Altheia
PREDICTIVE HEALTH

COVID-19 West Virginia
County by County Hospital Bed Demand versus Supply

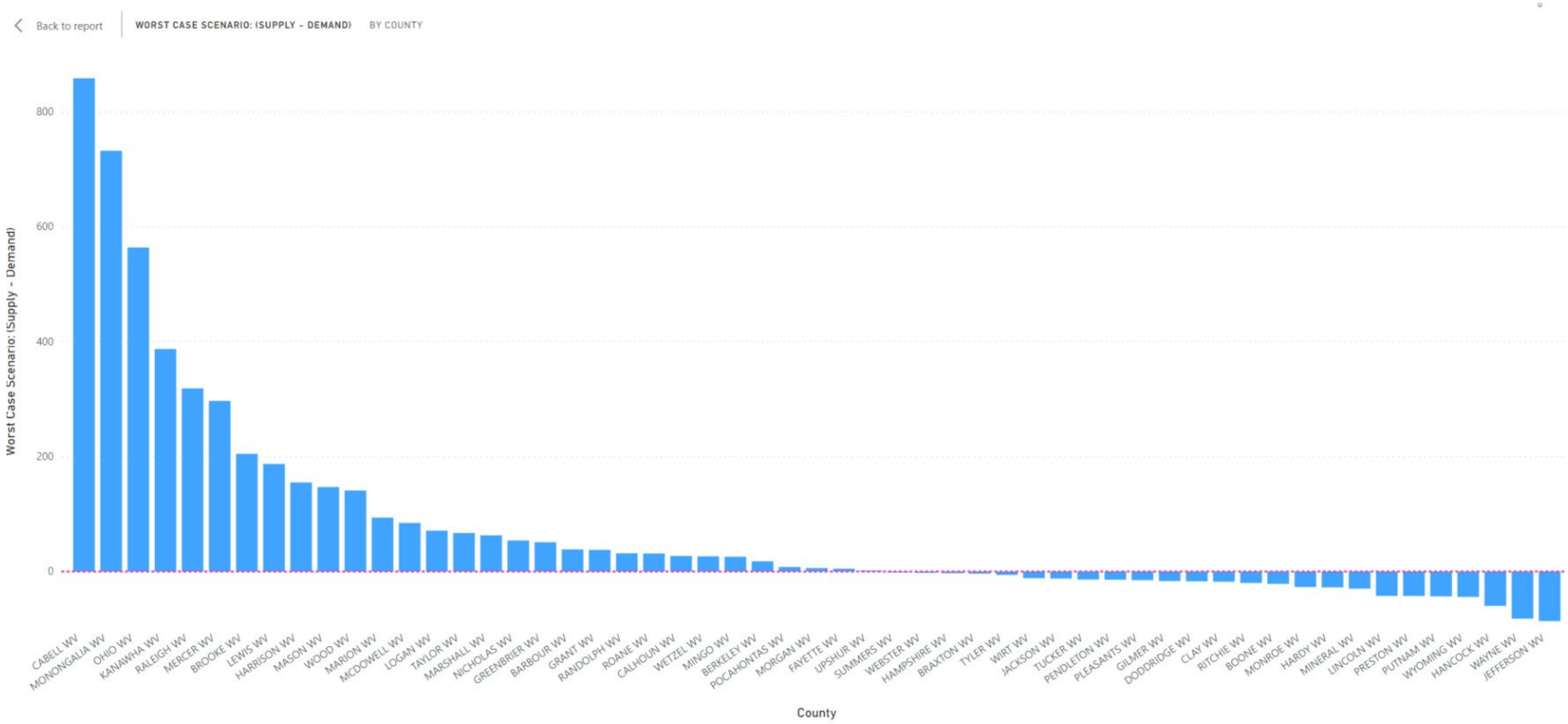

Fig 1: The above figure shows Supply minus Demand at peak using the Imperial-College-COVID19-NPI-modelling-16-03-2020 and the exponential regression model in the article published. All appearing above the red dashed line have capacity even at peak. All Counties that at or falling below the red line are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

