

## SI 501: Background Research Report

### **Michigan Medicine: Ideal Staffing Solution Team ACT\*M (Section 003: Lauren Sheridan)**

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#### **About Client:**

Since 1850, Michigan Medicine, previously the University of Michigan Health System (UMHS), has provided a wide range of medical services; it currently has over 3,000 medical providers from diverse disciplines. As one of the most reputable medical institutions both inside and outside of the United States, Michigan medicine has constantly made substantial efforts to provide excellent patient care and conduct innovative research and education. In 2018, the institution is in the top five best hospitals in the nation according to *U.S. News and World Report* (“U.S. News”). Currently, the institution consists of three hospitals, 125 clinics, University Medical Group, 26,000 employees, and over 3,000 faculty members (“Michigan Medicine Facts and Figures”).

#### **Problems:**

Michigan Medicine has experienced inefficient staffing issues in providing interpreter services. Since a total two million patients use its services and represent different demographics, interpreter services are integral to best provide patient care. However, the client is having difficulty in scheduling interpreters with patients due to lack of an efficient booking system. Around 75% of interpreters are scheduled the day before the appointments, and there are many reported cases that patients either missed the opportunity to have an interpreter or had to wait too long to get assigned appropriate interpreters. In the worst cases, service providers have failed to deliver proper medical service due to this lack of medical interpreters. In this regard, the client is looking for a better way to staff interpreters, and ideally seeks for staffing people on-demand.

#### **Research Questions:**

1. What is Michigan Medicine Interpreter Service and what are its core missions and target populations?
2. What are the significances of medical interpreter service and why is ideal staffing in interpreter services important to patients, service providers, and the client?
3. How is the leading institution providing efficient medical interpreter staffing service, and what are the key takeaways in regard to the client’s current problems?

**Word Count:** 1,951

## **Introduction: Michigan Medicine Interpreter Services**

Michigan Medicine has provided interpreter services since before 1990 and currently has between 370 to over 2,000 request per month (“Michigan Medicine Annual Report”). It covers a wide ranges of interpreter services by having over 100 interpreters who speak more than 70 languages. The service has dedicated its missions as follows:

- Help Limited English Proficient (LEP) and Deaf, Deaf/Blind, and Hard of Hearing patients feel comfort and relief regardless of their language difficulties
- Provide proper training for patients and families regarding their right to have adequate language assistance
- Raise Michigan Medicine’s staff’s awareness of the impact of culture and language on health care delivery
- Provide availability of medical documents in most of the languages spoken by patients from diverse backgrounds
- Provide precise medical and billing records interpretation from different regions
- Maintain demographic, cultural, and epidemiological profiles of the LEP community
- Collaborate with local ethnic communities to help them find the care they need.

In order to fully commit to the abovementioned missions, Michigan Medicine Interpreter Services constantly strive to ensure a rigid screening process when hiring interpreters. To enhance interpreters’ skills, the service offers educational options which are now regarded as the nation’s premier medical interpreter training program (“Interpreter Services”).

## **Importance of Medical Interpretation Services**

Given that the client’s mission is to offer excellent care to every patient, it is imperative to examine the question of 1) why LEP patients are important to medical institutions, and 2) how crucial medical interpreter service is not only for patients but all related parties. To begin with the question of the importance of LEP patients, there is a noticeable fact to highlight: approximately 57 million people, up to 20% of the entire U.S. population, do not speak English at home, and about 25 million, 10% of the U.S. population, can be identified as being LEP (Betancourt et al). This number proves that the percentage of potential LEP patients cannot be small. It reveals an important fact that about 10% of entire potential patients are LEP patients. In this regard, the significance of providing better care for LEP patients and attempting to increase LEP patient’s satisfaction level cannot be underestimated at any medical institutions.

Since communication is a key factor of patient care and safety at medical institutions, providing better and more communication methods is of utmost importance for both patients and service providers. Particularly for LEP patients, medical interpreter services can be the most reliable made of communication. In fact, many rigorous studies have investigated *how*

*better quality of interpreter services improve both LEP patient's communication level and overall satisfaction level.* According to Glenn, unlike English-speaking patients, LEP patients usually experience difficulties from the very beginning stage of receiving medical services (255-299). This includes screening service, office visiting, prescription process and after-care process.

