

COVID-19 Iowa County by County Hospital Bed Demand versus Supply

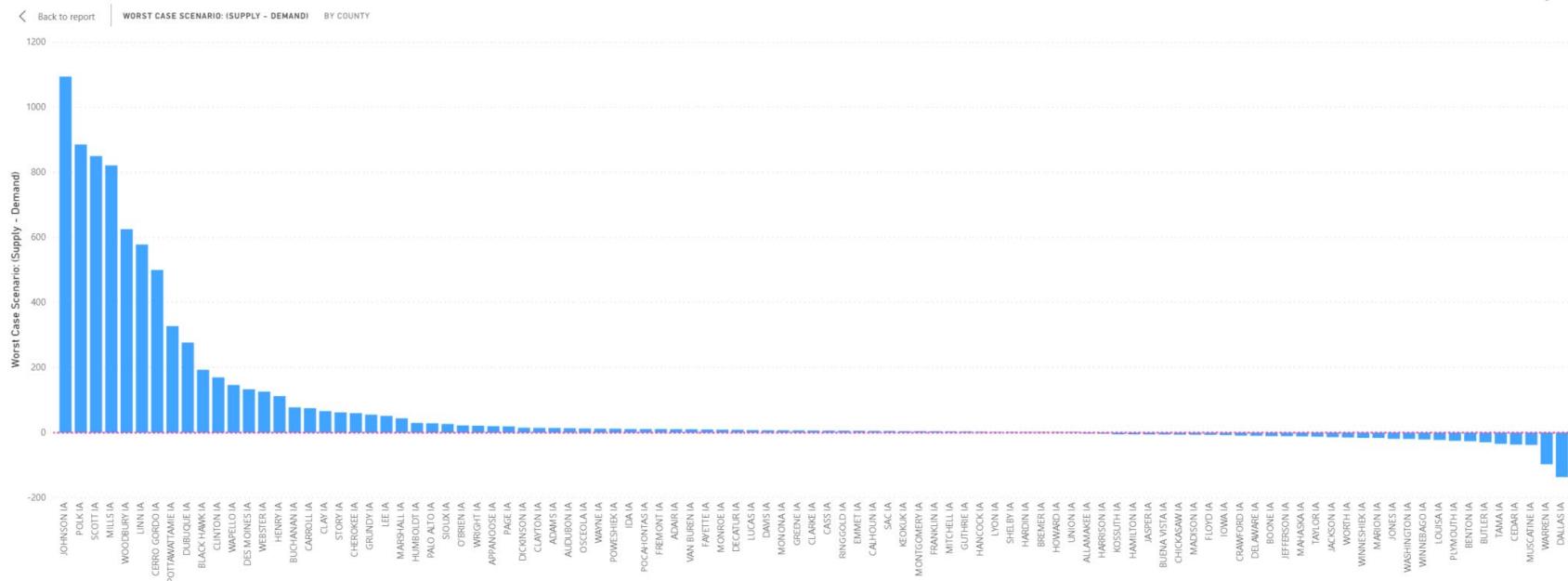


Fig 1: The above figure shows Supply minus Demand at peak using the Imperial-College-COVID19-NPI-modelling-16-03-2020 and the exponential regression model in the article published. All appearing above the red dashed line have capacity even at peak. All Counties that at or falling below the red line are 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.

