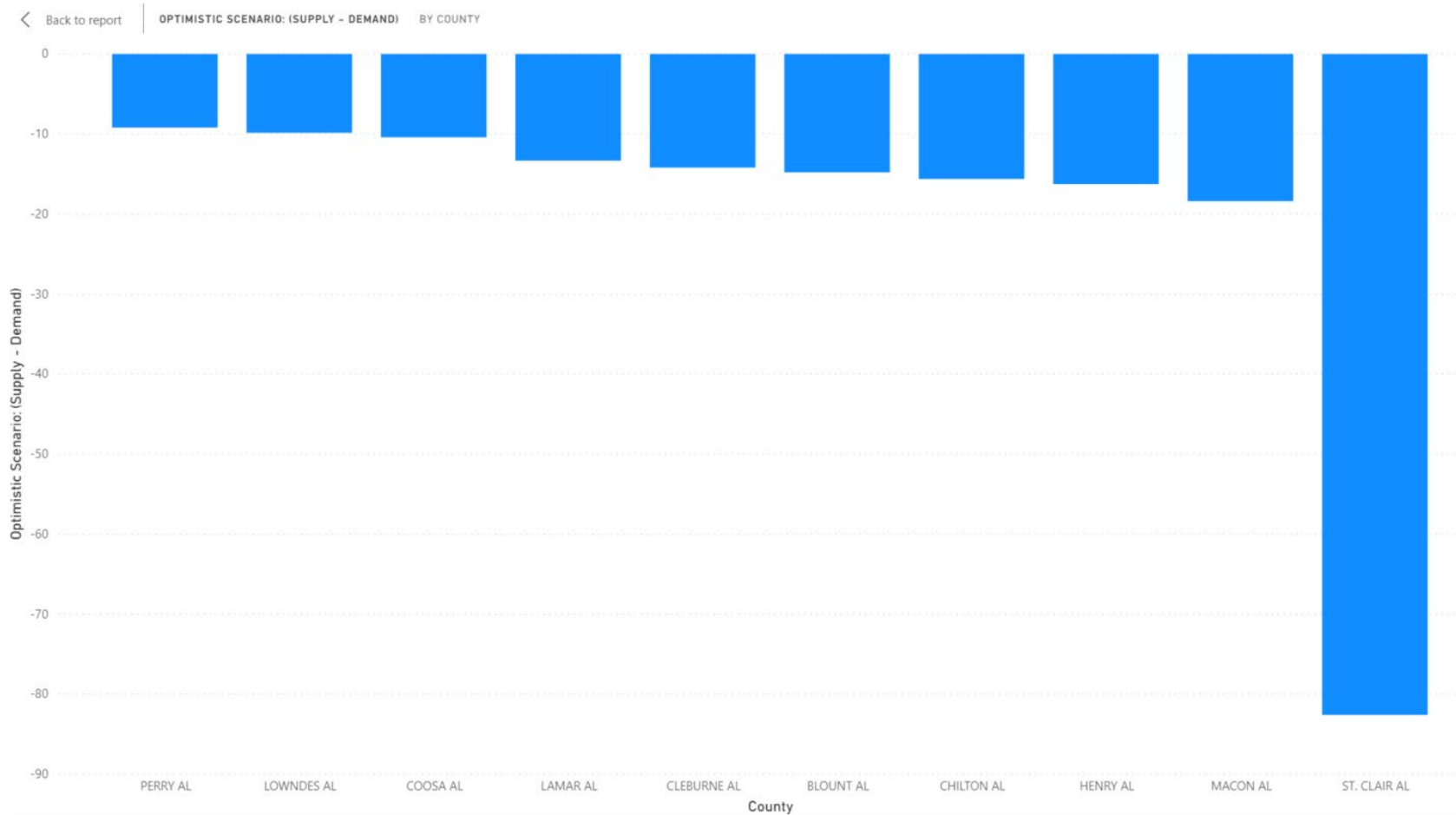


Fig 6: The figure above represents Counties that will run out of beds at peak for the Optimistic scenario

With Full Precautions - Optimistic Scenario of needed Demand for Hospital Beds      With Some Precautions - Likely Scenario of needed Demand for Hospital Beds      With No Precautions - Worst Case Scenario of needed Demand for Hospital Beds

County	State	Total Population	65+ Population	Beds	With Full Precautions - Optimistic Scenario of needed Demand for Hospital Beds								With Some Precautions - Likely Scenario of needed Demand for Hospital Beds								With No Precautions - Worst Case Scenario of needed Demand for Hospital Beds								Counties to run out of beds (all precautions - Optimistic)	Counties to run out of beds (some precautions - Likely)	Counties to run out of beds (no precautions - Worstcase)
					O-Apr	O-May	O-June	O-Mid-June	O-July	O-August	L-Apr	L-May	L-June	L-July	L-August	W-April	W-May	Mid-May	W-June	W-July	W-August										
AUTAUGA AL	AL	55036	9678	85	6	6	50	52	28	6	6	28	96	28	6	6	55	151	110	8	6			x		x					
BALDWIN AL	AL	203360	49647	398	20	20	183	193	102	20	20	102	356	102	20	20	203	559	407	31	20					x					
BARBOUR AL	AL	26201	5730	74	3	3	24	25	13	3	3	13	46	13	3	3	26	72	52	4	3										
BIBB AL	AL	22580	4458	35	2	2	20	21	11	2	2	11	40	11	2	2	23	62	45	3	2			x		x					
BLOUNT AL	AL	57667	12728	40	6	6	52	55	29	6	6	29	101	29	6	6	58	159	115	9	6	x		x		x					
BULLOCK AL	AL	10478	2227	61	1	1	9	10	5	1	1	5	18	5	1	1	10	29	21	2	1										
BUTLER AL	AL	20126	4637	94	2	2	18	19	10	2	2	10	35	10	2	2	20	55	40	3	2										
CALHOUN AL	AL	115527	25075	590	12	12	104	110	58	12	12	58	202	58	12	12	116	318	231	17	12										
CHAMBERS AL	AL	33895	7682	115	3	3	31	32	17	3	3	17	59	17	3	3	34	93	68	5	3										
CHEROKEE AL	AL	25855	7080	60	3	3	23	25	13	3	3	13	45	13	3	3	26	71	52	4	3					x					
CHILTON AL	AL	43805	8791	26	4	4	39	42	22	4	4	22	77	22	4	4	44	120	88	7	4	x		x		x					
CHOCTAW AL	AL	13188	3525	25	1	1	12	13	7	1	1	7	23	7	1	1	13	36	26	2	1					x					
CLARKE AL	AL	24625	5537	85	2	2	22	23	12	2	2	12	43	12	2	2	25	68	49	4	2										
CLAY AL	AL	13407	3224	45	1	1	12	13	7	1	1	7	23	7	1	1	13	37	27	2	1										
