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Health Language and Literacy Survey
Conducted by
Natividad Family Practice Residency Program
and the
Monterey County Health Department
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INTRODUCTION

According to research conducted under the California Endowment's Cultural Competence Initiative, approximately 6 million Californians define themselves as "Limited English Proficient (LEP)." The need for language assistance services in healthcare settings has been increasing and has become fundamental to ensuring access to high quality health care for all Californians.

There is an increasing need for language assistance services in healthcare settings in Monterey County. Researchers have demonstrated that language barriers may result in compromised patient comprehension and poor adherence to therapy. Language barriers have also been associated with increased risk of medication errors, longer emergency room stays and higher costs of providing care. Other research studies suggest that the use of trained interpreters can improve quality of patient care as well as decrease costs.

Preliminary data suggests that Natividad Medical Center's (NMC) patient population originates primarily from US, Mexico, Philippines, Vietnam, India and other countries. The various indigenous Mexican dialects/regions identified as growing in use among our target population include the following: Oaxaca (Mixteco, Triqui, Zapoteco, Chatino), Michoacan (Tarasco), Hidalgo (Nahuatl), Jalisco, Zacatecas, Guanajuato and others. While Natividad Medical Center offers all services in a bilingual (English/Spanish) manner, many of these diverse dialects are unknown even to native Spanish speakers.

Culturally responsive and linguistically appropriate health care is a basic right for patients and a vital part of quality health systems. Thus, understanding the language and literacy needs of the patient population is critical to implement a comprehensive translation services program at NMC. The goal of this project was to conduct an objective evaluation of the level of the current status of language and basic literacy among the patients served by NMC in order to understand the level of NMC's patient population's self-identified ability to speak, read and write their identified language/dialect.

METHODS

The literature was reviewed to identify language and literacy surveys of patient populations. There were no surveys found that could be used, so survey questions for this assessment were developed by the investigators and tested for face validity. Survey questions included questions about where the patient came from, their current place of residence, level of education, languages spoken and written, and comfort level speaking or reading in those languages (Appendix A). The survey was also translated into Spanish.

Surveyors (n=6) came from a local university internship program. Training meetings were held at NMC before surveying began. It was not required, but several of the surveyors were bilingual. The surveyors went to different clinics at NMC, based on the surveyor's time constraints, from November 25, 2005, to March 6, 2007. They approached individual patients waiting for their appointment and explained the purpose of the survey. If the potential surveyee declined to take the survey, they were thanked by the surveyor and another patient was approached. All surveys were collected using a form software and a hand held Palm Pilot. Completed surveys were downloaded into a centralized Access database. After completion of the survey period, this database was analyzed using SAS software. Basic descriptive statistics (percentages) were tabulated for the main questions.

RESULTS AND DISCUSSION

A total of 454 patients were surveyed, but 94 refused to participate and 14 had already completed the survey giving a total sample of 346 people (79% response rate). Of responders, 227 (66%) were female and 116 (34%) were male.

There were nine different hospital units visited by the surveyors:

1. Emergency Room Waiting Room
2. Radiology Waiting Room
3. Mother Infant Unit
4. Specialties Clinic
5. Mental Health Unit
6. Acute Rehabilitation Unit
7. Pediatric Unit
8. Intensive Care Unit
9. Medical Surgery Unit (Adults)

The majority of surveys (69%) were conducted with patients accessing services in Unit 1, 2, and 3 at NMC. This generally reflects the distribution of patients between units at NMC.

