

Appendix C-Procurement Data Extrapolations

NORTH CENTRAL REGION

There were 5,724 registered hospitals in the U.S. as of 2011,¹ including 1,456 registered community hospitals (non-federal, short-term general and other special hospitals) and 37 VA hospitals/medical centers² in the North Central Sustainable Agriculture and Education (SARE) region—Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin.^{3,4,5} See Table C.1 for a breakdown by state. Note: The total number of registered U.S. hospitals includes 421 non-federal psychiatric, 112 non-federal long-term care, and 10 other institutions, such as prison hospitals and college infirmaries, but region specific data is harder to find for these hospitals so they have not been included in the north central region-specific data.

Table C.1—Registered North Central Region Community Hospitals and VA Hospitals/Medical Centers by State (in alphabetical order)

State	Number of community hospitals	Number of VA medical facilities	Combined
Illinois	188	5	193
Indiana	125	3	128
Iowa	118	2	120
Kansas	132	3	137
Michigan	153	5	155
Minnesota	132	2	136
Missouri	120	4	124
Nebraska	86	2	90
North Dakota	41	1	43
Ohio	183	4	184
South Dakota	53	3	56
Wisconsin	125	3	128

POTENTIAL MARKET ESTIMATES

Hospital food procurement data are not readily available. The American Hospital Association (AHA) does not track this information. The Association for Healthcare Foodservice (AHF) reports the total health care food and beverage market as approximately \$12 billion today, but that is the extent of their public reporting on the topic.⁶ It is possible to use the Market Basket Data devised by the Centers for Medicare & Medicaid Services to estimate hospital food expenditures, but this approach defies application by a layperson and did not seem likely to produce a result any more accurate than the data presented here. Note: The data presented here is designed to give readers a sense of the potential market for sustainable food represented by various groups of north central region hospitals, and should not be used for any other purpose outside this Report.

Community hospitals

The following data sources were used to estimate the potential health care market for sustainable food and beverages represented by community hospitals in the north central region:

- 2012 food and beverage procurement data collected from eight of the nine Institute for Agriculture and Trade Policy (IATP) SARE project hospital collaborator facilities [data from the St. Cloud VA Medical Center (VAMC) was not included here]
- 2012 food and beverage procurement data collected from 20 north central region hospitals via the Health Care Without Harm (HCWH) 2013 Healthy Food in Health Care (HFHC) Survey⁷ (no north central region VA hospitals/medical centers completed the survey)
- 2011 utilization data reported in Table 5 U.S. Census Division 4: East North Central-Overview 2007-2011 and-Utilization, Personnel, Revenue and Expenses, Community Health Indicators 2007-2011, pages 38-39 of AHA Hospital Statistics, 2013 Edition

- 2011 utilization data reported in Table 5 U.S. Census Division 6: West North Central-Overview 2007-2011 and-Utilization, Personnel, Revenue and Expenses, Community Health Indicators 2007-2011, pages 42-43 of AHA Hospital Statistics, 2013 Edition
- 2011 utilization data reported in the state-specific sections of Table 6 Overview 2007-2011 and-Utilization, Personnel, Revenue and Expenses, Community Health Indicators 2007-2011 of AHA Hospital Statistics, 2013 Edition
- 2011 information on staffed beds and average daily patient census from the AHA Guide to the Health Care Field, 2013 Edition for the following groups of north central region health care facilities: VA hospitals/medical centers, HFHC Pledge signers, Healthier Hospitals Initiative (HHI) Healthier Food Challenge participants, IATP SARE project collaborating facilities, and the 20 respondents to the 2013 HFHC survey.

Table C.2 contains key 2012 food and beverage expense data reported by 27 north central region hospitals⁸ by staffed beds. This expenses data serves as the basis for all non-VA hospital/medical center extrapolations. Note: Using each hospitals average daily census (ADC) for patients would have provided the most realistic estimates, but this data could not be extracted in a timely fashion for all applicable north central region hospitals, so number of staffed beds was used.