The researchers also found that without having proper communication methods, LEP patients were more likely experience adverse events that caused physical harm compared to English-speaking patients as *figure 1* demonstrated below (Divi et al 60-67).

<b>Adverse Events and Physical Harm, English-Speaking and LEP Patients</b>		
<b>Adverse event characteristic</b>	<b>English-Speaking N (%)</b>	<b>Limited English Proficient N (%)</b>
Physical harm		
No harm	366 (46.1)	89 (40.1)
No detectable harm	194 (24.4)	24 (10.8)
Minimal temporary harm	177 (22.3)	58 (26.1)
Moderate temporary harm	46 (5.8)	43 (19.4)
Severe temporary harm	7 (0.9)	7 (3.2)
Severe permanent harm	1 (0.1)	0 (0)
Death	3 (0.4)	1 (0.5)

Source: C. Divi, R. G. Koss et al., "Language Proficiency and Adverse Events in U.S. Hospitals: A Pilot Study," *International Journal for Quality in Health Care*, Apr. 2007 19(2):60-67.

[Figure 1]

Due to the abovementioned facts, higher quality interpreter services affect LEP patient's overall medical service experience: it may directly impact to LEP patient's every process within the medical institutions. And importantly, better interpreter services might mitigate the issues of medical errors caused by miscommunication. According to *Karliner et al*, a majority of LEP patients can have safer treatment when employing professional interpreter services. In this regard, it is clear that medical interpreter service plays a significant role for LEP patients: 1) interpreter services increase both patient's communication and satisfaction level, which might be one of the most important parts of medical services, and 2) a high-quality interpreter services might reduce medical malpractices, providing a safer practice.

Not only for LEP patients but also for other related parties, medical interpreter services play a significant role. To service providers including doctors and nurses, high quality of interpreter services helps to reduce errors in diagnosis as well as expedite decision-making while delivering the service. In many circumstances, without proper interpreter services, providers rely heavily on the patient's non-fluent English or on body language to understand the patient's situation. In fact, having a high-quality interpreter services prevents providers from offering inefficient medical service as well as increasing their own dissatisfaction level at work (Gale 237-246). Another study also highlighted that there is a strong positive relation between high quality of interpreter services and service providers'

satisfaction level (Bagchi et al 248-256). Therefore, it is safe to conclude that medical interpreter services positively impact to the service providers.

In addition, many studies found that even to medical institutions, providing a good interpreter service to patients can be beneficial because it allows them to 1) increase patient's loyalty to their institution, 2) have great return on investment compared to cost, and 3) serve every patient equally according to legal requirements. According to *Jacobs et al*, patients who used the interpreter services received significantly more recommended preventive services, made more office visits, and had more prescriptions written and filled (866-869). This enables patients to receive better medical treatment, and therefore, spend more time and money on the institution. The study also demonstrated that providing interpreter services is a financially viable method for enhancing delivery of health care to patients (Jacobs et al 866). Importantly, medical interpreter services meet the federal civil rights policy, which clearly demonstrates that health care providers should supply appropriate language services and not discriminate against patients based on their background (Ku and Glenn 435-444).

To summarize, numerous benefits from better quality medical interpreter services can vary. To patients, it helps them to have fewer errors in communication with service providers while increasing their both communication and satisfaction level. To service providers, it lowers malpractice risk and facilitates better decision-making outcomes while increasing providers' satisfaction level. To medical institutions, it allows them to operate their business in a more sustainable way as well as helps them to best meet federal law requirements.

### **Key Features of a Leading Medical Interpreter Staffing System: *Mayo Clinic***

Due to the significance of medical interpreter services as abovementioned, many leading medical institutions have emphasized on efficient staffing of medical interpreters: efficient staffing would directly affect the quality and readiness of interpreter services. There are important factors found among leading institutions, demonstrating efficient ways of better staffing medical interpreters: 1) employing advanced medical analytic systems, which allows for determination of the patients' needs of interpreter service by specific parameters and 2) utilizing an *on-demand* interpreting device, video remote interpreting (VRI) system.