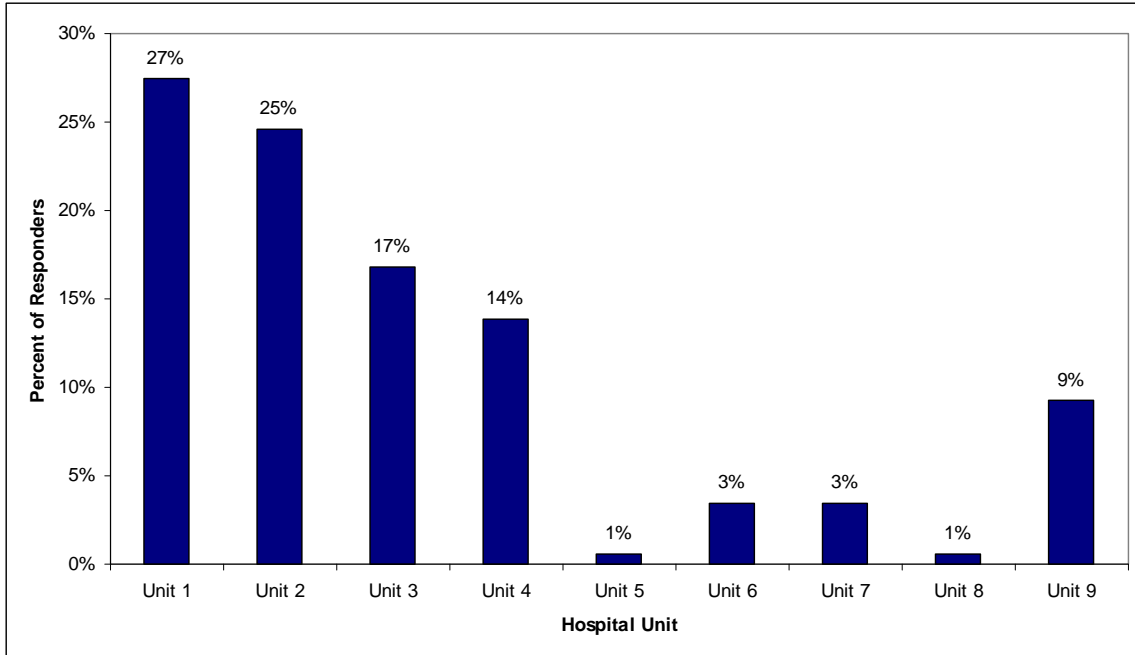
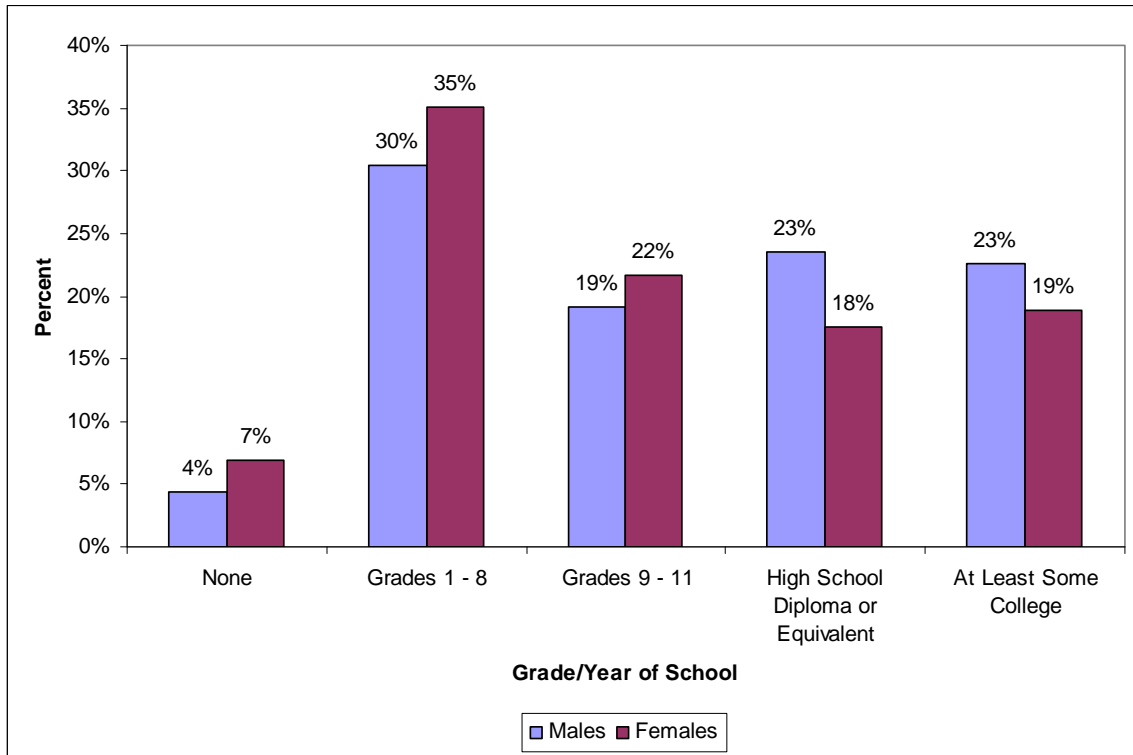


