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Exhibit R

**UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF MICHIGAN**

UNITED STATES OF AMERICA and
STATE OF MICHIGAN,

Plaintiffs,

v.

HILLSDALE COMMUNITY HEALTH
CENTER, W.A. FOOTE MEMORIAL
HOSPITAL D/B/A ALLEGIANCE HEALTH,
COMMUNITY HEALTH CENTER OF
BRANCH COUNTY, and
PROMEDICA HEALTH SYSTEM, INC.,

Defendants.

Case No. 5:15-cv-12311-JEL-DRG

Judge Judith E. Levy

Magistrate Judge David R. Grand

Expert Report of Dr. Tasneem Chipty

October 27, 2016

**CONFIDENTIAL – SUBJECT TO PROTECTIVE ORDER
IN CASE NO. 5:15-cv-12311-JEL-DRG (E.D. MICH.)**

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volume (88.6 percent and 86.4 percent, respectively, in 2014) originates from Hillsdale County.²²

12. Table 1 summarizes the importance of different area hospitals for general acute inpatient care from the perspective of patients living in Hillsdale County.²³ Hillsdale County residents choose HCHC (51.5 percent) and Allegiance (18.6 percent) most frequently for their inpatient care.²⁴ In this regard, the two hospitals represent the top two choices for general acute care inpatient services for Hillsdale County residents. A similar pattern holds for overlap services. Given these facts, economic principles indicate that residents of Hillsdale County are likely to be harmed by conduct, like the Agreement, that dampens competition between Allegiance and HCHC for general acute care inpatient services.

Table 1
Hillsdale County Residents' Choice of Hospitals
for General Acute Care Inpatient Services, 2014

	% of All Discharges	% of Overlap Discharges
HCHC	51.5%	58.7%
Allegiance	18.6%	16.9%
Community Health Center of Branch County	8.6%	9.3%
University of Michigan Health System	6.9%	4.5%
Borgess Medical Center	3.0%	1.0%
Oaklawn Hospital	2.1%	1.9%
ProMedica Bixby Hospital	1.8%	1.9%
St. Joseph Mercy Ann Arbor	1.8%	1.1%
Bronson Battle Creek Hospital	1.0%	0.7%
<i>Other Hospitals</i>	4.8%	4.1%

Notes:

1. "Overlap Discharges" include discharges associated with DRGs found at both Allegiance and HCHC.
2. See Chipty Workpapers for a description of other data processing steps.

Source: 2014 MHA Data.

²² The next largest segment of HCHC's inpatient volume (4.3 percent in 2014) originates from Lenawee County, and its next largest segment of outpatient volume (4.8 percent in 2014) originates from Branch County. See Chipty Workpapers.

²³ Consistent with Table 1, a 2012 analysis conducted by Navigant on behalf of Allegiance shows that HCHC and Allegiance typically rank first and second, respectively, in the share of inpatients from Hillsdale County across the vast majority of service lines. See Navigant Healthcare, "Regional Profiles: South-Hillsdale," February 27, 2012, AH000074334, pp. 12-13.

²⁴ Even more Hillsdale county residents might have gone to Allegiance but for its Agreement with HCHC.

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not aware of any evidence in the case to suggest that competition would have destroyed Allegiance’s ability to achieve the referral volume it needed to justify its investment in higher acuity services. Nor am I aware of any evidence in the case to suggest that competition would have caused Allegiance to lower the quality or breadth of services, which would have caused patients to suffer.

VIII. The Agreement Harmed Consumers

26. I turn next to a description of some of the ways in which the Agreement has harmed or is likely to have harmed consumers.

A. *Hillsdale County Residents Were Denied Free Health Services and Education They Would Have Otherwise Received*

27. Like other hospitals around the country, Allegiance provides a variety of free health services and education to patients in the local communities from which it hopes to attract patients.^{56,57} These activities include free screenings, educational seminars, and giveaways of items such as first aid kits. The direct benefits to consumers of some of Allegiance’s marketing initiatives are described by Georgia Fojtasek, in her annual report to the community:⁵⁸

“Every year, Allegiance Health makes a significant investment in our community by providing low-cost or cost-free services and education. These community benefit programs

⁵⁶ See for example the presentations of Jason Jakubowski (“April: Autism Awareness Month”) and Amber Cava (“October: Breast Cancer Awareness Month”), in Society for Healthcare Strategy & Market Development Webcast “Health Observance and Recognition Days: Successful Case Examples,” 2016.

