

The Healthy Michigan Plan
PA 107 §105(d)(8-9)
2016 Report on Uncompensated Care and Insurance Rates

December 21, 2017

Submitted to the Michigan Department of Health and Human Services
and the Michigan Department of Insurance and Financial Services

Thomas Buchmueller, University of Michigan, Institute for Healthcare Policy & Innovation

Helen Levy, University of Michigan, Institute for Healthcare Policy & Innovation

Sayeh Nikpay, Vanderbilt University School of Medicine

Jordan Rhodes, University of Michigan, Stephen M. Ross School of Business

105(d)(8) The program described in this section is created in part to extend health coverage to the state's low-income citizens and to provide health insurance cost relief to individuals and to the business community by reducing the cost shift attendant to uncompensated care. Uncompensated care does not include courtesy allowances or discounts given to patients. The Medicaid hospital cost report shall be part of the uncompensated care definition and calculation. In addition to the Medicaid hospital cost report, the department of community health shall collect and examine other relevant financial data for all hospitals and evaluate the impact that providing medical coverage to the expanded population of enrollees described in subsection (1)(a) has had on the actual cost of uncompensated care. This shall be reported for all hospitals in the state. By December 31, 2014, the department of community health shall make an initial baseline uncompensated care report containing at least the data described in this subsection to the legislature and each December 31 after that shall make a report regarding the preceding fiscal year's evidence of the reduction in the amount of the actual cost of uncompensated care compared to the initial baseline report. The baseline report shall use fiscal year 2012-2013 data. Based on the evidence of the reduction in the amount of the actual cost of uncompensated care borne by the hospitals in this state, beginning April 1, 2015, the department of community health shall proportionally reduce the disproportionate share payments to all hospitals and hospital systems for the purpose of producing general fund savings. The department of community health shall recognize any savings from this reduction by September 30, 2016. All the reports required under this subsection shall be made available to the legislature and shall be easily accessible on the department of community health's website.

Executive Summary

This report, pursuant to §105(d)(8-9) of PA 107 of 2013, provides the 2017 annual update to the baseline estimate of uncompensated care borne by Michigan hospitals.

The main source of data for the uncompensated care portion is cost reports that hospitals submit annually to the Michigan Department of Health and Human Services (MDHHS). The initial report, submitted in December 2014, provided baseline data on hospital uncompensated care from 2013, i.e., prior to the implementation of the Healthy Michigan Plan (HMP). The 2015 and 2016 reports presented data from 2014 and 2015, respectively. Because of reporting lags and the timing of hospital fiscal years, these data represented post-HMP experience for some but not all hospitals. The current report includes data from fiscal year 2015 for all hospitals and from fiscal year 2016 for some hospitals, reflecting entirely post-HMP experience.

Consistent with our earlier analysis using a subset of hospitals, these data indicate that the cost of uncompensated care provided by Michigan hospitals fell dramatically after the implementation of the Healthy Michigan Plan. For the average hospital, uncompensated care fell roughly in half, from \$8.1 million to \$3.9 million between 2013 and 2015. Expressed as a percentage of total hospital expenses, uncompensated care decreased from 4.8 percent to 2.2 percent. A total of 124 out of 138 hospitals (90 percent) saw a decline in the amount of uncompensated care provided between 2013 and 2015. The available data from fiscal year 2016 suggests that the amount of uncompensated care provided has stabilized at approximately 2 percent of total costs.

Introduction

In order to measure the effect of the Healthy Michigan Plan, §105(d)(8) of Public Act 107 requires the Department of Community Health (DCH), now the Department of Health and Human Services (DHHS), to publish annual reports on uncompensated care in Michigan. This report fulfills the requirement of §105(d)(8). The analysis is based on data from Medicaid cost reports submitted to the state annually, supplemented with publicly available data on program enrollment and hospital payer mix.

Background: Healthy Michigan Plan Enrollment and Hospital Payer Mix

Table 1 presents information on enrollment in the Healthy Michigan Plan (HMP) and the percentage of adult inpatients at Michigan hospitals who were uninsured from 2013 to 2016.¹ The HMP was established in April 2014 and by the end of that year, just over 500,000 individuals were enrolled in the program. By December 2015, enrollment had increased to over 600,000; by December 2016, enrollment stood at 635,374.

The initial increase in enrollment coincided with a decline in the percentage of hospital patients who lacked insurance. In 2013, approximately 4 percent of all adult inpatients treated at Michigan hospitals were uninsured. For all of 2014, the figure was 1.95 percent. Because the 2014 data include data for the first quarter, before HMP was in place, the change between 2013 and 2014 understates the impact of the HMP. In 2015 and 2016, when the program was in place for the full year, roughly 1 percent of adult inpatients were uninsured.

Data: Medicaid cost reports

Each year, Michigan hospitals submit cost reports to the state Medicaid program. The cost of uncompensated care provided by each hospital can be calculated based on several data elements contained in these reports.

Uncompensated care is the sum of charity care and bad debt. Charity care is the cost of medical care for which there was no expectation of payment because the patient has been deemed unable to pay. Bad debt is the cost of medical care for which there was an expectation of payment, but ultimately payment was not received. Both types of uncompensated care may arise from patients who are uninsured or from those who are under-insured and unable to afford deductibles or other cost-sharing required by their insurance plans when they receive hospital care. More information on the definition of uncompensated care and its measurement in the cost reports is provided in Appendix A.

