MICHIGAN DEPARTMENT OF HEALTH AND HUMAN SERVICES (MDHHS)
NURSING HOME AND HOSPITAL LONG-TERMCARE
UNIT BEDS STANDARD ADVISORY COMMITTEE (NH-HLTCU SAC)
MEETING

Thursday, December 19, 2019

South Grand Building
333 S. Grand Ave,
1st Floor, Grand Conference Room
Lansing, MI 48933

APPROVED MINUTES

I. Call to Order

Chairperson Haney called the meeting to order at 9:30 a.m. and asked members and staff to introduce themselves.

A. Members Present:

Donald A. Haney, Chairperson – Thornapple Manor
Frank Wronski, Vice-Chairperson – WellBridge Group
Patricia E. Anderson – Health Care Association of Michigan (HCAM)
Renee Beniak – Michigan County Medical Care Facilities Council
Laura Caldwell – Ascension Michigan
Donna Elston – Spectrum Health Continuing Care
Laurrie Murphy Knight, MD – Blue Cross Blue Shield of Michigan
Deanna Ludlow Mitchell – LeadingAge Michigan
Jon A. Nowinski, CPA – Lally Group, PC
Holli Titus – Employee Benefit Logistics LLC

B. Members Absent:

Margaret Lightner – Beaumont Health
Salli Pung – Michigan Long Term Care Ombudsman Program - Michigan Elder Justice Initiative

C. Michigan Department of Health and Human Services Staff present:

Tulika Bhattacharya
Joette Laseur
Beth Nagel
Tania Rodriguez

Brenda Rogers

II. Introduction of Members and Staff

Members and staff introduced themselves.

III. Declaration of Conflicts of Interests

Patricia Anderson, HCAM stated a potential conflict of interest due to pending litigation.

Motion by Ms. Beniak, seconded by Mr. Wronski identified Patricia Anderson as not having a conflict of interest for the deliberations and voting on Charge 1. the bed need methodology. Motion carried.

IV. Review of Agenda

Motion by Ms. Anderson, seconded by Mr. Nowinski to accept the agenda as presented. Motion carried.

V. Basic CON Overview

Brenda Rogers provided an overview of the Michigan Certificate of Need Program. (Attachment A)

VI. Review and Discussion of the Charge

Chairperson Haney reviewed the charge assigned to the SAC.

Discussion followed.

VII. Bed Need Methodology Overview

Paul Delamater, University of North Carolina, provided an overview of the bed need methodology. (Attachment B)

Discussion followed.

VIII. Next Steps

Ms. Anderson, Ms. Mitchell, Ms. Beniak, Ms. Titus, Ms. Caldwell, Ms. Elston, and Mr. Delamater will work on Ms. Anderson's and Ms. Mitchell's suggestions to use occupancy rates for the bed need methodology calculations and report in January. They will work on a longer-term change to the bed need methodology and review special populations too. Ms. Anderson will chair the subcommittee.

IX. Future Meeting Dates

January 16, 2020; February 20, 2020; March 26, 2020; April 23, 2020; May 21, 2020, & June 11, 2020.

X. Public Comment

1. Ken Sikkema, Public Sector Consultants

XI. Adjournment

Motion by Ms. Anderson, seconded by Ms. Beniak to adjourn the meeting at 11:30 a.m. Motion carried.

Attachment A

Michigan Certificate of Need

NURSING HOME AND HOSPITAL LONG-TERM-CARE UNIT (NH-HLTCU) BEDS STANDARD ADVISORY COMMITTEE (SAC)

DECEMBER 19, 2019

What is Certificate of Need?

- A health service & equipment regulatory program
- Created by state law
- Intended to balance cost, quality and access by ensuring that only needed health services are developed in Michigan
- Administered by the Michigan Department of Health and Human Services
- Governor-appointed Commission develops and updates standards

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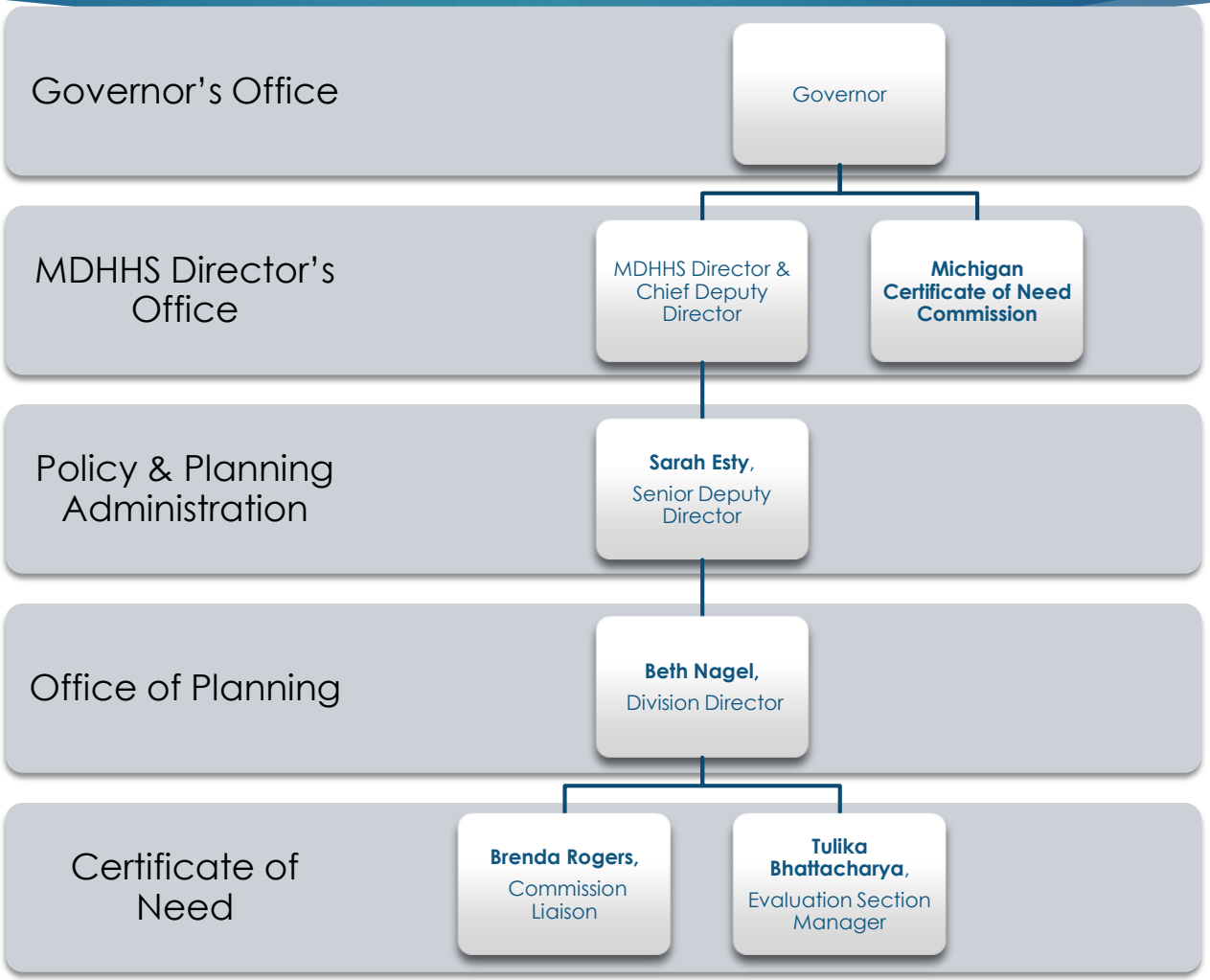
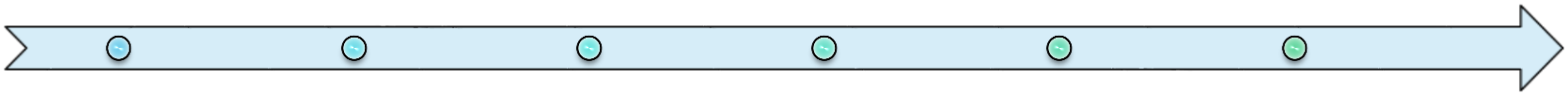
Organization