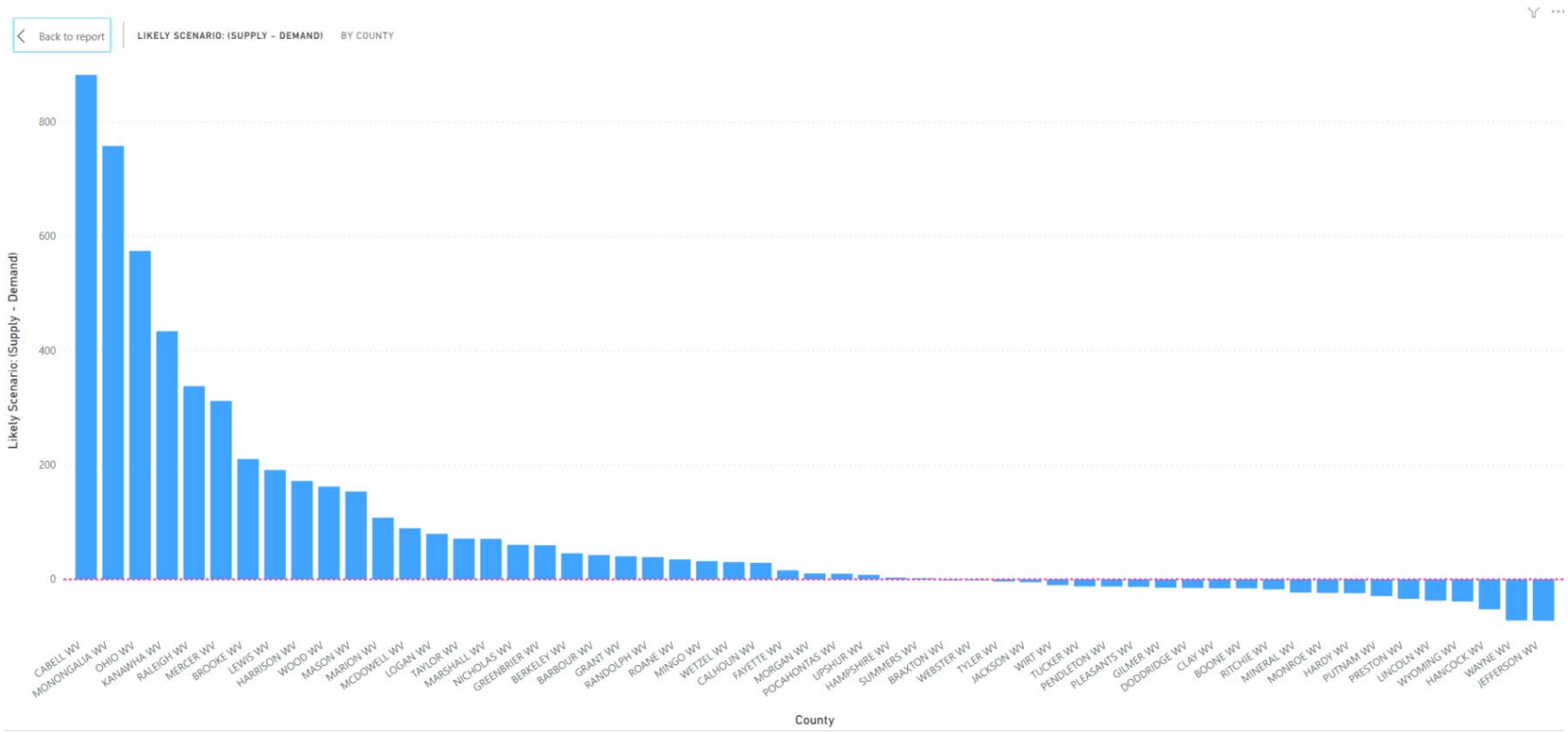

Fig 2: In the more likely scenario where some precautions are taken to flatten the curve, data suggests some Counties will still be unable to meet the needed demand. The peak will hit in early June. Planning for servicing counties that either do not have hospitals or overburdened systems should be made.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