¹ Healthy Michigan Plan enrollment data are from weekly progress reports published by the Michigan Department of Health & Human Services (http://www.michigan.gov/mdhhs/0,5885,7-339-71547_2943_667). The data on the share of inpatients who are uninsured come from the Agency for Healthcare Research and Quality's HCUP Fast Stats program (<https://www.hcup-us.ahrq.gov/faststats/landing.jsp>).

Hospitals vary in the timing of their fiscal years and this variation affects the timing of when data are reported to the state. Table 2 summarizes the timing of hospital fiscal years and indicates how this timing affects our ability to measure changes in uncompensated care before and after the implementation of the HMP.

For hospitals with fiscal years ending in the first three quarters of the calendar year (i.e., before September 30) the data reported to the state in a particular calendar year corresponds to the previous fiscal year. Hospitals with fiscal years ending in the fourth quarter (i.e., after September 30) report data with an additional one year lag. Thus, in 2014, 90 hospitals submitted data from fiscal year 2013, while 49 hospitals reported data for fiscal year 2012.

Because of this schedule, the most recent data reported to the State in late 2014 was for fiscal year 2013 and therefore represented pre-HMP data for all hospitals. In 2015, the most current data reported was for fiscal year 2014, which for many hospitals included a mix of pre-HMP and post-HMP experience. In 2016, hospitals with fiscal years ending before September 30 reported data for fiscal year 2015. Thus, last year's PA107 report was the first year that the reports for any hospital represented a full 12 months of post-HMP experience. This year's report is the first that reflects data on a full 12 months of post-HMP experience for all Michigan hospitals, as well as 2016 data for roughly two-thirds of the hospitals.

Uncompensated care, FY 2013 to FY 2016

Table 3 presents data on hospital uncompensated care over the period 2013 to 2016. The first three columns present data for all Michigan hospitals. Because for most hospitals 2014 represents a mix of pre-HMP and post-HMP experience, the best estimate of the impact of HMP on hospital uncompensated care comes from a comparison of data from fiscal year 2013 to fiscal year 2015. That comparison indicates that the total cost of uncompensated care provided by Michigan hospitals fell roughly in half, from \$1.1 billion to \$541 million, after the program was put in place. Measured at the level of the average hospital in the state, this corresponds to a decline from \$8.1 million (or 4.8 percent of total expenditures) to \$3.89 million (or 2.2 percent of total expenditures).

The four columns on the right present results for those hospitals with fiscal years ending in the first 3 quarters. The benefit of focusing specifically on these hospitals comes from the fact that the most recent data they reported come from fiscal year 2016. Thus, it is possible to examine how uncompensated care has changed between fiscal years 2015 and 2016. The first thing to note about these data is that the mean results for 2013 to 2015 are quite similar to those for the full set of Michigan hospitals, indicating that the amount of uncompensated care provided by the average hospital fell roughly in half between 2013 and 2015. The data for 2016 suggests that the cost of uncompensated care has stabilized. Uncompensated care represented 2.0 percent of total expenditures in 2016, compared to 2.2 percent in 2015.

Note that in the post-HMP period, uncompensated care as a percentage of total expenditures is larger than the percentage of adult inpatients who were uninsured, as reported in Table 1. One reason is that some uncompensated care may be care provided to privately insured patients. In

particular, patients with high-deductible insurance plans often face large out-of-pocket costs. In addition, the two data sources are not directly comparable, as the discharge data reported in Table 1 pertain only to adult inpatient admissions, whereas the data from the Medicaid cost reports include uncompensated care provided in both inpatient and outpatient settings to patients of all ages.

Results for each individual hospital are reported in Appendix Table B1. Figure 1 presents the full distribution of the change between 2013 and 2015 in uncompensated care as a percentage of total expenses for all hospitals submitting data for both years. That is, each bar in the figure represents the change for a specific Michigan hospital. Uncompensated care fell as a percentage of expenses for 90 percent of these hospitals (124 out of 138). The median change was a decline of 1.9 percentage points, as compared to the average reduction of 2.6 percentage points for all hospitals shown in Table 3. Forty-one hospitals (30 percent) experienced a decline of 3 percentage points or more.

Conclusion

This is the fourth in a series of annual reports analyzing changes in uncompensated care following the implementation of the Healthy Michigan Plan. This year's report is the first to present data representing a full year of experience after the program was in place for all hospitals. The results indicate a substantial decline in uncompensated care since the implementation of the Healthy Michigan Plan. For the average Michigan hospital, uncompensated care expenditures fell roughly in half between fiscal year 2013 and fiscal year 2015. Nine in ten of hospitals saw a decline in uncompensated care measured as a percentage of total expenses between those two years. Data from fiscal year 2016, which are available for 86 out of 137 hospitals, indicate that as Healthy Michigan Plan enrollment has stabilized, so has the cost of uncompensated care provided by hospitals.

Table 1. Healthy Michigan Enrollment and Percent of Uninsured Patients by Year

	2013	2014	2015	2016
Year-End HMP Enrollment	0	507,618	606,490	635,374
Percent of Adult Inpatients Uninsured	3.95%	1.95%	0.99%	0.98%

Notes: Healthy Michigan Plan enrollment is taken from weekly progress reports published by the Michigan Department of Health & Human Services

(http://www.michigan.gov/mdhhs/0,5885,7-339-71547_2943_66797---,00.html)

. The percent of uninsured patients is calculated using data from the HCUP Fast Stats program (<https://www.hcup-us.ahrq.gov/faststats/landing.jsp>). The Fast Stats program reports quarterly data on the percentage of adult inpatients by the following payer source categories: Medicaid, age 19-64; Uninsured, age 19-64; Private, age 19-64; Medicare, age 65+.