Table C.2—2012 F&B Expense Data Reported by 27 North Central Region Hospitals (by staffed beds)⁹

Staffed beds	Lowest F&B expenses reported by a facility	Highest F&B expenses reported by a facility	Average of all F&B expenses reported by facilities
4 to 24	\$139,665	\$139,665	\$139,665
25 to 49	\$186,816	\$400,000	\$314,272
50 to 99	\$380,000	\$380,000	\$380,000
100 to 199	\$636,095	\$750,000	\$688,969
200 to 299	\$784,283	\$1,500,000	\$1,212,432
300 to 399	\$918,780	\$3,211,795	\$1,876,858
400 to 499	\$1,337,791	\$2,013,929	\$1,675,860
500+	\$1,451,035	\$5,063,074	\$2,936,285

The procurement data in these additional resources were used to test the validity of the ranges reported in Table C.2:

Food Service Director, “2013 Healthcare Census: Hospitals Uncertain on Impact of Obamacare,” www.foodservicedirector.com/trends/research/articles/2013-healthcare-census-hospitals-uncertain-impact-obamacare (accessed October 11, 2013)

Food Service Director “2012 Hospital Census Report,” www.foodservicedirector.com/sites/default/files/2012_Hospital_Census.pdf (accessed October 11, 2013)

Food Service Director, “2012 Performance Report for 50 Hospitals,” www.foodservicedirector.com/sites/default/files/2012_Hospital_Census.pdf (accessed October 11, 2013) (contains 2011 food and beverages expenditures reported by 50 hospitals/health systems)

Food Service Director, “2011 Hospital Census,” www.foodservicedirector.com/trends/research/articles/2011-hospital-census (accessed October 11, 2013)

Note: These resources contained hospital food and beverage expense data that was useful to review for comparison purposes, but the data was not for 2012.

See Table C.3 for a breakdown by bed size of the estimated market for sustainable foods represented by north central region community hospitals and Table C.4 for a breakdown by state.

Table C.3—Estimated Market for Sustainable Food and Beverages (F&B)¹⁰

Represented by North Central Region Community Hospitals (by staffed beds)

Staffed beds	2012 F&B expenditures (low end of range)	2012 F&B expenditures (high end of range)	2012 F&B expenditures (average)
4 to 24	\$23,882,715	\$23,882,715	\$23,882,715
25 to 49	\$78,836,352	\$168,800,000	\$132,622,925
50 to 99	\$117,420,000	\$117,420,000	\$117,420,000
100 to 199	\$156,479,370	\$184,500,000	\$169,486,456
200 to 299	\$102,741,073	\$196,500,000	\$158,828,644
300 to 399	\$74,421,180	\$260,155,395	\$152,025,525
400 to 499	\$54,849,431	\$82,571,089	\$68,710,260
500+	\$79,806,925	\$278,469,070	\$161,495,675
Combined	\$688,437,046	\$1,312,298,269	\$984,472,200

Table C.4—Estimated North Central Region Community Hospital Market for Sustainable Food and Beverages (F&B)¹¹ (by state)

States	2012 F&B expenditures (low end of range)	2012 F&B expenditures (high end of range)	2012 F&B expenditures (average)
Illinois	\$109,955,452	\$218,408,578	\$161,222,403
Indiana	\$61,011,987	\$117,327,531	\$88,306,716
Iowa	\$39,127,577	\$76,812,687	\$59,095,716
Kansas	\$42,798,210	\$76,846,112	\$61,217,221
Michigan	\$80,071,844	\$177,991,495	\$126,150,602
Minnesota	\$55,138,500	\$97,998,003	\$76,849,478
Missouri	\$61,126,216	\$127,441,564	\$92,814,493
Nebraska	\$26,311,244	\$49,072,553	\$39,580,979
North Dakota	\$11,689,289	\$23,152,648	\$18,502,839
Ohio	\$109,868,727	\$224,606,193	\$163,661,323
South Dakota	\$15,657,385	\$26,743,288	\$22,701,131
Wisconsin	\$51,797,900	\$95,897,617	\$74,369,299

HFHC Pledge signers/Healthier Food Challenge participants

See Table C.5 for a breakdown by staffed beds of the estimated market for sustainable foods represented by north central region HFHC Pledge signers and HHI Healthier Food Challenge participants. In addition, 2011 average daily census information was available for most of these hospitals. See Table C.6 for a breakdown by average daily census (and staffed beds, if average daily census unknown). It would have been preferable to have average daily census data for 2012, the same year as the purchasing data. Note: While it is possible that these hospitals could have reported much higher average daily census data in 2012 than that reported in 2011, Table C.6 demonstrates how much lower actual annual hospital F&B expenditures might be than what is reported in Tables C.3 and C.5.

