Language Barriers Research

GeaCom Fact Sheet

Purpose

The purpose of this fact sheet is to equip GeaCom employees with cited research that is relevant to the multilingual capabilities of Phrazer[™]. This information can be referenced in press releases, interviews, presentations, other fact sheets, and future publications. To build our company's credibility and eliminate the potential for inaccurate information bet stated, the appropriate citations should always be included when referencing this research. The full citations are included at the end of the Master Literature Review located in the GeaCom server.

Language Diversity & Language Barriers

- There are 6,909 languages spoken in the world today (Lewis 2009)
- There are 364 languages spoken in the United States (Lewis 2009)
 - The most commonly spoken languages in the US are: English, Spanish/ Spanish Creole, Chinese, Tagalog, French Vietnamese, German and Korean (Lewis 2009).
 - There are more than 124 languages spoken in Minnesota
 - In New York City, close to half of the population does not speak English at home (Provenzano 2009).
 - One out of four New Yorkers cannot understand complex sentences in English
- More than 55 million people (close 20% of US population) speak a language other than English at home (US Census Bureau, 2007)
- 24.2 million Americans are considered limited English proficient (LEP), meaning they have only a limited ability to speak, understand, read or write English (Barrett, et al. 2008)
- See Appendix A

Language Barriers and Healthcare

- 1 out of 5 patients with LEP feel their medical care has been compromised as a result of language barriers (New York Immigration Coalition 2008)
- LEP patients are twice as likely to experience adverse events while hospitalized (Provenzano 2010)
- Language barriers often result in:
 - Errors in medication and treatment, misdiagnoses and caregiver mistakes than can cause the patient serious harm or even death (Kramer 2010).
 - Decreased access to medical resources, particularly preventative care (Ribera 2008)
 - A negative impact on the quality of patient care, patients' level of satisfaction and the caregivers' level of satisfaction with their work (Ribera 2008)
 - Increased use of emergency services
 - Visiting a medical facility multiple times for the same health problem (because the problem was not communicated or resolved in previous visits) (Ribera 2008)

Language Services

Language Barriers Research

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- A language service is defined as any service that aids an LEP patient in acquiring access to and understanding of care that is comparable to that of a native English speaker (Barrett et al. 2008).
- Limited use of language services
 - Less than half of patients with LEP will receive assistance from a medical interpreter (Bowman 2010)
 - Nearly 97% of physicians treat at least some non-English speaking patients. However, only 56% worked in facilities that provided patients with interpreter services (2008 data; Reschovsky & Boukus 2010).
 - Of these facilities that offered interpreter services, 44% offered patients assistance in only one language, 16% offered two languages. The remaining 50% provided services in three or more languages (this includes those facilities relying on telephonic interpreting services).
 - 22% of physicians reported working for a practice that has IT capable of recording patients' preferred languages. However, only one-third of these physicians (or 7% of physicians overall) routinely use this function.
 - The utilization of language services is especially limited in the Emergency Department; a survey indicated only 13% of patients received assistance from an interpreter (Garrett et al. 2008)
 - A recent survey conducted by the Association of Clinicians for the Underserved (ACU) found that the limited use of traditional language services was due in part to the caregivers' resistance to these services. One clinician reported that he felt awkward using a telephonic interpreting service and talking on the phone to discuss his patient's medical condition and treatment. He said he would prefer to use an alternative form of interpretation (Barrett, et al., 2008).
 - See Appendix B

Benefits of language services

- Without the assistance of an interpreter, LEP patients are LESS likely (than non-LEP patients) to (Ribera, 2008):
 - Access preventative health care
 - LEP patients with professional medical interpreters were 94% more likely to use primary care and 78% less likely to use ED than English proficient patients, resulting in lower cost and more access to preventive care." (Graham, *et al.*, 2008)
 - "Use of trained interpreters was associated with... increased clinic utilization." (Bernstein, *et al.*, 2002).
 - Report mental or physical symptoms
 - Understand diagnosis and prognosis
 - Adhere to treatments and scheduled follow-up visits
 - Be referred to specialists when required
 - Be satisfied with their level of medical care
 - Return to the same healthcare facility
 - Understand informed consent

Language Services Expenditures

Industry expenditures

- It would cost the US \$268 million per year to provide interpretation services to LEP patients in all inpatient hospital, outpatient physician, ED and dental visits (Leighton & Flores 2005).
- Interpretation services cost facilities an average of \$4.04 per LEP patient visit, or 0.5% of the total cost of the visit (OMB estimate, Leighton & Flores 2005)
- Interpreters receive \$20-\$26 per hour and telephone interpretation costs \$132/hr (OMB estimates 2002)
- Individual facility and state expenditures
 - Bellevue hospital (NY) spends \$2.5 million a year on interpreting services (Kramer 2010).
 - The cost of language services accounted for 0.06% to 0.78% of overall hospital operating budgets (study of 20 CA hospitals, Dower & Kasier 2007).
 - Air Canada spends more than \$9.27 million per year to meet Canada's bilingualism requirements. The airline must generate an additional \$185 million in sales to cover these costs (Trottier 2001).
 - Alameda County Medica Center spends more than \$1 million on interpreters per year (18 full-time and 19 on-call interpreters) (Colliver 2003).