CLEBURNE AL	AL	14939	3248	0	1	1	13	14	7	1	1	7	26	7	1	1	15	41	30	2	1	x		x		x					
COFFEE AL	AL	51073	10173	131	5	5	46	49	26	5	5	26	89	26	5	5	51	140	102	8	5					x					
COLBERT AL	AL	54435	12929	363	5	5	49	52	27	5	5	27	95	27	5	5	54	150	109	8	5										
CONECUH AL	AL	12649	3190	58	1	1	11	12	6	1	1	6	22	6	1	1	13	35	25	2	1										
COOSA AL	AL	10955	2901	0	1	1	10	10	5	1	1	5	19	5	1	1	11	30	22	2	1	x		x		x					
COVINGTON AL	AL	37519	9446	187	4	4	34	36	19	4	4	19	66	19	4	4	38	103	75	6	4										
CRENSHAW AL	AL	13866	3084	93	1	1	12	13	7	1	1	7	24	7	1	1	14	38	28	2	1										
CULLMAN AL	AL	81703	18450	185	8	8	74	78	41	8	8	41	143	41	8	8	82	225	163	12	8					x					
DALE AL	AL	49393	9698	89	5	5	44	47	25	5	5	25	86	25	5	5	49	136	99	7	5					x					
DALLAS AL	AL	40755	8803	175	4	4	37	39	20	4	4	20	71	20	4	4	41	112	82	6	4										
DEKALB AL	AL	71194	14862	134	7	7	64	68	36	7	7	36	125	36	7	7	71	196	142	11	7					x					
ELMORE AL	AL	80989	14821	138	8	8	73	77	40	8	8	40	142	40	8	8	81	223	162	12	8			x		x					
ESCAMBIA AL	AL	37621	7975	142	4	4	34	36	19	4	4	19	66	19	4	4	38	103	75	6	4										
ETOWAH AL	AL	103132	23225	739	10	10	93	98	52	10	10	52	180	52	10	10	103	284	206	15	10										
FAYETTE AL	AL	16657	4204	61	2	2	15	16	8	2	2	8	29	8	2	2	17	46	33	2	2										
FRANKLIN AL	AL	31507	6596	125	3	3	28	30	16	3	3	16	55	16	3	3	32	87	63	5	3										
GENEVA AL	AL	26572	6274	83	3	3	24	25	13	3	3	13	47	13	3	3	27	73	53	4	3										
GREENE AL	AL	8533	2110	20	1	1	8	8	4	1	1	4	15	4	1	1	9	23	17	1	1					x					
HALE AL	AL	14995	3623	39	1	1	13	14	7	1	1	7	26	7	1	1	15	41	30	2	1					x					
HENRY AL	AL	17110	4400	0	2	2	15	16	9	2	2	9	30	9	2	2	17	47	34	3	2	x		x		x					
HOUSTON AL	AL	104108	21533	782	10	10	94	99	52	10	10	52	182	52	10	10	104	286	208	16	10										
JACKSON AL	AL	52326	12541	170	5	5	47	50	26	5	5	26	92	26	5	5	52	144	105	8	5										
JEFFERSON AL	AL	659460	125570	4392	66	66	594	626	330	66	66	330	1154	330	66	66	659	1814	1319	99	66										
LAMAR AL	AL	14021	3510	0	1	1	13	13	7	1	1	7	25	7	1	1	14	39	28	2	1	x		x		x					
LAUDERDALE AL	AL	92590	21370	358	9	9	83	88	46	9	9	46	162	46	9	9	93	255	185	14	9										
LAWRENCE AL	AL	33288	7221	98	3	3	30	32	17	3	3	17	58	17	3	3	33	92	67	5	3										
LEE AL	AL	156597	23100	314	16	16	141	149	78	16	16	78	274	78	16	16	157	431	313	23	16					x					
