# Acute Care Hospital Bed Need and Limited Access Areas
# 2020 Update

Paul L. Delamater
November 23, 2020
Department of Geography, University of North Carolina at Chapel Hill
E-mail: pld@email.unc.edu

## Summary

This report provides updated results for the Acute Care Hospital Bed Need and Limited Access Areas (LAAs).

## Determination of Needed Hospital Bed Supply

In the most recent update of the hospital bed need, the base year was determined from the most recently available MIDB data, which is 2018. The planning year is 2023, five years from the base year. The predicted statewide bed need for 2023 is 20,271 beds, which is roughly 1,500 beds more than the previous estimate (bed need for 2021, calculated in 2019). The underlying cause for the overall increase in Michigan's future bed need can be traced to the statewide increase in acute care hospitalization (since falling to a low point in 2013 and 2014). Figure 1 shows statewide patient days since 2000; although patient days decreased slightly from 2017 to 2018, both were higher than those reported in 2015 and 2016.

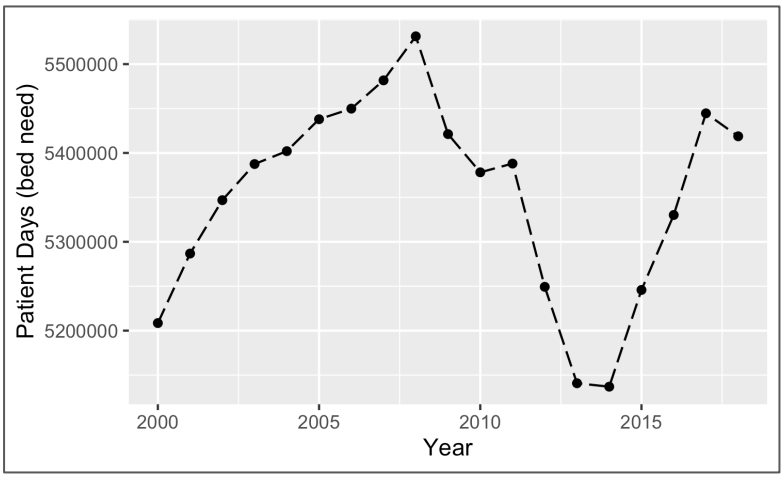


**Figure 1. Statewide Patient Days, 2000 to 2018**

The detailed bed need output is found in Table 1. The statewide trend in patient days over the prior two years was captured in the county-level patient day prediction phase of the Bed Need Methodology. Of the 84 county units (83 counties plus one "out of state" unit), a significant positive linear trend was detected in 45, resulting in predictions that were greater than current utilization. A significant negative linear trend in patient days was detected in only 5 county units and no discernible trend was detected in 34 county units.

Overall, of the 31 Hospital Groups, 30 showed an excess of beds in this update, while one had the same need and inventory and no Hospital Groups showed a need for additional beds. Statewide, there is a 4,608 bed overage in the state per this most recent update.

| HG | Bed Need 2023 | Beds 2020 | Dept Inv 2020 | Difference |
|---|---|---|---|---|
| 1 | 4,925 | 5,632 | 5,621 | 696 |
| 2 | 2,917 | 3,620 | 3,560 | 643 |
| 4 | 1,644 | 1,969 | 1,969 | 325 |
| 5 | 1,558 | 1,729 | 1,735 | 177 |
| 6 | 278 | 375 | 375 | 97 |
| 7 | 944 | 1,086 | 1,058 | 114 |
| 8 | 389 | 389 | 389 | 0 |
| 9 | 56 | 113 | 113 | 57 |
| 10 | 804 | 1,034 | 1,034 | 230 |
| 11 | 322 | 427 | 427 | 105 |
| 12 | 272 | 409 | 409 | 137 |
| 14 | 1,635 | 2,045 | 2,046 | 411 |
| 15 | 364 | 543 | 543 | 179 |
| 17 | 67 | 170 | 170 | 103 |
| 18 | 75 | 123 | 123 | 48 |
| 19 | 1,339 | 1,441 | 1,441 | 102 |
| 20 | 994 | 1,355 | 1,352 | 358 |
| 21 | 35 | 188 | 188 | 153 |
| 22 | 391 | 542 | 542 | 151 |
| 23 | 64 | 185 | 185 | 121 |
| 24 | 462 | 550 | 550 | 88 |
| 25 | 172 | 242 | 242 | 70 |
| 26 | 79 | 124 | 124 | 45 |
| 27 | 55 | 98 | 98 | 43 |
| 28 | 256 | 253 | 279 | 23 |
| 29 | 15 | 40 | 40 | 25 |
| 30 | 37 | 86 | 86 | 49 |
| 31 | 79 | 119 | 119 | 40 |
| 32 | 24 | 36 | 36 | 12 |
| 33 | 19 | 25 | 25 | 6 |
| *STATE* | *20,271* | *24,948* | *24,879* | *4,608* |