Table 2. The Number of Hospitals Reporting Data to the State by Reporting Year and Fiscal Year End

Reporting Year Fiscal Year	2013		2014		2015		2016	
	2012	2013	2013	2014	2014	2015	2015	2016
<u>Quarter in which FY Ends</u>								
1		8 (0)		9 (0)		9 (12)		8 (12)
2		63 (0)		61 (3)		59 (12)		60 (12)
3		19 (0)		19 (6)		20 (12)		18 (12)
4	49 (0)		51 (0)		51 (9)		51 (12)	
Total Number of Hospitals	139		140		139		137	

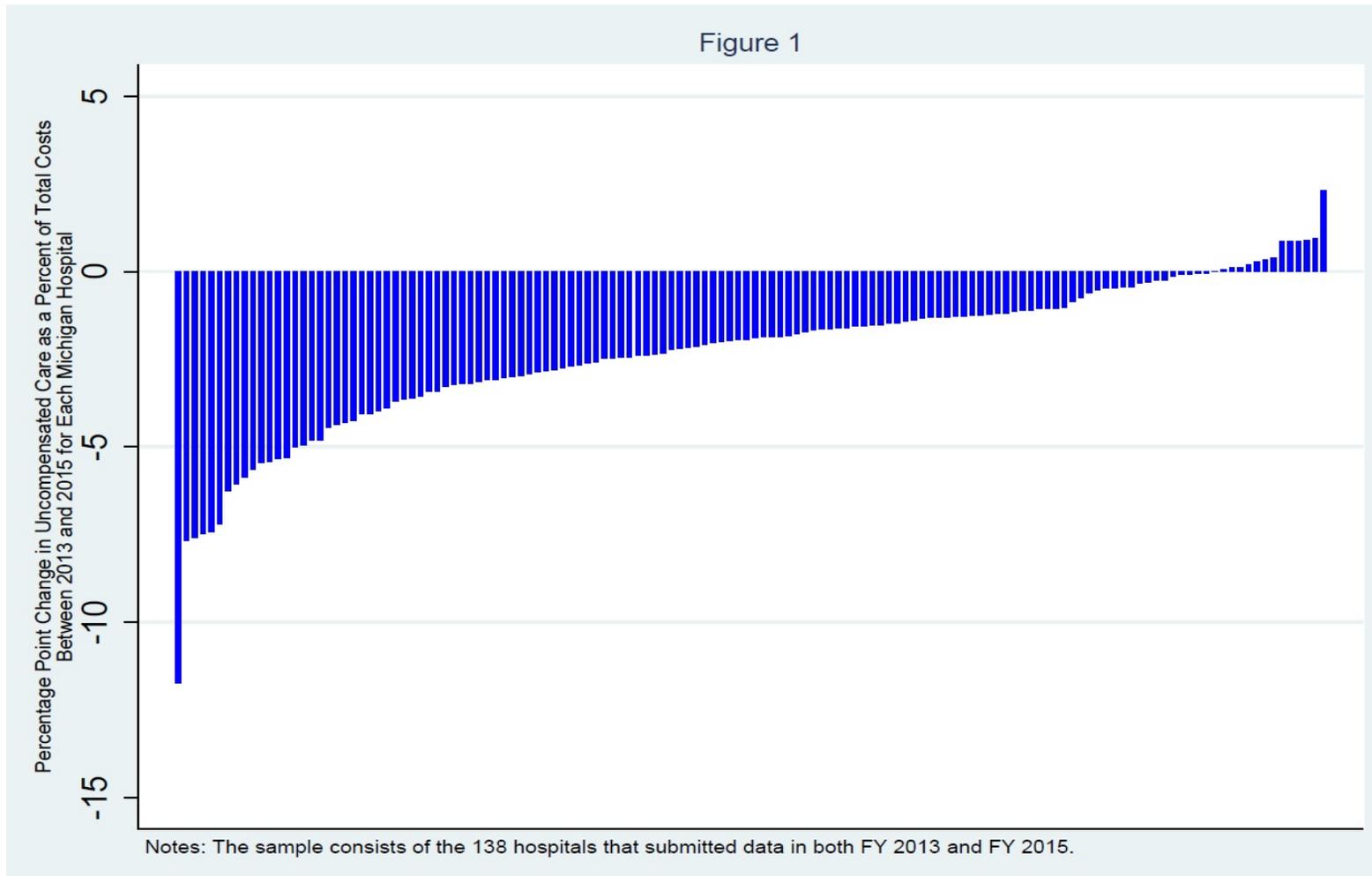
Notes: Average number of months of exposure to Healthy Michigan expansion (4/01/2017) in parentheses. Some hospitals change fiscal year reporting periods during the data years; as a result, there are slight discrepancies in quarterly hospital counts across fiscal years.

Table 3. The Cost of Uncompensated Care Provided by Michigan Hospitals by Fiscal Year, 2013 to 2016

	<u>All Hospitals</u>			<u>Hospitals FY Ends Q1 - Q3</u>			
	<u>FY2013</u>	<u>FY2014</u>	<u>FY2015</u>	<u>FY2013</u>	<u>FY2014</u>	<u>FY2015</u>	<u>FY2016</u>
Number of Hospitals	141	140	139	90	89	88	86
Mean months post-HMP	0	5.4	12	0	3.4	12	12
Uncompensated Care Costs							
Aggregate Total (millions)	\$1,145.0	\$926.9	\$541.7	\$663.2	\$607.7	\$336.1	\$320.9
Mean per Hospital (millions)	\$8.1	\$6.6	\$3.9	\$7.4	\$6.8	\$3.8	\$3.7
As a % of Hospital's Total Costs	4.8%	3.9%	2.2%	4.5%	4.1%	2.2%	2.0%

Note: All cost figures have been converted into 2015 dollars. Uncompensated care costs are the sum of costs from charity care and bad debt. Further details on the derivation of uncompensated care costs are available in Appendix A. The aggregate totals represent the total amount of uncompensated care for those hospitals reporting in a particular year.