Table C.5—Estimated Market for Sustainable Food and Beverages (F&B)¹²
Represented by North Central Region HFHC Pledge Signers and HHI Healthier Hood Challenge Participants (by average daily census)

Staffed beds	HFHC Pledge signers/HHI Healthier Food Challenge Participants	2012 F&B expenditures (low end of range)	2012 F&B expenditures (high end of range)	2012 F&B expenditures (average)
4 to 24	6	\$837,990	\$837,990	\$837,990
25 to 49	15	\$2,802,240	\$6,000,000	\$4,714,085
50 to 99	26	\$9,880,000	\$9,880,000	\$9,880,000
100 to 199	26	\$16,538,470	\$19,500,000	\$17,913,203
200 to 299	25	\$19,607,075	\$37,500,000	\$30,310,810
300 to 399	18	\$15,289,380	\$57,812,310	\$29,159,933
400 to 499	4	\$5,351,164	\$8,055,716	\$6,703,440
500+	16	\$23,216,560	\$81,009,184	\$46,980,560
Combined		\$93,522,879	\$220,595,200	\$146,500,020

Table C.6—Estimated Market for Sustainable Food and Beverages (F&B)¹³
Represented by North Central Region HFHC Pledge Signers and HHI Healthier Hood Challenge Participants (by average daily census)¹⁴

Average daily census	HFHC Pledge signers/HHI Healthier Food Challenge Participants	2012 F&B expenditures (low end of range)	2012 F&B expenditures (high end of range)	2012 F&B expenditures (average)
4 to 24	20	\$2,793,300	\$2,793,300	\$2,793,300
25 to 49	22	\$4,109,952	\$8,800,000	\$6,913,991
50 to 99	21	\$7,980,000	\$7,980,000	\$7,980,000
100 to 199	36	\$22,899,420	\$27,000,000	\$24,802,896
200 to 299	20	\$15,685,660	\$30,000,000	\$24,248,648
300 to 399	5	\$4,247,050	\$16,058,975	\$8,099,981
400 to 499	3	\$4,013,373	\$6,041,787	\$5,027,580
500+	9	\$13,059,315	\$45,567,666	\$26,426,565
Combined		\$74,788,070	\$144,241,728	\$106,292,962

VA hospitals and medical centers

The following data sources were used to estimate the potential market for sustainable food and beverages represented by VA hospitals/medical centers in the north central region:

- FY2010 food and beverage procurement data reported in Attachment A: VA Facility Data from FY10, Solicitation #VA-797-11-RP-0176 issued October 19, 2011 (Subsistence Prime Vendor Program for all VA Medical Centers and other participating government agencies)¹⁵
- 2011 and 2012 food and beverage procurement data collected from one IATP SARE project health care collaborator—VAMC St. Cloud

See Table C.7 for a breakdown by bed size of the fiscal year (FY) 2010 food and beverage expense data reported for the 37 north central region VA hospitals and medical centers and estimated market for sustainable foods as of FY 2010. See Table C.8 for a breakdown by state.

NOTE: The estimated market for sustainable food represented by north central region VA hospitals/medical centers was configured at first using the data in Table C.2. However, in comparing this data to the VA-specific data reported in VA-797-11-RP-0176, and even taking into consideration average food budget increases of at least five percent since 2010,^{16,17} it was determined that use of Table C.2 data would yield results well above the real market represented by VA facilities in the north central region.

Table C.7—Estimated Market for Sustainable Food and Beverages (F&B) Represented by North Central Region VA Hospitals/Medical Centers¹⁸ (by staffed beds)

Staffed beds	Lowest FY10 F&B expenses reported by a facility	Highest FY10 F&B expenses reported by a facility	Total FY10 F&B expenses	Average of all FY10 F&B expenses reported by facilities
4 to 24	\$243,595	\$243,595	\$243,595	\$243,595
25 to 49	\$370,058	\$370,568	\$370,568	\$370,568
50 to 99	\$221,166	\$647,274	\$3,195,169	\$399,396
100 to 199	\$154,446	\$1,384,590	\$5,601,086	\$700,136
200 to 299	\$640,460	\$1,281,028	\$7,956,450	\$884,050
300 to 399	\$341,557	\$2,090,156	\$9,991,645	\$1,110,183
400 to 499	\$0	\$0	\$0	\$0
500+	\$1,996,398	\$1,996,398	\$1,996,398	\$1,996,398
Combined			\$29,354,911	

Table C.8—Estimated North Central Region VA Hospital/Medical Center Market for Sustainable Food and Beverages (F&B (by state)

Staffed beds	Lowest FY10 F&B expenses reported by a facility	Highest FY10 F&B expenses reported by a facility	Total FY10 F&B expenses	Average of all FY10 F&B expenses reported by facilities
Illinois	\$418,089	\$1,633,823	\$5,166,649	\$1,033,330
Indiana	\$154,446	\$1,281,028	\$2,642,889	\$880,963
Iowa	\$425,939	\$756,423	\$1,182,362	\$591,181
Kansas	\$370,568	\$649,158	\$1,660,186	\$553,395
Michigan	\$243,595	\$1,110,910	\$3,583,787	\$716,757
Minnesota	\$891,665	\$1,374,622	\$2,266,287	\$1,133,144
Missouri	\$334,459	\$1,074,020	\$2,624,283	\$656,071
Nebraska	\$221,166	\$546,115	\$767,281	\$383,641
North Dakota	\$295,411	\$295,411	\$295,411	\$295,411
Ohio	\$819,587	\$1,996,398	\$4,837,578	\$1,209,395
South Dakota	\$341,557	\$396,380	\$1,092,935	\$364,312
Wisconsin	\$497,833	\$2,090,156	\$3,235,263	\$1,078,421