Michigan Certificate of Need History



1974	1978	1986	1988	2002	2019
Federal Mandate: All states have to develop a CON program	Michigan's CON Program is put into state law	Federal Mandate Rescinded: 38 of 50 states keep CON program	Michigan's First Legislative Reform of CON	Michigan's Second Legislative Reform of CON	Today: Focus on quality standards

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What is Certificate of Need?

- A healthcare provider must apply for a Certificate of Need in order to operate one of the 15 covered clinical services

CON Covered Clinical Services	
Air Ambulance Services (helicopters only)	Cardiac Catheterization Services
Computed Tomography (CT) Scanners	Hospital Beds
Magnetic Resonance Imaging (MRI)	Megavoltage Radiation Therapy (MRT)
Neonatal Intensive Care Units (NICU)	Nursing Home Beds
Open Heart Surgery Services	Positron Emission Tomography (PET) Scanners
Psychiatric Beds (Acute Inpatient)	Surgical Services
Transplant Services: Bone Marrow, Heart, Lung & Liver	Urinary Lithotripter Services

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Obtaining a Certificate of Need

- In order to be approved for a Certificate of Need in Michigan a provider must:
  - Meet Michigan CON criteria outlined in the corresponding CON standard
  - Demonstrate "need" per the corresponding CON Standard
  - Agree to specific project delivery requirements
  - Agree to meet specific service volumes
  - Provide data to MDHHS regularly for the life of the service
  - Apply for another CON before specific changes are made to the service (relocation, replacement, acquisition, for example)
  - Understand that a CON can be revoked

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The Certificate of Need Standards

- Created and updated by CON Commission
- Must be updated at least every three years
- Are prospective (not retroactive)
- Contain specific requirements to initiate, replace, acquire, relocate (as necessary)
- Contain Project Delivery Requirements

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CON Standard Update Process

Public Comment Period

- Every CON Standard must be updated every three years. Each year, a public hearing is held to get solicit input on changes, updates, issues, etc. for 1/3 of the standards

Commission Special Meeting

- Every January the CON Commission holds a special meeting to determine how each standard will be updated. The options are:

  1) No updates necessary

  2) Deregulate

  3)Continue regulation with modifications to the standard

Commission Options for Updating

- To continue regulation and make updates, then the following options are explored:

  1) Commission makes changes

  2) Department drafts changes

  3) A Workgroup makes recommendations

  4) A SAC makes recommendations

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Standard Advisory Committees

- Deliver recommendations to the CON Commission based on a specific "Charge"
- Composition outlined in statute
  - Made up of 2/3 of subject matter experts
  - Must include representatives of 1 each of consumers; providers; payers and purchasers
- Must complete work within 6 months of first meeting date
- All meetings open to the public and comply with Michigan Open Meetings Act
  - If a quorum of the SAC members is present at any gathering, this becomes a public meeting

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NURSING HOME AND HOSPITAL LONG-TERM-CARE UNIT BEDS (NH-HLTCU) STANDARD ADVISORY COMMITTEE (SAC) APPROVED CHARGE
Approved by the CON Commission Chairperson as Delegated by the CON Commission on March 21, 2019

The NH-HLTCU SAC is charged to review and recommend any necessary changes to the NH-HLTCU Beds CON Standards regarding the following:

1. The bed need methodology

2. Whether adequate access exists for Medicaid patients

3. Specialty population beds

4. Language changes as presented by the Department regarding adding minimum occupancy requirements to Sections 6 and 8.

5. Language changes presented by the Department regarding technical edits to Section 7.

6. Consider any technical changes from the Department, e.g., updates or modifications consistent with other CON review standards and the Michigan Public Health Code.

In its deliberations of the above-mentioned charges, the SAC shall consider and report on how each recommendation addresses healthcare cost, quality and/or access in Michigan.

Where did the Charge come from?

- Public Comment Period in October
  - Acceptance of written comments/testimony by MDHHS on behalf of the Commission
  - Commission members and MDHHS staff review all of the comments/testimony received
  - Recommendations offered to the Commission by the Department
- CON Commission develops and approves the final charge to the SAC

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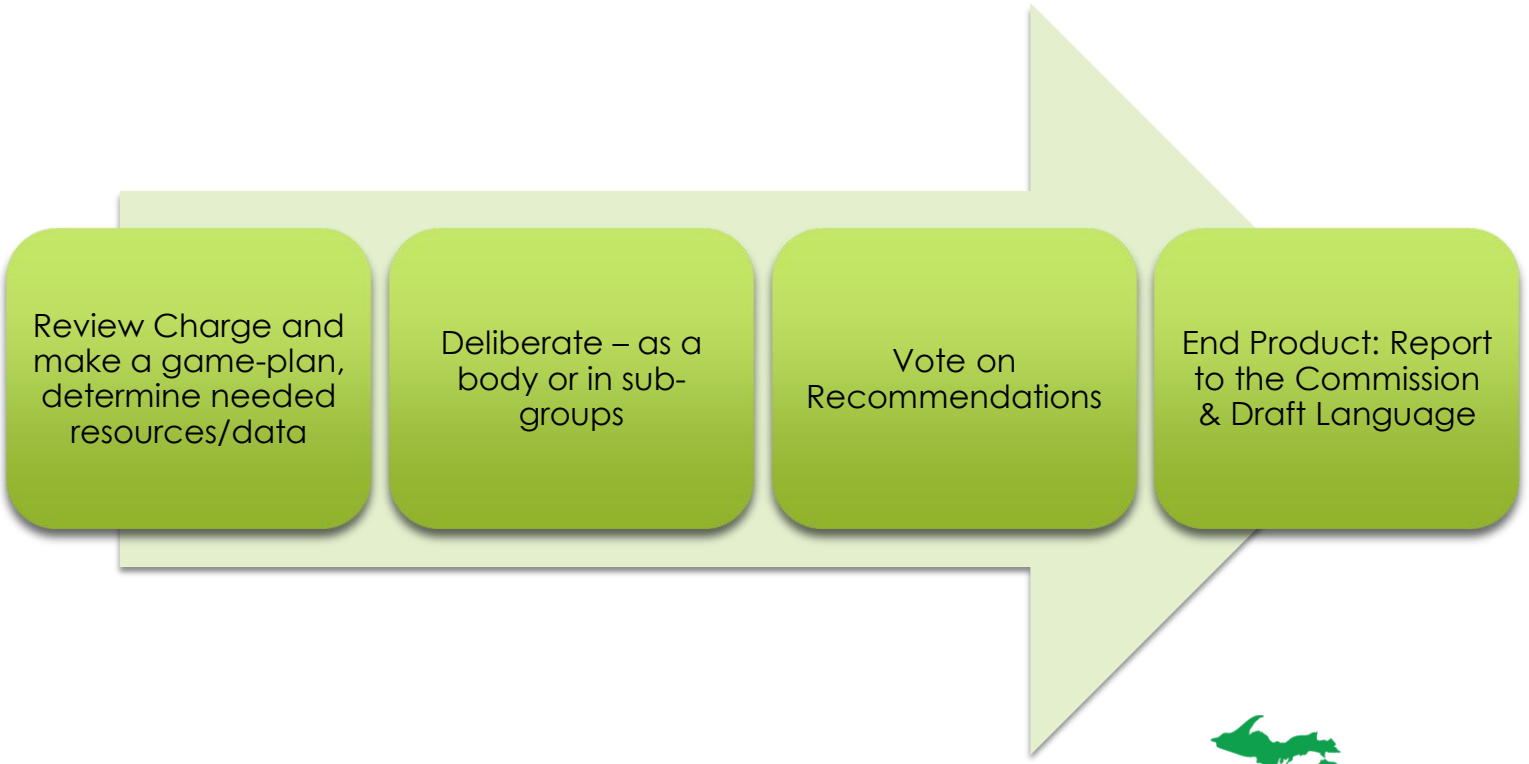
Standard Advisory Committee Operations