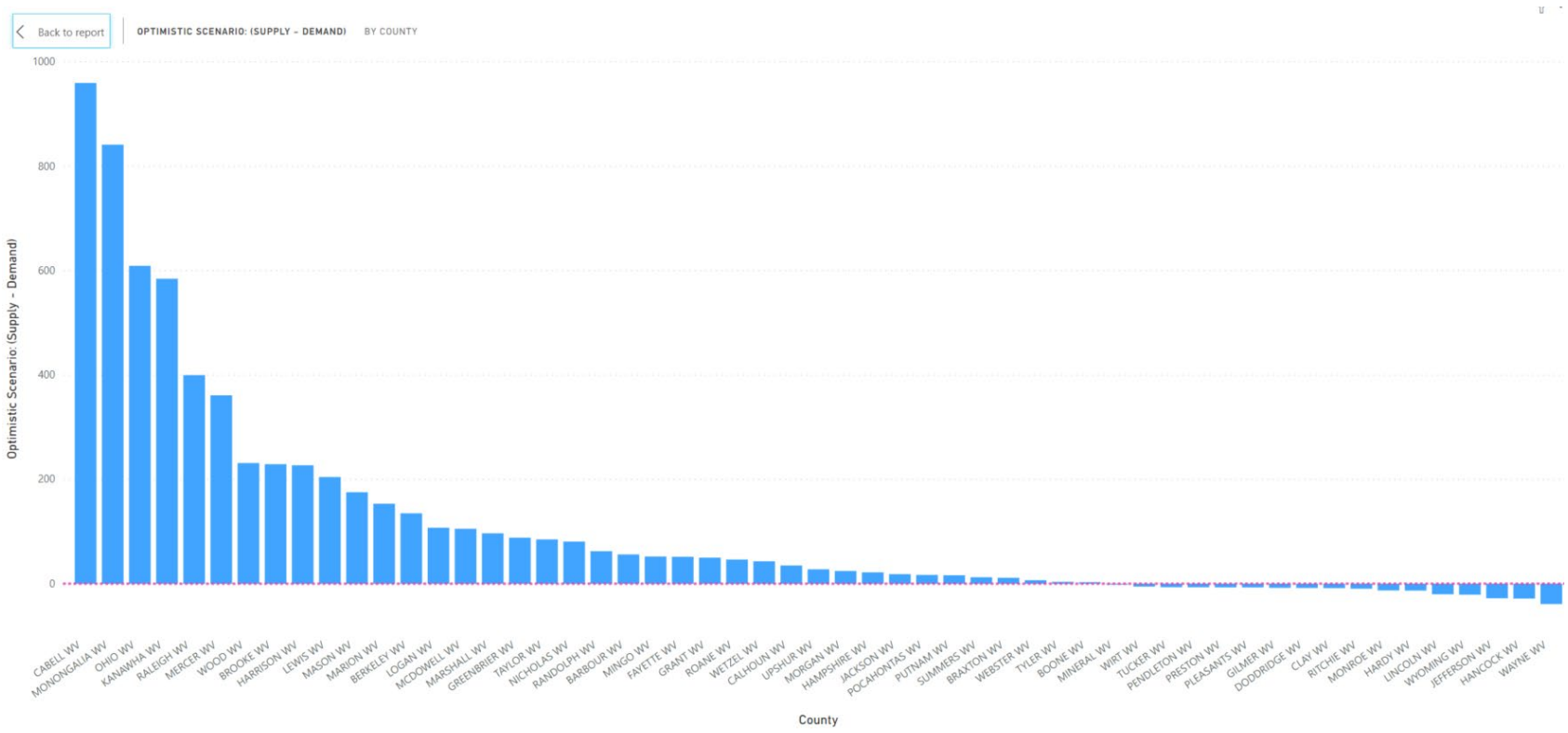

Fig 3: In the scenario where all precautions are taken to flatten the curve, data suggests almost all Counties will be able to meet the needed demand. The peak will hit in June. Planning for servicing counties that either do not have hospitals or overburdened systems should be made. Several Counties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