Figure 1: Proportion of Surveys Completed by Hospital Unit

Education by Gender

A large proportion of the patients surveyed had less than a 12th grade education (60%), women (64%) more so than men (53%). A small proportion of women (7%) and men (4%) had no education at all. The pattern shifted for those who had a 12th grade or higher education, with more men (56%) than women (37%) attaining higher levels of education.



Results do not include 14 responders (4%) for whom gender and education information was incomplete.

Figure 2: Highest Education Level Attained by Gender

Place of Residence

The majority of the patients who responded to the survey were Monterey County residents (96%), and of those the majority resided in Salinas (71%). In the 2000 census, Salinas represented 36% of the County population (Monterey County Health Profile 2006). Other places of residence included other California counties (3.2%), other U.S. states (0.6%), and Mexico (0.6%). In general, NMC seemed to see a cross section of county residents, but the surveyed patient population was heavily biased towards residents living nearer to the facility (Salinas and the adjacent Salinas Valley towns as opposed to the peninsula or southern Salinas Valley towns).

Table 1: Residential Location of Survey Responders

Place of Residence	n	%
Monterey County	331	95.7%
Aromas	1	0.3%
Castroville	10	2.9%
Chualar	2	0.6%
Gonzales	9	2.6%
Greenfield	13	3.8%
King City	2	0.6%
Marina	7	2.0%
Monterey	4	1.2%
Pacific Grove	1	0.3%
Prunedale	3	0.9%
Salinas	244	70.5%
Seaside	14	4.0%
Soledad	21	6.1%
Other California Counties	11	3.2%
Bakersfield	1	0.3%
Fresno	2	0.6%
Hollister	1	0.3%
Los Angeles	1	0.3%
Pollock Pines	1	0.3%
San Francisco	1	0.3%
San Juan Bautista	1	0.3%
Santa Cruz	1	0.3%
Watsonville	2	0.6%
Other States	2	0.6%
Iowa	1	0.3%
Arizona	1	0.3%
Other Countries	2	0.6%
Mexico	2	0.6%
Survey Total	346	100.0%

