

ORIGINAL RESEARCH ARTICLE

Hitting or Missing Healthcare Expectations of Chinese Americans and Immigrants with Language Barriers

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INTRODUCTION: Chinese immigrants are one of the fastest growing yet least studied minority groups in the United States. This study explored the unique experiences of this vulnerable population which experienced language barriers during healthcare encounters.

METHODS: This is a secondary qualitative analysis of interviews from 27 Chinese immigrants who had limited English proficiency and lived in urban areas of the United States. A content analysis approach was used for data analysis.

RESULTS: Three themes emerged, which reflect participants' unique experience about healthcare: (1) dialect matching during healthcare encounters, (2) language barriers as a source of stress and contributing to feelings of isolation, and (3) mixed expectations for bridging the language barrier.

CONCLUSION: Chinese immigrants with limited English proficiency have unique unmet needs and experiences related to healthcare that need to be addressed in patient-centered healthcare.

Key Words: language barriers ■ limited English proficiency ■ Chinese Americans ■ immigrants ■ healthcare

An estimated 50 million Chinese immigrants live in countries around the world.¹ In the United States, Chinese immigrants are one of the largest and fastest growing minority groups.² Immigrants from China comprise 22% of all Asian immigrants to the United States and their numbers have steadily grown in the last 50 years.³ Often, Chinese immigrants' access to and experiences with healthcare are complicated by a language barrier. Nearly half of Chinese Americans have limited English proficiency.⁴ Older adults generally have high healthcare needs and often experience challenges in accessing needed care.⁵ Limited English proficiency could add additional barriers for older adults when seeking healthcare, given that the implementation of interpreter services varies widely.^{6,7} Additionally, while Mandarin is the official language in China, dialects – such as Cantonese, Shanghaiese, and Taishanese – are often preferred by many Chinese Americans for daily communication, espe-

cially among older adult Chinese Americans. This variation among dialects adds another layer of complexity to the patient–provider encounter among Chinese Americans.

The experiences of Chinese immigrants in the US healthcare system and how language barriers shape that experience are poorly understood.⁸ As healthcare delivery moves toward patient-centered approaches where individualized care is expected to be culturally and linguistically tailored to patient needs, the Chinese American patient experience must not be left behind.

The purpose of this study was to explore the experiences of Chinese immigrants with limited English proficiency and/or preference for communicating in Chinese (i.e. Mandarin and Cantonese) within the US healthcare system. Findings from this study will provide unique insights about facilitating access to care and promoting positive health outcomes among Chinese immigrants in the United States.

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POPULAR SCIENTIFIC SUMMARY

- Various dialects (e.g., Cantonese) are used among Chinese Americans for daily communication beyond Mandarin, and failure to consider patient spoken language at dialect level could significantly compromise care quality and patient safety.
- Presence of language barrier during healthcare encounters was a source of stress and feelings of isolation among Chinese Americans.
- Chinese culture values and social norms had profound influence on Chinese Americans' expectations for care quality and availability of language services.

METHODS

Study design and data source

This is a secondary qualitative data analysis of Chinese immigrant respondents from a mixed method study that examined the relationship of language barriers and post-acute care outcomes in home care.⁹ The parent study involved patients who preferred to speak one of four languages, including Chinese (i.e. Mandarin and Cantonese), Korean, Russian, and Spanish. This study is motivated by the initial analysis of interviews in the parent study, which revealed distinct themes within Chinese participants' experiences that warranted more in-depth exploration. The parent study involved 71 participants from four language groups, and the analysis focused on the common experiences reported by participants across language groups. The parent study's Institutional Review Board approval by the participating agency (#E15-008) and the authors' home institution applied to this analysis (#15-10710).

Study sample and data collection

Interviews from 27 Chinese participants recruited for the parent study served as the dataset for this study. To be eligible, these participants needed to have received home healthcare within the last 6 months for post-acute care following hospitalization and self-identified preference for Mandarin or Cantonese for daily communication. Using administrative data from partner agency, two bilingual research assistants who were native Cantonese and Mandarin speakers and had extensive interviewing experience contacted potentially eligible Chinese participants and screened them for eligibility. It was assumed that if a participant indicated Chinese as their preferred language, they likely had limited English proficiency and were an immigrant to the United States. Following an explanation of the study purpose and a brief cognitive screen with a 6-item screener,¹⁰ an in-person or phone interview was scheduled for those who were

eligible and expressed interest in participating. Participant recruitment continued until data saturation, which was achieved after 27 interviews.

