Limited Access Areas Report, 2024

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Summary

This report provides updated results for the Limited Access Area Methodology, which was completed in 2024. The average yearly patient day use rate of Michigan residents in 2022 (the base year in the bed need methodology) was State Rate, 2022, 0.546915806110615 patient days per person.

First, we identified geographically underserved areas, which are regions greater than a 30 minute drive time from the nearest hospital. We created potential hospital locations within the underserved areas and identified the number of people within a 30 minute drive from the location and the percent of the population (within 30 minutes) in an underserved area.

For each potential hospital location, we multiplied the total number of people residing within 30 minutes by the average yearly patient day use rate to calculate the expected number of yearly patient days for that hospital location. Using the expected number of patient days, we followed the steps outlined in the bed need methodology to estimate the bed need for each potential hospital location based on their expected patient days.

We **removed** any potential hospital location with a bed need of less than 10 beds, as well as any locations with an underserved population percent of less than 50%. The remaining locations are the Limited Access Areas. The LAAs and their bed need are displayed in the map below (note that, because of their small size, the individual LAA hexagons are not able to be discerned at this resolution). The online LAA map is available here.

There were 8,163 potential hospital locations identified as LAAs, including 781 locations with a bed need greater than 50 beds and 234 locations with a bed need greater than 70 beds. Of the LAAs, 4,546 locations have a currently underserved population of 80% or more and 1,976 locations have a currently underserved population of 95% or more.

This implementation of the LAA methodology identified slight less underserved area in the state (47,429km^2 vs. 45,942km^2) than the prior implementation. Additionally, there were slightly fewer potential locations identified as LAAs (8,304km^2 vs. 8,163km^2). These minor variations are expected to occur between runs and are likely due to small changes in speed limits and road connectivity, which would impact the identification of underserved areas, or small changes in utilization rates and population distribution, which would impact the bed need calculation for each potential location.