Language and Literacy Survey: Monterey County Participants by Area of Residence

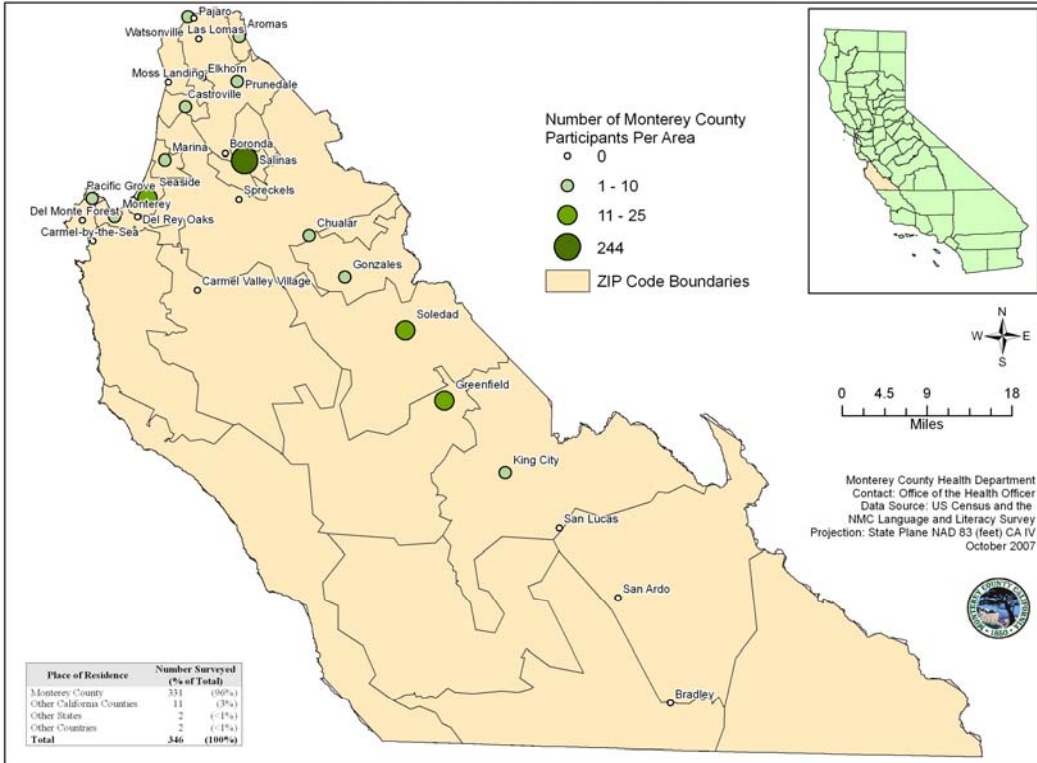


Figure 3: Number of Survey Participants by Area of Residence

Country of Origin

Survey responders' country of origin was primarily Mexico (61%), followed by the United States (34%). A small percentage of responders originated from western Pacific countries (3.2%).

Table 2: Survey Responders' Country of Origin

Country of Origin	n	%
Mexico	212	61.3%
USA	118	34.1%
Philippines	6	1.7%
El Salvador	4	1.2%
China	2	0.6%
Chile	1	0.3%
Vietnam	1	0.3%
Indonesia	1	0.3%
Unknown	1	0.3%
Survey Total	346	100.0%