**Table 1. 2020 Bed Need Results.** Base year: 2014, Planning year: 2018, Dept Inv 2020 data from September 2020, Difference column calculated as difference between Dept Inv 2020 and Bed Need 2023: positive values in the Difference column reflect an excess of hospital beds.

## Limited Access Areas

Figure 2 provides the map of the Limited Access Areas. The bed need for each LAA can be found in Table 2, while the Zip Codes associated with each LAA are listed in Table 3. Based on 2018 hospitalization data, the minimum number of predicted patient days for an undeserved area to be considered an LAA was 27,138. This value was calculated using the overall state rate of 0.543 patient days per person and a minimum population of 50,000, per the Review Standards. Six LAAs were identified in the 2020 update, which are the same as those from the 2018 update.

| LAA | Predicted Patient Days 2023 | Bed Need 2023 |
|---|---|---|
| 1 | 86,305 | 316 |
| 2 | 116,061 | 419 |
| 3 | 37,700 | 149 |
| 4 | 29,716 | 121 |
| 5 | 41,322 | 163 |
| 6 | 29,645 | 121 |

**Table 2. Bed Need for Limited Access Areas**

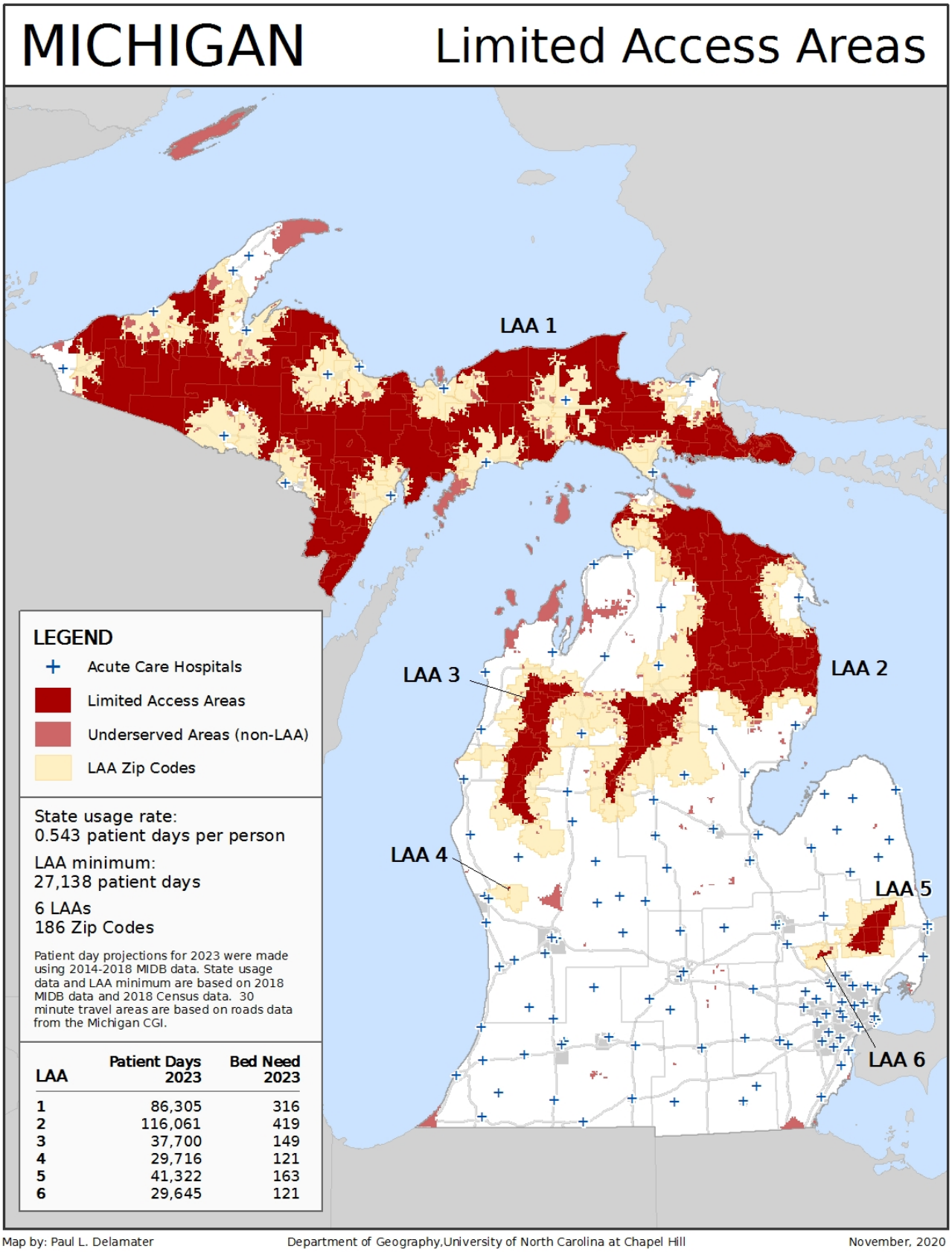


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**Figure 2. Limited Access Areas**

| LAA 1 | | | LAA 2 | | LAA 3 | LAA 4 | LAA 5 | LAA 6 |
|---|---|---|---|---|---|---|---|---|
| 49710 | 49829 | 49885 | 48619 | 49651 | 49304 | 49442 | 48002 | 48348 |
| 49715 | 49831 | 49886 | 48621 | 49665 | 49309 | 49451 | 48003 | 48371 |
| 49719 | 49833 | 49887 | 48624 | 49667 | 49349 | | 48005 | 48462 |