- Operates using modified Roberts' Rules.
- The Chair or a designee (SAC member) appointed by the Chair can run the meeting.
- A physical quorum is necessary to conduct business.
- Although SAC members may participate by phone; phone participation is not included in the quorum count or a vote.
- A quorum is defined as a majority of the members appointed and serving.
- Final recommendations are made by the SAC to the CON Commission. The SAC presents a written report and/or final draft language.

SAC Recommendations Process



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After the SAC…

- Recommendations presented to the Commission
- Commission may:
  - Accept the Recommendations
  - Make modifications
  - Reject the Recommendations
- If changes to the Standard are to be made, then:

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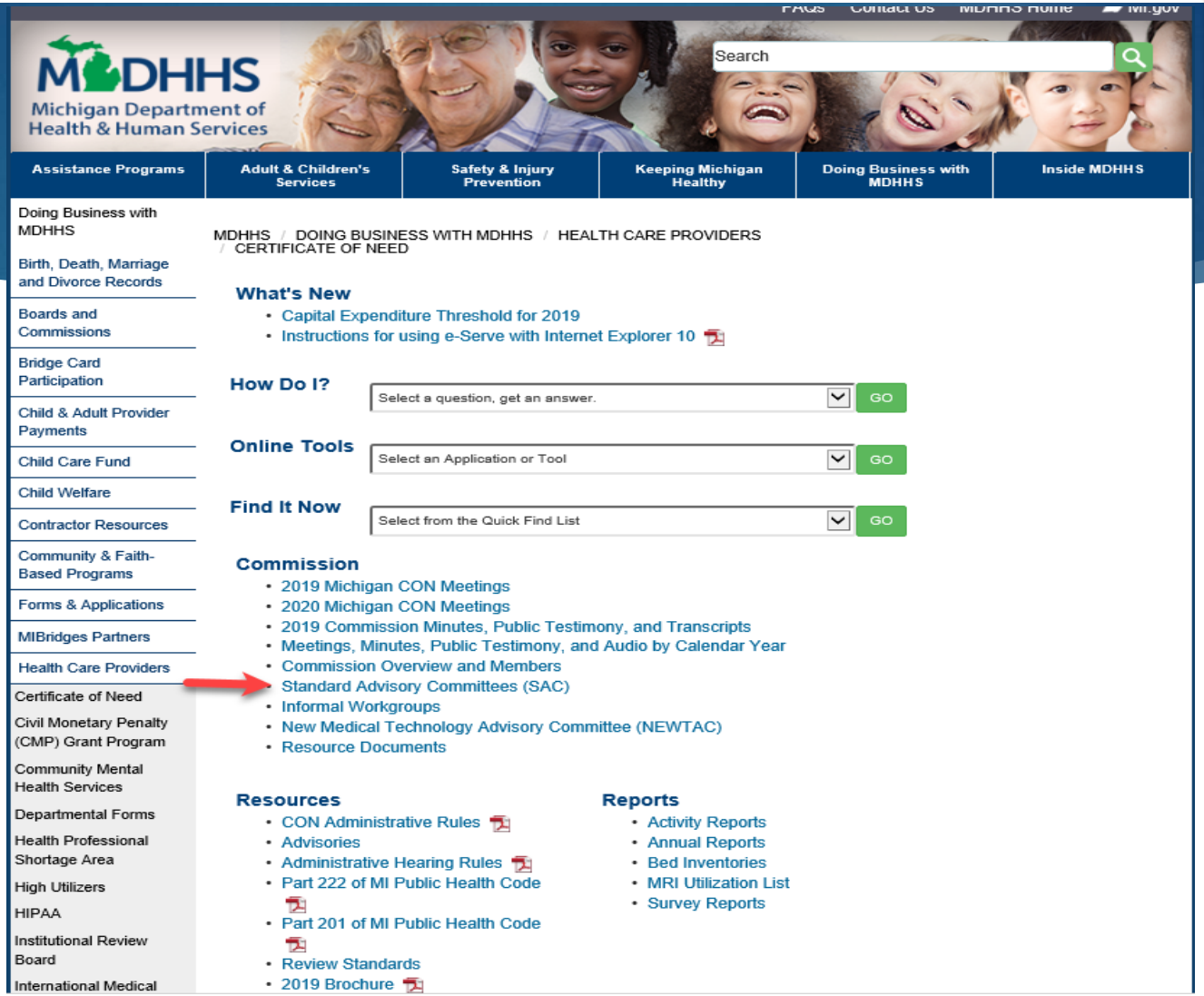
- www.michigan.gov/con



