

The Language of Scholarship Accent Modification Program

Wyona M. Freysteinson, PhD wfreysteinson@twu.edu

Joshua Adams, EdD₂ jadams15@twu.edu

Sandra Cesario, PhD₁ scesario@twu.edu

Hanna A. Belay, PhD₃ ⁱ hbelay@stcloudstate.edu

Paula Clutter, PhD₁ pclutter@twu.edu

Jinlan Du, MS₁ jdu@twu.edu

Betty M. Duson, PhD₁ bduson@hotmail.com

Marilyn Goff, MLS₁ mgoff@twu.edu

Lenora McWilliams, PhD₄ lamcwill@Central.UH.EDU

Rachelle Nurse, PhD₁ rnurse@twu.edu

Zoheb Allam, MS₁ zallam@twu.edu

Corresponding author: Wyona M. Freysteinson, phone 1-281-433-5365,
wfreysteinson@twu.edu, 6700 Fannin Street, Houston, Texas, United States

Communication remains a key element in promoting patient safety and satisfaction. Healthcare organizations have focused on improving communication through technology and patient-centered care. One communication challenge that merits further investigation is the problematic communication that occurs when a healthcare provider speaks with an accent that makes it difficult for others to understand. A one-

group pretest-posttest study examined the perceptions of 27 individuals - nursing students, health care administration students and registered nurses - who participated in a 12-week accent modification program. Self-esteem, communication competence and communication apprehension were measured before and after the intervention. There was a statistically significant increase in self-perceived self-esteem and several communication competence items. Implications for education and practice suggest that schools of nursing and healthcare organizations consider implementing accent modification programs. A key implication for future research is to determine the existence of a link between patient safety and satisfaction and the presence of strong accents among nurses and other health care workers.

Highlights

- Communication failure is a key contributing factor in more than 400,000 deaths per year.
- Telephone communication can be especially difficult when a speaker has a strong accent, and the listener has no visual cues to help interpret the dialogue.
- The aims of accent reduction, accent modification, and pronunciation programs are to improve speech intelligibility and comprehensibility.
- This one group pretest-posttest study was conducted in the world's largest medical center where more than 90 languages are spoken.
- Following the 12-week accent modification program led by a licensed speech-language pathologist, participants perceived that they could communicate with

others more clearly and their ability to understand others also improved.

In healthcare, effective communication is critical to the delivery of quality care focused on patient safety and satisfaction. Communication and collaboration among healthcare professionals are one of the nine essential competencies of baccalaureate education for professional nursing practice (American Association of Colleges of Nursing, 2008). In 2014, The Joint Commission (2016) identified communication as the root cause of 744 out of 936 sentinel events in 2015. In addition, nurse communication has been cited (StuderGroup, 2012) as having the most influence on patient satisfaction as measured by the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS). This performance tool measures patients' perceptions of the care they receive in the hospital which is publicly reported and, drive value-based purchasing in the inpatient hospital setting (Centers for Medicare & Medicaid Services, 2015).

In 1999, the Institute of Medicine in the paper *To Err is Human* recognized communication failure as a key contributing factor to the sentinel events that caused the death of almost 100,000 individuals annually. In 2013 (John), an evidence-based estimate of preventable deaths due to preventable harm was over 400,000. Today, communication errors remain a significant element in sentinel events in health care facilities (Joint Commission, 2016).

A review of the literature was conducted using controlled MeSH vocabulary or free text searching of the databases: Academic Search Complete, CINAHL, DTIC (open

classification), PubMed/MEDLINE, and ProQuest Nursing & Allied Health Science. Although hundreds of articles on accents and communication barriers were located, when articles eliminating foreign accent syndrome were removed, and then limits were applied of evidence-based, full-text, research conducted in the last ten years, there were only about a dozen articles, most of which dealt with nursing. Few studies consider communication failures, safety issues, and patient satisfaction. Although the issue is popularly discussed, a paucity of research documenting effective programs to modify the accented English demonstrated the need for this program.