| 49725 | 49834 | 49891 | 48625 | 49679 | 49402 | | 48006 | |
| 49726 | 49835 | 49892 | 48629 | 49705 | 49411 | | 48014 | |
| 49728 | 49836 | 49893 | 48630 | 49706 | 49459 | | 48022 | |
| 49736 | 49837 | 49895 | 48632 | 49709 | 49601 | | 48041 | |
| 49745 | 49838 | 49896 | 48635 | 49716 | 49619 | | 48062 | |
| 49752 | 49839 | 49905 | 48636 | 49721 | 49620 | | 48065 | |
| 49760 | 49840 | 49910 | 48647 | 49738 | 49625 | | 48097 | |
| 49762 | 49841 | 49912 | 48651 | 49740 | 49637 | | 48367 | |
| 49768 | 49847 | 49916 | 48653 | 49743 | 49638 | | 48428 | |
| 49774 | 49848 | 49919 | 48654 | 49744 | 49643 | | 48444 | |
| 49780 | 49849 | 49920 | 48656 | 49746 | 49644 | | | |
| 49781 | 49853 | 49925 | 48705 | 49747 | 49645 | | | |
| 49801 | 49854 | 49935 | 48721 | 49749 | 49649 | | | |
| 49806 | 49855 | 49946 | 48728 | 49751 | 49656 | | | |
| 49807 | 49858 | 49947 | 48737 | 49753 | 49663 | | | |
| 49812 | 49861 | 49948 | 48738 | 49755 | 49668 | | | |
| 49814 | 49862 | 49952 | 48739 | 49756 | 49683 | | | |
| 49815 | 49866 | 49953 | 48740 | 49759 | 49689 | | | |
| 49816 | 49868 | 49958 | 48742 | 49765 | | | | |
| 49817 | 49873 | 49962 | 48743 | 49766 | | | | |
| 49818 | 49874 | 49965 | 48745 | 49769 | | | | |
| 49820 | 49878 | 49967 | 48750 | 49776 | | | | |
| 49821 | 49879 | 49968 | 48761 | 49777 | | | | |
| 49822 | 49880 | 49969 | 48762 | 49779 | | | | |
| 49825 | 49881 | 49970 | 49305 | 49792 | | | | |
| 49826 | 49883 | | 49631 | 49799 | | | | |
| 49827 | 49884 | | 49632 | | | | | |

**Table 3. Zip Codes in Limited Access Areas**