Altheia
PREDICTIVE HEALTH

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

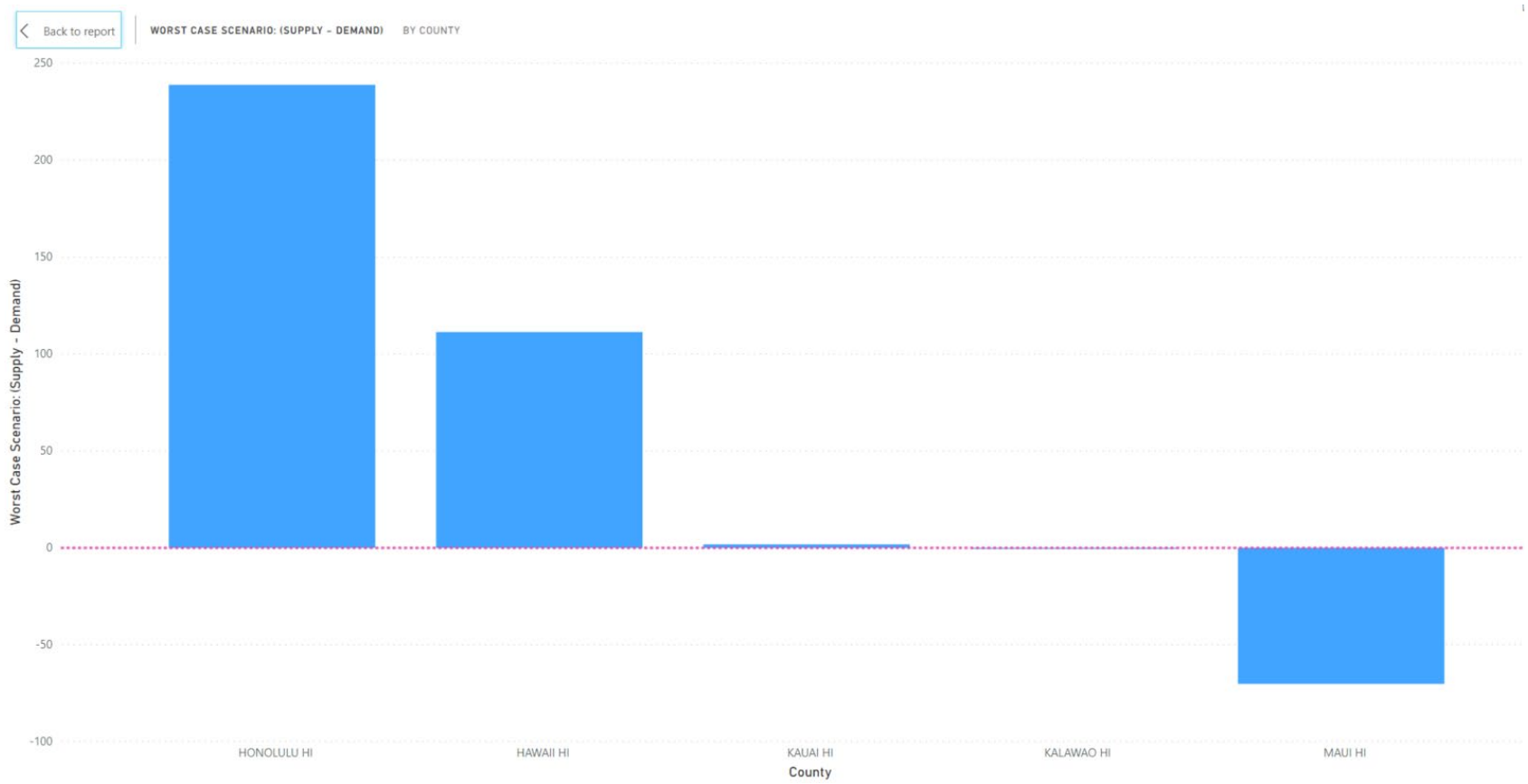

Fig 1: The above figure shows Supply minus Demand at peak using the Imperial-College-COVID19-NPI-modelling-16-03-2020 and the exponential regression model in the article published. All appearing above the red dashed line have capacity even at peak. All Counties that at or falling below the red line are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