Health care organizations have worked diligently to improve communication processes. Nursing patient care models that include hourly rounding, bedside report, and a focus on patient education have been implemented (Ellison, 2015; StuderGroup, 2012). Electronic patient records, patient information portals, social media, and mobile devices are communication technologies that have emerged in order to produce effective communications (Mamlin & Tierney, 2016). In addition, translation services have been made available to patients (United States Department of Health & Human Services, 2015) and nurses are encouraged to disclose errors (Burhans, Chastain, & George, 2012).

One challenge that has received limited attention is the ineffective communication that may occur when health care workers with strong foreign or regional accents try to talk with their patients, families, and other members of the health care team. An accent is a unique mode of pronunciation common to a particular nation, locality or region. A

perceived strong or thick foreign or regional accent as compared to a mild accent is difficult or impossible for a native speaker to understand (American Speech-Language-Hearing Association, 2016).

There can be ineffective communication between a nurse and a physician when one of the speakers has an accent that is difficult to understand (Robinson, Gorman, Slimmer, & Yudkowsky, 2010). Telephone communication between nurses and physicians or other individuals may be difficult when a speaker has a strong accent as the listener has no visual cues to help interpret what the speaker is saying (Kawi & Xu, 2009). Nurses, particularly international nurses with strong accents, reported difficulty communicating with health care workers (i.e., shift to shift report), patients, and families (Smith & Smyer, 2015; Smith & Ho, 2014; & Robinson et al., 2010), and these difficulties have also been noted in schools of nursing (Crawford & Candlin, 2013; Malecha, Tart, & Junious, 2012).

For the speaker with a strong accent, there is a potential for negative psychological effects in having an accent that is difficult for others to understand. Nurses and nursing students with thick accents have been asked to repeat themselves frequently, have felt devalued, and have felt others perceived them as less intelligent (Smith & Smyer, 2015; Mulready-Shick, 2013). A literature review of foreign-born nursing students demonstrated that these students often feel inferior to others (Malecha et al., 2012). For nursing, the worst case scenario is that accent communication problems may lead to

speakers simply trying to avoid social interactions (American Speech-Language-Hearing Association, 2016).

The aim of accent reduction, accent modification, and pronunciation programs is to improve speech intelligibility and comprehensibility. A review of 75-second language instruction courses has demonstrated mixed results concerning pronunciation (Thomson & Derwing, 2015). On the whole, approximately 82% of these studies report significant improvement in speech intelligibility.

Similar programs have begun to emerge in healthcare with a research landscape so vast that researchers have dubbed it “uncharted territories” (Khurana & Huang, 2013, p. 2). Eighty-eight non-native English-speaking medical graduates participated in a 10-week accent reduction course at an American University. A pre-test, post-test model was used to measure participants’ self-evaluation of communication skills and video/audio tapes in an independent evaluation by two external reviewers. Using a questionnaire developed by the researchers, participants perceived their communication skills significantly improved from 71% pre-intervention to 77% post-intervention ($p < 0.01$). Evaluators scores were highly correlated (Pearson $R = 0.914$, $p < 0.01$) and suggested an improvement in the participant's ability to communicate like a native English language speaker (40%) (Khurana & Huang, 2013).

Shen et al. (2012) used a quasi-experimental control group design to study a 10-week accent modification course for international nurses ($n = 32$) in a hospital the Southwestern

United States. International nurses in a sister hospital were in the control group (n=29). A phonetic tool, Compton's Phonological Assessment of Foreign Accent (CPAFA), was used to count phonetic errors indicated a significant reduction in linguistic errors ($p < 0.01$)...

Carr and Demel-Ichikawa (2012) piloted a 12-week program with 13 English as second language nursing students attending a university in the United States. A linguistic tool, Psycholinguistic Aspects of Foreign Accent (PAFA), was used to capture reductive changes in accent post-intervention. This tool, together with anecdotal from the student's weekly logs, suggested all students mastered saying target phonemes (a unit of sound) at the word level, seven mastered this skill at the sentence level, and seven showed improvements in speech melody.