Figure 1. Change in Uncompensated Care as a Percentage of Total Expenditures for Each Hospital in Michigan, 2015 vs. 2013



Notes: Each bar represents the percentage change between 2013 and 2015 for a particular hospital.

Appendix A: Data Elements for Calculating Uncompensated Care and Discharges

Data Elements and Methods for Calculating Uncompensated Care

1. Defining uncompensated care

Uncompensated care is defined as the cost of charity care plus the cost of bad debt.

Charity care is the cost of medical care for which there was no expectation of payment because the patient has been deemed unable to pay for care. Each hospital has its own criteria for identifying patients who are eligible for charity care. For example, hospitals in the Mercy Health system pay 100% of the charges for patients who are uninsured and have family income below 100% of the federal poverty level. The University of Michigan's charity care program pays 55% of total charges for uninsured patients that do not qualify for public insurance programs, have family income below 400% of the federal poverty level, and meet several other criteria. However, not all discounted medical care is charity care. Discounts provided for prompt payment or discounts negotiated between the patient and the provider to standard managed care rates do not represent charity care.

Bad debt is the cost of medical care for which there was an expectation of payment because the patient was deemed to be able to pay for care. For example, bad debt includes the unpaid medical bills of an uninsured patient who applied for charity care but did not meet the hospital's specific criteria. Insured patients who face deductibles and coinsurance payments for hospital care can also generate bad debt.

Hospitals report charity care and bad debt separately on the Michigan Medicaid Forms, though as just noted hospitals vary in the criteria they use to distinguish charity care from bad debt. Even within a particular hospital, rules governing eligibility for charity care are often not strictly applied and may take into account the judgment of individuals determining eligibility.

For purposes of this report, Medicaid and Medicare shortfalls — the difference between reimbursements by these programs and the cost of care— are not included in the estimate of uncompensated care. Similarly, expenditures for community health education, health screening or immunization, transportation services, or loss on health professions education or research are not considered uncompensated care. Although the hospital does not expect to receive reimbursement for these services, they do not represent medical care for an individual. These costs incurred by hospitals fall into the broader category of “community benefit,” a concept used by the Internal Revenue Service in assessing hospitals' non-profit status.

2. Measuring uncompensated care using Michigan Medicaid cost report data

The cost of charity care is measured as full charges for uninsured charity care patients minus patient payments toward partial charity discounts, multiplied by the cost-to-charge ratio. The cost of bad debt is measured as unpaid patient charges for which an effort was made to collect payment minus any recovered payments, multiplied by the cost-to-charge ratio. Bad debts

include charges for uninsured patients who did not qualify for a reduction in charges through a charity care program, and unpaid coinsurance, co-pays and deductibles for insured patients.

The cost-to-charge ratio is the ratio of the cost of providing medical care to what is charged for medical care, aggregated to the hospital-level. For example, a cost-to-charge ratio of 0.6 means that on average, 60 cents of every charged dollar covers the cost of care. Variation in cost-to-charge ratios among different payment source categories reflects differences in the mix of services received by patients in those categories. Charity care and bad debt charges for uninsured patients are translated to costs using the cost-to-charge ratio for uninsured patients. Bad debt charges for insured patients are translated to costs using the whole hospital cost-to-charge ratio.

The specific data elements from the Michigan Medicaid Forms (MMF) that are used for these calculations are as follows.

Measures of care for which payment was not received enter positively:

- Uninsured charity care charges (MMF line 6.00)
Full charge of care provided to patients who have no insurance and qualify for full or partial charity care. Payment is not expected.
- Uninsured patient-pay charges (MMF line 6.10)
Full charge of care provided to patients who have no insurance and do not qualify for full or partial charity care (self-pay). Payment is expected but hospital has not yet made a reasonable attempt to collect payment.
- Uninsured bad debts (MMF line 6.36)
Full charge of care provided to patients who have no insurance and do not qualify for charity care. Payment is expected and hospital has made a reasonable attempt to collect payment.
- Third party bad debts (MMF line 6.38)
Insured patients' unpaid coinsurance, co-pays or deductibles when there is an expectation of payment. This includes gross Medicare bad debts. Payment is expected and the hospital has made a reasonable attempt to collect the amount from the patient

These amounts are offset by payments that were received by patients who qualify for charity care as well as bad debt recoveries. These payments enter the calculation of uncompensated care negatively:

- Uninsured payments from charges (MMF line 6.60)
Total payments made by uninsured charity care patients and uninsured self-pay patients towards charges.
- Recoveries for uninsured bad debt (MMF line 10.96)

Recovered amounts for uninsured bad debts, which can include amounts that were collected from patients or amounts from community sources (such as an uncompensated care pool).

- Recoveries for third party bad debts and offsets (MMF line 10.98)
Recovered amounts for insured patients' co-pays, co-insurance and deductibles, including Medicare beneficiaries.