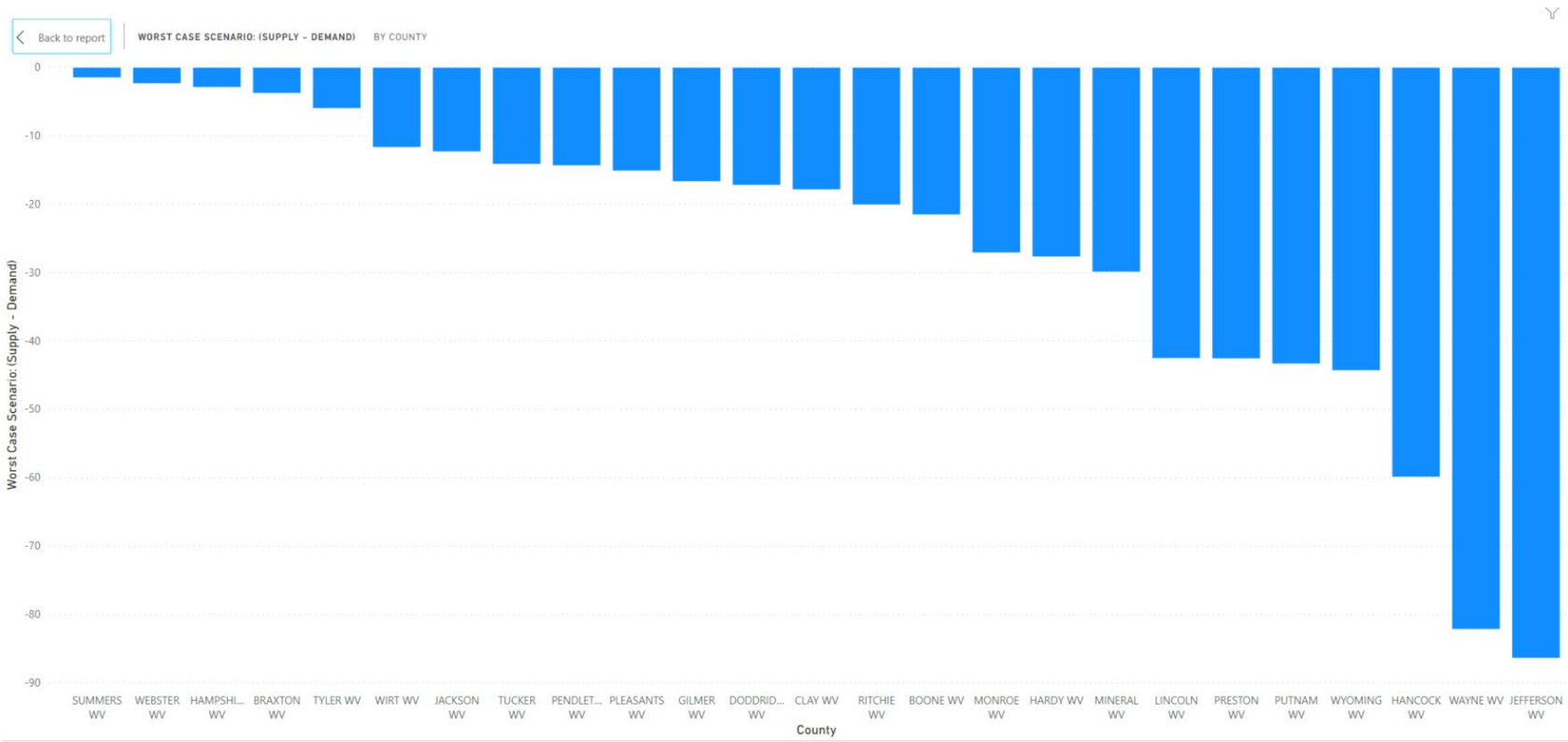

Fig 4: The figure above represents Counties that will run out of beds at peak for the Worst-Case scenario