Language and Literacy Survey: Participants' Country of Birth

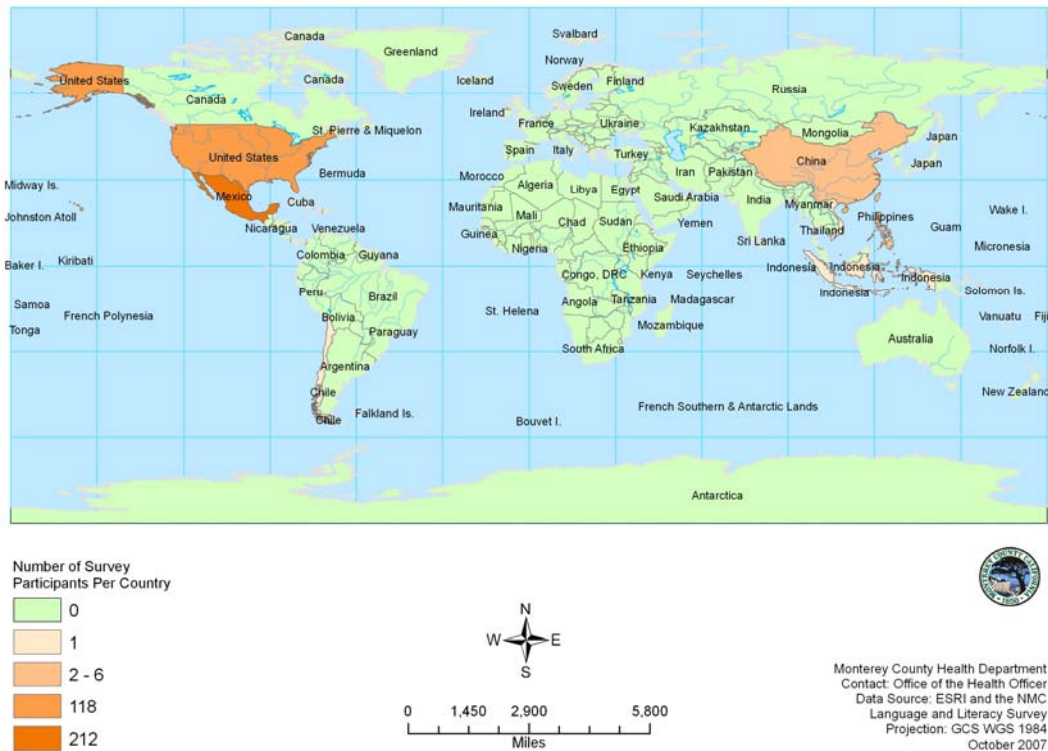


Figure 4: Number of Survey Participants by Country of Origin

Language

The major cluster of languages/dialects spoken was from Mexico and included responders who spoke Spanish (86%) and a variety of indigenous languages (2%), including Maya, Mixteco, Nahuatl, and Triqui. The majority of responders' who spoke Spanish were able to do so either a lot or with complete competency (85%). Responders' speaking a Mexican indigenous language had variable competency speaking the language. English was spoken by 57% of responders, with 75% of English-speaking responders speaking English a lot or with complete competency. A variety of other languages were spoken by responders, with languages of Asia the third most common language grouping (8%). Similar to the Mexican indigenous languages, these languages were spoken with variable competency by the responders who spoke them.

Table 3: Languages Spoken by Survey Responders and Proficiency Speaking Each Language

Language/Dialect	n	Percent of All Languages	Competency Speaking the Language (%)				
			None	A Little	Some	A Lot	Everything
Languages of Mexico	301	88.0%	0%	7%	8%	20%	65%
Spanish	293	85.7%	0%	7%	8%	20%	65%
Castellano	1	0.3%	0%	0%	0%	0%	100%
Maya	1	0.3%	0%	100%	0%	0%	0%
Mixteco	3	0.9%	0%	0%	33%	33%	33%
Nahuatl	1	0.3%	0%	100%	0%	0%	0%
Triqui	2	0.6%	0%	0%	0%	0%	100%
Languages of Europe	205	59.9%	0%	17%	11%	21%	51%
English	194	56.7%	0%	13%	12%	22%	54%
French	7	2.0%	0%	71%	14%	14%	0%
German	4	1.2%	0%	100%	0%	0%	0%
Languages of the Middle East	2	0.6%	0%	50%	50%	0%	0%
Arabic	1	0.3%	0%	100%	0%	0%	0%
Hebrew	1	0.3%	0%	0%	100%	0%	0%
Languages of Asia	26	7.6%	4%	35%	9%	17%	35%
Chinese	2	0.6%	100%	0%	0%	0%	0%
Mandarin	2	0.6%	0%	0%	0%	0%	100%
Indonesian	1	0.3%	0%	0%	0%	0%	100%
Ilocano	1	0.3%	0%	100%	0%	0%	0%
Java	1	0.3%	0%	0%	100%	0%	0%
Japanese	3	0.9%	0%	67%	33%	0%	0%
Korean	2	0.6%	0%	100%	0%	0%	0%
Bisayan	1	0.3%	0%	0%	0%	0%	100%
Pampangan	2	0.6%	0%	0%	0%	50%	50%
Tagalog	8	2.3%	0%	29%	0%	43%	29%
Thai	1	0.3%	0%	100%	0%	0%	0%
Vietnamese	2	0.6%	0%	0%	0%	0%	100%
Survey Total	342	100.0%	0%	12%	10%	20%	58%

Many responders were multilingual; therefore, results sum to greater than 100%.

Language results do not include information from 4 responders for whom language information was incomplete. Competency results do not include 27 responses for which verbal competency information was incomplete.

The majority of responders were monolingual for Spanish (41%), followed by bilingual for Spanish and English (40%). Almost 4% of responders were trilingual and of these, English was always one of the three languages spoken.