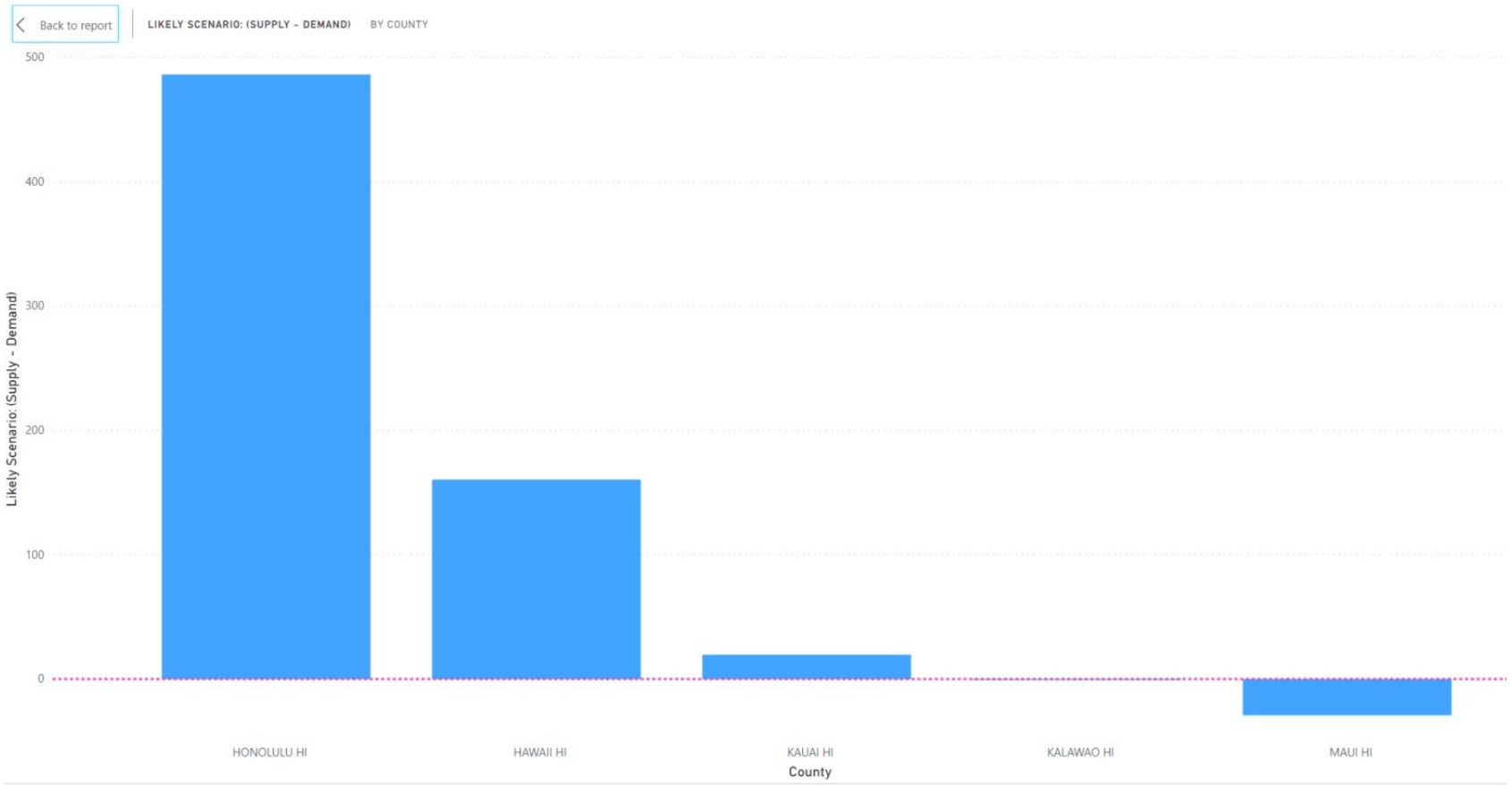

Fig 2: In the more likely scenario where some precautions are taken to flatten the curve, data suggests some Counties will still be unable to meet the needed demand. The peak will hit in early June. Planning for servicing counties that either do not have hospitals or overburdened systems should be made.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