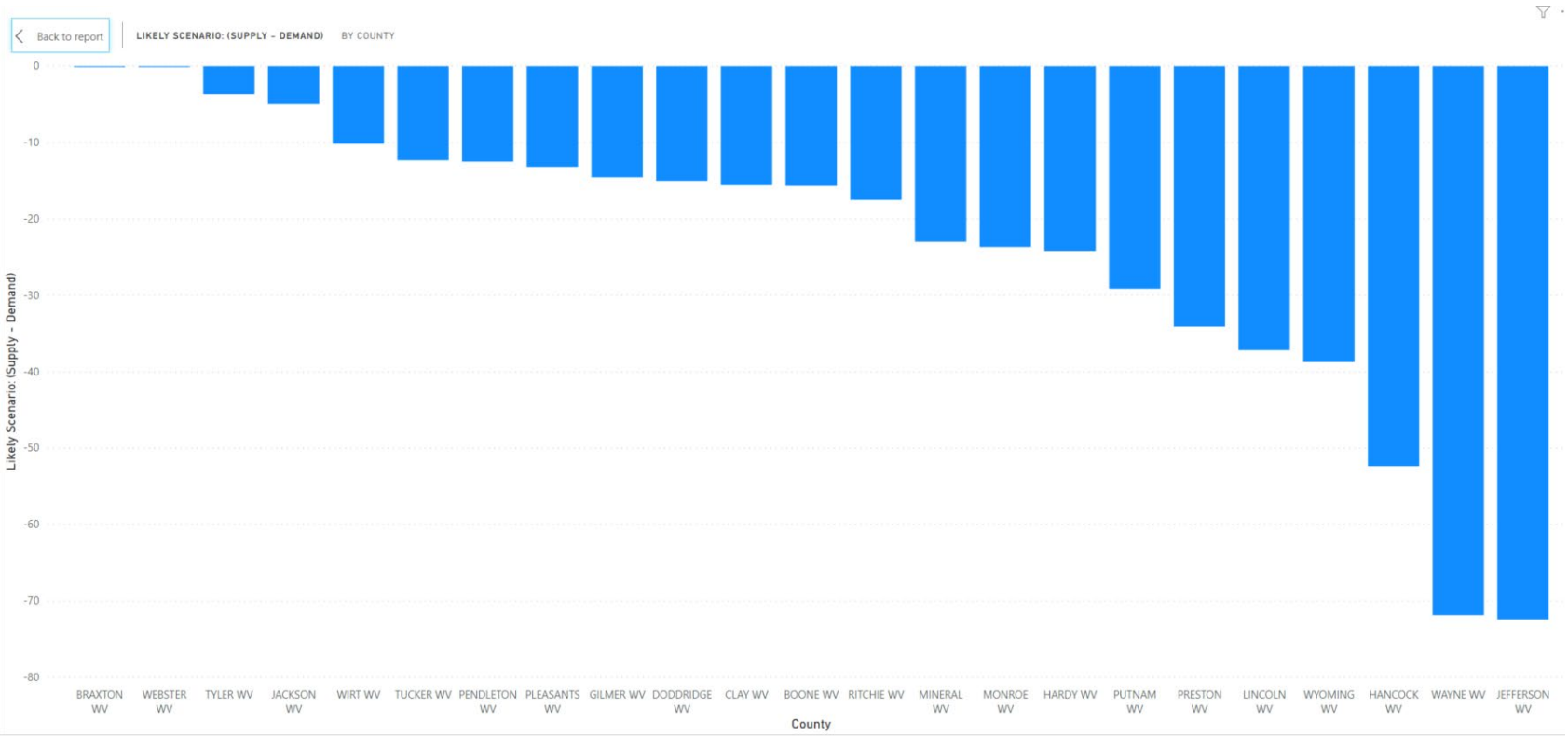

Fig 5: The figure above represents Counties that will run out of beds at peak for the Likely scenario