Belay (2013) conducted a qualitative study to explore the experiences of 14 international nurses in a hospital in the Southwestern United States who took part in a 13-week accent modification program. A thematic analysis suggested the participants felt increased confidence in their language abilities and that this led to a desire to be more active in voluntary activities on the unit.

This study adds to the accent modification literature through quantitative measurement of the perceptions of nursing students, nurses, and other healthcare professionals in a 12-week accent modification program. We hypothesized that participants who have taken an accent modification program would self-report a) decreased communication apprehension, b) improved communication competence, and c) enhanced self-esteem.

Method

Study Design

This study is a one-group pretest-posttest research study to evaluate participants' perceptions of their communication patterns and self-esteem before and after an accent modification program.

Sample

The Texas Medical Center (2016) is the largest medical center in the world, with over 90 languages spoken throughout the area (City of Houston, 2016). Overcoming communication barriers is one of its greatest challenges. A large university situated in the heart of this medical center enrolls students from all over the world, some of whom have foreign or regional accents that may be barriers to intelligible language and effective communication. The sample was drawn from this university and hospitals located in the Texas Medical Center.

A priori power analysis was conducted to determine the minimum sample size required to find significance with a desired level of power set at .80, an α -level at .05, and a moderate effect size of .25 (f) and .50 (dz). Based on the analysis, it was determined that a sample of 27 participants was required to ensure adequate power for paired samples t-tests. Nonparametric Wilcoxin Signed Rank Tests were also utilized to confirm the findings from the paired samples t-tests. Over the course of three semesters, 27 individuals completed an accent modification program.

A convenience sampling strategy was used. Participants self-selected to be in the program if they perceived they had an audible foreign or regional accent (i.e., incorrect sounds, rhythms, and/or intonation) that made it difficult for others to understand them. For the first two semesters, the study was limited to students enrolled in at least one course at Texas Woman’s University. In the third semester, the study was expanded to include nurses from the Texas Medical Center, faculty, and staff from Texas Woman's University. Recruitment flyers, Facebook, an online education platform (Learning Management System) and email were used to recruit an initial sample of 40 participants.

Figure 1. Categorical Demographic Variables for Participants Who Completed the Program (n = 27)

	<i>n</i>	%
Gender		
Female	24	88.9
Male	3	11.1
Enrolled in TWU in:		
Nursing	21	77.8
Other	2	7.4
Marital Status		
Married	19	70.4
Single/Divorced	8	29.6
Ethnicity		
Not Hispanic or Latino	23	85.2
Hispanic or Latino	4	14.8
Race		
Asian	14	51.9
Black or African American	6	22.2
Other	7	25.9

Current Education Level		
Greater Than or Equal to 2 Years of College	14	51.9
Bachelor's Degree	10	37
Graduate Degree	3	11.1
Country/Area of Origin		
Asia	13	48.1
Africa	6	22.2
North/South America	2	7.4
Other	6	22.2
Age When English Speaking Began		
As a child	3	11.1
Later on in life	24	88.9
Number of Years in a Country Where English is the Primary Language		
1 Year or Less	5	18.5
3 Years to 5 Years	4	14.8
More Than 5 Years	18	66.7
Age		
<i>M</i>	32.37	
<i>SD</i>	7.77	
Min	23	
Max	47	

Note: Frequencies not summing to 27 indicate missing data

Intervention

The accent modification program consisted of 12 weekly one-hour classes taught by a licensed speech language pathologist. Classes were limited to 10 students in order to enable adequate individual attention; two sessions were taught in each of the three semesters of the program. The role of melody (prosody) in the acquisition of American

English pronunciation was taught throughout the program. For example, many languages use short vowel sounds, whereas individuals who speak American English use a smooth, melodic voice and a slow rate of speech.