The cost-to-charge ratios used in the calculation are:

- Uninsured inpatient cost-to-charge ratio
Cost-to-charge ratio calculated by MDHHS for the purposes of determining Disproportionate Share Hospital (DSH) payments. It is used to convert charges for care provided to uninsured patients to costs.
- Whole hospital cost-to-charge ratio
Cost-to-charge ratio calculated by MDHHS and used to convert charges for care provided to insured patients to costs.

In addition to measuring the dollar amount of uncompensated care costs, we also measure these costs relative to total hospital costs (MMF line 11.30) as a percentage.

Appendix B

Table B1. Uncompensated Care Expenses by Individual Hospital, FY 2013, FY 2014, FY 2015, and FY 2016

Hospital Name - CMS ID	Qtr of FY end	FY 2013		FY 2014		FY 2015		FY 2016	
		Total UC	as a % of Cost	Total UC	as a % of Cost	Total UC	as a % of Cost	Total UC	as a % of Cost
Allegan General Hospital - 1328	4	1.76	4.57%	1.69	4.38%	1.26	3.30%	----	----
Ascension Crittenton Hospital - 254	4	5.35	2.64%	3.33	1.76%	----	----	----	----
Ascension Crittenton Hospital - 254**	2	----	----	----	----	----	----	8.88	4.65%
Aspirus Iron River Hospital & Clinics - 1318	4	1.65	4.63%	----	----	----	----	----	----
Aspirus Iron River Hospital & Clinics - 1318**	2	----	----	----	----	1.11	3.08%	----	----
Aspirus Iron River Hospital & Clinics - 1318	2	----	----	----	----	----	----	1.16	2.99%
Aspirus Ironwood Hospital - 1333	2	2.03	5.12%	2.32	5.89%	0.59	1.56%	1.99	4.78%
Aspirus Keweenaw Hospital - 1319	2	1.37	4.54%	1.41	4.25%	0.9	2.45%	1.02	2.85%
Aspirus Ontonagon Hospital - 1309	2	0.17	1.73%	0.11	1.14%	0.42	4.03%	0.09	0.81%
BCA StoneCrest Center - 4038	4	0.13	0.83%	0.11	0.66%	0.2	1.11%	----	----
Baraga County Memorial Hospital - 1307	3	1.01	6.70%	0.78	5.11%	0.47	3.00%	0.33	2.07%
Barbara Ann Karmanos Cancer Hospital - 297	2	2.16	0.99%	----	----	----	----	----	----
Barbara Ann Karmanos Cancer Hospital - 297**	3	----	----	1.99	0.97%	----	----	----	----
Barbara Ann Karmanos Cancer Hospital - 297	3	----	----	----	----	1.41	0.65%	1.38	0.67%
Beaumont Hospital - Dearborn - 20	4	18.12	3.49%	13.16	2.42%	8.56	1.54%	----	----
Beaumont Hospital - Farmington Hills - 151	4	16.7	6.88%	7.58	3.10%	5.6	2.07%	----	----
Beaumont Hospital - Taylor - 270	4	6.15	5.12%	3.51	2.85%	1.84	1.50%	----	----
Beaumont Hospital - Trenton - 176	4	3.5	2.82%	2.34	1.84%	1.69	1.26%	----	----
Beaumont Hospital - Wayne - 142	4	7.97	6.64%	5.1	4.07%	3.55	2.76%	----	----
Beaumont Hospital, Grosse Pointe - 89	4	9.16	5.44%	5.49	3.28%	3.86	2.15%	----	----
Beaumont Hospital, Royal Oak - 130	4	46.66	4.04%	22.53	1.97%	15.96	1.29%	----	----
Beaumont Hospital, Troy - 269	4	19.68	3.87%	12.37	2.34%	8.47	1.52%	----	----
Bell Memorial Hospital - 1321	2	3.25	8.67%	1.39	4.39%	0.33	1.08%	0.4	1.25%
Borgess Hospital - 117	2	27.84	7.58%	20.78	5.83%	12.93	3.62%	10.36	2.82%
Borgess-Lee Memorial Hospital - 1315	2	4.1	13.66%	3.73	12.67%	2.18	7.59%	1.96	7.33%