Prior to the interviews, the research team of the parent study, including members from New York University and VNS Health, first developed the original interview guide in English, which was then translated into Chinese (same written language for Mandarin and Cantonese) by team members who are fluent in both English and Chinese (Mandarin and/or Cantonese). During May-July 2016, all interviews were completed, including 12 in Cantonese and 15 in Mandarin. Consent was obtained at the very beginning of each interview. Interviews lasted between 35 and 90 min and were audio recorded.

Interview audio recordings were then transcribed into Chinese (the same written language for Mandarin and Cantonese) by the two research assistants who conducted the interviews. Research assistants also verified their transcripts with each other and a third team member when needed as a translation quality check as recommended by Squires¹¹ and Im et al.¹² Of the 27 interviews, 5 were telephone interviews and 22 were in-person interviews at participants' homes. These two interview formats produced no discernable differences in transcript quality. Table 1 summarizes the characteristics of these Chinese interviewees. Among the 27 participants, 13 (48%) were over 65 years old. Over half of participants were female ($n = 16, 59\%$). All participants were recruited in New York City, including 8 from Manhattan, 9 from Brooklyn, and 10 from Queens.

Data analysis

To guide the coding process, we used a general content analysis approach. General content analysis allows researchers to iteratively generate codes from the data

Table 1. Characteristics of participants (N = 27)

Characteristics	Number	Percent
Age		
<65	13	48.1
≥65	14	51.9
Gender		
Female	16	59.3
Male	11	40.7
Language		
Cantonese	12	44.4
Mandarin	15	55.6
Borough		
Bronx	0	0
Brooklyn	9	33.3
Manhattan	8	29.6
Queens	10	37.0

and then harmonize themes through team consensus.¹³ For our study, all coding was conducted independently within the Chinese transcripts by at least two research team members. Field notes were also reviewed during coding. We used an iterative approach during transcript coding and for codebook development. Any issues raised during coding were solved through team discussion and consensus. We also used a similar team approach in translating research findings into English.

RESULTS

Three themes were unique to the Chinese participant experience compared with other limited English proficiency participants in the parent study. The first theme was 'Dialect Matching during Healthcare Encounters', which reflected the variety of spoken languages used for daily communication among Chinese Americans and underscored how a lack of such recognition could impact their overall experience as a patient. The second theme was 'Language Barriers as a Source of Stress and Contributing to Feelings of Isolation', which highlighted patients' experiences that a language barrier present during a healthcare encounter was linked to feelings of isolation when ill that even family members could not resolve. The final theme was 'Mixed Expectations of Bridging the Language Barrier Effectively', which revealed Chinese patients' expectations for healthcare, both ideally and realistically, when addressing a language barrier. The following sections describe the themes in greater detail and provide supporting illustrative quotes. Representative quotes for each theme are summarized in Table 2.

Theme 1: dialect matching during healthcare encounters

Dialect use for daily communication is common among Chinese Americans, particularly among seniors. A Chinese dialect (e.g. Cantonese) can diverge substantially from Mandarin, which was not the official spoken language in China till the 1950s. Such communication difficulties during a healthcare encounter could comprise care quality and patient safety.

Our participants felt that native language and dialect fluency among healthcare providers and staff plays an important role in their healthcare experience. They expressed a preference for providers who spoke their native dialect rather than an interpreter, referencing the 'inconvenience' of communicating through multiple avenues to relay something (e.g. three-way communication between an English-speaking provider, an interpreter, and the patient). More importantly, when communicating in their dialect, participants said they were more comfortable speaking about their health, felt better understood by healthcare providers, and were better able

to understand instructions from healthcare providers. Speaking to a provider or staff who spoke their dialect also brought them a sense of security in an unfamiliar environment (i.e. hospital). Participants consistently described 'convenience' when they were speaking to someone who spoke their native dialect:

'But of course, if the hospital staff speak Mandarin, it's more convenient for me.' (Mandarin-speaking, male)

'Things are definitely slower [than when they have to go through an interpreter].' (Cantonese-speaking, male)

Similarly, the issue of dialect matching between participants and interpreters also existed while using language services during healthcare encounters. When participants received interpreting services, they did not always get it in their preferred dialect. Frequently, Cantonese-speaking participants were assigned a Mandarin-speaking interpreter without asking their preference. While many of the Cantonese-speaking participants had some level of proficiency in Mandarin, they were not always at a fluent level or a level that can be considered 'safe' for communication in healthcare settings that will not result in unnecessary patient harm or safety concerns due to misunderstandings. As such, Cantonese speakers reported finding it inconvenient to work only with Mandarin-speaking interpreters because they could not fully understand everything that was said to them in Mandarin. The following quotes by Cantonese-speaking participants illustrate how the level of understanding during a healthcare encounter is significantly reduced when receiving an interpreter who does not speak a participant's dialect:

'Cantonese, like we speak Cantonese, right? So, it's best if they speak Cantonese. Like we're Cantonese, usually you usually use Cantonese to communicate, so it's easier to understand. ... So if s/he spoke Cantonese then of course there is a higher percentage of comprehensibility, right? Like if you used Mandarin [to communicate with Mandarin speakers] then the percent [of understood words] is bigger. Use Cantonese the percent is bigger. So, they understand [their] medical condition.' (Cantonese-speaking, Male)

'Sometimes we Cantonese people and Mandarin are different. [...] Like it's not so easy to communicate. I mean you know Cantonese people even if we spoke Mandarin. It's still not perfect. Not as good, like you wouldn't understand it. So, if you don't really know it and you speak it, they won't understand either. Therefore, it is easier to understand a Cantonese person than a non-Cantonese person. [Hospitals] needs to hire a [Cantonese] interpreter [to speak to me].' (Cantonese-speaking, male)

Theme 2: language barriers as a source of stress and contributing to feelings of isolation

Language barriers produced strong negative mental effects among Chinese participants during hospitalization. Some participants recalled being nervous, scared, or

Table 2. Representative quotes by themes

Themes	Quotes
Dialect matching during healthcare encounters	But of course, if the hospital staff speak Mandarin, it's more convenient for me. (#2977, Mandarin-speaking, Male) Cantonese, like we speak Cantonese, right? So, it's best if they speak Cantonese. Like we're Cantonese, usually you usually use Cantonese to communicate, so it's easier to understand. ... So if s/he spoke Cantonese then of course there is a higher percentage of comprehensibility, right? Like if you used Mandarin [to communicate with Mandarin speakers] then the percent [of understood words] is bigger. Use Cantonese the percent is bigger. So, they understand [their] medical condition. (#1815, Cantonese-speaking, Male)
	Sometimes we Cantonese people and Mandarin are different. [...] Like it's not so easy to communicate. I mean you know Cantonese people even if we spoke Mandarin, it's still not perfect. Not as good, like you wouldn't understand it. So, if you don't really know it and you speak it, they won't understand either. Therefore, it is easier to understand a Cantonese person than a non-Cantonese person. (Hospitals) needs to hire a [Cantonese] interpreter [to speak to me]. (#2012, Cantonese-speaking, Male)
	Things are definitely slower. They (healthcare providers) have to go through an interpreter and that makes things slower. (#2012, Cantonese-speaking, Male)
Language barriers as a source of stress and contributing to feelings of isolation	I had a big surgery ... when I began staying at the hospital, I was a bit scared because I didn't understand the language, right? Don't know how to communicate with them ... Everyone there were foreigners, I was nervous ... I didn't know what to do, I was nervous, quite nervous, I don't know what they will be asking me, or what I need, right? So, I was very scared. (#2159, Mandarin-speaking, Female)
	The surgeon, before the surgery ... he told me ... and then performed a surgery and CT something. But I said I don't understand what you are talking about. It has nothing to do with me. Then he said, 'Your surgery was very successful.' But I don't know what happened or why I was sick ... I think the hospital didn't do a great job communicating with me ... I need to know what surgery you are telling me to get done, why I need to do it, or how it would be done. (#2215, Cantonese-speaking, Female)
	Of course, if I am seeing a doctor, I will be nervous. Because if I really want to clearly understand my own health condition. If I do not understand what they are saying, I will have doubts. (#2832, Mandarin-speaking, Female)
	So then, she [a Chinese-speaking nurse] asked me if I need any help. I said I need to pee pee. I don't speak English. I don't know how to tell them ... Really, I was very nervous at that moment, because I don't know English, right? But then I found this person, she told me, 'don't worry, I work for this hospital, I serve people like you.' I said, 'oh, I didn't see any Chinese people here.' (#2159, Mandarin-speaking, female)
Mixed expectation of handling the language barrier effectively	Of course (having) one who speaks my language is better. (#2509, Cantonese-speaking, Female)
	If the people at the hospital spoke Chinese too, I think it will be better, I will at least feel better, I can communicate better. (#2832, Mandarin-speaking, Female)
	Mainly because we are Chinese, so those are your own problems [if you do not speak English]. I mean America's primary language is English. You can't ask for too much, it's just that you need to speak through an interpreter [to understand]. (#1595, Mandarin-speaking, Male)
	Can't expect them to have Chinese interpreters all day. As long as they are available, it's enough. (#1342, Mandarin-speaking, Male)