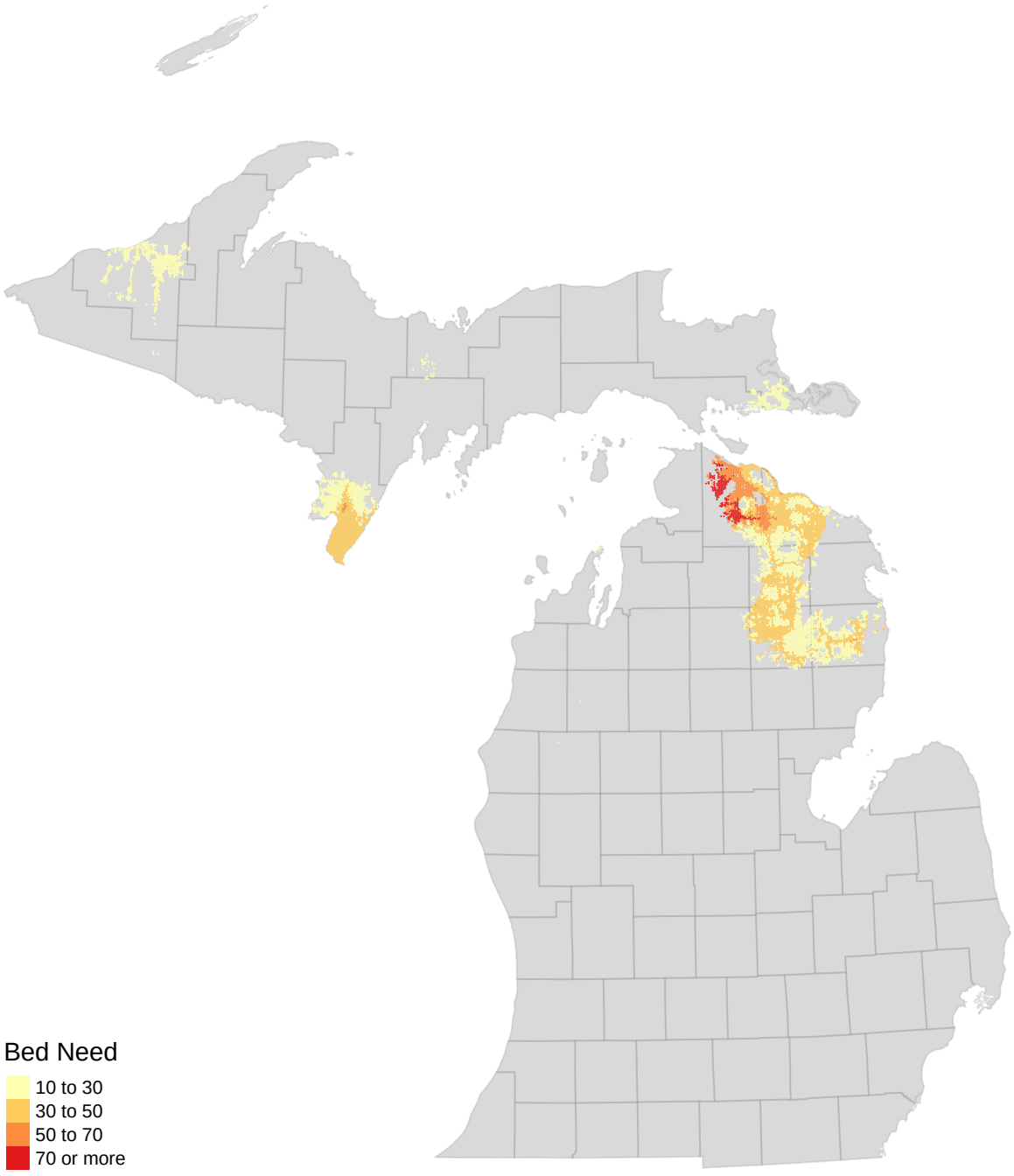

Figure 1: Limited Access Areas

Acute Care Hospital Bed Need Report, 2024

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Summary

This report provides updated results for the Acute Care Hospital Bed Need Methodology, which was completed in 2024 using 2022 as the Base Year and 2027 as the Planning Year. The calculated statewide bed need for 2027 is 19,260 beds, which is 248 beds more than the previous estimate (bed need for 2021, calculated in 2019). The statewide Department Inventory of beds is 24,652, meaning the state has an overage of 5,392 beds.

The most likely cause for the slight increase in Michigan's bed need (from the prior run) is the increase in patient day utilization following the massive decrease during 2020. Figure 1 shows statewide patient days used in the bed need methodology (from 2018 to 2022).

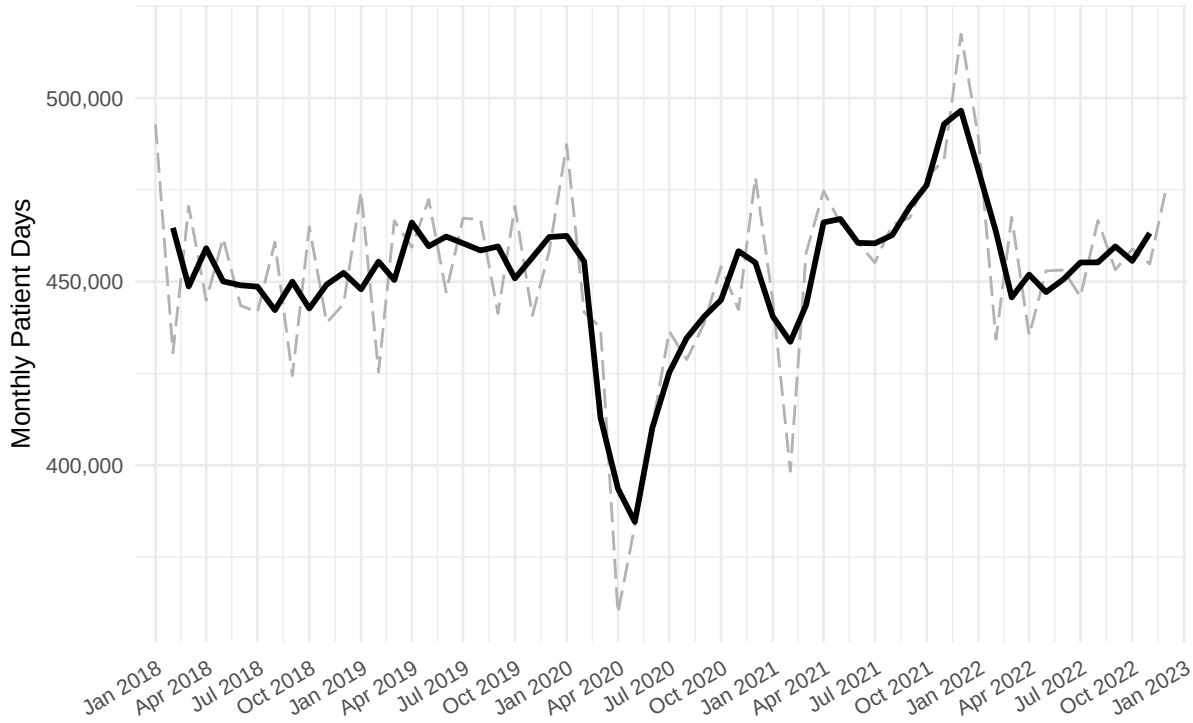

Figure 1: Monthly patient days (grey dashed line) and 3-month moving average of monthly patient days (black solid line) for the base year and preceeding four years.

The Bed Need Methodology predicts patient days in the future based on past trends in use for the 83 Michigan counties plus one "out of state" unit. A significant, positive linear trend in patient days was detected in 27 counties, resulting in predictions that were greater than current utilization. A significant negative linear trend in patient days was detected in 13 counties. No discernible trend was detected in 44 counties.

The detailed bed need output is found in Table 1. Overall, of the 30 Hospital Groups, 29 have an overage of beds, while 1 has a need for additional beds.

Table 1: Acute Care Hospital Bed Need Results

HG	Bed Need	Dept Inventory	Difference
1	4,733	5,609	876
2	2,876	3,461	585
4	1,515	1,969	454
5	1,737	1,911	174
6	227	370	143
7	827	985	158
8	278	325	47
9	59	58	-1
10	702	1,034	332
11	281	425	144
12	309	368	59
14	1,654	2,181	527
15	352	461	109
17	63	141	78
18	79	108	29
19	1,078	1,441	363
20	871	1,365	494
21	60	173	113
22	359	542	183
23	52	183	131
24	487	550	63
25	146	242	96
26	79	124	45
27	51	92	41
28	216	253	37
29	15	40	25
30	45	61	16
31	63	119	56
32	30	36	6
33	16	25	9
STATE	**19,260**	**24,652**	**5,392**