Bronson Battle Creek Hospital - 75	4	15.6	8.54%	11.32	6.58%	5.2	2.67%	----	----
Bronson Lake View Hospital - 1332	4	2.81	6.19%	2.43	5.87%	1.41	3.49%	----	----
Bronson Methodist Hospital - 17	4	50.26	10.16%	30.3	6.42%	14.87	2.95%	----	----
Bronson South Haven Hospital - 85	2	1.5	4.71%	1.01	3.01%	0.41	1.29%	0.33	0.99%
Caro Community Hospital - 1329	4	0.48	4.79%	0.48	4.50%	0.38	3.32%	----	----
Children's Hospital of Michigan - 3300	4	3.54	1.06%	3.57	1.10%	3.25	1.00%	----	----
Chippewa War Memorial Hospital - 239	4	2.39	3.32%	1.03	1.27%	0.89	1.11%	----	----
Clinton Memorial Hospital - 1326	4	0.71	2.92%	0.71	3.09%	0.55	2.31%	----	----
Community Health Center of Branch County - 22	4	5.64	9.16%	3.61	5.91%	2.45	4.20%	----	----
Covenant Medical Center, Inc. - 70	2	9.96	2.74%	8.15	2.30%	3.35	0.87%	4	0.98%
Deckerville Community Hospital - 1311	2	0.22	3.55%	0.41	6.05%	0.25	3.93%	0.32	4.73%
Detroit Receiving Hospital - 273	4	32	14.40%	14.66	6.72%	5.81	2.66%	----	----
Dickinson County Memorial Hospital - 55	4	1.6	2.16%	0.91	1.23%	0.63	0.75%	----	----
Doctors' Hospital of Michigan - 13	4	3.54	12.93%	1.62	7.05%	0.83	5.52%	----	----
Eaton Rapids Medical Center - 1324	2	1.59	9.87%	1.77	9.47%	1.26	7.07%	1.13	5.89%
Edward W. Sparrow Hospital - 230	4	21.67	3.08%	17.36	2.50%	14.48	2.02%	----	----
Forest Health Medical Center, Inc. - 144	4	0.41	1.20%	0.28	0.77%	0.2	0.46%	----	----
Forest View Psychiatric Hospital - 4030	4	0.2	1.39%	0.17	1.22%	0.17	1.14%	----	----
Garden City Hospital - 244	3	6.21	5.18%	----	----	----	----	----	----
Garden City Hospital - 244*	2	----	----	5.27	4.38%	----	----	----	----
Garden City Hospital - 244*	4	----	----	3.11	2.68%	----	----	----	----
Garden City Hospital - 244	4	----	----	----	----	3.45	3.01%	----	----
Genesys Regional Medical Center - 197	2	15.14	3.95%	14.59	3.79%	5.59	1.48%	6.09	1.58%
Harbor Beach Community Hospital - 1313	4	0.06	0.82%	0.14	1.64%	0.07	0.87%	----	----
Harbor Oaks Hospital - 4021	2	0.06	0.50%	0.15	1.34%	0.18	1.37%	0.2	1.38%
Harper University Hospital - 104	4	9.85	2.48%	6.91	1.64%	3.65	0.87%	----	----
Havenwyck Hospital - 4023	2	0.22	0.86%	0.32	1.12%	0.22	0.73%	0.42	1.35%
Hayes Green Beach Memorial Hospital - 1327	1	3.66	7.83%	4.29	9.76%	2.21	4.86%	1.62	3.79%
Healthsource Saginaw - 275	4	0.19	0.78%	0.29	1.12%	0.4	1.64%	----	----
Helen Newberry Joy Hospital - 1304	4	1.88	7.39%	1.21	4.78%	1.08	4.18%	----	----
Henry Ford Allegiance Health - 92	2	36.27	9.84%	29.68	8.01%	15.51	4.18%	17.99	4.46%

Henry Ford Hospital - 53	4	97.97	8.46%	83.46	7.57%	50.75	4.22%	----	----
Henry Ford Macomb Hospital - 47	4	14.88	4.66%	12.4	4.06%	11.86	3.64%	----	----
Henry Ford West Bloomfield Hospital - 302	4	6.35	2.53%	6.92	2.84%	6.18	2.45%	----	----
Henry Ford Wyandotte Hospital - 146	4	21.8	9.10%	16.49	7.18%	9.95	4.09%	----	----
Hills & Dales General Hospital - 1316	3	0.62	3.23%	0.5	2.52%	0.45	2.18%	0.64	2.99%
Hillsdale Hospital - 37	2	2.72	5.62%	2.12	4.59%	1.86	4.14%	2.98	6.28%
Holland Community Hospital - 72	1	4.96	3.00%	5.57	3.31%	3.39	1.95%	6.46	3.65%
Hurley Medical Center - 132	2	27.97	9.41%	16.16	5.36%	10.05	3.16%	6.4	1.84%
Huron Medical Center - 118	3	0.82	2.87%	0.75	2.52%	0.4	1.35%	0.48	1.53%
Huron Valley - Sinai Hospital - 277	4	8.79	5.75%	3.36	2.04%	2.15	1.43%	----	----
Ionia County Memorial Hospital - 1331	4	1.72	6.61%	1.08	4.18%	0.97	3.19%	----	----
Kalkaska Memorial Health Center - 1301	2	1.94	8.90%	1.85	8.35%	0.7	3.59%	0.86	3.31%
Kingswood Psychiatric Hospital - 4011	4	0.2	0.99%	0.11	0.56%	0.25	1.19%	----	----
Lake Huron Medical Center - 31	2	4.99	7.33%	3.69	5.78%	----	----	----	----
Lake Huron Medical Center - 31**	3	----	----	----	----	1.26	1.99%	----	----
Lake Huron Medical Center - 31*	4	----	----	----	----	1.54	2.28%	----	----
Lakeland Hospital - St. Joseph - 21	3	14.2	5.31%	12.16	4.30%	7.2	2.47%	9.02	3.03%
Lakeland Hospital Watervliet - 78	3	2.09	9.21%	1.57	6.29%	0.39	1.53%	0.6	2.24%
Mackinac Straits Hospital - 1306	1	2.26	11.26%	2.06	9.19%	1.73	7.20%	2.01	7.28%
Marlette Regional Hospital - 1330	2	0.78	3.43%	0.86	3.97%	0.64	3.13%	0.39	1.98%
Marquette General Hospital - 54*	2	4.04	2.04%	----	----	----	----	----	----
Marquette General Hospital - 54	2	----	----	3.4	1.93%	0.76	0.42%	0.89	0.39%
Mary Free Bed Hospital & Rehabilitation Center - 3026	1	0.88	1.86%	1.5	3.02%	0.67	1.39%	0.71	1.29%
McKenzie Memorial Hospital - 1314	3	0.61	4.65%	0.42	3.33%	0.3	2.41%	0.4	3.05%
McLaren - Central Michigan - 80	3	2.28	2.90%	2.09	2.73%	1.19	1.60%	1.38	1.71%
McLaren - Greater Lansing - 167	3	7.68	2.71%	11.24	4.19%	6.53	2.18%	4.99	1.61%
McLaren Bay Regional - 41	3	6.94	2.86%	5.85	2.29%	4.01	1.54%	4.65	1.82%
McLaren Flint - 141	3	14.36	3.66%	12.93	3.33%	4.75	1.19%	5.6	1.43%
McLaren Lapeer Region - 193	3	5.75	5.61%	5.8	5.79%	3.25	3.17%	2.15	2.07%
McLaren Macomb - 227	3	20.27	8.15%	18.26	6.92%	8.96	3.34%	4.47	1.61%
McLaren Oakland - 207	3	5.99	4.98%	6.53	5.18%	3.65	2.85%	2.48	1.84%