even embarrassed due to language barriers during their healthcare encounters with doctors, nurses, and other healthcare staff. The negative mental effects of language barriers were further compounded by unfamiliarity with medical terms, which continued even when an interpreter was present or the provider spoke their language.

One participant described herself as 'quite nervous' and 'scared' when she was about to have surgery and was not able to communicate her needs and feelings with the healthcare workers because of the language barrier. Similarly, another participant also expressed feeling anxious and stressful when meeting her doctor:

'I had a big surgery ... when I began staying at the hospital, I was a bit scared because I didn't understand the language, right? Don't know how to communicate with them ... Everyone there were foreigners, I was nervous ... I didn't know what to do, I was nervous, quite nervous, I don't know what they will be asking me, or what I need, right? So, I was very scared.' (Mandarin-speaking, female)

'Of course, if I am seeing a doctor, I will be nervous. Because if I really want to clearly understand my own health condition. If I do not understand what they are saying, I will have doubts.' (Mandarin-speaking, female)

In addition to being nervous and stressed, participants expressed a feeling of isolation during their hospitalization. In our study, we found that participants' feelings of isolation were largely attributed to the impression that care providers were resistant and ignorant around directly communicating with patients about their surgical procedures and critical care plans. Another cause for feeling isolated among participants was being in an environment without anyone that looked like them. One participant reported that she felt that she had no one to turn to for help when she wanted to use the bathroom. She waited until she saw a staff member who had a 'Chinese face' like her with whom she felt comfortable asking for assistance even though this person did not speak her language:

'The surgeon, before the surgery ... he told me ... and then performed a surgery and CT something. But I said I don't understand what you are talking about. It has nothing to do with me. Then he said, "Your surgery was very successful." But I don't know what happened or why I was sick ... I think the hospital didn't do a great job communicating with me ... I need to know what surgery you are telling me to get done, why I need to do it, or how it would be done.' (Cantonese-speaking, female)

'So then, she asked me if I need any help. I said I need to pee pee. I don't speak English. I don't know how to tell them ... Really, I was very nervous at that moment, because I don't know English, right? But then I found this person, she told me, "don't worry, I work for this hospital, I serve people like you." I said, "oh, I didn't see any Chinese people here."' (Mandarin-speaking, female)

Theme 3: mixed expectations for bridging the language barrier

Participants expressed mixed expectations about how they hoped to be treated and how to decrease language barriers during healthcare encounters. All participants agreed on wanting to have language services available whenever they needed it. This is based on their concerns about patient safety issues resulting from miscommunication and misunderstanding of their medical conditions, and their care needs being unmet when they were not able to communicate effectively:

'Of course (having) one who speaks my language is better.' (Cantonese-speaking, female)