Among several leading medical institutions, it is noticeable that Mayo Clinic, ranked the top hospital nationwide in 2018, has devoted considerable efforts to develop both medical analytic and VRI systems ("U.S. News"). According to Slabodkin, Mayo Clinic's analytics capabilities are fast becoming one of the largest and most sophisticated in the nation. By utilizing the clinic's huge database – more than five million patient records – they can attempt to predict particular patient needs, which can also be applied to efficient interpreters staffing systems. Currently, Mayo Clinic is not only exploring state-of-the-art medical analytic systems, but also the latest technology from Artificial Intelligence (AI) to blockchain systems. Although such developments do not derive exclusively from interpreter staffing matters, it is certain that such efforts have been their ace in the hole for offering the best medical interpreter services among other medical institutions.

In addition to innovative analytic systems, Mayo Clinic has been a leading institution in implementing medical VRI system. In fact, VRI system has been becoming the most popular method among medical interpreter systems, which can be both effective and easily accessible (Bramowicz; Gooch). Through actively utilizing VRI system, the clinic has been covering patients from diverse regions, successfully providing satisfactory interpreter services on demand. According to the clinic's spokesman, to efficiently staff interpreters based on requests from patients, the clinic offers 24/7 VRI coverage system for high demand languages (Madsen). Currently, the clinic constantly endeavored to further developing VRI systems by partnering with key players in VRI system manufacture. Considering the fact that VRI systems have evaluated as one of the most efficient ways to staff medical interpreters, Mayo Clinic's great efforts to develop the abovementioned systems merits special attention.

### **Discussion: Takeaways from Research Implications to Client's Problem**

Michigan Medicine has been experiencing difficulties in best staffing medical interpreters, which might have been providing unpleasant interpreter services to patients. Although clinic schedulers receive training to directly schedule with interpreters based on patient's request, most clinics do not follow the steps, mainly because it is extra work for clinics to schedule interpreter services. Whenever the clinics do not schedule an interpreter, the client's fallback measures show the result of this failure. By the time the client realizes the issue and tries to match the appropriate interpreting schedules, they frequently experience abundance of overbooking, which often leads to failure of offering the LEP patients care excellent.

Based on numerous research and studies as previously mentioned, there are two primary root causes to the client's current problem: 1) lack of awareness of the importance of LEP patient's care, and 2) absence of solid on-demand interpreting systems. To begin with the first issue, aforementioned research implications might be valuable. As highlighted in the beginning, offering a high quality of medical interpreter services is imperative not only for patients, but also all related parties. However, current clinic schedulers do not highly consider or care the significance of medical interpreter services with or without acknowledging the fact. In addition, given that the current system does not allow clinics to have one-stop scheduling solution – clinics currently should do extra work to schedule interpreter services after they schedule an appointment with a provider –, this additional process impedes clinics from even attempting to scheduling interpreter services regardless of patient's need.

In this regard, it is imperative for Michigan Medicine to ponder ways to have clinics schedule interpreter services as soon as they receive the request. This could be realized by offering clinics a 1) more frequent mandatory training session to increase the awareness of both importance of LEP patients and a high quality of medical interpreter services and 2) one-stop scheduling system with better usability and accessibility.

To address the second question of lack of concrete *on-demand* system, key takeaways from a case of Mayo Clinic would be significant. It is noticeable that Michigan Medicine is also conducting a test pilot of a video or phone call center to supplement on-demand

interpreter services. However, compared to Mayo Clinic's current system and their heavy investment in advancing interpreter services, the client might need to apply greater effort. This not only indicates efforts in building a completely new system, but also in paying more attention to the significance of medical interpreter services: efforts from the whole entity of Michigan Medicine would be necessary in this process. The necessity of such efforts can be supported by aforementioned research outcomes, demonstrating numerous benefits that the client would have in both short-term and long-term period.

## **Conclusion**

Given that the client's core mission is to offer excellent care to *every* patient, providing a high quality of interpreter services is crucial to Michigan Medicine. Many studies examined in this paper also highlights the importance of medical interpreter services within the medical institutions. In this sense, better interpreter staffing system would enable the client to not only best offer medical interpreter services but also better achieve their core missions. As one of the top-notch medical institutions inside and outside the country, future investment on both medical interpreter systems building and raising awareness of the issue is essential. This would not only allow every patient of Michigan Medicine to enjoy the best medical service but also enables the institution to thrive in the long run.