McLaren Port Huron - 216	2	7.77	4.75%	----	----	----	----	----	----
McLaren Port Huron - 216**	3	----	----	7.15	4.30%	----	----	----	----
McLaren Port Huron - 216	3	----	----	----	----	4.46	2.79%	4.12	2.48%
McLaren-Northern Michigan - 105	3	5.15	2.89%	3.44	1.91%	1.75	0.89%	5.38	2.63%
Memorial Healthcare - 121	4	2.08	2.60%	1.22	1.55%	0.8	0.96%	----	----
Mercy Health Muskegon - 66	2	11.15	6.82%	6.87	4.23%	4.03	2.36%	6.68	8.84%
Mercy Health Partners - Lakeshore Campus - 1320	2	1.06	6.37%	0.82	3.95%	0.54	3.34%	0.63	3.61%
Mercy Health Partners - Mercy Campus - 4	2	9.01	6.19%	7.54	3.40%	4.17	1.83%	----	----
Metro Health Hospital - 236	2	13.53	6.12%	11.9	4.92%	10.6	3.73%	7.57	2.89%
Mid Michigan Medical Center - Gladwin - 1325	2	0.89	4.35%	0.92	4.43%	0.72	3.17%	0.68	2.95%
MidMichigan Medical Center - Alpena - 36	2	2.59	2.88%	1.86	1.98%	0.94	1.03%	1.16	1.17%
MidMichigan Medical Center - Clare - 180	2	1.67	5.33%	2.8	8.44%	0.94	2.73%	0.78	2.16%
MidMichigan Medical Center - Gratiot - 30	2	3.14	3.83%	2.77	3.48%	1.6	2.01%	1.36	1.58%
MidMichigan Medical Center - Midland - 222	2	7.69	3.13%	7.33	2.90%	5.32	1.93%	4.04	1.24%
Munising Memorial Hospital - 1308	1	0.46	5.78%	0.55	7.60%	0.32	4.14%	0.15	1.99%
Munson Healthcare Cadillac Hospital - 81	2	2.8	4.54%	2.66	3.71%	1.76	2.64%	0.96	1.34%
Munson Healthcare Charlevoix Hospital - 1322	1	0.93	3.24%	1.01	3.32%	0.47	1.46%	----	----
Munson Healthcare Charlevoix Hospital - 1322**	2	----	----	----	----	----	----	0.43	1.21%
Munson Healthcare Grayling Hospital - 58	2	2.54	4.23%	1.89	2.64%	1.57	2.57%	0.8	1.31%
Munson Medical Center - 97	2	23.09	4.97%	17.41	3.81%	8.12	1.78%	9.2	1.90%
North Ottawa Community Hospital - 174	2	2.09	4.66%	1.75	3.77%	1.15	2.22%	0.82	1.57%
Oakland Regional Hospital - 301	4	0.11	0.40%	0.11	0.46%	0.12	0.53%	----	----
Oaklawn Hospital - 217	2	4.46	5.09%	----	----	----	----	----	----
Oaklawn Hospital - 217*	1	----	----	3.03	3.48%	----	----	----	----
Oaklawn Hospital - 217	1	----	----	----	----	1.62	1.95%	1.6	1.85%
Otsego County Memorial Hospital - 133	4	1.36	2.61%	0.97	1.76%	0.72	1.21%	----	----
Paul Oliver Memorial Hospital - 1300	2	1.12	8.16%	0.98	7.20%	0.72	5.15%	0.66	4.73%
Pine Rest Christian Hospital - 4006	2	0.55	1.01%	0.63	1.04%	0.61	0.94%	1.19	1.91%
ProMedica Herrick Hospital - 1334	4	0.59	1.88%	0.65	2.38%	0.68	2.73%	----	----
ProMedica Monroe Regional Hospital - 99	2	9.63	6.55%	9.17	6.93%	6.34	4.60%	----	----
ProMedica Monroe Regional Hospital - 99*	4	----	----	----	----	8.91	6.12%	----	----