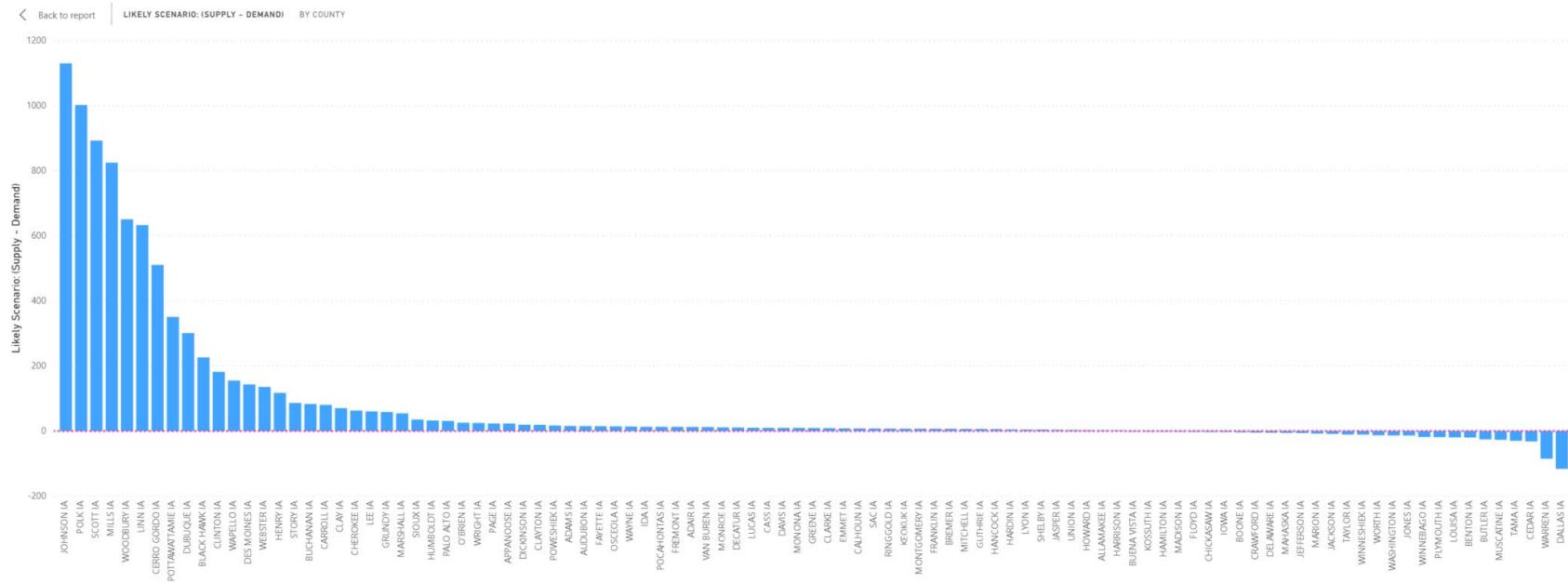


Fig 2: In the more likely scenario where some precautions are taken to flatten the curve, data suggests some Counties will still be unable to meet the needed demand. The peak will hit in early June. Planning for servicing counties that either do not have hospitals or overburdened systems should be made.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