⁵⁷ “Allegiance’s Objections and Responses to Plaintiffs’ Second Set of Interrogatories and Third Set of Requests for Production of Documents,” *United States of America and State of Michigan v. Hillsdale Community Health Center, et al*, Case No.: 5:15-cv-12311-JEL-DRG, September 18, 2016, pp. 13-15; and accompanying files “AH000000211.xls” to “AH000000217.xls.” See also “Allegiance Health’s Objections and Answers to Plaintiffs’ First Set of Interrogatories,” *United States of America and State of Michigan v. Hillsdale Community Health Center, et al*, Case No.: 5:15-cv-12311-JEL-DRG, October 15, 2015, pp. 9-10; and Fojtasek September Deposition, pp. 157-158.

⁵⁸ Allegiance Health, “I Am Proud. 2015 Report to the Community,” (hereafter “2015 Report to the Community”), available at <http://iamproud.allegiancehealth.org/>, site visited September 27, 2016. See also Fojtasek September Deposition, pp. 114-115 (Ms. Fojtasek explained about an educational seminar on orthopedic health, “Q: Did Joint Camp seminars have any benefit to patients? A: They can be informative if people are making choices where they’re going to have their care. Q: Do Joint Camp seminars let people know about services that they might not otherwise know about? A: They do.”); and Fojtasek September Deposition, pp. 157-158 (“Q: What does Allegiance do for health fairs? A: We offer a variety of screenings...And then there’s promotional material. Q: And do they also have benefits to patients in letting them know about health conditions they may have? A: It’s to educate and then to provide some – I mean, depending. Ours can provide some screenings.”).

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supplement our normal services and extend our mission as a health system to improve the health and well-being of all community members, regardless of their ability to pay.”

Ms. Fojtasek and Allegiance estimate that Allegiance’s total contribution to community programs and services in 2015 was \$72,327,900.⁵⁹ Yet, as a result of the Agreement, residents of Hillsdale County were denied the benefit of some of these free services.

28. Ordinary course documents make clear that Allegiance is restricted from offering many of these free services in Hillsdale County because of its Agreement with HCHC. For example, Allegiance hosted a health fair in 2009 commemorating women’s health, at which it offered free health screenings for cholesterol, vascular disease, blood pressure, body mass index, and bone density.⁶⁰ Allegiance did not promote the event in Hillsdale County, depriving some residents of the opportunity to access both useful information and free services.⁶¹ In 2011, Allegiance offered a menu of free health screenings as part of its annual “heart and vascular expo;” however, as with its 2009 event, Allegiance was restricted from promoting the event in Hillsdale County.⁶² A 2012 document describing free vascular screenings provided by Allegiance explains, “Currently Hillsdale does not permit AH [Allegiance] to conduct free vascular screens as they periodically charge for such screenings.”⁶³ In 2014, Allegiance’s orthopedic surgeon Dr. Timothy Ekpo wanted to host a free educational seminar in Hillsdale County, but Allegiance stopped him from doing so.⁶⁴ In the latter case, Hillsdale County

⁵⁹ According to Allegiance, the benefit of these programs reached tens of thousands of people. For example, Allegiance estimates that: (a) “general community health education related to AIDS/HIV, behavioral health, depression, fitness and exercise, family planning, and prenatal health” served 84,272 people and was valued at \$290,196; (b) “group support for patients with asthma and chronic lung disease, organ transplants, diabetes, cancer, stroke, and grief and loss” served 132,049 people and was valued at \$979,885; (c) “community-based free screenings for blood pressure, vascular disease, cholesterol, cancer, hearing and behavioral health” served 1,348 and was valued at \$27,329; and (d) “free counseling services including family and smoking/tobacco cessation counseling” served 2,968 people and was valued at \$35,345. *See* 2015 Report to the Community.

⁶⁰ Allegiance Health, “Healthy Hearts – Summer 2009,” AH001401475-478, at 478.

⁶¹ Anthony Gardner, “Campaign Name: Summer 2009 Heart Healthy Newsletter,” AH000988098 (“Distribution list Criteria...Exclude: ...Hillsdale zips”).