Table 4: Language Combinations Spoken by Survey Responders

Language Combinations	n	%
Mono-Lingual	173	50.6%
Spanish	140	40.9%
English	32	9.4%
Mandarin	1	0.3%
Bilingual	151	44.2%
Spanish + English	137	40.1%
Spanish + Mixteco	3	0.9%
English + Vietnamese	2	0.6%
Spanish + Triqui	2	0.6%
English + French	1	0.3%
English + German	1	0.3%
English + Hebrew	1	0.3%
English + Mandarin	1	0.3%
English + Tagalog	1	0.3%
Spanish + Maya	1	0.3%
Spanish + Nahuatl	1	0.3%
Tri-Lingual	13	3.8%
Spanish + English + French	3	0.9%
English + German + French	1	0.3%
English + Ilocano + Tagalog	1	0.3%
English + Indonesian + Java	1	0.3%
English + Pampangan + Tagalog	1	0.3%
English + Spanish + Arabic	1	0.3%
English + Spanish + Korean	1	0.3%
English + Spanish + Tagalog	1	0.3%
English + Tagalog + Bisayan	1	0.3%
English + Tagalog + Chinese	1	0.3%
Spanish + English + Castellano	1	0.3%
Other Multi-Lingual	5	1.5%
English + German + French + Thai	1	0.3%
English + German + Japanese + Korean	1	0.3%
English + Spanish + Japanese + French	1	0.3%
English + Spanish + Tagalog + Pampangan	1	0.3%
English + Tagalog + Japanese + Chinese	1	0.3%
Survey Total	342	100.0%

Results do not include information from 4 responders for whom language information was incomplete.

Literacy

For those speaking Spanish (86%), 63% of responders thought they could understand a lot or everything of what they read in Spanish. Those speaking indigenous Mexican languages generally had low levels of competency in reading the language, but this is likely compounded by whether or not there is a written form of the language variant that they spoke. This latter question was not asked of responders. For responders who spoke English, 68% thought they could understand “a lot” or “everything” of information presented to them in English. Those speaking the various western Pacific countries’ languages had variable competency in reading in that language.

Generally, about a third of the responders reported they could not read competently in a language they speak (Spanish non-competent readers = 36%, English non-competent readers = 28%, English or Spanish non-competent readers = 33%, all languages non-competent readers = 35%). The literacy responses to this survey would seem to indicate a general need by NMC to have a verbal translation service for written documents presented to patients in order to ensure all NMC patients are able to comprehend the various materials presented to them.

Table 5: Languages Spoken by Survey Responders and Proficiency Reading Each Language

Language/Dialect	n	Percent of All Languages	Competency Reading Each Language (%)				
			None	A Little	Some	A Lot	Everything
Languages of Mexico	301	88.0%	9%	17%	11%	18%	45%
Spanish	293	85.7%	8%	17%	11%	19%	46%
Castellano	1	0.3%	0%	0%	100%	0%	0%
Maya	1	0.3%	100%	0%	0%	0%	0%
Mixteco	3	0.9%	33%	33%	0%	33%	0%
Nahuatl	1	0.3%	100%	0%	0%	0%	0%
Triqui	2	0.6%	100%	0%	0%	0%	0%
Languages of Europe	205	59.9%	4%	15%	13%	24%	44%
English	194	56.7%	1%	15%	13%	25%	47%
French	7	2.0%	57%	14%	14%	14%	0%
German	4	1.2%	75%	25%	0%	0%	0%
Languages of the Middle East	2	0.6%	0%	0%	0%	50%	50%
Arabic	1	0.3%	0%	0%	0%	100%	0%
Hebrew	1	0.3%	0%	0%	0%	0%	100%
Languages of Asia	26	7.6%	43%	4%	0%	13%	39%
Chinese	2	0.6%	0%	100%	0%	0%	0%
Mandarin	2	0.6%	0%	0%	0%	0%	100%
Indonesian	1	0.3%	0%	0%	0%	0%	100%
Ilocano	1	0.3%	100%	0%	0%	0%	0%
Java	1	0.3%	0%	0%	0%	100%	0%
Japanese	3	0.9%	100%	0%	0%	0%	0%
Korean	2	0.6%	100%	0%	0%	0%	0%
Bisayan	1	0.3%	0%	0%	0%	0%	100%
Pampangan	2	0.6%	0%	0%	0%	50%	50%
Tagalog	8	2.3%	29%	0%	0%	14%	57%
Thai	1	0.3%	100%	0%	0%	0%	0%
Vietnamese	2	0.6%	100%	0%	0%	0%	0%
Survey Total	342	100.0%	9%	15%	11%	20%	44%

Many responders were multilingual; therefore, results sum to greater than 100%.