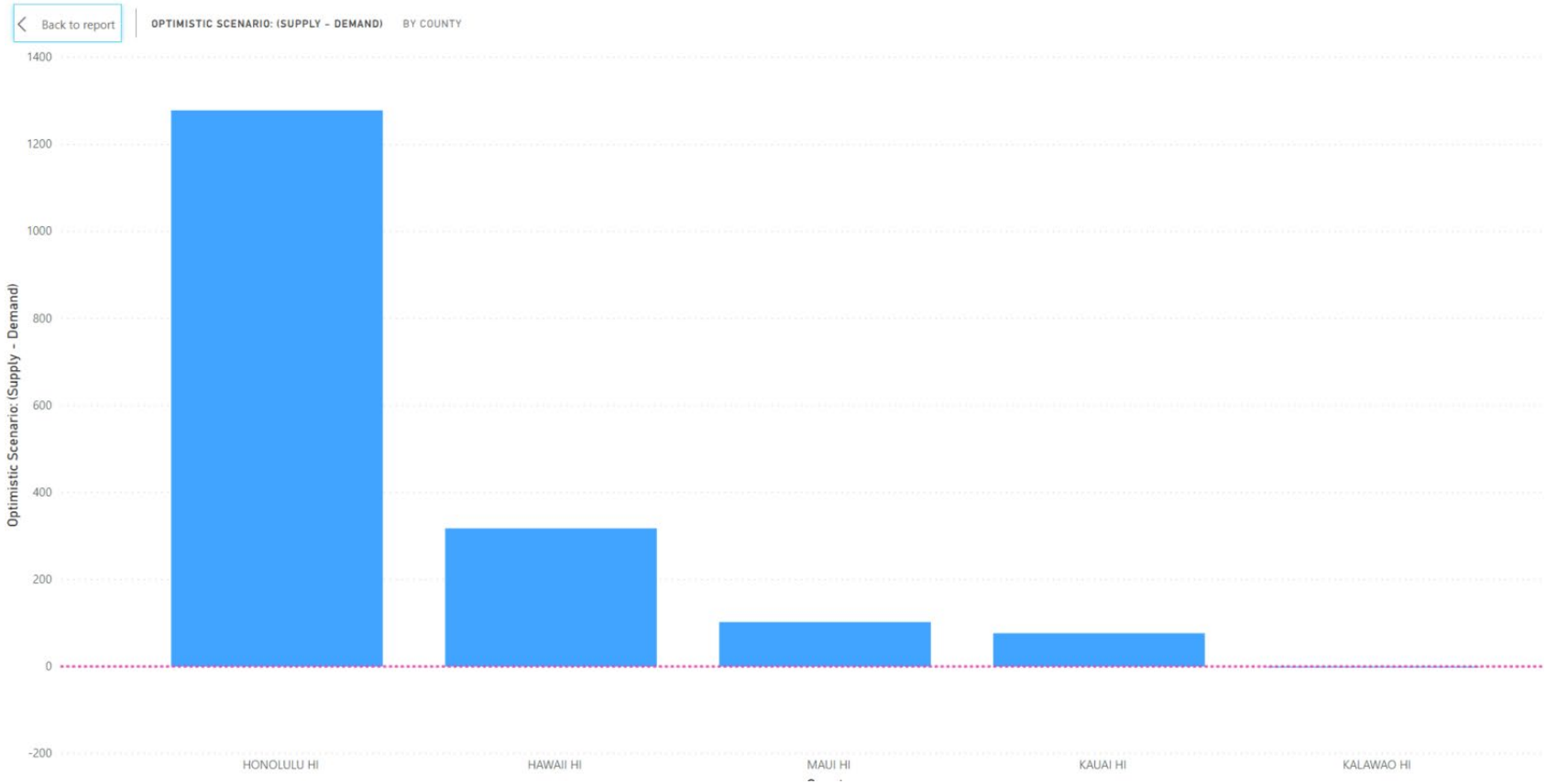

Fig 3: In the scenario where all precautions are taken to flatten the curve, data suggests almost all Counties will be able to meet the needed demand. The peak will hit in June. Planning for servicing counties that either do not have hospitals or overburdened systems should be made. Several Counties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