⁶² Allegiance Health, “7th Annual Heart and Vascular Expo” AH000563849; and Email from Sara Volland, Marketing Specialist at Allegiance, to Julie Jank, January 21, 2011, AH00563848 (describing the marketing strategy for “Heart Expo 4x10 Hillsdale Ad” explaining that the advertisement was approved everywhere “except for in Hillsdale (barred from using full agenda there due to competing services like behavioral health, cardiology, and diabetes).”).

⁶³ Allegiance Health, “Cardiovascular Hillsdale SBAR,” October 22, 2012, ALLDOJMIAG-GG-00000208-214, at 212.

⁶⁴ Turpel, Suzette, Email to Gerald Grannan, Subject: RE: response requested – speaking opportunity, January 6, 2014, ALLDOJMIAG-ST-00005338-343, at 338 (“Who do you think is the best person to explain to Dr. Ekpo our restrictions in Hillsdale?”).

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residents did not receive a free service that would have otherwise been offered. In other cases, the marketing restrictions reduced the likelihood that Hillsdale County residents received the free services. In all of these cases, the Agreement resulted in a restriction of output.

B. Hillsdale County Residents Did Not Receive Other Benefits Associated with Marketing They Would Have Otherwise Received

29. Allegiance also promotes its services directly to patients through advertisements on traditional media, in print, radio, television, digital, and outdoor media, in each of eight marketing regions around Jackson, Michigan.⁶⁵ [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁶⁵ Market Media Message Data, November 2010 to June 2014; Linda Grigg, Email to Suzette Turple, Subject: MMM Reports, July 28, 2014, GRIGG-DOJ-010693; and “Allegiance Health’s Objections and Answers to Plaintiffs’ First Set of Interrogatories,” *United States of America and State of Michigan v. Hillsdale Community Health Center, et al*, Case No.: 5:15-cv-12311-JEL-DRG, October 15, 2015, pp. 5-6.

⁶⁶ See also Allegiance Health, “Well Positioned for the New Reality,” June 2012, ALLDOJMIAG-AG-00013676, at Slide 36.

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According to Mr. Anderson of HCHC, the effect of Allegiance’s marketing campaigns is that patients will “ask the local physician, ‘Can I go up to Allegiance to see their cardiologist?’”⁶⁷ Similarly, Mr. Anderson explained “with some of the marketing of cardiology heart services that Allegiance has done, it has put I think in some people’s mind ... that there’s another alternative. So when they discuss it with their local physician, ‘Hey, I saw this.’ Can I – ‘What do you think?’”⁶⁸ Thus, promotional marketing educates patients and may enable them to make choices that are better-suited to their needs.⁶⁹ Without this information, patients are less informed and, as a result, less able to make decisions or participate fully in discussions about their care options.

30. Examination of Allegiance’s marketing activities from November 2010 to June 2014 shows that Allegiance engaged in relatively few outdoor and print media campaigns in South-Hillsdale, and when it did, it focused primarily on promoting Allegiance’s cardiovascular service. Table 2 provides a summary of the number and types of outdoor and print media campaigns run by Allegiance, in each of its marketing regions over the period, based on data provided by the media agency used by Allegiance for such advertising.⁷⁰ The table also provides information on the size and attractiveness of that region to Allegiance. The former is measured by average annual inpatient discharges originating from that region. The latter is measured by the region’s opportunity rank, as determined by Allegiance’s consultant upon consideration of patient demographics and competitive conditions.⁷¹ As seen here, Allegiance engaged in a variety of outdoor and print media campaigns in each of the marketing areas, with the exception of South-Hillsdale. In South-Hillsdale, Allegiance focused almost exclusively on its cardiovascular services.

⁶⁷ Deposition of Duke Anderson, January 27, 2015, p. 191.

⁶⁸ Deposition of Duke Anderson, January 28, 2015, p. 387.

⁶⁹ There is academic research to suggest that patient preferences have a significant impact on physician referrals. For example, studies undertaken by the Cleveland Clinic Foundation show that nearly 50 percent of physicians report that they had referred a patient to the Cleveland Clinic because of a patient request. *See* Carroll, Patricia A., Gombeski Jr., William R., and Judith A. Lester, “Influencing Decision-Making of Referring Physicians,” *Journal Of Health Care Marketing*, 1990, Vol. 10(4), pp. 56-60.