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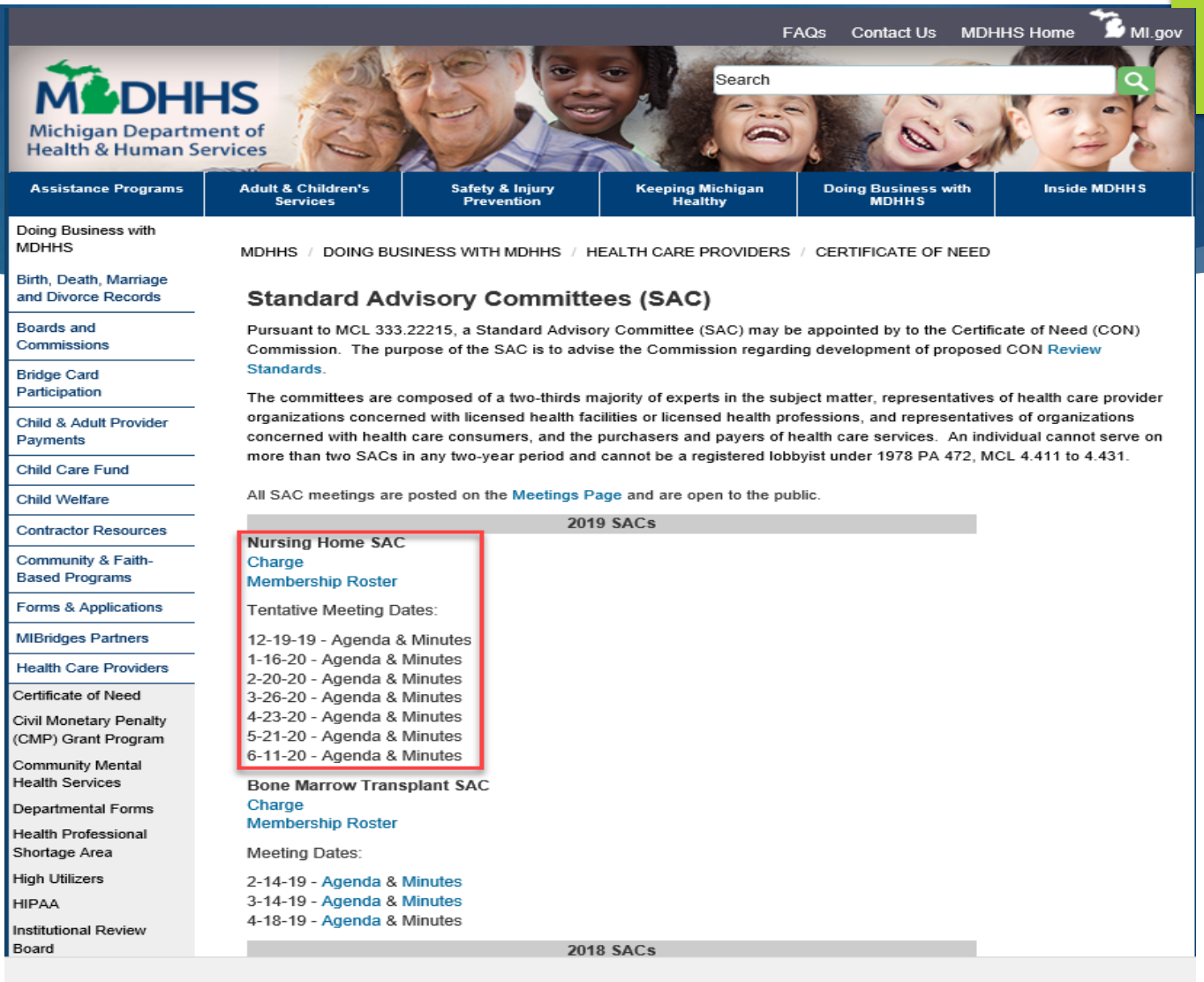

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Standard Advisory Committees (SAC)

Pursuant to MCL 333.22215, a Standard Advisory Committee (SAC) may be appointed by to the Certificate of Need (CON) Commission. The purpose of the SAC is to advise the Commission regarding development of proposed CON Review Standards.

The committees are composed of a two-thirds majority of experts in the subject matter, representatives of health care provider organizations concerned with licensed health facilities or licensed health professions, and representatives of organizations concerned with health care consumers, and the purchasers and payers of health care services. An individual cannot serve on more than two SACs in any two-year period and cannot be a registered lobbyist under 1978 PA 472, MCL 4.411 to 4.431.

All SAC meetings are posted on the Meetings Page and are open to the public.

2019 SACs

Nursing Home SAC
Charge
Membership Roster

Tentative Meeting Dates:

12-19-19 - Agenda & Minutes
1-16-20 - Agenda & Minutes
2-20-20 - Agenda & Minutes
3-26-20 - Agenda & Minutes
4-23-20 - Agenda & Minutes
5-21-20 - Agenda & Minutes
6-11-20 - Agenda & Minutes

Bone Marrow Transplant SAC
Charge
Membership Roster

Meeting Dates:

2-14-19 - Agenda & Minutes
3-14-19 - Agenda & Minutes
4-18-19 - Agenda & Minutes

2018 SACs

MDHHS Michigan Department of Health & Human Services

Nursing Home and HLTCU Bed Need Methodology

Michigan Certificate of Need, Standard Advisory Committee, 2019-20

Paul Delamater (pld@email.unc.edu (mailto:pld@email.unc.edu))

University of North Carolina at Chapel Hill

December 03, 2019

Executive Summary

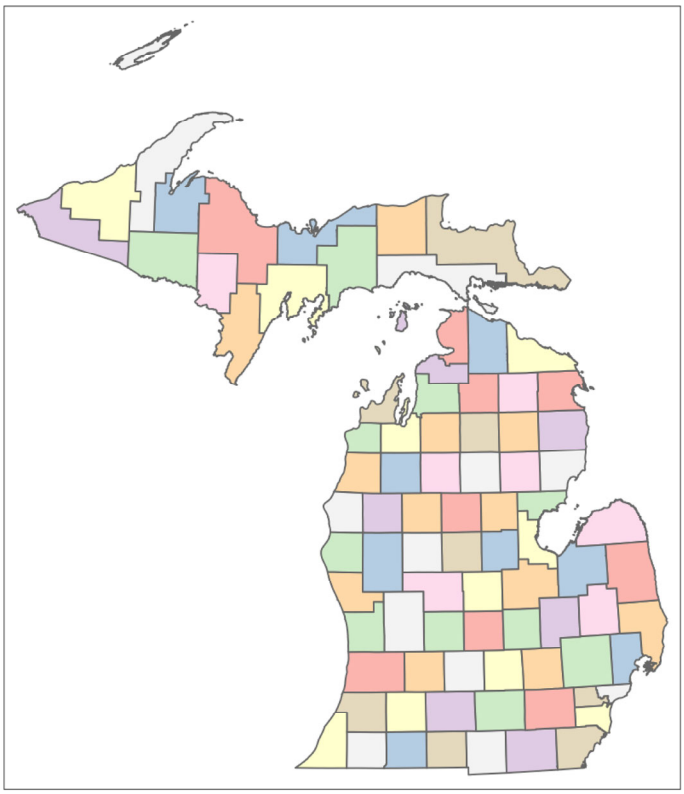
The first charge of the Nursing Home and Hospital Long Term Care Unit (NH-HLTCU) Standard Advisory Committee is to review and potentially recommend changes to the bed need methodology. This document provides a summary of the current bed need methodology, which uses current statewide patient day utilization rates and predicted future population projections to estimate the number of beds needed in the future. I conducted an initial test to examine the methodology's performance and found that, even if presented perfect input data, the methodology produces inaccurate results. This appears to be a result of using statewide patient day use rates to predict localized use. I recommend exploring the use of geographically varying patient day use rates and considering other potential modifications of the NH-HLTCU bed need methodology.