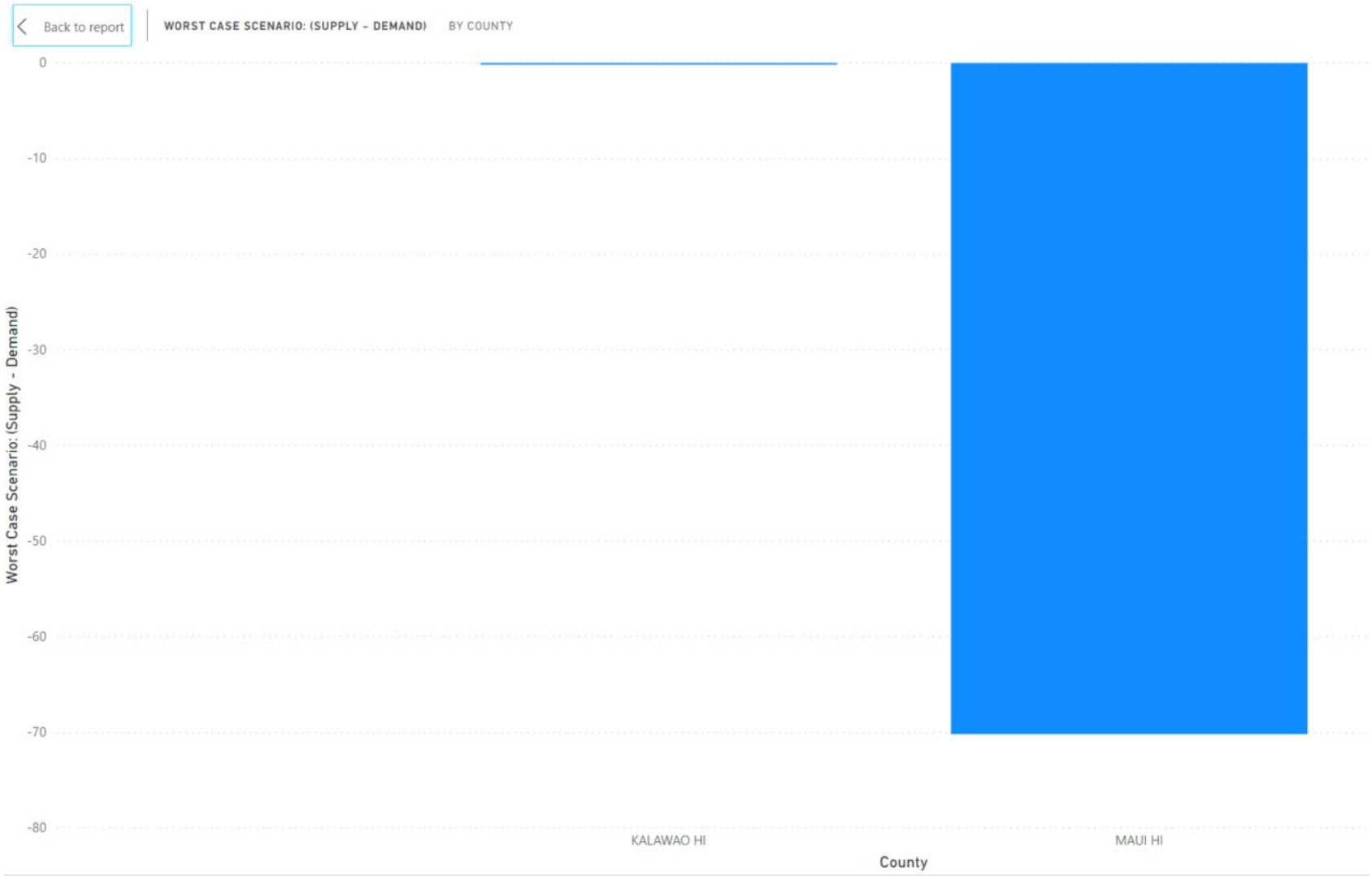

Fig 4: The figure above represents Counties that will run out of beds at peak for the Worst-Case scenario