Participants were taught to pause slightly before phrases, open their mouths when speaking, and to keep a mirror near their telephone to remind them to slow down and more their lips. Participants also practiced the basics of the English language, including simple past tense, plurals, and subject-verb agreement. Fourteen different vowel sounds and twelve difficult to pronounce consonant sounds (l, r, th, d, s, sh, ch, v, f, w, b, and p) in North American English were taught.

Numerous exercises were used to learn the vowel and consonant sounds, including exact placement of the mouth and tongue. For example, to make the “d” sound, the tongue is placed behind the upper teeth. Examples of teaching “d” included using this consonant at the beginning of words. Examples are: Don has a dog, the dollar is damp, and eat the dairy foods at dawn. The consonants were also taught in the middle of words. Examples include: the ladder is muddy, modern bodies, and goodbye to credit cards.

As all participants were in healthcare, a video was developed by two of the nursing faculty on the correct way to give bedside report between shifts. This video was used, together with medical words, to teach North American English medical terminology. Participants were also taught the need for eye-contact when speaking.

Suggestions for practice included: tape recording of the sessions and listening to the

sessions in the car or at home as one prepares meals, the use of a mirror when practicing, and the use of self-videotapes using an iPad or video-camera. iPad and video-cameras were available through the University technology department.

Instruments

Instruments included demographics, pre and post-intervention tools, and post-intervention focus groups. The pre-study demographic tool gathered data on age, gender, marital status, ethnicity, race, education level, field of study or profession, country of origin, age when English speaking began and number of years in a country where English is the primary language. A self-esteem tool and two extensive communication tools were given to the participants prior to the intervention and following the last day of the accent modification classes.

The Rosenberg (1989) Self-Esteem scale (SES) is one of the most widely-used self-esteem measures in social science research. The SES is scored as a Likert scale. The ten items are answered on a four-point scale ranging from strongly disagree to strongly agree. The scale generally has high reliability. Test-retest correlations for the Rosenberg SES are typically in the range of .82 to .85, and Cronbach's alpha for various samples are in the range of .774 to .88 (Blascovich & Tomaka, 1993; Rosenberg, 1989). The validity or the extent to which the scale captures what it is intended to measure is as follows: criterion validity is .55 and construct validity correlated -.64 with anxiety, -.54 with depression, and -.43 with anomie (Rosenberg, 1965).

Personal Report of Communication Apprehension – 24 (PRCA-24) measures communication apprehension, defined as the level of fear or anxiety associated with either real or anticipated (oral) communication encounters (McCroskey, 1982). The PRCA includes 24 items with a Likert five-point response scale, anchored by “strongly disagree” to “strongly agree.” In filling out the PRCA-24, an individual indicates the level of anxiety he or she feels about participating in various oral communication situations in one of four contexts – public, small group, meetings, and interpersonal. According to McCroskey’s (1982) normative study of 40,000 college students, the mean overall score is 65.6 with a standard deviation of 15.3, and the overall score is highly reliable with alpha range from .93 to .95. According to McCroskey, Beatty, Kearney, and Plax (1985), construct and predictive validity, as well as its cross-situational consistency, were strong. Levine and McCroskey (1990) extensively reviewed the literature demonstrating validity and reliability of this frequently used measure of communication apprehension.

The Self Perceived Communicative Competence (SPCC) scale measures how competent people may feel in four different communication contexts: public speaking, talking in a large meeting, talking in a small group, and talking in a dyad (McCroskey & McCroskey, 1988). In addition, the SPCC addresses three different kinds of receivers: strangers, acquaintances, and friends. The SPCC includes 12 items ranked on a scale of 0 = completely incompetent and 100 = competent. The reliability across all of these contexts

and receivers in one study (N=344) using this instrument was .92. The reliability for all subscores was in a satisfactory range of .67 to .87 with the exception of the “Dyad” reliability score, which was .44 (McCroskey & McCroskey, 1988).

Data Collection and Analysis

Institutional Review Board approval was provided by Texas Woman’s University, Houston, Texas. Written consent was received from all participants. Appropriate steps were taken to ensure confidentiality. The greatest risk in the project was that students might feel the project conveyed prejudice or bias toward English as a second language learner. Steps taken to minimize this risk were to invite all university students to self-select into the research program including students who believed they had a regional accent. One student who believed she had a regional accent that made it hard for others to understand her did take part in the study.