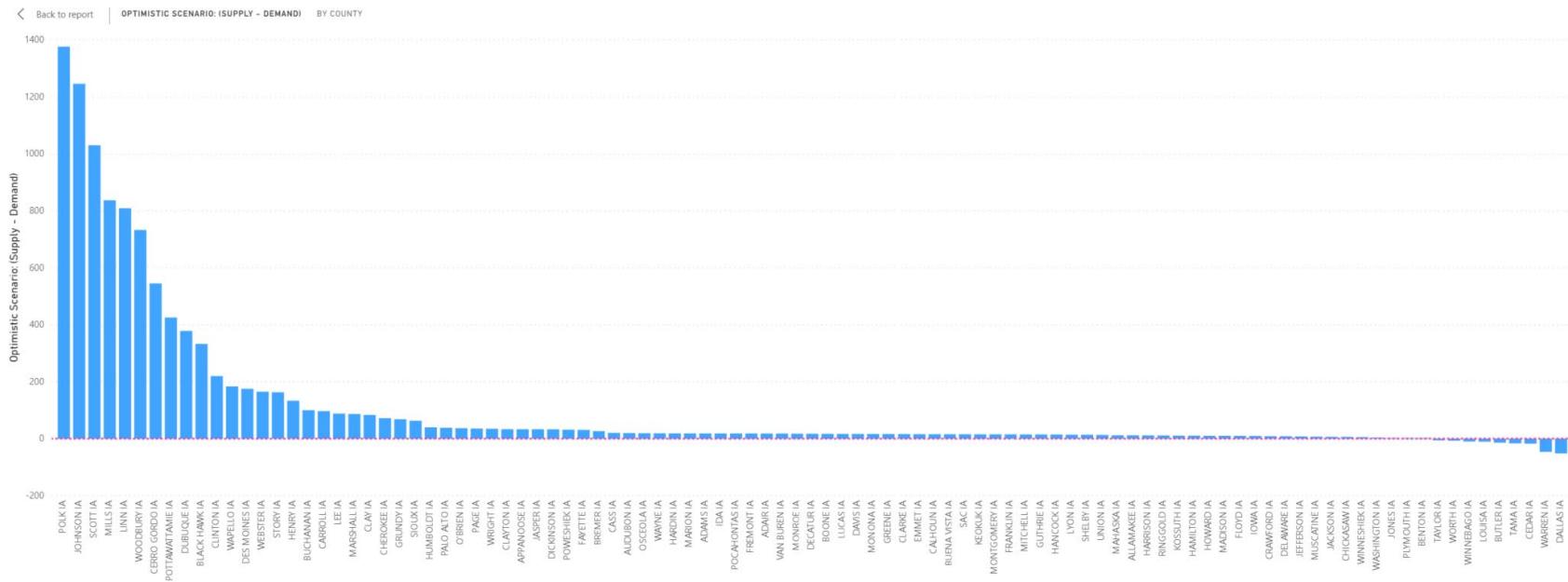


Fig 3: In the scenario where all precautions are taken to flatten the curve, data suggests almost all Counties will be able to meet the needed demand. The peak will hit in June. Planning for servicing counties that either do not have hospitals or overburdened systems should be made. Several Counties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