Medical Costs Associated with Language Barriers

- \$73 billion is spent annually in unnecessary health expenses due to the inability of patients to understand what medical providers are attempting to communicate (The Institute of Healthcare Advancement 2003).
- Language barriers increase medical costs by:
 - Generating unnecessary costs due to poor communication
 - Increased length of patient stay in the hospital
 - 2004 study: LEP patients remained hospitalized 0.5 days (6%) longer than non-LEP patients (John-Baptiste *et al.*, 2004)
 - 1.8 days longer for diabetes
 - 3.6 days longer for stroke
 - Increased number of patients that are needlessly hospitalized
 - Unnecessary tests
 - When patients are not confident in their communication with a patient, they often increase testing to be assured that they are providing the correct diagnosis. This is commonly referred to as "defensive medicine."
 - In a 2002 study, LEP patients were found to have \$5.78 more in test costs than a non-LEP patient (Hampers & McNulty, 2002).
 - "...An incomplete medical history leads to an attempt to compensate for possible deficiencies in the interview by obtaining more labs and imaging data" (Brettler Vandervort, 2003).

- Language and communication barriers may lead to unnecessary intubations in trauma patients (Joint Commission, 2008; Bard, 2004).
- Unnecessary consultations
- Causing expensive medical complications
 - Misdiagnosis
 - Patient misunderstanding of diagnosis and treatment
 - Decreased patient adherence to treatments
 - \circ $\;$ Low rates of preventive health care
- The average cost of testing for LEP patients was \$41 higher (\$145 vs. \$105) and the length of time they spent in the ER was also longer (165 minutes vs. 137 minutes) (Brettler Vandervort 2003).



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United States Population by English-Speaking Ability									
Characteristic Total English-speaking ability									
Very well Well	Not we	ell	Not at	all					
NUMBER									
Population 5 years and older	280,95	50,438	(X)	(X)	(X)	(X)			
Spoke only English at home 225,5	05,953	(X)	(X)	(X)	(X)				
Spoke a language other than English	at home	55,444	,485	30,97	5,474				
10,962,722 9,011,298	4,494,9	991							
Spoke a language other than Engli	sh at ho	me	55,44	4,485	30,97	5,474			
10,962,722 9,011,298	4,494,	991							
Spanish or Spanish Creole 34,54	7,077	18,179	,530	6,322,	170				
6,344,110 3,701,267									
Other Indo-European languages	10,320	,730	6,936,	808	2,018,	148			
1,072,025 293,749									
Asian and pacific Island languages	8,316,4	426	4,274,	,794	2,176,	180			
1,412,264 453,188									
Other languages 2,260,252	1,584,3	342	446,2	24	182,89	99	46,787		
PERCENT									
Population 5 years and older	100	Χ	Χ	Х	Χ				
Spoke only English at home 80.3	Х	Х	Х	Х					
Spoke a language other than English	at home	19.7	55.9	19.8	16.3	8.1			
Spoke a language other than Engli	sh at ho	me	100	55.9	19.8	16.3	8.1		
Spanish or Spanish Creole 62.3	52.6	18.3	18.4	10.7					
Other Indo-European languages	18.6	67.2	19.6	10.4	2.8				
Asian and Pacific Island languages	15.0	51.4	26.2	17.0	5.4				
Other languages 4.1 70.1	19.7	8.1	2.1						
Source: U.S. Census Bureau, 2007 American Community Survey (Shin & Kominski, 2010)									

Appendix B: "HSC 2008 Health Tracking Physician Survey"



US Physicians Implementing Select Tools Aimed at Reducing Racial/Ethnic Disparities, 2008 Practice Provides Interpreter Services* 55.8%

Practice Provides Patient-Education Materials in Languages other than English40.1%Physician Received Training in Minority Health40.3%

Physician Receives Reports on Own Patients' Demographic Characteristics23.2%Information Technology to Access Patients' Preferred Language is Available and UsedRoutinely*7.3%

Physician Receives Reports on Quality of Care for Own Minority Patients 11.8% *Excludes physicians who reported having no non-English speaking patients. Source: HSC 2008 Health Tracking Physician Survey (Reschovsky & Boukus 2010)

Patient Communication Difficulties among US Physicians, by Level of Interpreter Support , 2008

All Physicians Unable to obtain interpreter services in past year Reported difficulties communicating with patients because of language or cultural barriers a major problem Proportion of patients physician has difficulties communicating with because they speak a different language

No interpreter services (r) 42.8% 15.8% 3.8% 4.3%

Practice provides one language only23.5%24.0%**4.4%7.2%**Practice provides two languages8.7%20.9%*4.2%7.8%**Practice provides three or more languages13.2%20.1%*5.5%8.5%**Practice provides translator services8.3%18.0%4.8%8.2%***Difference from reference group (r) is significant at p<0.5 and ** at p<.01.</td>Source: HSC 2008 Health Tracking Physician Survey (Reschovsky & Boukus 2010).