Instruments were uploaded to an online survey site (PsychData®, 2016). Prior to the first accent modification class, the principal investigator met with all potential participants to explain the study and obtain consent. Participants were emailed the link to the survey site after consent and asked to complete the pre-study questionnaires prior to their first class. After the last class, the participants were emailed a link to the survey site, where they completed the post-study questionnaires.

Results

Participants self-selected based on their perceived foreign or regional accent, which made it difficult for others to understand them. Twenty-seven participants (see Table 1) completed the program. Participants included 18 nursing students, three health care

administration students, one staff member, and five registered nurses from the Texas Medical Center. Attrition ($n=22$) among students was due to failure in other classes, conflicting tutoring sessions and family commitments. One registered nurse took one class and decided not to remain in the program.

The overall findings (see Table 2 and Figure 1) indicated that at posttest, participants perceived significantly higher self-esteem and overall competence communicating compared to scores at pretest. In particular, participants believed they showed significant improvement communicating in meetings, groups, interpersonal situations, with strangers, and acquaintances. However, participants did not believe significant improvement in their apprehension scores.

Participants had significantly higher perceived self-esteem scores at posttest ($M = 33.48$, $SD = 5.42$) than at pretest ($M = 31.89$, $SD = 5.47$), $Z = -2.03$, $p = .043$. Perceived competence communicating in meetings yielded higher scores at posttest ($M = 67.46$, $SD = 24.01$) than at pretest ($M = 57.84$, $SD = 27.44$), $Z = -2.56$, $p = .011$. Similarly, perceived competence communicating in groups was higher at posttest ($M = 82.23$, $SD = 14.72$) than at pretest ($M = 74.36$, $SD = 22.86$), $Z = -2.15$, $p = .032$. Perceived competence communicating in interpersonal situations yielded higher results at posttest ($M = 87.98$, $SD = 13.66$) than at pretest ($M = 77.16$, $SD = 19.50$), $Z = -2.76$, $p = .006$. Perceived competence communicating with acquaintances was higher at posttest ($M = 79.08$, $SD = 17.13$) than at pretest ($M = 69.47$, $SD = 25.11$), $Z = -2.45$, $p = .014$. Perceived competence communicating with strangers was higher at posttest ($M = 68.27$, $SD = 21.00$) than at pretest ($M = 54.10$, $SD = 31.99$), $Z = -2.68$, $p = .007$. Overall

perceived competence communication scores were higher at posttest ($M = 78.31$, $SD = 15.11$) than at pretest ($M = 69.59$, $SD = 20.91$), $Z = -2.80$, $p = .005$.

Table 2. Pre and Post Intervention Scores for the Outcome Measures

	<i>n</i>	<i>M</i>	<i>SD</i>	<i>Z</i>	<i>p</i>
Self-Esteem				-2.03	0.043*
Preintervention	27	31.89	5.47		
Postintervention	27	33.48	5.42		
Group Discussion (PRCA)				-0.68	0.495
Preintervention	27	17.37	1.80		
Postintervention	27	18.07	2.62		
Meeting (PRCA)				-0.31	0.755
Preintervention	27	18.15	1.63		
Postintervention	27	18.63	2.57		
Interpersonal Conversations (PRCA)				-0.21	0.835
Preintervention	27	18.44	1.78		
Postintervention	27	18.78	2.47		
Public Speaking (PRCA)				-0.77	0.441
Preintervention	27	18.52	1.99		
Postintervention	27	18.44	2.81		
Overall Communication Apprehension				-0.77	0.444
Preintervention	27	72.48	4.73		
Postintervention	27	73.93	9.71		
Public (SPCC)				-1.39	0.166
Preintervention	27	68.99	23.52		
Postintervention	27	75.59	15.78		
Meeting (SPCC)				-2.56	0.011*
Preintervention	27	57.84	27.44		
Postintervention	27	67.46	24.01		
Group (SPCC)				-2.15	0.032*