Language results do not include information from 4 responders for whom language information was incomplete. Competency results do not include 30 responses for which reading competency information was incomplete.

Similarly, almost one third (32%) of responders who could write in Spanish could only do so a little or not at all. Those who could write in English were able to do so at a slightly higher proficiency level with only 22% able to write only a little or not at all in English.

Table 6: Languages Spoken by Survey Responders and Proficiency Writing Each Language

Language/Dialect	n	Percent of All Languages	Competency Writing Each Language (%)				
			None	A Little	Some	A Lot	Everything
Languages of Mexico	301	88.0%	13%	19%	10%	17%	41%
Spanish	293	85.7%	11%	20%	10%	18%	41%
Castellano	1	0.3%	0%	0%	100%	0%	0%
Maya	1	0.3%	100%	0%	0%	0%	0%
Mixteco	3	0.9%	33%	33%	0%	0%	33%
Nahuatl	1	0.3%	100%	0%	0%	0%	0%
Triqui	2	0.6%	100%	0%	0%	0%	0%
Languages of Europe	205	59.9%	8%	14%	12%	23%	43%
English	194	56.7%	4%	14%	12%	24%	46%
French	7	2.0%	57%	14%	14%	14%	0%
German	4	1.2%	100%	0%	0%	0%	0%
Languages of the Middle East	2	0.6%	0%	0%	0%	50%	50%
Arabic	1	0.3%	0%	0%	0%	100%	0%
Hebrew	1	0.3%	0%	0%	0%	0%	100%
Languages of Asia	26	7.6%	39%	9%	4%	13%	35%
Chinese	2	0.6%	0%	100%	0%	0%	0%
Mandarin	2	0.6%	0%	0%	0%	0%	100%
Indonesian	1	0.3%	0%	0%	0%	0%	100%
Ilocano	1	0.3%	0%	0%	100%	0%	0%
Java	1	0.3%	0%	0%	0%	100%	0%
Japanese	3	0.9%	100%	0%	0%	0%	0%
Korean	2	0.6%	100%	0%	0%	0%	0%
Bisayan	1	0.3%	0%	0%	0%	0%	100%
Pampangan	2	0.6%	0%	0%	0%	50%	50%
Tagalog	8	2.3%	29%	14%	0%	14%	43%
Thai	1	0.3%	100%	0%	0%	0%	0%
Vietnamese	2	0.6%	100%	0%	0%	0%	0%
Survey Total	342	100.0%	12%	17%	10%	19%	41%

Many responders were multilingual; therefore, results sum to greater than 100%.

Language results do not include information from 4 responders for whom language information was incomplete. Competency results do not include 32 responses for which reading competency information was incomplete.

CONCLUSIONS

This study provided a good general overview of some of the potential language and literacy needs of the survey responders at NMC during the survey period. The majority of responders were monolingual for a language other than English and a third of responders had difficulty reading in any of the language(s) they could speak and a third of those who could write in Spanish could do so only a little or not at all. Thus, the cultural diversity and language and literacy needs of survey respondents at NMC supports the need for a comprehensive translation services program at NMC. The survey data support investigation of a translation service that includes verbal translation of written documents based on the lower levels of literacy of the survey respondents. It would also be helpful if the program included educational cultural competency components for staff, as this could increase effective interactions between providers and staff with their culturally diverse patient population. Such a system would also likely empower NMC health consumers to more effectively advocate for their rights within the health system.

Although there was a good response rate, a limitation of the survey is that responders were not randomly chosen, thus possibly underrepresenting certain groups based on language barriers between the surveyor and the responder. Also, it is not known what the language and literacy needs were of those who refused to take the survey, thus there could be some amount of nonresponder bias. Finally, the survey relied on self-responses and did not objectively assess actual language and literacy capabilities. Thus, extrapolation of the results of this report to the entire NMC population should not be made. However, the findings should prove useful for development and improvement of patient services at NMC regarding the language and literacy needs of its patients.