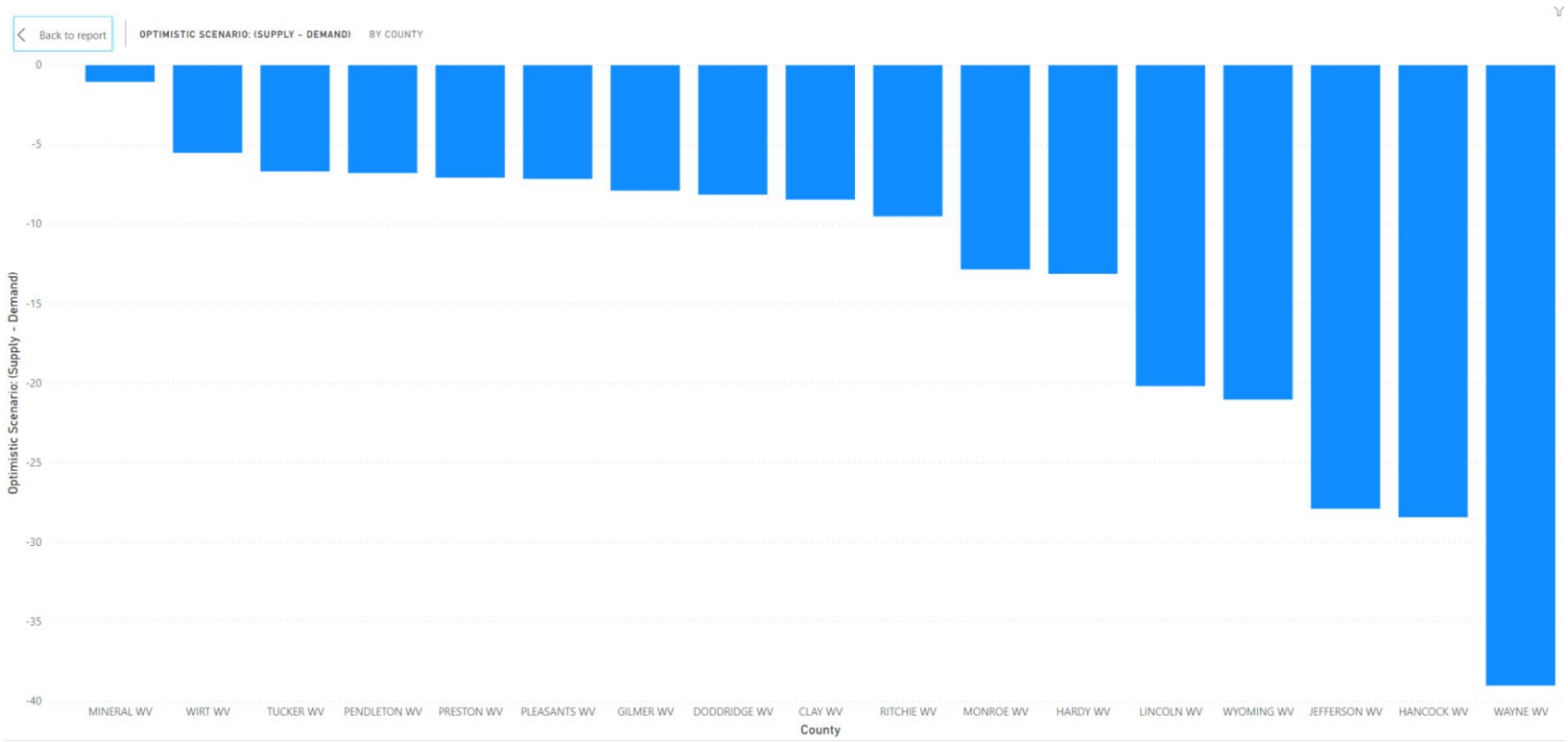

Fig 6: The figure above represents Counties that will run out of beds or do not have a hospital at peak for the Optimistic scenario