NH-HLTCU Methodology

Planning Areas

The Planning Areas for NH-HLTCU services are defined in *Sections 2.1.(v)* and *13* of the Review Standards. The NH-HLTCU Planning Areas are Michigan's counties with the exception of Houghton and Keweenaw counties, which are combined into a single Planning Area, and Wayne County, which is divided into three Planning Areas, labeled Northwest Wayne, Southwest Wayne, and Detroit. The specific locales included in each of the Wayne County Planning Areas are provided in the Review Standards. The Planning Areas are mapped in Figure 1.

Figure 1. NH-HLTCU Planning Areas



Patient Day Use Rates

The initial step in the NH-HLTCU methodology is to update the patient day use rates by age cohort (people aged 0-64, 65-74, 75-84, and +85 years) using the most recent utilization data from the CON Annual Survey. This calculation is straightforward. The facility-level data from the CON Annual Survey are summed for each age cohort to provide the statewide number of yearly patient days in NH-HLTCU facilities. Population data for Michigan are gathered from the US Census bureau (https://factfinder.census.gov/bkmk/table/1.0/en/PEP/2018/PEPASR6H/0400000US26?slice=year~est72018) in 5-year age categories and then aggregated to the NH-HLTCU age cohorts. The most recent data used for this calculation are presented in Table 1.

Table 1. Patient Day Use Rates (patient days per 1,000 people), 2018 data

AGE	DAYS	POPULATION	USERATE
0 - 64	2,080,203	8,279,311	252
65 - 74	2,658,304	1,004,702	2,646
75 - 84	3,828,742	497,916	7,690
+85	5,296,830	213,986	24,754

Predict Beds and Compare

The predicted patient days in the Planning Year (generally 5 years from the year with the most recent data) are calculated by multiplying the appropriate age cohort patient day use rate by the predicted age cohort population for each Planning Area. The predicted population data is gathered from the Department of Technology, Management & Budget (https://milmi.org/Research/michigan-population-projections-by-county-through-2045). This produces the predicted patient days per age cohort in the Planning Year, which are then summed for each planning area. The resulting total patient days are divided by 365 to calculate each Planning Area's average daily census (ADC) for the Planning Year.

Because facilities are not expected to operate at 100% capacity for an entire year, the methodology includes an occupancy adjustment such that the ADC of each Planning Area is divided by 0.9 (OCCADJADC) and then rounded up to the nearest whole number. The result is the number of beds needed to meet the predicted future demand while operating at 90% occupancy (PREDBEDS).

The predicted beds are compared to the current number of beds (CURRBEDS) for each Planning Area, resulting in either a bed overage or a need for additional beds (BEDNEED). The current number of beds is defined as the most recent CON Bed Inventory from MDHHS CON (https://www.michigan.gov/mdhhs/0,5885,7-339-71551_2945_5106-91133--,00.html). A summary of these calculations are presented for each Planning Area in Table 2. The excess or need for beds is mapped in Figure 2.

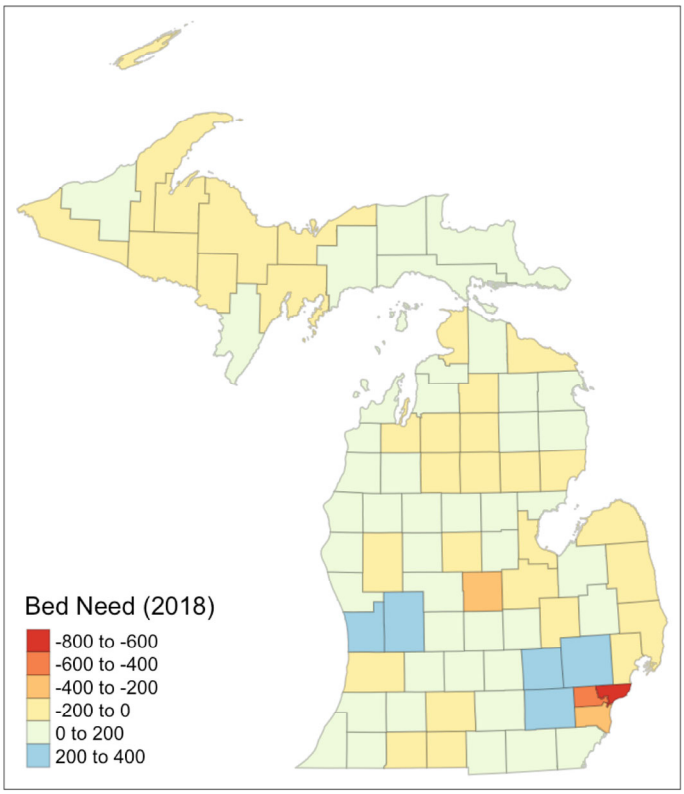
Table 2. Predicted Patient Days, ADC, Beds and Current Beds, 2018 and 2019 data. In the table, Planning Areas with a positive BEDNEED value are predicted to have a *need* for beds in the Planning Area, while those with a negative value are predicted to have an *overage* of beds.

PLANAREA	NAME	PREDPATDAYS	ADC	OCCADJADC	PREDBEDS	CURRBEDS	BEDNEED
1	Alcona	27,745.93	76.02	84.46	85	78	7
2	Alger	16,419.46	44.98	49.98	50	106	-56
3	Allegan	167,123.63	457.87	508.75	509	539	-30
4	Alpena	56,706.63	155.36	172.62	173	171	2
5	Antrim	51,319.41	140.60	156.22	157	133	24
6	Arenac	30,062.39	82.36	91.51	92	68	24
7	Baraga	15,142.30	41.49	46.10	47	59	-12
8	Barry	96,149.00	263.42	292.69	293	267	26
9	Bay	182,630.69	500.36	555.95	556	654	-98
10	Benzie	39,747.49	108.90	121.00	121	113	8
11	Berrien	262,180.39	718.30	798.11	799	774	25
12	Branch	66,231.39	181.46	201.62	202	283	-81
13	Calhoun	209,789.38	574.77	638.63	639	796	-157
14	Cass	83,346.66	228.35	253.72	254	188	66
15	Charlevoix	52,509.46	143.86	159.85	160	159	1
16	Cheboygan	55,127.60	151.03	167.82	168	85	83
17	Chippewa	57,391.51	157.24	174.71	175	157	18
18	Clare	57,951.76	158.77	176.41	177	163	14
19	Clinton	119,569.04	327.59	363.98	364	312	52
20	Crawford	28,594.79	78.34	87.05	88	111	-23
21	Delta	74,916.93	205.25	228.06	229	282	-53
22	Dickinson	49,274.13	135.00	150.00	150	194	-44
23	Eaton	174,738.71	478.74	531.93	532	507	25
24	Emmet	64,170.43	175.81	195.34	196	220	-24
25	Genesee	618,091.65	1,693.40	1,881.56	1,882	1,911	-29
26	Gladwin	51,020.72	139.78	155.31	156	144	12
27	Gogebic	31,330.93	85.84	95.38	96	174	-78