'If the people at the hospital spoke Chinese too, I think it will be better, I will at least feel better, I can communicate better.' (Mandarin-speaking, female)

On the other hand, participants also often expressed low expectations for the quality of health services they would receive. It was commonly noticed in this study that Chinese participants thought that not being proficient in English was their personal problem when living in an English-speaking country. In their views, their lack of proficiency in speaking English brought extra burden to the US healthcare system, and therefore they should not expect to receive the same health services as other English-speaking Americans did. One participant expressed several times during the interview that it was her own problem for not being able to communicate in English. Other participants considered it enough when they could have interpreters for 'big conversations' with physicians. Most of the participants indicated they often tried to minimize their 'non-essential needs' and remain quiet during their healthcare encounters:

'Mainly because we are Chinese, so those are your own problems [if you do not speak English]. I mean America's primary language is English. You can't ask for too much, it's just that you need to speak through an interpreter [to understand].' (Mandarin-speaking, male)

'Can't expect them to have Chinese interpreters all day. As long as they are available, it's enough.' (Mandarin-speaking, male)

DISCUSSION

Patients with language barriers face numerous challenges in patient safety, care coordination, and quality of healthcare they receive. Researchers have reported that

patients with limited English proficiency are more likely to experience medication errors and make inappropriate lifestyle change decisions, leading to poorer health outcomes; they are also less likely to have high self-efficacy in management and communication.¹⁴⁻²⁰ This study captures the unique experiences of Chinese immigrant patients with limited English proficiency in the United States healthcare system, including the importance of language services at the dialect level, language barriers as a source of mental health concerns, and mixed expectations for language services. Findings from our study provide new insights into improving healthcare services and patient experiences for Chinese immigrants, one of the fastest-growing minority groups in the United States. Our study highlights the importance of including this vulnerable population in further health research, particularly to reduce health disparities as they are also among the least studied minority group in the US.

This study indicates that dialect strongly affects Chinese immigrants' experiences with the US healthcare system. Dialect use is very common among Chinese immigrants for daily communication; however, it is one area most healthcare providers are likely to be unaware of.²¹ Failure to account for dialect can result in an inappropriate assignment of language services. This could cause delays in timely treatment and care and contribute to waste of healthcare resources. Nearly 30% of US hospitals fail to employ appropriate interpreters, while still using reimbursements provided by Medicaid for those services.²²⁻²⁵ Importantly, language services for specific Chinese dialects can be easily implemented by taking advantage of electronic health records (EHRs). Building dialect capture into EHRs under the language category will go a long way toward implementing person-centered care that is culturally and linguistically tailored to Chinese patients. This would also benefit other immigrants speaking multi-dialect languages, such as Arabic speakers and Russian speakers.

Findings from our study highlighted mental health issues such as loneliness and isolation as negative consequences of language barriers during healthcare encounters, particularly when seeking institutional care such as hospitalization. This finding adds new insight to health and healthcare in Chinese immigrants and merits further exploration. To date, studies of mental health among this population have mainly focused on access and utilization of mental health services.^{26,27} Little, however, is known of how healthcare encounters as patients with language barriers influence Chinese immigrants' mental health. One approach to address this issue is using scheduling technology to improve language concordance between healthcare providers and patients. As expressed by participants in this study and previous research, seeing a healthcare provider who speaks their language is highly preferred when seeking healthcare.²⁸⁻³⁷ Technological interventions can help improve service delivery in the

present, but building a diverse healthcare workforce, including diversity in language fluency, should be an important long-term goal for healthcare administrations.

The finding that Chinese immigrants had mixed expectations of bridging the language barrier reflects the profound influence of culture and social norms of the native country even after decades of living in another country. Chinese immigrants expressed desire for increased future availability of language services and language concordant providers during healthcare encounters. Many Chinese immigrants, however, may not be aware that language services are a Civil Right.³⁸ While new provisions in the Affordable Care Act provide enhanced guidance and requirements for healthcare organizations to bridge language barriers, implementation is likely uneven.²¹ More research is needed to better understand the operational challenges involved with implementing their regulations and meeting the tenet of the law.