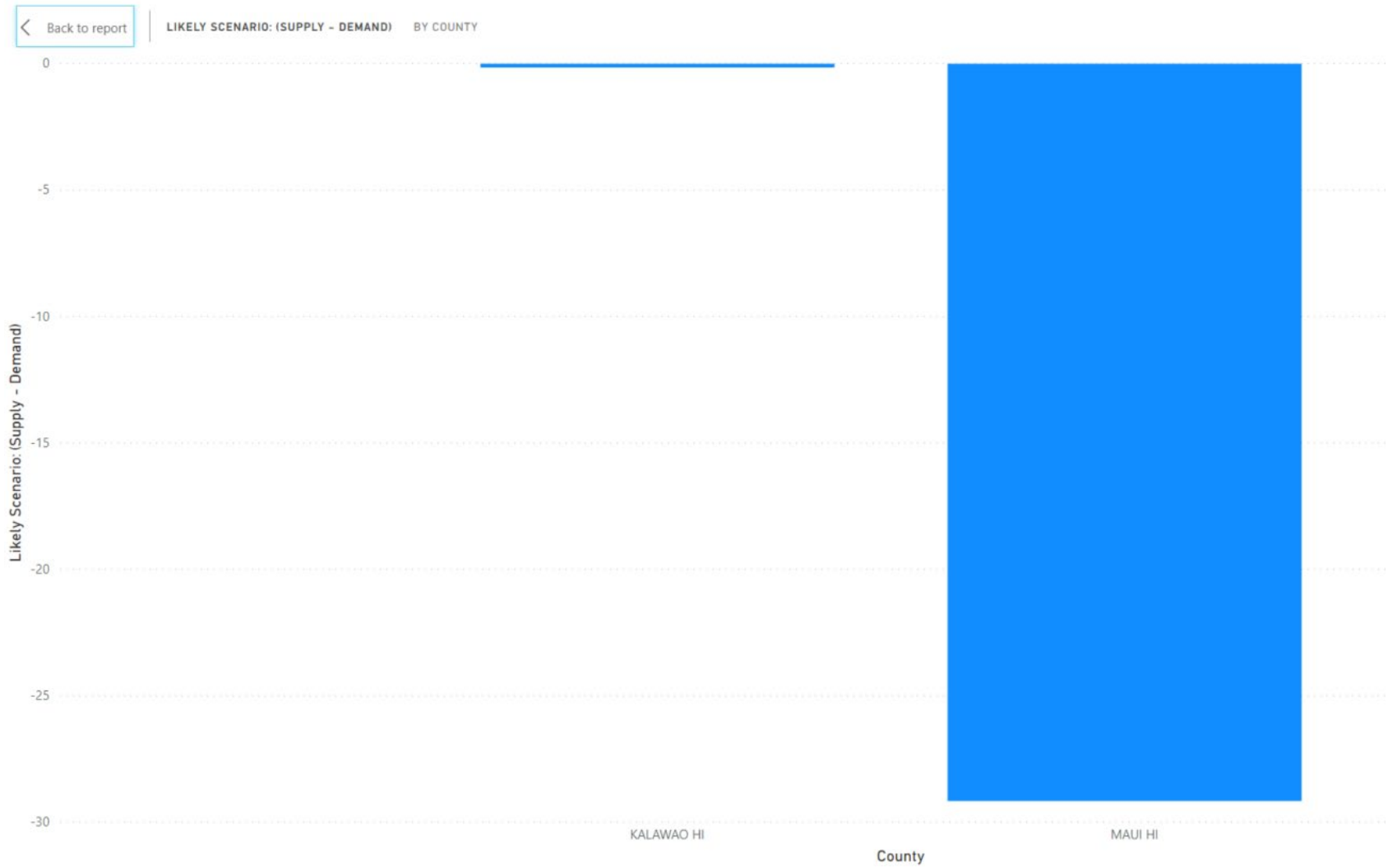

Fig 5: The figure above represents Counties that will run out of beds at peak for the Likely scenario