ENDNOTES

1. American Hospital Association. Fast Facts on US Hospitals, <http://www.aha.org/research/rc/stat-studies/fast-facts.shtml> (accessed September 6, 2013).
2. In addition to serving meals to patients, visitors, and personnel, VA medical centers may serve meals to residents in nursing, psychiatric, and drug and alcohol treatment facilities, as well as veterans in adult day care.
3. AHA Hospital Statistics 2013 Edition, Table 5 U.S. Census Division 4: East North Central-Overview 2007-2011 and-Utilization, Personnel, Revenue and Expenses, Community Health Indicators 2007-2011, pgs. 38-39.
4. AHA Hospital Statistics 2013 Edition, Table 5 U.S. Census Division 4: West North Central-Overview 2007-2011 and-Utilization, Personnel, Revenue and Expenses, Community Health Indicators 2007-2011, pgs. 42-43.
5. AHA Hospital Statistics 2013 Edition, Table 6 Overview 2007-2011 and-Utilization, Personnel, Revenue and Expenses, Community Health Indicators 2007-2011.
6. Building a Bright Future for Healthcare Foodservice. Association for Healthcare Foodservice, <http://healthcarefoodservice.org/about-us> (accessed September 26, 2013).
7. As a founding partner and 2012 participant in the Healthy Food in Health Care work, IATP was given access the north central region specific survey data.
8. Represents data from seven SARE project collaborator facilities and 20 north central region respondents to 2013 HCWH HFHC Survey.
9. Using each hospitals average daily census (ADC) for patients, instead of staffed beds, would have provided the most realistic estimates, but ADC numbers were not reported consistently or as readily available as the number of staffed beds so they could not be used.
10. Extrapolated using data reported in Table C.2. and the total number of north central region registered community hospitals per staffed bed range as reported in AHA Hospital Statistics, 2013 Edition (Table 5): pgs.38-39, 42-43.
11. Extrapolated using reported in Table C.2. and the total number of north central region registered community hospitals per staffed bed range by state as reported in AHA Hospital Statistics, 2013 Edition (Table 6).
12. Extrapolated using data reported in Table C.2. and the total number of HFHC Pledge signers and/or HHI Healthier Food Challenge participants per staffed bed range using staffed bed data reported for each hospitals in the AHA Guide to the Health Care Field, 2013 Edition.
13. Extrapolated using data reported in Table C.2. and the total number of HFHC Pledge signers and/or HHI Healthier Food Challenge participants per average daily census data reported for each hospital in the AHA Guide to the Health Care Field, 2013 Edition. Used staffed bed ranges to report, since it is standard to have one patient per bed.
14. Number of staffed beds was used in 10 instances where average daily census information was not available.
15. For more on the VA Subsistence Prime Vendor Contract see <http://www.va.gov/oal/business/nc/spv.asp>. Due to the Federal Government shutdown a link to Attachment cannot be provided.
16. 2012 Hospital Census Report. Food Service Director, <http://www.foodservicedirector.com/trends/research/articles/2012-hospital-census-report> (accessed August 27, 2013).
17. Non-Patient Service Drives Hospitals. Foodservice Director (April 15, 2011), <http://www.foodservicedirector.com/sites/default/files/FSD%20Hospital%20Census%202011.pdf> (accessed October 16, 2013).
18. Per page 12 of VA-797-11-RP-0176, Attachment A lists the "estimated dollar amount for annual purchases from [the] contract for each [VA Medical Center] VAMC and [Veterans Canteen Service] VCS facility, and the "figures are based on actual dollars spent in FY 2010 for all food items, which includes the distribution price, except fresh bread, fresh milk and some produce plus approximately 50 [percent] of their non-food (flatware, china, serving utensils, disposable products, etc.) purchases." Though these figures do not include fresh bread, fresh milk and some produce purchases made via other sources and includes some non-food purchases, based on the 2011 and 2012 food and beverage expense data collected by VAMC St. Cloud for this project, the amounts reported in Appendix A can be considered a good proxy for total food and beverage expenditures.