PLANAREA	NAME	PREDPATDAYS	ADC	OCCADJADC	PREDBEDS	CURRBEDS	BEDNEED
28	Grand Traverse	161,961.79	443.73	493.03	494	505	-11
29	Gratiot	63,350.10	173.56	192.85	193	526	-333
30	Hillsdale	77,885.33	213.38	237.09	238	209	29
31	Houghton and Keweenaw	60,973.82	167.05	185.61	186	365	-179
32	Huron	62,479.80	171.18	190.20	191	288	-97
33	Ingham	356,115.64	975.66	1,084.07	1,085	1,073	12
34	Ionia	81,984.48	224.62	249.57	250	235	15
35	Iosco	57,077.58	156.38	173.75	174	203	-29
36	Iron	28,537.18	78.18	86.87	87	249	-162
37	Isabella	83,701.30	229.32	254.80	255	296	-41
38	Jackson	245,147.47	671.64	746.26	747	707	40
39	Kalamazoo	365,198.15	1,000.54	1,111.71	1,112	989	123
40	Kalkaska	28,355.38	77.69	86.32	87	104	-17
41	Kent	858,334.23	2,351.60	2,612.89	2,613	2,354	259
43	Lake	25,660.09	70.30	78.11	79	79	0
44	Lapeer	132,558.35	363.17	403.53	404	368	36
45	Leelanau	56,112.98	153.73	170.82	171	119	52
46	Lenawee	157,732.64	432.14	480.16	481	451	30
47	Livingston	294,524.61	806.92	896.57	897	694	203
48	Luce	11,137.00	30.51	33.90	34	22	12
49	Mackinac	22,988.62	62.98	69.98	70	48	22
50	Macomb	1,339,018.72	3,668.54	4,076.16	4,077	4,159	-82
51	Manistee	52,184.46	142.97	158.86	159	100	59
52	Marquette	113,183.08	310.09	344.55	345	441	-96
53	Mason	59,177.64	162.13	180.15	181	169	12
54	Mecosta	66,078.71	181.04	201.15	202	200	2
55	Menominee	49,110.43	134.55	149.50	150	133	17
56	Midland	144,182.15	395.02	438.91	439	386	53
57	Missaukee	25,500.98	69.87	77.63	78	95	-17
58	Monroe	244,319.50	669.37	743.74	744	659	85
59	Montcalm	98,106.66	268.79	298.65	299	272	27
60	Montmorency	21,796.43	59.72	66.35	67	39	28
61	Muskegon	257,473.67	705.41	783.79	784	646	138
62	Newaygo	77,497.57	212.32	235.91	236	245	-9
63	Oakland	1,908,288.25	5,228.19	5,809.10	5,810	5,426	384

PLANAREA	NAME	PREDPATDAYS	ADC	OCCADJADC	PREDBEDS	CURRBEDS	BEDNEED
64	Oceana	44,567.14	122.10	135.67	136	115	21
65	Ogemaw	43,255.54	118.51	131.68	132	172	-40
66	Ontonagon	15,486.12	42.43	47.14	48	39	9
67	Osceola	41,947.62	114.92	127.69	128	50	78
68	Oscoda	16,940.75	46.41	51.57	52	39	13
69	Otsego	42,512.19	116.47	129.41	130	140	-10
70	Ottawa	423,230.07	1,159.53	1,288.37	1,289	968	321
71	Presque Isle	31,821.28	87.18	96.87	97	98	-1
72	Roscommon	57,959.70	158.79	176.44	177	179	-2
73	Saginaw	320,408.65	877.83	975.37	976	1,130	-154
74	Saint Clair	256,226.15	701.99	779.99	780	784	-4
75	Saint Joseph	94,680.91	259.40	288.22	289	357	-68
76	Sanilac	71,981.00	197.21	219.12	220	227	-7
77	Schoolcraft	17,867.23	48.95	54.39	55	55	0
78	Shiawassee	106,695.87	292.32	324.80	325	316	9
79	Tuscola	87,626.76	240.07	266.75	267	256	11
80	Van Buren	114,569.36	313.89	348.77	349	330	19
81	Washtenaw	485,088.14	1,329.01	1,476.68	1,477	1,189	288
83	Wexford	54,489.32	149.29	165.87	166	131	35
84	Northwest Wayne	824,931.36	2,260.09	2,511.21	2,512	3,020	-508
85	Southwest Wayne	534,861.57	1,465.37	1,628.19	1,629	1,866	-237
86	Detroit	1,046,063.35	2,865.93	3,184.36	3,185	3,968	-783

Figure 2. Map of Current Bed Need, 2018 data.



Assumptions

All methods of predicting future health care use or need require major assumptions. The current NH-HLTCU bed need methodology makes three major assumptions that have the potential to impact its predictions. They are as follows:

1. Future patient day use rates (by age cohort) will be the same as current patient day rates.
2. Statewide patient day use rates are appropriate for use at the Planning Area scale.
3. Future predictions of Planning Area populations are more accurate than assuming no changes from current populations.

In general, these assumptions are not unique to the NH-HLTCU bed need methodology; similar assumptions are present for other bed-based services.

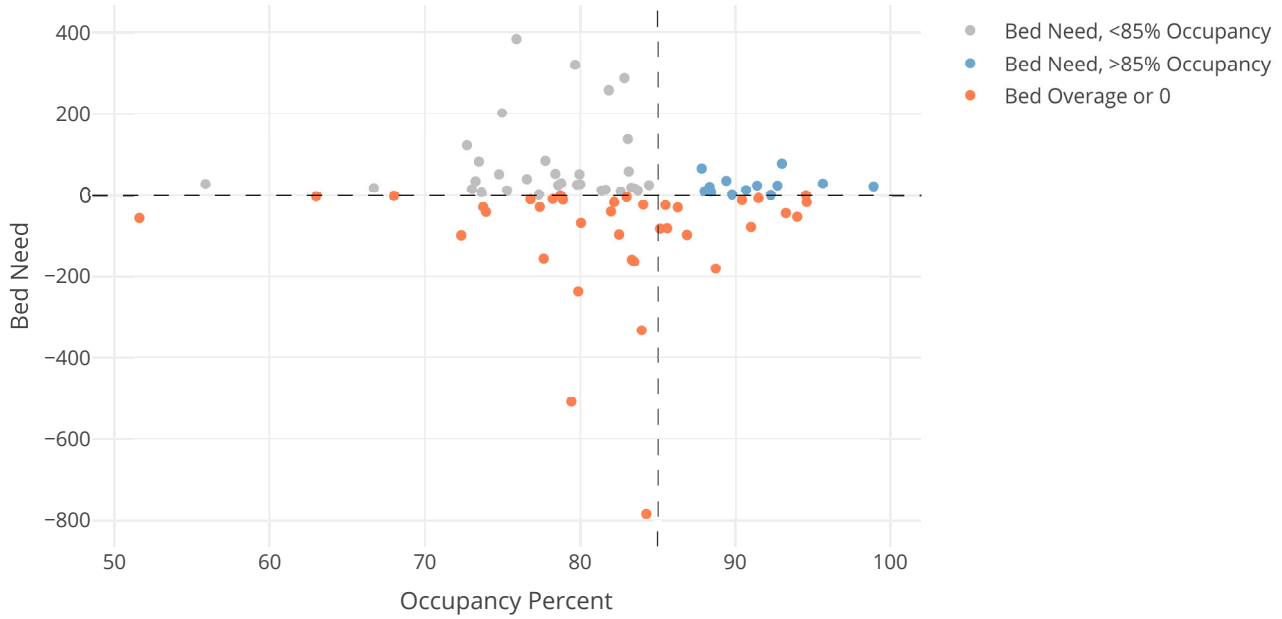
Concerns

For a number of years, there have been concerns that the NH-HLTCU methodology may not be adequately capturing future need. These concerns were compounded by major problems with data collection (in the CON Annual Survey), which caused a delay in the ability to evaluate the methodology. This was because there was limited confidence that the methodology could be appropriately modified with poor data.