Interestingly, Chinese immigrants considered the aforementioned civil rights a 'wish' or 'ideal situation', and held another set of so-called 'realistic expectations', which were deeply influenced by Chinese culture and social norms. In Chinese culture, it emphasizes that as a member of the 'big family' (the society/community they are in or belong to), each member has the responsibility to contribute to the greatness of the 'big family' and should avoid being a trouble or burden to it. In addition, asking for help (herein language services), particularly help that is unnecessary for most of the members in the 'big family' (herein the US society) is linked to weakness and shame, instead of being honest and open. Despite the fact that many of the participants in this study have been in the US for a long time, the majority of Chinese immigrants, particularly those who are older adults, often retain traditional cultural views.³⁹

Limitations

Our study contributes to the understanding of the healthcare-related experiences that are unique to Chinese immigrants in the US. However, it should be noted that this study has several limitations. Firstly, all participants in this study were recruited from urban areas and therefore our findings may only be generalizable to those in urban areas. However, it should be noted that the vast majority of home health services in the US are in urban areas. Secondly, despite various efforts to ensure robustness and accuracy of results, including independent coding by bilingual researchers and team discussion and employing a consensus approach, it is possible that some conceptual drift may have occurred when translating participant interviews into English giving the cultural and social norm differences across culture.⁴⁰ Thirdly, it is possible that some of the unique experiences, such as issues related to social structure, of Chinese immigrants with limited English proficiency during healthcare encounters was not

fully captured due to the nature of this study – a secondary qualitative analysis that used data from a parent study with a different primary purpose and only recruited participants from one home health agency.

Implications

Although these qualitative findings could not be considered generalizable beyond the urban setting of the study, these findings do offer unique insights into how to improve the Chinese immigrant patient experience in the US healthcare system. This study highlights key areas that can improve their experiences across multiple care encounter points. One of the key areas for improvement is language concordance between provider and patient during healthcare encounters. As mentioned, this can be addressed to some extent by capturing speaking language at the dialect level, using technology-assisted scheduling, and building a diverse healthcare workforce. In addition, improving the quantity and quality of language services can be another approach. It is also important to hire more bi- and/or multilingual persons as medical interpreters. To do so, it is critical to make sure training on medical terminologies are available and affordable to potential medical interpreters, which would improve their competency and thus the quality of language services. Furthermore, the quality of language services can also be improved by building a standardized registration system for medical interpreter certification and language specification. Another way to improve the quality is to carefully consider the advantages and disadvantages of various interpreting service options (such as in-person, remote video, and remote audio) and whenever feasible, prioritize onsite in-person interpretation.

Finally, clinicians may need to be more proactive in identifying needs for language services when serving Chinese immigrants as they're less likely to explicitly express such needs due to cultural and social norms. Providers need to be mindful that the Chinese language does not mean just Cantonese and Mandarin, although these are the top two languages spoken widely among Chinese people. Previous research with Spanish-speaking patients revealed that patients with providers who speak Spanish have higher satisfaction with the healthcare service.⁴¹ It is also important to train healthcare providers and staff on the clinical and legal risk of non-compliance of providing timely and high-quality language service. Training should be also available on how healthcare providers and interpreters can work together effectively.

CONCLUSIONS

This study sheds light on the unique experience of Chinese Immigrants during healthcare encounters and

suggests the importance of quality language services in the US healthcare system. Our findings suggest that improving the matching of dialects between patient and healthcare provider/interpreter should be considered for improving language concordance in healthcare for Chinese immigrants. Furthermore, clinicians should pay close attention to mental health status as a consequence of language barrier among Chinese immigrants and address the hidden healthcare needs of this fast growing but understudied population.

DISCLOSURE/FUNDING SOURCES

This work was supported by the Agency for Healthcare Research and Quality (01HS023593, PI: Squires) and the pilot funding (PI: Ma) from the NYU Center for the Study of Asian American Health under the National Institute on Minority Health and Health Disparities grant award. The sponsor was not involved in the research.

DISCLOSURE/CONFLICT OF INTEREST

The authors have declared no potential conflicts of interest exist.

ARTICLE INFORMATION

Submitted: April 14, 2023; Accepted: August 16, 2024.

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