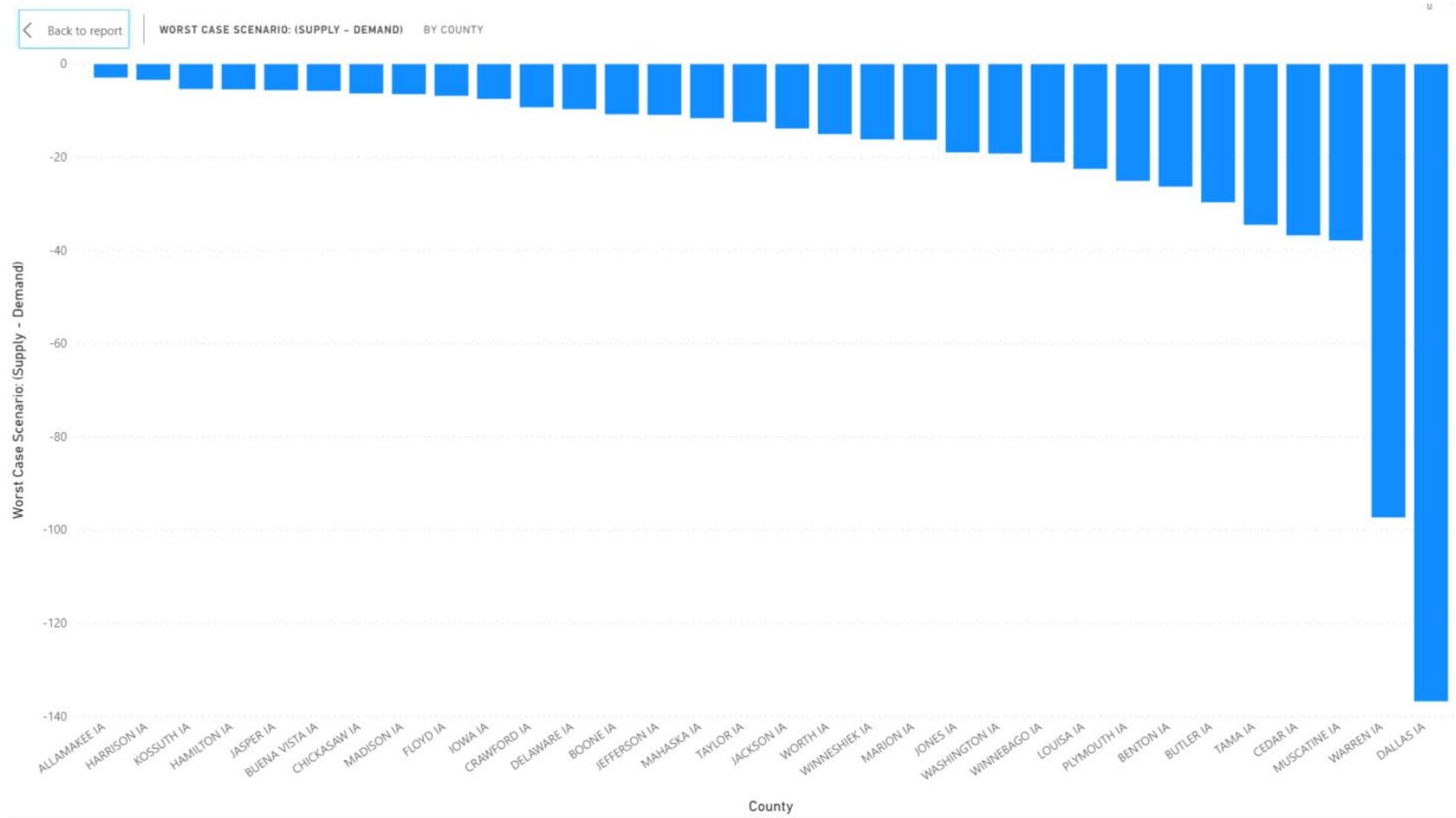


Fig 4: The figure above represents Counties that will run out of beds at peak for the Worst-Case scenario