However, now that there is confidence in the data being reported in the CON Annual Survey, there is an opportunity to examine and potentially modify the methodology, as the concerns continue. One of the most pressing issues is that the methodology appears to be identifying a future need for beds in Planning Areas relatively low occupancy. To examine this, the current bed need and occupancy percent in 2018 are plotted in Figure 3. This plot shows no clear relationship, as some places with an expected need for beds in the future currently have relatively low occupancy (e.g., the Oakland County planning area with a 384 bed need and 75.89% current occupancy). Further, the opposite scenario is also true, as some regions are currently operating at relative high occupancy level and have an expected overage of beds in the future (e.g., the Delta County planning area with a 53 bed overage and 93.94% current occupancy).

One suggested modification to the current NH-HLTCU methodology is to add an additional step requiring Planning Areas with a future need for beds to also have a minimum current occupancy percent of 85%; his is the approach currently used in Indiana. In Figure 3, the dots for each Planning Areas have been colored based on the following categories: current bed need with greater than 85% occupancy, current bed need with less than or equal to 85% occupancy, and current bed overage.

Figure 3. Occupancy Percent and Bed Need, 2018 data.



Initial Evaluation

Any bed need methodology is likely to be inaccurate, as predicting future health care demand is extremely difficult, especially considering changes in population demographics and distribution, as well as changing standards of care. Furthermore, evaluating the performance or accuracy of a methodology (not solely its predictions) can be difficult, as a methodology may produce highly accurate predictions in some years and poor ones in others as others. Further, inaccurate predictions made by the methodology may not be the "fault" of the methodology itself, but can result from poor inputs such as inaccurately predicted future population data.

Given the issues in the NH-HLTCU data from the CON Annual Survey, testing the performance of the methodology will be difficult (because we only have three years worth of data to work with). However, one approach to evaluate any bed need methodology is to provide the methodology with perfect input data and evaluate its predictions (remove the sources of uncertainty). This test can be accomplished with the NH-HLTCU methodology by running it using the observed patient days and actual population for 2018 (the most recent year with data). Essentially, this test asks the question, "How would the methodology perform if we had a very effective crystal ball and could perfectly predict the statewide age cohort patient day use rates and the age cohort populations for each Planning Areas (the two inputs for the current methodology)?" In other words, this test shows how the methodology would perform if, in 2013, we were given perfect input data for the NH-HLTCU methodology (the predicted age cohort patient day use rates and population).

For this test, county population estimates (by age) were gathered from the US Census (https://factfinder.census.gov/bkmk/table/1.0/en/PEP/2018/PEPAGESEX/0400000US26.05000). The age cohort population counts for the three Wayne county Planning Areas were estimated using the relative distribution of people by age according to the 2010 Census, which was multiplied by the estimated population in 2018.

We compared the predicted data to the observed data for 2018. For the test, the outputs (patient days) were converted to "beds" (more specifically, to ADC) for reference purposes.

Results

The results of the evaluation can be found in Figures 4 and 5 and Table 3. The results of the evaluation show that, even if given perfect input information, the methodology produces predictions that are quite different from the observed data. This does not inspire confidence. Specifically, this means that even if we accurately predict statewide use rates and the future populations (by age cohort), our current methodology will not provide accurate results.

Figure 4. Predicted versus Observed Average Daily Census (ADC), 2018 data.

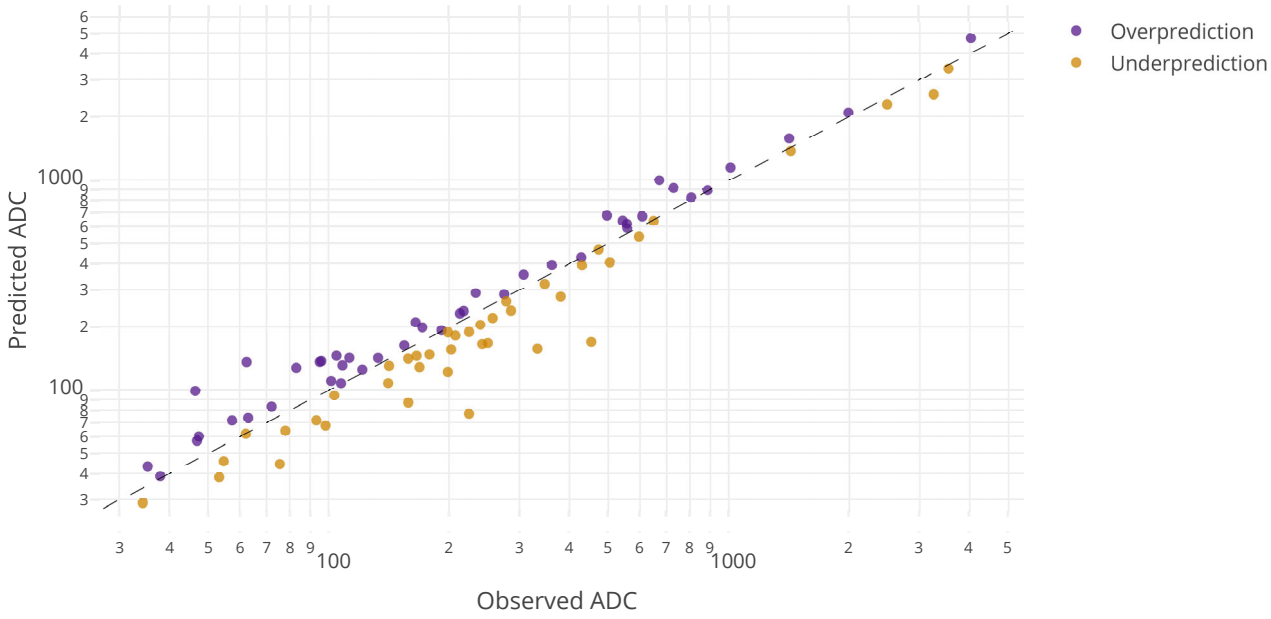


Figure 5. Map of Difference in Predicted and Observed Average Daily Census (ADC), 2018 data.