Preintervention	27	74.36	22.86		
Postintervention	27	82.23	14.72		
Interpersonal (SPCC)				-2.76	0.006**
Preintervention	27	77.16	19.50		
Postintervention	27	87.98	13.66		
Stranger (SPCC)				-2.68	0.007**
Preintervention	27	54.10	31.99		
Postintervention	27	68.27	21.00		
Acquaintance (SPCC)				-2.45	0.014*
Preintervention	27	69.47	25.11		
Postintervention	27	79.08	17.13		
Friend (SPCC)				-0.30	0.765
Preintervention	27	85.19	16.36		
Postintervention	27	87.59	12.18		
Overall SPCC Score				-2.80	0.005**
Preintervention	27	69.59	20.91		
Postintervention	27	78.31	15.11		

* $p < .05$, ** $p < .01$.

Discussion

Accent modification programs in health care organizations and schools are one intervention that has begun to emerge in response to ineffective communication due to accents that are difficult to understand. This study fills a gap in the literature in that self-esteem, and self-perceived apprehension and competence in communication were measured. Participants perceived themselves as communicating with others more clear.

Th

. This finding is similar to Belay's (2013) qualitative study, where nurses who took an accent modification program reported higher self-esteem and confidence in communicating.

Limitations

Limitations to this study did exist. A significant limitation is that all variables measured in this study were self-reported. The use of a one-group pretest-posttest design can be impacted by extenuating circumstances such as events outside of the intervention or change within the participants may affect results. The rigor of competing tutoring sessions, students not being academically successful in the nursing program, and family crises were circumstances causing 22 participants to withdraw from the study. This resulted in a smaller sample size affecting the generalizability of the study.

Other limitations were testing itself, which may have affected participants and the outcomes of the study. Motivation may impact testing, as students self-selected into the program. During the duration of the study period the influence of maturation may have affected the outcomes. Participants interacted with other students and faculty who did not have an accent during their interactions outside of the study. This may have influenced the post-test results.

This study primarily focused on upper-division nursing students in a baccalaureate program in the United States. The intervention and outcomes concentrated on communication driven by the registered nurse including nurse to nurse, nurse to patient, and nurse to physician. This is a lack of homogeneity which affects generalizability.

Implications for Research

Further research is needed to validate problems of strong accents and benefits of accent modification. Robust research is required regarding accent modification programs. In keeping with programs similar to those in the literature (Belay, 2013; Carr & Demel-Ichikawa; 2012; & Shen et al., 2012), the project team developed a 12-week accent modification course. Research is needed to determine if other educational methods may be comparable or better. These methods may include web-based tutorials, 1:1 session programs, shorter or longer group courses, or a combination of support. Research on short and long-term post-testing of speech patterns, self-esteem, and other psychosocial indicators is also needed.

A global perspective is required to determine if other countries may experience similar situations with foreign-born students and healthcare workers. Some individuals may be reluctant to modify their accents. Exploring the ethics, motivation, and cultural implications behind accent modification may shine a light on this phenomenon.

Randomized control trials may determine if accent modification programs improve communication abilities and self-esteem. Within the current literature, there is no direct

link between individuals with strong accents and patient safety and satisfaction. Research on an accent modification program in a hospital or other healthcare organizational setting that includes patient safety and satisfaction indicators is needed. Research is needed to establish whether or not accent modification programs improve nurse to patient, nurse to nurse, and nurse to physician communication. Likewise, research is needed to discern whether or not accent modification programs improve shift to shift report and telephone communication in a healthcare setting.

Implications for Education

Communication is a core competency for healthcare professionals. Identification of assessment and evaluation methods of the student's communication competency within the curriculum is important. Likewise, nursing administrators should identify how communication competency is assessed and evaluated with nurses and other healthcare professionals. Identified educational needs should be addressed with appropriate educational interventions.