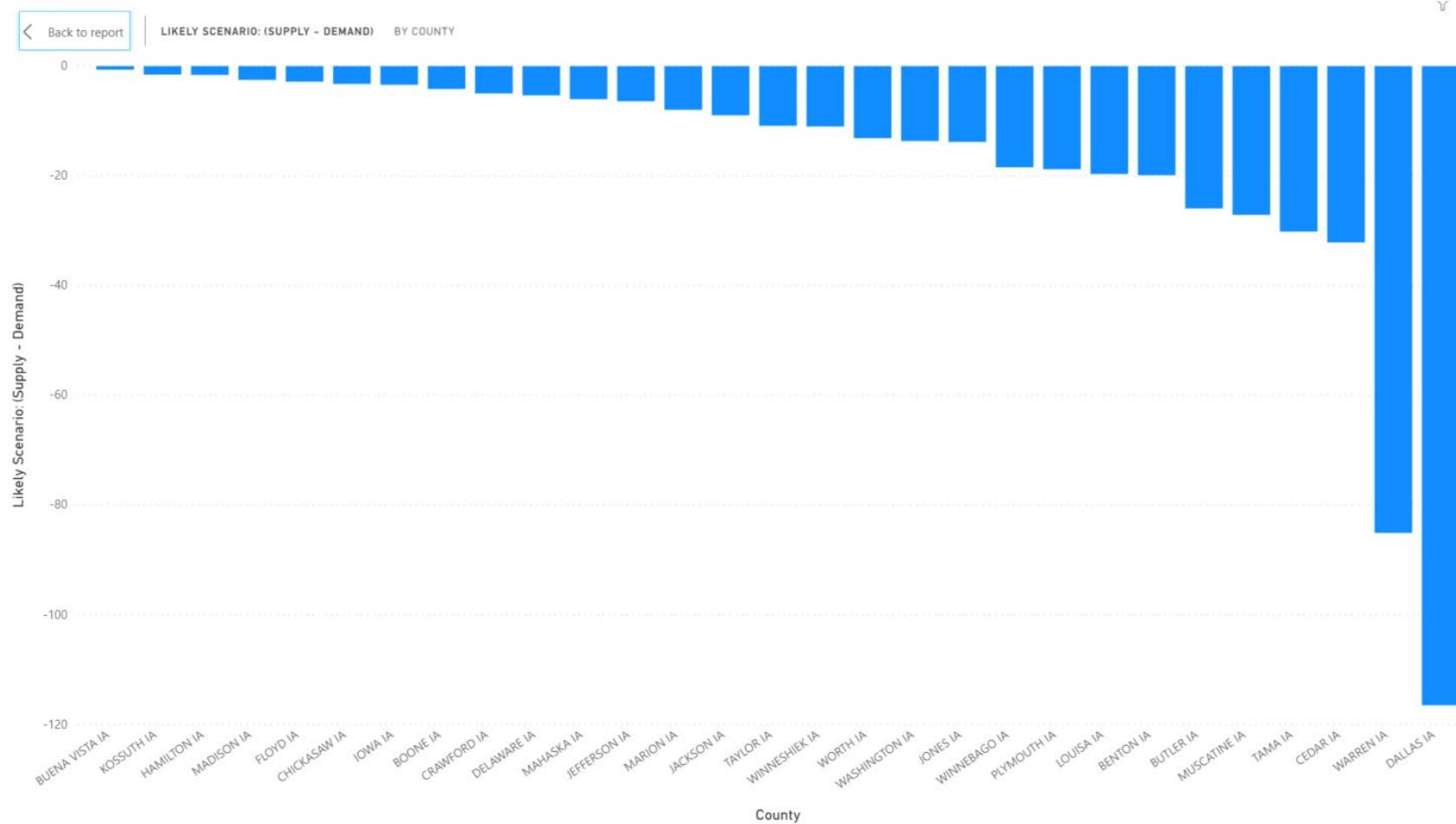


Fig 5: The figure above represents Counties that will run out of beds at peak for the Likely scenario

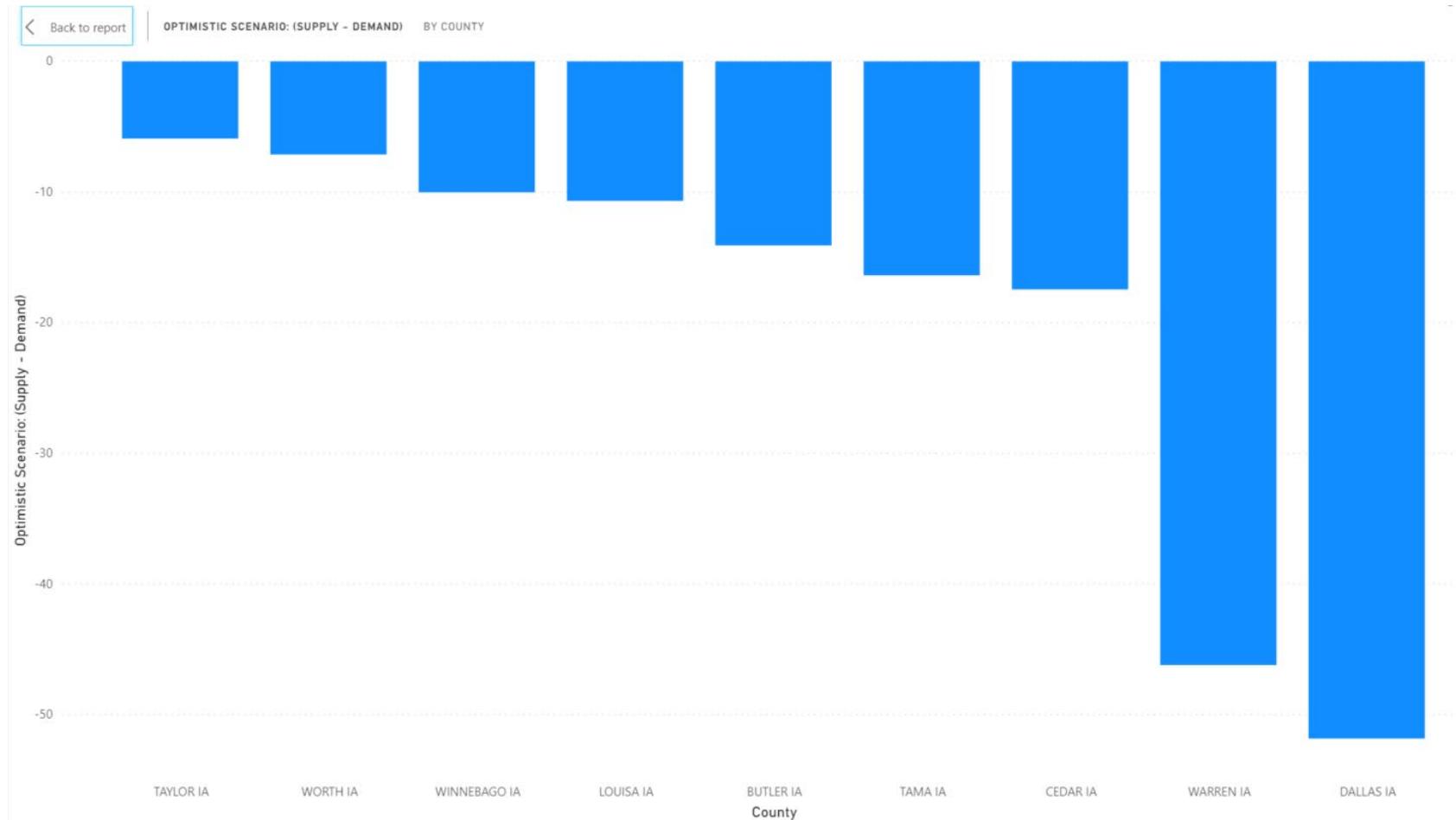


Fig 6: The figure above represents Counties that will run out of beds or do not have a hospital at peak for the Optimistic scenario