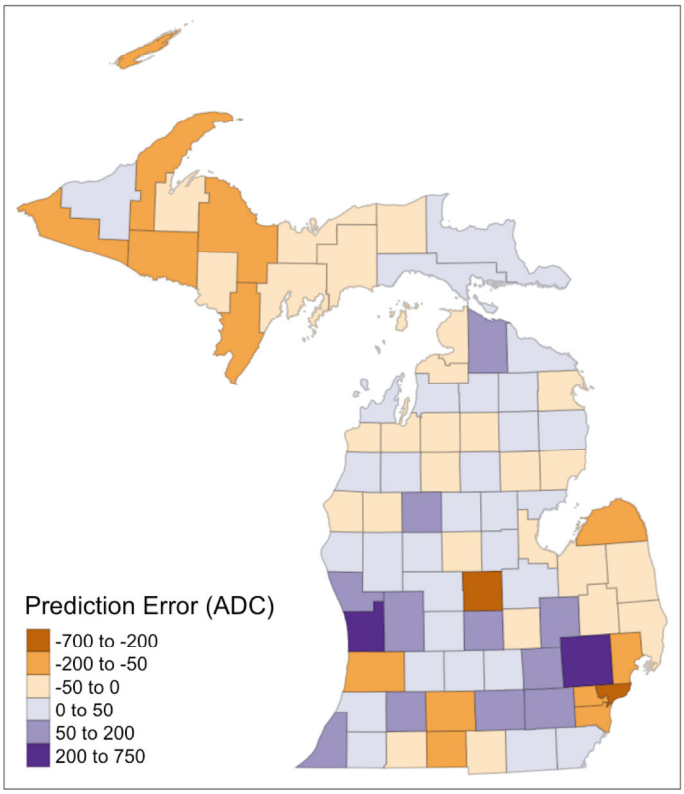


Table 3. Predicted and Observed Average Daily Census (ADC), 2018 data. In the table, Planning Areas with a positive DIFFERENCE value are overpredictions (methodology predicts more beds than they actually need) and Planning Areas with a negative DIFFERENCE value are underpredictions (methodology predicts fewer beds than they actually need).

PLANAREA	NAME	PREDADC	OBSADC	DIFFERENCE
1	Alcona	71.71	57.44	14.27
2	Alger	45.86	54.75	-8.90
3	Allegan	407.07	504.61	-97.55
4	Alpena	146.38	166.03	-19.65
5	Antrim	126.03	121.51	4.52
6	Arenac	73.76	63.02	10.75
7	Baraga	38.49	53.33	-14.83
8	Barry	232.81	213.00	19.81
9	Bay	467.48	473.07	-5.59
10	Benzie	94.45	103.42	-8.98
11	Berrien	673.57	608.11	65.46
12	Branch	166.22	242.19	-75.97
13	Calhoun	538.72	596.52	-57.80
14	Cass	211.43	165.07	46.36
15	Charlevoix	129.40	168.80	-39.40
16	Cheboygan	136.72	62.46	74.26
17	Chippewa	146.53	104.75	41.79
18	Clare	142.97	133.03	9.94
19	Clinton	290.06	233.29	56.77
20	Crawford	71.75	93.28	-21.54
21	Delta	189.97	224.52	-34.56
22	Dickinson	131.27	141.68	-10.41
23	Eaton	429.02	427.95	1.06
24	Emmet	156.65	202.56	-45.91
25	Genesee	1,577.12	1,415.17	161.95
26	Gladwin	131.97	108.41	23.56
27	Gogebic	87.20	158.28	-71.08
28	Grand Traverse	393.80	429.88	-36.08
29	Gratiot	170.16	453.30	-283.14
30	Hillsdale	189.16	198.83	-9.67
31	Houghton-Keweenaw	157.94	332.62	-174.68
32	Huron	168.10	250.12	-82.02
33	Ingham	896.55	885.22	11.33

PLANAREA	NAME	PREDADC	OBSADC	DIFFERENCE
34	Ionia	200.17	171.61	28.56
35	Iosco	148.39	178.78	-30.39
36	Iron	77.19	224.51	-147.32
37	Isabella	205.52	239.54	-34.02
38	Jackson	620.40	556.57	63.83
39	Kalamazoo	917.14	727.78	189.36
40	Kalkaska	67.79	98.34	-30.55
41	Kent	2,106.92	1,989.41	117.51
43	Lake	61.92	62.18	-0.27
44	Lapeer	321.24	346.79	-25.56
45	Leelanau	137.06	95.13	41.93
46	Lenawee	394.51	361.54	32.98
47	Livingston	679.70	496.28	183.41
48	Luce	29.05	34.37	-5.31
49	Mackinac	60.15	47.45	12.71
50	Macomb	3,385.88	3,537.55	-151.67
51	Manistee	128.44	83.11	45.34
52	Marquette	278.44	380.27	-101.83
53	Mason	141.98	158.18	-16.19
54	Mecosta	163.92	154.67	9.25
55	Menominee	122.94	198.71	-75.77
56	Midland	355.42	307.31	48.11
57	Missaukee	63.93	78.06	-14.13
58	Monroe	592.35	557.50	34.85
59	Montcalm	238.71	217.59	21.12
60	Montmorency	57.40	46.96	10.45
61	Muskegon	641.71	543.14	98.57
62	Newaygo	193.77	191.63	2.14
63	Oakland	4,745.41	4,025.12	720.30
64	Oceana	111.30	101.56	9.75
65	Ogemaw	108.70	140.98	-32.29
66	Ontonagon	38.93	37.99	0.94
67	Osceola	99.66	46.48	53.18
68	Oscoda	43.38	35.35	8.02
69	Otsego	108.56	107.51	1.05

PLANAREA	NAME	PREDADC	OBSADC	DIFFERENCE
70	Ottawa	1,002.36	670.73	331.63
71	Presque Isle	83.33	72.10	11.24
72	Roscommon	143.17	112.78	30.39
73	Saginaw	825.77	805.92	19.85
74	St. Clair	639.80	648.83	-9.03
75	St. Joseph	239.75	285.75	-46.01
76	Sanilac	182.78	207.58	-24.80
77	Schoolcraft	44.48	75.60	-31.12
78	Shiawassee	264.39	278.00	-13.61
79	Tuscola	221.61	257.13	-35.52
80	Van Buren	285.59	274.80	10.79
81	Washtenaw	1,153.51	1,009.73	143.78
83	Wexford	138.26	95.97	42.30
84	Northwest Wayne	2,304.80	2,485.73	-180.93
85	Southwest Wayne	1,373.24	1,427.97	-54.72
86	Detroit	2,561.08	3,249.01	-687.93

Discussion

The issue with the NH-HLTCU methodology appears to be, given these results, related to the use of *statewide* age cohort patient day use rates. A solution may not be straightforward though, as use rates for each Planning Area are affected by health of the population, the presence of alternate modes of care (e.g., assisted living), geographic patterns of use (facilities in one planning area that are used by residents of another planning area), and numerous other factors.

Recommendation

I recommend that the SAC consider major modifications to the NH-HLTCU methodology, with specific attention focused on whether using localized age cohort patient day use rates (rather than using a statewide rate) would provide better results. However, this will not be straightforward because NH-HLTCU patient day utilization data is only reported at the facility level (we do not know the home planning area of the patients visiting each facility) and there may be justifiable reasons for using statewide use rates. My suggested first step is to discuss (with the SAC participants) possible reasons why use rates vary greatly among planning areas.

The approach implemented in Indiana has been suggested as a possible modification of the current methodology. Presently, I do not recommend implementing this approach, as I believe that it does not get to the root of the problem, but is a post-methodology fix.