⁷⁰ For each week from November 2010, to June 2014, Grigg Media’s Market Media Message data contain information on the number and types of Allegiance’s campaigns, by marketing region. *See* Deposition of Linda Grigg, September 8, 2016, pp. 97-99.

⁷¹

[REDACTED]

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31. The relatively small number and variety of Allegiance’s outdoor and print campaigns in South-Hillsdale does not appear to have been the result of local supply and demand conditions, but rather the result of the Agreement. As shown in Table 2, South-Hillsdale had on average 4,803 total inpatient discharges over the period; its discharges were in between the 4,343 discharges of the “East” and 5,009 discharges of the “West” regions. According to analysis conducted in the ordinary course by the consultant Allegiance hired to evaluate its growth strategies, South-Hillsdale was ranked first in terms of Allegiance’s opportunities for volume growth, while the West and East regions were ranked fourth and fifth (out of seven), respectively.⁷² Yet, as shown in Table 2, Allegiance undertook nearly four times as many outdoor and print campaigns in the East and West regions, compared to South-Hillsdale. It also undertook a greater variety of campaigns in the East and West regions. For example, Allegiance undertook 73 oncology campaigns in the West region and 132 oncology campaigns in the East region, but none in South-Hillsdale.

32. Furthermore, ordinary course documents indicate that the decision to restrict outdoor and print advertising in South-Hillsdale resulted from the Agreement. For example, in response to receiving the Media Plan for the second quarter of fiscal year 2013, Dawn Anderson-Meier, the marketing manager for Allegiance, directed Linda Grigg to “Remove Hillsdale from the ‘Print Primary’ category on Planning Area Regions (not allowed to market oncology in Hillsdale County),” which Ms. Grigg confirmed they did.⁷³ Similarly in November 2013, Peter May, another marketing manager at Allegiance, commented to a Grigg Media employee (in regard to another campaign) that “[w]e are restricted from promoting anything other than open-heart in Hillsdale.”⁷⁴

⁷² Navigant Healthcare, “See How Far Impact Can Reach – Allegiance Health Regional Planning – Hillsdale Strategy Development,” May 7, 2012, ALLDOJMIAG-AG-00006283-288, at 288.

⁷³ Anderson-Maier, Dawn, Email to Linda Grigg, et al., Subject: RE: Feedback/Questions from Suz and Dawn – Media Plans with and without costs, October 17, 2012, GRIGG-DOJ-009433-437, at 434-435.

⁷⁴ May, Peter, Email to Kris Ocenasek, et al., Subject: RE: Outdoor creative question, GRIGG-DOJ-028722-723, at 722.

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Table 2
Allegiance’s Outdoor and Print Advertising by Region, Sorted By
Growth Opportunity Rank, November 2010 to June 2014

Campaign	Central Jackson	South-Hillsdale	North-127 Corridor	South-Lenawee	West	East	North-Eaton	Southwest
Cardiovascular	259	106	130	149	176	131	23	22
Oncology	159	0	65	66	73	132	21	0
Ortho/Osteo	128	0	29	84	51	52	12	0
Wellness	109	0	26	19	36	41	6	0
Surgery	81	0	31	51	38	19	0	0
Family Medicine	5	0	147	4	0	11	21	0
Emergency Dept.	33	0	11	60	7	20	3	1
Home Care	67	0	29	4	15	16	0	0
Awards	27	2	11	42	13	25	0	3
Health Fairs	26	0	12	9	15	17	4	0
All Others	168	7	25	49	16	36	5	2
<i>Total Campaigns</i>	<i>1,062</i>	<i>115</i>	<i>516</i>	<i>537</i>	<i>440</i>	<i>500</i>	<i>95</i>	<i>28</i>
Average Annual Inpatient Discharges	20,789	4,803	6,279	7,756	5,009	4,343	6,026	3,887
Opportunity Rank	-	1	2	3	4	5	6	7

Notes:

1. Average annual inpatient discharges are calculated over the years 2010 to 2014.
2. As determined by Allegiance’s consultant, “Opportunity Rank” is a composite rank of growth opportunity. It reflects the attractiveness of the area to Allegiance on the basis of patient demographics and competition from other area hospitals.
3. See Chifty Workpapers for a description of other data processing steps.