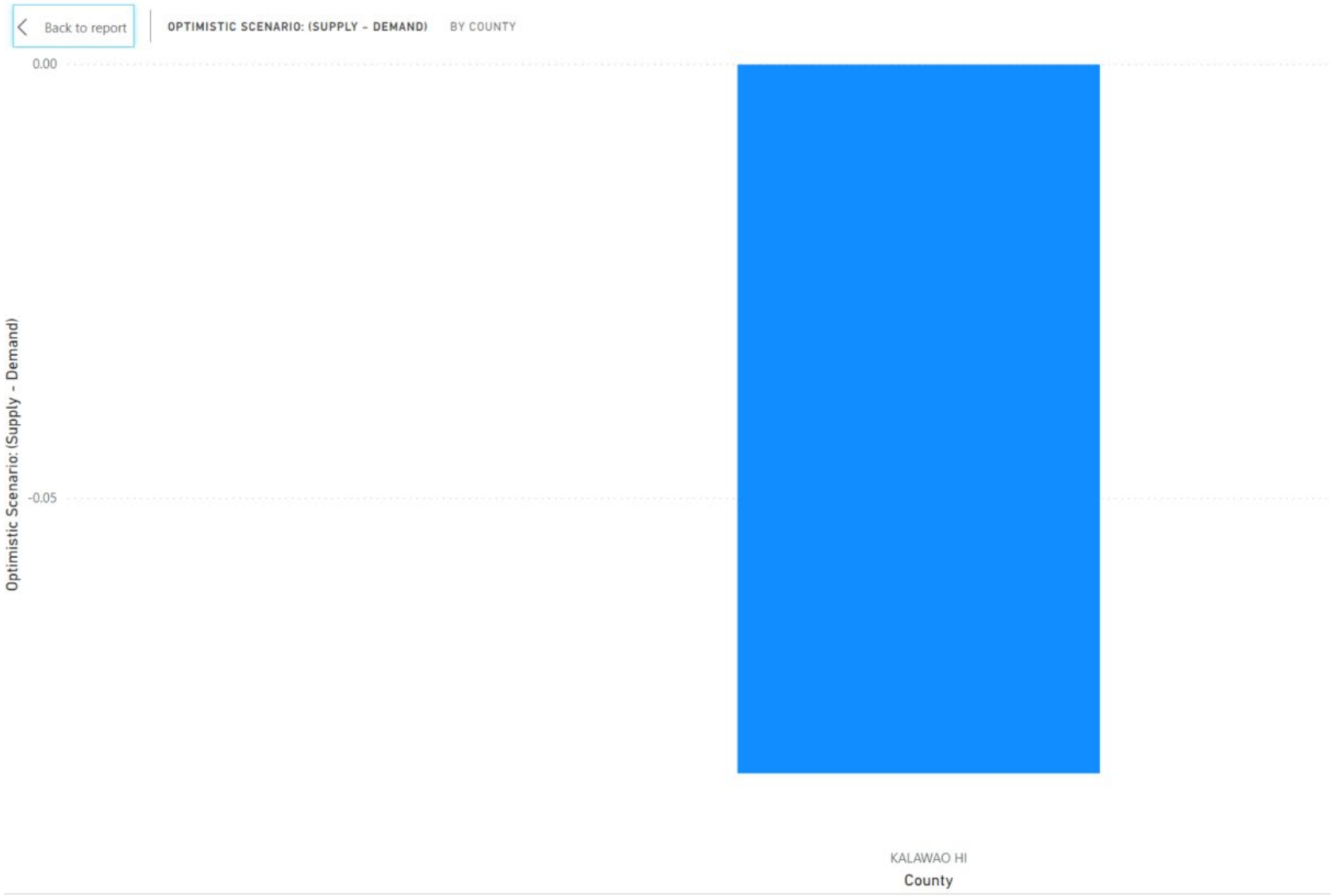

Fig 6: The figure above represents Counties that will run out of beds or do not have a hospital at peak for the Optimistic scenario

					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)
HAWAII HI	HI	196325	47705	504	20	20	177	187	98	20	20	98	344	98	20	20	196	540	393	29	20			x
HONOLULU HI	HI	990060	190241	2219	99	99	891	941	495	99	99	495	1733	495	99	99	990	2723	1980	149	99			x
KALAWAO HI	HI	86	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	x	x	x
KAUAI HI	HI	71093	16335	144	7	7	64	68	36	7	7	36	124	36	7	7	71	196	142	11	7			x
MAUI HI	HI	164094	34720	258	16	16	148	156	82	16	16	82	287	82	16	16	164	451	328	25	16		x	x

Table 1: Table with Data showing all three scenarios