Educators should consider the impact an accent modification program may have on student nurses and other healthcare students who perceive they have a regional or foreign accent that makes it difficult for others to understand. Several students who study at this university speak English as a second language (ESL). This program quickly filled all spaces each semester as ESL students appeared to want to modify their accents. The attrition rate of 22 students over three semesters was disconcerting. Some of our students failed other courses and were not able to continue in their studies. Although many of the students did not have scheduling conflicts with other classes, tutoring was being offered

for pharmacology at the same time when accent modification classes were held. Many students chose tutoring over accent modification. Going forward, this program will be offered in the summer as our primary academic semesters are fall and spring, and students are free to immerse themselves in the program. Ideally, this program should be offered before students enter school.

Implications for Practice

Although a direct link between accents and patient safety or satisfaction has not been researched to date, it is clear that communication that is understandable to the listener is necessary for healthcare to ensure quality patient outcomes. Communication plays a vital role in the delivery of patient-centered care. Hull (2016) posited the argument that if patient safety is at risk due to communication deficits, health care organizations have an obligation to provide education to correct the problem. However, this is not necessarily an easy task as there are confounding variables in assessing and correcting communication deficits in the healthcare arena which can have an impact on the healthcare organization's hiring and retention process.

Foreign accents can impact the communication process. Individuals with strong accents may not believe their accents are difficult for others to understand, or they may not want to lose their native accent. In Hartshorn's (2013) study of 345 English as Second Language students, 80.58% indicated a desire to modify their accents. Further, 19.42% of

the students had varying degrees of wanting to retain their native accent. Of these, one student was identified as not wanting to modify his accent.

Patient safety may be an issue when individuals with foreign accents do not communicate essential patient information or feel uncomfortable asking health-related questions regarding patient care due to embarrassment or lack of self-confidence in their communication skills. Deficient communication competencies relating to the individual not being understood and communication challenges in conveying vital patient information may impact job performance, patient and staff satisfaction, and complaints.

In the United States, HCAHPS scores have financial implications for healthcare organizations and communication is one of the main elements in patient satisfaction surveys. One specific HCAHPS question relating to the care from nurses addresses the patient perception of how often the nurse explained things in a way the patient could understand. Individuals who have strong accents and demonstrate less than effective communication skills can negatively impact HCAHPS scores. This will be a concern for the healthcare organization's leaderships who are focused on ways to boost their facility's HCAHPS scores.

Healthcare organizations with validated evidence of strong accents causing communication problems can mitigate risk related to communication barriers by making accent modification opportunities available. Hospitals must create culturally competent

work environments that embrace all employees (i.e., physicians, nurses, therapists, nursing assistants) with varying accents and allow them to enter programs without being stigmatized. Human Resource or Student Affairs Departments need to be consulted when implementing accent modification programs to ensure sensitivity to communication deficits, and that prejudice or bias is not conveyed. Strategic efforts to provide support and resources to incorporate accent modification opportunities that are attainable for all employees can impact patient care delivery and employee satisfaction. Furthermore, hospitals should aggressively evaluate whether accent modification impacts patient outcomes and satisfaction.

In universities and hospitals, where there are several competing priorities, time and money can be a deterrent to sustain an accent modification program. Questions that may be asked are: When do the employees or students have time during the week to take a class? Should flexible class times be offered? What are the financial options to cover the cost of a program? How does a university financially sustain the program? Can collaboration between hospitals and universities be developed, replicated, and sustained? Our plans to sustain this program are to offer the program to the community for a small fee but one that is large enough to cover the costs of a speech-language pathologist. This will allow the program to be provided to university students, faculty, and staff at no cost.

Speaking skills are critical for nurses in the delivery of safe and effective patient care. Strong foreign and regional accents may impede the intelligibility and comprehensibility of nurse's conversations during the implementation of treatment orders, patient

education, and communicating with the patient, family, physicians, and other healthcare professionals. Schools of nursing and health care organizations where nurses are employed are urged to investigate their particular communication issues and provide support and resources to intervene and improve the identified communication challenges.

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