Promedica Bixby Hospital - 5	4	1.2	1.70%	1.33	1.90%	1.34	1.81%	----	----
Providence-Providence Park Hospital - 19	2	21.83	3.65%	20.9	3.63%	14.44	2.40%	10.02	1.57%
Rehabilitation Institute - 3027	4	1.54	1.90%	0.94	1.21%	1.06	1.45%	----	----
Saint Mary's Standish Community Hospital - 1305	2	0.89	4.49%	0.85	4.60%	0.49	2.64%	0.4	2.18%
Samaritan Behavioral Center - 4040	4	0.09	0.99%	0.05	0.56%	0.06	0.75%	----	----
Scheurer Hospital - 1310	2	1.58	5.37%	1.39	4.52%	1.35	4.05%	0.91	2.71%
Schoolcraft Memorial Hospital - 1303	4	0.34	1.74%	0.28	1.39%	0.14	0.63%	----	----
Sheridan Community Hospital - 1312	1	1.05	8.10%	1.02	7.36%	1.28	9.06%	0.48	3.47%
Sinai-Grace Hospital - 24	4	29.02	9.21%	11.44	3.78%	5.24	1.72%	----	----
Southeast Michigan Surgical Hospital - 264	4	0.04	0.32%	0.11	0.88%	0.15	1.21%	----	----
Southwest Regional Rehabilitation Hospital - 3025	2	0.46	3.88%	0.32	3.34%	----	----	----	----
Southwest Regional Rehabilitation Hospital - 3025*	4	----	----	0.21	1.60%	----	----	----	----
Sparrow Carson Hospital - 208	4	1.39	3.25%	1.77	4.29%	0.82	1.72%	----	----
Spectrum Health - 38	2	33.42	2.86%	40.88	3.37%	20.4	1.61%	21.56	1.58%
Spectrum Health - Reed City Campus - 1323	2	2.94	6.80%	3.17	6.84%	1.72	3.61%	0.85	1.66%
Spectrum Health Big Rapids - 93	2	2.68	5.81%	2.08	4.33%	1.99	3.78%	2.39	4.17%
Spectrum Health Gerber Memorial - 106	2	3	5.00%	3.4	5.56%	----	----	----	----
Spectrum Health Gerber Memorial - 1338	2	----	----	----	----	2.51	4.06%	1.98	2.78%
Spectrum Health Ludington Hospital - 110	3	2.3	4.13%	----	----	----	----	----	----
Spectrum Health Ludington Hospital - 110*	2	----	----	1.85	3.31%	----	----	----	----
Spectrum Health Ludington Hospital - 110	2	----	----	----	----	1.63	2.81%	2	2.92%
Spectrum Health Pennock - 40	3	2.28	4.66%	2.58	5.86%	2.07	4.61%	----	----
Spectrum Health Pennock - 40*	2	----	----	----	----	----	----	1.97	3.91%
Spectrum Health United Hospital - 35	2	2.61	4.36%	3.49	5.53%	2.26	3.25%	2.07	2.91%
Spectrum Health United Memorial - Kelsey Campus - 1317	2	0.89	7.01%	1.23	9.36%	0.91	7.01%	0.77	5.78%
Spectrum Health Zeeland Community Hospital - 3	2	1.6	3.87%	2.37	5.31%	1.73	3.43%	1.57	3.09%
St Joseph Mercy Chelsea - 259	2	2.61	2.76%	2.75	2.91%	0.99	1.05%	1.18	1.16%
St. Francis Hospital & Medical Group - 1337	3	4.24	7.27%	3.26	6.00%	1.87	3.20%	1.85	2.94%
St. John Hospital and Medical Center - 165	2	36.69	5.47%	34.98	5.25%	19.54	2.86%	14.07	1.81%
St. John Macomb-Oakland Hospital-Macomb Center - 195	2	22.49	6.22%	20.21	5.88%	11.45	3.31%	10.5	2.89%
St. John River District Hospital - 241	2	1.2	2.68%	1.12	2.40%	0.63	1.53%	0.65	1.51%

St. Joseph Mercy Hospital - Ann Arbor - 156	2	30.63	4.53%	26.33	4.33%	11.34	1.86%	10.3	1.50%
St. Joseph Mercy Livingston Hospital - 69	2	8.44	8.86%	7.29	7.97%	2.52	3.44%	4.64	5.68%
St. Joseph Mercy Oakland - 29	2	14.02	4.84%	18.58	6.67%	5.27	1.76%	6.24	2.05%
St. Mary Mercy Hospital - 2	2	10.82	5.26%	14.5	7.06%	6.04	2.88%	3.33	1.50%
St. Mary's Health Care (Grand Rapids) - 59	2	15.86	4.68%	12.84	3.58%	7.79	1.83%	9.37	2.11%
St. Mary's of Michigan Medical Center - 77	2	18.3	8.00%	13.82	6.50%	5.33	2.56%	5.32	2.38%
Straith Memorial Hospital - 71	4	0.03	0.32%	0.03	0.27%	0.06	0.65%	----	----
Sturgis Memorial Hospital - 96	3	2.34	7.02%	1.87	5.48%	1.33	3.93%	1.26	3.64%
Tawas St. Joseph Hospital - 100	2	2.22	5.35%	1.42	3.63%	1.21	3.02%	1.02	2.51%
The Behavioral Center of Michigan - 4042	4	0.08	0.92%	0.09	0.96%	0.04	0.44%	----	----
Three Rivers Health - 15	4	----	----	1.68	4.37%	1.15	2.95%	----	----
Three Rivers Health - 15*	4	2.58	6.58%	----	----	----	----	----	----
UP Health System - Portage - 108	2	1.08	1.88%	----	----	----	----	----	----
UP Health System - Portage - 108*	4	1.11	1.86%	----	----	----	----	----	----
UP Health System - Portage - 108	4	----	----	0.54	1.11%	0.32	0.66%	----	----
University of Michigan Health System - 46	2	52.28	2.38%	55.15	2.38%	37.1	1.53%	37.09	1.42%
West Branch Regional Medical Center - 95	1	2.23	5.78%	2.05	5.28%	1.75	4.49%	1.65	3.85%

Note: All cost figures have been annualized and converted into 2015 dollars.

Hospital observations highlighted in grey are dropped from the analysis in Tables 2 and 3. These observations represent a duplicate submission in a fiscal year.

***Contains observations that are either less than, (* < 362), or more than, (** > 365), 365 days.