				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	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	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)
BARBOUR WV	WV	16790	4021	72	2	2	15	16	8	2	2	8	29	8	2	2	17	46	34	3	2			
BERKELEY WV	WV	111610	20527	241	11	11	100	106	56	11	11	56	195	56	11	11	112	307	223	17	11			x
BOONE WV	WV	23236	5596	25	2	2	21	22	12	2	2	12	41	12	2	2	23	64	46	3	2		x	x
BRAXTON WV	WV	14345	3865	25	1	1	13	14	7	1	1	7	25	7	1	1	14	39	29	2	1		x	x
BROOKE WV	WV	23067	6247	251	2	2	21	22	12	2	2	12	40	12	2	2	23	63	46	3	2			
CABELL WV	WV	96100	20607	1051	10	10	86	91	48	10	10	48	168	48	10	10	96	264	192	14	10			
CALHOUN WV	WV	7450	2003	42	1	1	7	7	4	1	1	4	13	4	1	1	7	20	15	1	1			
CLAY WV	WV	8901	2088	0	1	1	8	8	4	1	1	4	16	4	1	1	9	24	18	1	1	x	x	x
DODDRIDGE WV	WV	8570	2340	0	1	1	8	8	4	1	1	4	15	4	1	1	9	24	17	1	1	x	x	x
FAYETTE WV	WV	44602	11047	94	4	4	40	42	22	4	4	22	78	22	4	4	45	123	89	7	4			x
GILMER WV	WV	8305	1687	0	1	1	7	8	4	1	1	4	15	4	1	1	8	23	17	1	1	x	x	x
GRANT WV	WV	11673	3130	61	1	1	11	11	6	1	1	6	20	6	1	1	12	32	23	2	1			
GREENBRIER WV	WV	35523	9797	122	4	4	32	34	18	4	4	18	62	18	4	4	36	98	71	5	4			
HAMPSHIRE WV	WV	23412	6291	44	2	2	21	22	12	2	2	12	41	12	2	2	23	64	47	4	2			x
HANCOCK WV	WV	29921	7777	0	3	3	27	28	15	3	3	15	52	15	3	3	30	82	60	4	3	x	x	x
HARDY WV	WV	13812	3363	0	1	1	12	13	7	1	1	7	24	7	1	1	14	38	28	2	1	x	x	x
HARRISON WV	WV	68438	15555	292	7	7	62	65	34	7	7	34	120	34	7	7	68	188	137	10	7			
JACKSON WV	WV	29123	6995	46	3	3	26	28	15	3	3	15	51	15	3	3	29	80	58	4	3		x	x
JEFFERSON WV	WV	55673	11274	25	6	6	50	53	28	6	6	28	97	28	6	6	56	153	111	8	6	x	x	x
KANAWHA WV	WV	187827	45166	763	19	19	169	178	94	19	19	94	329	94	19	19	188	517	376	28	19			
LEWIS WV	WV	16371	3999	220	2	2	15	16	8	2	2	8	29	8	2	2	16	45	33	2	2			
LINCOLN WV	WV	21241	4832	0	2	2	19	20	11	2	2	11	37	11	2	2	21	58	42	3	2	x	x	x
LOGAN WV	WV	34428	7754	140	3	3	31	33	17	3	3	17	60	17	3	3	34	95	69	5	3			
MCDOWELL WV	WV	19707	4914	124	2	2	18	19	10	2	2	10	34	10	2	2	20	54	39	3	2			
MARION WV	WV	56575	12962	207	6	6	51	54	28	6	6	28	99	28	6	6	57	156	113	8	6			
MARSHALL WV	WV	32006	8569	127	3	3	29	30	16	3	3	16	56	16	3	3	32	88	64	5	3			