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												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-April	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	O-April	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						
IA	7793	1084	25	1	3	6	7	4	1	4	13	1	1	1	7	20	14	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
IA	3785	1001	22	0	0	3	4	2	0	0	2	7	2	0	0	4	10	8	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
IA	13940	3582	25	1	1	13	13	7	1	1	7	24	7	1	1	14	38	28	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
IA	12547	3354	45	1	1	11	12	6	1	1	6	22	6	1	1	13	35	25	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
IA	6771	1524	25	1	4	6	5	3	1	1	10	20	5	1	1	6	16	15	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
IA	25040	5263	25	9	2	23	24	13	3	2	13	13	13	1	1	2	26	71	11	4	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
IA	132960	25270	459	13	13	120	126	66	13	13	66	233	66	13	13	133	366	266	20	13	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
IA	26381	5715	42	3	3	24	25	13	3	3	13	46	13	3	3	26	73	53	4	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
IA	24741	5497	50	2	2	22	24	12	2	2	12	43	12	2	2	25	68	49	4	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
IA	21301	4254	120	2	19	20	11	7	2	11	37	11	2	2	21	58	47	5	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
IA	20500	2548	25	1	1	14	15	10	3	3	10	30	10	2	2	10	50	43	5	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
IA	14822	3851	0	1	1	13	14	7	1	1	7	26	7	1	1	15	41	30	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
IA	9814	2586	25	1	1	9	9	5	1	1	5	24	10	5	1	3	10	27	20	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
IA	20428	4414	116	2	2	18	19	10	2	2	10	36	10	2	2	20	56	41	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
IA	18368	4441	0	2	2	17	17	9	2	2	9	32	9	2	2	18	51	37	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
IA	43134	10586	986	4	4	39	41	22	4	4	22	75	22	4	4	43	119	86	6	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
IA	11577	10368	83	1	1	10	11	6	1	1	1	6	20	6	1	1	12	32	23	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
IA	12140	29741	18	1	1	11	12	6	1	1	6	21	6	1	1	12	33	24	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
IA	9577	2041	25	1	1	8	9	5	1	1	5	16	5	1	1	9	25	19	6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
IA	16387	3886	99	2	2	15	16	8	2	2	8	29	8	2	2	16	45	33	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
IA	17711	4766	50	2	2	17	17	9	3	2	9	31	9	2	2	18	49	35	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
IA	47587	10745	265	5	5	43	45	24	5	5	24	83	24	5	5	48	131	95	7	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
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IA	9084	2441	25	8	2	19	19	10	8	4	1	1	4	15	4	1	1	9	24	18	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
IA	8884	1885	25	1	1	8	8	5	1	1	4	14	4	1	1	9	25	18	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
IA	8105	1798	25	1	1	8	8	4	1	1	4	14	4	1	1	8	22	16	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
IA	17326	3759	25	2	2	16	16	9	2	2	9	30	9	2	2	17	48	35	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
IA	8500	2045	25	1	1	14	15	5	1	1	5	18	5	1	1	12	34	29	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
IA	12544	2223	25	1	1	8	8	5	1	1	5	16	5	1	1	9	25	18	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
IA	16344	3517	25	1	1	14	15	5	1	1	5	16	5	1	1	12	34	29	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
IA	18429	4665	25	2	2	17	18	10	2	2	10	34	10	2	2	19	53	38	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
IA	17845	4979	25	2	2	16	17	8	2	2	8	27	8	2	2	18	49	36	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
IA	14442	15241	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14				
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IA	15166	3895	25	2	2	14	14	8	2	2	8	27	8	2	2	15	42	30	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
IA	34785	8105	21	3	3	31	33	17	3	3	3	17	61	17	3	3	35	96	70	5	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
IA	10663	1560	25	1	1	10	10	5	1</td																																	