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Language Accessibility of Liver Transplant Center Websites

Rapid Communication

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To the Editor:

Low health literacy is a contributor to healthcare disparities and can be an insurmountable barrier to accessing quality care (1). End stage liver disease is a complex and daunting diagnosis for patients to educate themselves about. In liver transplantation, a lack of easy to understand educational materials and low health literacy have been associated with lower rates of waitlisting (2,3). Language accessibility is another key component of health literacy. Since over 20% of the United States (US) population speaks a language other than English, lack of language accessible resources can create further barriers to care for many patients (4).

Patients of all backgrounds frequently rely on the internet for accessing health information on a new diagnosis (5). One potential measure of a transplant center's health equity efforts is the availability of non-English language patient-facing resources, especially online

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ones. Providing language-accessible online information about the basics of liver transplantation and eligibility requirements is a fundamental practice for any transplant center committed to equitable stewardship of limited transplantation resources.

Within this context, we sought to assess the language accessibility of liver transplant center websites. We surveyed the patient-facing educational websites of all 140 active, accredited US liver transplant centers. We analyzed each website to determine how many had information in a language other than English. We hypothesized that the majority of centers do not offer patient-facing materials specific to liver transplantation in a language other than English.

Methods

Active, accredited US liver transplant centers as of December 2020 were identified using the Organ Procurement and Transplantation Network website. Exclusion criteria were active centers in Puerto Rico, as Spanish is the predominant governmental language. Demographic information for each state was obtained from publicly available US Census Bureau reports (4). Data on 2020 transplant volume per center was obtained from the publicly available Scientific Registry of Transplant Recipients.

The patient facing website for each active liver transplant center was located using the Google ® search engine. A comprehensive search of each center's website was performed to identify any patient facing, transplant specific resources in a language other than English. This included navigation of the liver transplant center's homepage, subpages, external links, and drop-down menus. Non-discrimination notices and hospital interpreter information were excluded from this assessment. Resource type was categorized as integrated website translation, individually translated resources, or separate websites in another language.

Descriptive statistics were used to report the number and percentage of transplant centers that provided information in a language other than English. As transplant volume can vary center to center, which may affect the reach of alternative language resources, state and center level transplant volumes from January 2020 through December 2020 were included in analysis.

Results

Websites were identified for all 140 active transplant centers included in the study, representing 38 states and the District of Columbia. Twenty-three states had no transplant centers which provided online materials in a second language. Resources in a language other

than English were found in 24.3%(n=34) of websites, representing 41.0%(n=16) of states. By center transplant volume, 31.1% of liver transplant operations in the US were performed at a center with online resources in a language other than English. Resource availability ranged from 3-100% per state (Figure 1). California had the highest number of centers with resources in an alternative language 58.3%(n=7), followed by Texas 42.9%(n=6), and New York 50%(n=4) (Supplementary Table 1).

Thirty-six individual translated resources were identified across 34 websites. Most centers had only one type of resource (94.1% n=32). The most common type of resource was individually translated materials 50.0%(n=18), followed by integrated translation 44.4%(n=16), and separate websites 5.6%(n=2). Individually translated resources included pamphlets, single webpages, health libraries, videos, and surveys. Some resources were translated in more than one language, with 108 different languages represented. Spanish was the most common language available 100.0%(n=36), followed by Arabic 38.9%(n=14) and Mandarin Chinese 38.9%(n=14). Ten states had online patient materials in an alternative language that was not Spanish, with 108 different languages represented (Supplementary Table 1).

Discussion

Although over 25 million people residing in the US have low English language proficiency, only 16 out of 39 states with active liver transplant centers had patient-facing online materials in alternative languages (4). Approximately 70% of the liver transplant operations in the US were performed at a center without any alternative language online patient materials, and in the centers with language accessible websites, Spanish offerings are predominant.

In states with the highest reported populations with alternative language needs (4) (Texas, California), alternative language offerings are available at only 40-60% of centers. Current national offerings have a strong focus on Spanish, the second most commonly spoken language in the US. However, 8.3% of the US population speaks a language other than Spanish or English at home. Since only 14 centers have resources in alternative languages other than Spanish, many patients with alternative language needs are underserved (4).

Limitations of this study include reliance on the search engine algorithm to locate the official center websites. Our analysis does not reflect any recent changes in the evaluated websites. Additionally, we were unable to assess in person resources, such as brochures or multilingual staff (although these resources are likely only available to patients during evaluation). There are states without active transplant centers whose populations receive transplant care at centers out of state, thus our state and transplant center level analyses are

limited by this confounding factor. However, the lack of accessible resources is demonstrated nationwide, and patients that are residents in states without active centers have been included in the statewide analyses of the transplant center where they were served.

There is great need for patient-facing materials for liver transplantation in languages other than English. Current liver transplant center websites' offerings are not accessible to a large portion of patients with alternative language needs. Future work may include describing in-person offerings of transplant centers and surveying centers on their current engagement with non-English speaking patients. Centralized translated resources may be an achievable first step in improving access, and center level accessibility for patients should be considered as a novel quality metric, as it is integral to closing the equity gap in transplantation.

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Figure 1. Transplant volume per state served by a center that provided online resources in a language other than English.