MASON WV	WV	27000	6626	201	3	3	24	26	14	3	3	14	47	14	3	3	27	74	54	4	3			
MERCER WV	WV	60963	15488	419	6	6	55	58	30	6	6	30	107	30	6	6	61	168	122	9	6			
MINERAL WV	WV	27421	6791	25	3	3	25	26	14	3	3	14	48	14	3	3	27	75	55	4	3	x	x	x
MINGO WV	WV	25150	5906	76	3	3	23	24	13	3	3	13	44	13	3	3	25	69	50	4	3			
MONONGALIA WV	WV	103715	15440	940	10	10	93	99	52	10	10	52	182	52	10	10	104	285	207	16	10			
MONROE WV	WV	13517	3849	0	1	1	12	13	7	1	1	7	24	7	1	1	14	37	27	2	1	x	x	x
MORGAN WV	WV	17510	4922	41	2	2	16	17	9	2	2	9	31	9	2	2	18	48	35	3	2			x
NICHOLAS WV	WV	25496	6921	105	3	3	23	24	13	3	3	13	45	13	3	3	25	70	51	4	3			
OHIO WV	WV	42906	10730	650	4	4	39	41	21	4	4	21	75	21	4	4	43	118	86	6	4			
PENDLETON WV	WV	7138	2010	0	1	1	6	7	4	1	1	4	12	4	1	1	7	20	14	1	1	x	x	x
PLEASANTS WV	WV	7527	1707	0	1	1	7	7	4	1	1	4	13	4	1	1	8	21	15	1	1	x	x	x
POCAHONTAS WV	WV	8574	2613	25	1	1	8	8	4	1	1	4	15	4	1	1	9	24	17	1	1			
PRESTON WV	WV	33760	8046	25	3	3	30	32	17	3	3	17	59	17	3	3	34	93	68	5	3	x	x	x
PUTNAM WV	WV	56644	12906	70	6	6	51	54	28	6	6	28	99	28	6	6	57	156	113	8	6		x	x
RALEIGH WV	WV	77097	18284	473	8	8	69	73	39	8	8	39	135	39	8	8	77	212	154	12	8			
RANDOLPH WV	WV	29152	7241	90	3	3	26	28	15	3	3	15	51	15	3	3	29	80	58	4	3			
RITCHIE WV	WV	10005	2557	0	1	1	9	10	5	1	1	5	18	5	1	1	10	28	20	2	1	x	x	x
ROANE WV	WV	14348	3818	60	1	1	13	14	7	1	1	7	25	7	1	1	14	39	29	2	1			
SUMMERS WV	WV	13210	3716	25	1	1	12	13	7	1	1	7	23	7	1	1	13	36	26	2	1			x
TAYLOR WV	WV	16977	4091	101	2	2	15	16	8	2	2	8	30	8	2	2	17	47	34	3	2			
TUCKER WV	WV	7035	2046	0	1	1	6	7	4	1	1	4	12	4	1	1	7	19	14	1	1	x	x	x
TYLER WV	WV	8949	2353	12	1	1	8	9	4	1	1	4	16	4	1	1	9	25	18	1	1		x	x
UPSHUR WV	WV	24604	5846	51	2	2	22	23	12	2	2	12	43	12	2	2	25	68	49	4	2			x
WAYNE WV	WV	41063	9636	0	4	4	37	39	21	4	4	21	72	21	4	4	41	113	82	6	4	x	x	x
WEBSTER WV	WV	8637	2290	15	1	1	8	8	4	1	1	4	15	4	1	1	9	24	17	1	1		x	x
WETZEL WV	WV	15793	4074	58	2	2	14	15	8	2	2	8	28	8	2	2	16	43	32	2	2			
WIRT WV	WV	5800	1370	0	1	1	5	6	3	1	1	3	10	3	1	1	6	16	12	1	1	x	x	x
WOOD WV	WV	86016	20319	313	9	9	77	82	43	9	9	43	151	43	9	9	86	237	172	13	9			
WYOMING WV	WV	22130	5774	0	2	2	20	21	11	2	2	11	39	11	2	2	22	61	44	3	2	x	x	x

Table 1: Table with Data showing all three scenarios