## References

- Bagchi, Ann D., et al. "Examining Effectiveness of Medical Interpreters in Emergency Departments for Spanish-Speaking Patients With Limited English Proficiency: Results of a Randomized Controlled Trial." *Annals of Emergency Medicine*, vol. 57, no. 3, 2011, pp.248-256.
- Betancourt, Joseph R, et al. "Improving Patient Safety Systems for Patients With Limited English Proficiency: A Guide for Hospitals." Vol. 12, Sept. 2012.
- Bramowicz, Matthew. "Why Hospitals are in Desperate Need of Interpreting Services." *Electronic Health Reporter – Healthcare IT News and Editorials*. 27 May 2017. Web. <http://electronichealthreporter.com/why-hospitals-are-in-desperate-need-of-interpreting-services>.
- Divi, Chandrika, et al. "LANGUAGE PROFICIENCY AND ADVERSE EVENTS IN U.S. HOSPITALS: A PILOT STUDY." *International Journal for Quality in Health Care*, vol. 19, no. 2, Apr. 2007, pp. 60–67.
- Gale, Dysart. "Clinicians and medical interpreters: negotiating culturally appropriate care for patients with limited English ability." *Fam Community Health*. (2007): 237-246. Web.
- Glenn, Flores. "The Impact of Medical Interpreter Services on the Quality of Health Care: a Systematic Review." *Sage Journals*, vol. 62, no. 3, June 2005, pp. 255–299., [www.ncbi.nlm.nih.gov/pubmed/15894705](http://www.ncbi.nlm.nih.gov/pubmed/15894705).
- Gooch, Kelly. "Video Remote Interpreting: Bridging the Communication Barrier." *Becker's Hospital Review*, [www.beckershospitalreview.com/healthcare-information-technology/video-remote-interpreting-bridging-the-communication-barrier](http://www.beckershospitalreview.com/healthcare-information-technology/video-remote-interpreting-bridging-the-communication-barrier).

“Interpreter Services.” Michigan Medicine, 2018,

<http://www.med.umich.edu/interpreter/about/about.html>

Jacobs, Elizabeth A., et al. “Overcoming Language Barriers in Health Care: Costs and Benefits of Interpreter Services.” American Journal of Public Health, vol. 94, no. 5, 2004, pp. 866–869.

Karliner, Leah S, et al. “Do Professional Interpreters Improve Clinical Care for Patients with Limited English Proficiency?” A Systematic Review of the Literature. Health Service Research, Apr. 2007.

Ku, Leighton, and Glenn, Flores. “Pay Now Or Pay Later: Providing Interpreter Services In Health Care.” Health Affairs, vol. 24, no. 2, 2005, pp. 435–444.

Madsen, Nancy. “Hospitals Rely on Video, Phone Interpretation Services for Patients Who Use Another Language.” Southernminn.com, 31 Jan. 2018.

“Mayo Clinic Ranked No. 1 Hospital Nationwide by U.S. News & World Report.” Mayo Clinic, Mayo Foundation for Medical Education and Research, [newsnetwork.mayoclinic.org/discussion/mayo-clinic-ranked-no-1-hospital-nationwide-by-u-s-news-world-report](http://newsnetwork.mayoclinic.org/discussion/mayo-clinic-ranked-no-1-hospital-nationwide-by-u-s-news-world-report).

“Michigan Medicine.” Michigan Medicine University of Michigan, 2018, [uofmhealth.org](http://uofmhealth.org).

“Michigan Medicine Annual Report.” Michigan Medicine, 2017, [www.med.umich.edu/pdf/2017-Annual-Report.pdf](http://www.med.umich.edu/pdf/2017-Annual-Report.pdf).

“Michigan Medicine Facts and Figures.” Michigan Medicine University of Michigan, 2018, [uofmhealth.org](http://uofmhealth.org)

Slabodkin, Greg. “Mayo Clinic Initiative Takes Analytics to the Enterprise Level.” Health Data Management, 20 July 2016, [www.healthdatamanagement.com/news/mayo-clinic-initiative-takes-analytics-to-the-enterprise-level](http://www.healthdatamanagement.com/news/mayo-clinic-initiative-takes-analytics-to-the-enterprise-level).

“U.S. News.” *U.S. News Announces 2018-19 Best Hospitals*. U.S. News & World Report, 14 Aug. 2018, [www.usnews.com/info/blogs/press-room/articles/2018-08-14/us-news-announces-2018-19-best-hospitals](http://www.usnews.com/info/blogs/press-room/articles/2018-08-14/us-news-announces-2018-19-best-hospitals).