LIMESTONE AL	AL	91695	17153	102	9	9	83	87	46	9	9	46	160	46	9	9	92	252	183	14	9			x		x					
LOWNDES AL	AL	10362	2305	0	1	1	9	10	5	1	1	5	18	5	1	1	10	28	21	2	1	x		x		x					
MACON AL	AL	19358	4419	0	2	2	17	18	10	2	2	10	34	10	2	2	19	53	39	3	2	x		x		x					
MADISON AL	AL	353213	64562	1178	35	35	318	336	177	35	35	177	618	177	35	35	353	971	706	53	35										
MARENGO AL	AL	19743	4846	99	2	2	18	19	10	2	2	10	35	10	2	2	20	54	39	3	2										
MARION AL	AL	30058	7375	120	3	3	27	29	15	3	3	15	53	15	3	3	30	83	60	5	3										
MARSHALL AL	AL	94738	19896	240	9	9	85	90	47	9	9	47	166	47	9	9	95	261	189	14	9					x					
MOBILE AL	AL	414328	80800	1929	41	41	373	394	207	41	41	207	725	207	41	41	414	1139	829	62	41										
MONROE AL	AL	21745	5094	94	2	2	20	21	11	2	2	11	38	11	2	2	22	60	43	3	2										
MONTGOMERY AL	AL	227120	40601	1143	23	23	204	216	114	23	23	114	397	114	23	23	227	625	454	34	23										
MORGAN AL	AL	119157	24445	402	12	12	107	113	60	12	12	60	209	60	12	12	119	328	238	18	12										
PERRY AL	AL	9680	2030	0	1	1	9	9	5	1	1	5	17	5	1	1	10	27	19	1	1	x		x		x					
PICKENS AL	AL	20170	4466	56	2	2	18	19	10	2	2	10	35	10	2	2	20	55	40	3	2										
PIKE AL	AL	33287	6021	97	3	3	30	32	17	3	3	17	58	17	3	3	33	92	67	5	3										
RANDOLPH AL	AL	22530	5679	34	2	2	20	21	11	2	2	11	39	11	2	2	23	62	45	3	2			x		x					
RUSSELL AL	AL	58480	9908	118	6	6	53	56	29	6	6	29	102	29	6	6	58	161	117	9	6					x					
ST. CLAIR AL	AL	86937	17807	0	9	9	78	83	43	9	9	43	152	43	9	9	87	239	174	13	9	x		x		x					
SHELBY AL	AL	208721	39112	349	21	21	188	198	104	21	21	104	365	104	21	21	209	574	417	31	21					x					
SUMTER AL	AL	13084	2732	33	1	1	12	12	7	1	1	7	23	7	1	1	13	36	26	2	1					x					
TALLADEGA AL	AL	80888	17458	285	8	8	73	77	40	8	8	40	142	40	8	8	81	222	162	12	8										
TALLAPOOSA AL	AL	40756	10172	127	4	4	37	39	20	4	4	20	71	20	4	4	41	112	82	6	4										
TUSCALOOSA AL	AL	204424	33220	933	20	20	184	194	102	20	20	102	358	102	20	20	204	562	409	31	20										
WALKER AL	AL	64927	15181	267	6	6	58	62	32	6	6	32	114	32	6	6	65	179	130	10	6										
WASHINGTON AL	AL	16746	3929	25	2	2	15	16	8	2	2	8	29	8	2	2	17	46	33	3	2			x		x					
WILCOX AL	AL	10919	2509	30	1	1	10	10	5	1	1																				