Sources: Market Media Message Data; 2010-2014 MHA Data; and AH000991205; and Navigant Healthcare, “See How Far Impact Can Reach – Allegiance Health Regional Planning – Hillsdale Strategy Development,” May 7, 2012, ALLDOJMIAG-AG-00006283-288, at 288.

33. The data also show that from November 2010 to June 2014, Allegiance’s radio advertising in Hillsdale County was limited. Over the period, Allegiance engaged in 370 radio advertising campaigns across seven different radio stations.⁷⁵ Of these, one station (WCSR-FM) transmits from Hillsdale County and reaches about 95 percent of South-Hillsdale residents with “good” signal strength or better.^{76,77} Allegiance ran eight campaigns (about two percent of its

⁷⁵ The data also report that Allegiance placed 140 campaigns directly through Comcast, the local cable provider. There is no information on which stations or networks these campaigns appeared. See Chifty Workpapers.

⁷⁶ There are three radio stations that transmit from Hillsdale, Michigan: WCSR-FM, WCSR-AM, and WRFH. (See “Radio Locator,” available at <http://radio-locator.com/cgi-bin/locate?select=city&city=Hillsdale&state=MI>, site visited October 27, 2016). It does not appear that Allegiance advertises on either WCSR-AM or WRFH. See Chifty Workpapers.

⁷⁷ Signal strength measures the strength of signal reception by a radio antenna at a distance from the transmitting antenna. As such, it provides an indication of the coverage of a radio station within an area. According to the Federal Communications Commission, radio signal strengths range from “extremely strong” to “weaker coverage.” See VSoft Communications, “Zip Code Signal,” available at <http://www.v-soft.com/on-line-based-software/zipsignal>, site visited October 26, 2016.

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total radio campaigns) on this station; all eight of these campaigns were for cardiovascular services.⁷⁸ Elsewhere, Allegiance ran more and a wider variety of radio campaigns. Allegiance’s radio campaigns did not specifically exclude South-Hillsdale, in part because radio does not permit selective exclusion. However, of the remaining six radio stations on which Allegiance engaged in radio advertising campaigns: (a) one has no signal in South-Hillsdale; (b) two have no signal or weak signal in South-Hillsdale; and (c) three reach no more than 30 percent of South-Hillsdale residents with good signal strength or better.⁷⁹

34. The data also show that from November 2010 to June 2014, Allegiance engaged in 469 television advertising campaigns across seven different broadcast television stations.⁸⁰ Of these, three are located in Lansing, Michigan, one in Onondaga, Michigan (30 miles south of Lansing), and three in Toledo, Ohio. Allegiance’s television campaigns did not specifically exclude South-Hillsdale, in part because television does not permit selective exclusion. However, as a practical matter, the stations on which Allegiance advertises have relative poor reach into South-Hillsdale.⁸¹ As acknowledged by Allegiance, the Lansing stations “do not reach down into much of Hillsdale County or Lenawee County.”⁸² The Toledo stations have even less reach in South-Hillsdale, compared to the Lansing stations.⁸³

35. Finally, in 2012, Allegiance began marketing on their website and on social media.⁸⁴ The early digital marketing campaigns focused on cardiovascular and oncology services.⁸⁵ In

⁷⁸ See Chipty Workpapers.

⁷⁹ See Chipty Workpapers.

⁸⁰ The data also report that Allegiance placed 140 campaigns directly through Comcast, the local cable provider. There is no information on which stations or networks these campaigns appeared. See Chipty Workpapers.

⁸¹ To the extent the local cable provider carries a broadcast station in its channel’s lineup, a cable household would be able to view the station’s programming irrespective of signal strength.

⁸² “Statement of Allegiance Health in Further Response to the DOJ and MIAG Civil Investigative Demands,” ALL-DOJ_MIAG0002295-307, at 300 (“While the bulk of Allegiance’s television advertising originates out of Lansing, which broadcasts into Jackson County, the Lansing stations do not reach down into much of Hillsdale County or Lenawee County.”).

⁸³ See Chipty Workpapers.

⁸⁴ Deposition of Suzette Turpel, October 13, 2016 (hereafter “Turpel Deposition”), p. 89 (“Q: Allegiance started doing some digital marketing in 2012? A: Yes. [...] Q: Did you have a specific plan in 2012 or was it on a trial basis? A: We were dipping our toe in, trying to look at early metrics.”).

⁸⁵ Turpel Deposition, pp. 89-90 (“Q: Did you first utilize digital marketing with cardiovascular? A: That or oncology. I forget which one came first. They were back-to-back, then ortho was the following spring, I think. Q: For cardiovascular, do you recall if the advertising was for Allegiance’s open-heart program? A: Yes, it was.”). See also “Statement of Allegiance Health in Further Response to the DOJ and MIAG Civil Investigative Demands,” ALL-DOJ_MIAG0002295-2307, at 299.

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2013, Allegiance expanded its digital marketing to also include campaigns focused on orthopedics services.⁸⁶ Like Allegiance’s radio and television campaigns, some forms of digital marketing do not permit selective exclusion. Allegiance’s Vice President of Marketing Suzette Turpel also explained that the digital marketing efforts did not exclude Hillsdale County because this form of marketing did not appear to antagonize HCHC.⁸⁷

36. Consistent with the Agreement, Hillsdale County residents have limited exposure to Allegiance’s marketing on traditional media. I am not aware of any evidence that Allegiance has ramped up any other form of marketing activity to address this shortfall in Hillsdale County. As explained by Professors Lande and Marvel, direct restrictions on advertising such as these raise consumer search costs and “insulate cartel members to some degree from certain forms of competition among themselves.”⁸⁸ In the case of patients needing medical services, lack of direct-to-patient marketing means patients are less informed about their healthcare options and, as such, less likely to form preferences, let alone voice them to physicians or participate in the decision-making about their own healthcare.

37. It is possible that some patients who went to HCHC for their general acute care inpatient services might have otherwise gone to Allegiance. Certainly, HCHC feared that would be the outcome of Allegiance’s unrestrained marketing in Hillsdale County. It is also possible that some Hillsdale County patients who did not go to HCHC (or Allegiance) for their general acute care inpatient services might have opted for Allegiance had they learned about Allegiance’s capabilities through its marketing campaigns. As shown in Table 3, marketing campaigns that would have encouraged some of these patients to choose Allegiance may have resulted in shorter travel distances. For example, about six percent of patients who did not go to either HCHC or Allegiance for their general acute inpatient care traveled an average of 55 minutes when they could have travelled 35 minutes had they gone to Allegiance. About 29 percent of these patients travelled an average of 78 minutes when they could have travelled 45

⁸⁶ See Turpel Deposition, pp. 89-90; and “Statement of Allegiance Health in Further Response to the DOJ and MIAG Civil Investigative Demands,” ALL-DOJ_MIAG0002295-2307, pp. 299-300.

⁸⁷ Turpel Deposition, p. 242 (“Q: Did Allegiance utilize digital media in Hillsdale County because it was less likely to antagonize Hillsdale Community Health Center? A: Partially. I mean, it was just a good strategic decision, and I didn't hear any complaints, so I kept doing it.”).

⁸⁸ Lande and Marvel, p. 943.

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minutes had they gone to Allegiance. To the extent patients would have driven shorter distances had Allegiance engaged in more marketing, the Agreement reduced patient welfare.

Table 3
Allegiance’s Marketing May Have Allowed Some Patients
Who Went to Other Hospitals to Shorten Their Travel Time

Drive Time Range	%	Average Drive Time (in Minutes), To	
		Chosen Hospital	Allegiance
Less than 10 minutes	0.0%	-	-
10-20 minutes	4.6%	18.3	49.0
20-30 minutes	15.0%	26.1	46.5
30-40 minutes	22.0%	35.0	44.6
40-50 minutes	12.3%	42.3	46.1
50-60 minutes	6.3%	55.1	35.5
60-90 minutes	28.5%	77.7	45.1
More than 90 minutes	11.4%	116.5	49.0
<i>Average (minutes)</i>		56.5	45.3

Notes:

1. The analysis describes patients from Hillsdale County who did not choose HCHC or Allegiance for care that was available at both HCHC and Allegiance.
2. See Chifty Workpapers for a description of other data processing steps.

Sources: 2014 MHA Data; and Google Maps.