

AAC STRATEGIES FOR USE WITH LIMITED ENGLISH PROFICIENCY HOSPITALIZED PATIENTS.

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The University of Iowa

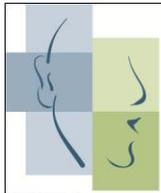
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Atlanta

Conflict of Interest Disclosure:

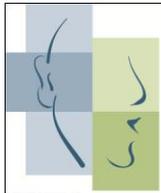
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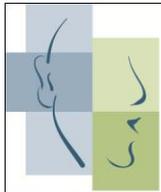
SCOPE OF PROBLEM

- **20%** of the US population over the age of five does not speak English in the home.
- Approximately **44%** of these individuals rated their English proficiency as less than “very well”.
- Number of individuals who might have limited English proficiency (LEP) is **24,395,573**.
- The census of US hospitals revealed an average daily inpatient census of **641,000**.
- Thus over **128,000** of the daily inpatient population would fall into the LEP group and require professional interpreter services.



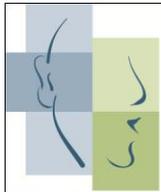
A CASE EXAMPLE

- The University of Iowa Hospitals & Clinics
 - 729 staffed beds
 - 30,982 acute care admissions in 2008-09,
 - average length of stay of 6.33 days
- In 2010, UIHC provided
 - 11,772 translation services
 - 37 different languages.
 - Spanish accounted for 74%
 - Sign Language(ASL, SE & SEE) accounted for 9%



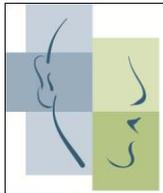
CHALLENGE AND RESTRICTIONS

- Providing quality professional interpreting services for a wide range of languages
- Some hospitals need to rely on phone and video services for less frequently spoken languages.
- Professional interpreters cannot be at the bedside around the clock to interpret most of the interactions between the patients and their nurses.
- Many hospitals have instituted rules that
 - preclude the use of family members, children
 - bar cyber translation applications (e.g. Babel Fish) because of the high risk of translation errors



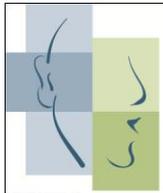
CONSEQUENCES OF POOR PATIENT-PROVIDER COMMUNICATION

- Inadequate patient-provider communication is responsible for a range of adverse events including death .
- LEP patients were almost twice as likely to experience adverse events (49.1%).
 - **52.4% of these adverse events were likely the result of errors in communication.**
- The Joint Commission has set standards requiring hospitals to address the communication needs of all patients (JC, 2010; Blackstone et al., 2011a).



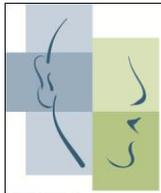
THE ROLE OF THE SLP

- The role of the Speech Language Pathologist in meeting the communication needs of all patients should include solutions for the growing LEP population
- Speech generating AAC devices can offer LEP patients a means of communicating with their caregivers and to more actively participate in their care.



UNIVERSITY OF IOWA BILINGUAL TEMPLATES

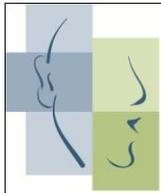
- We developed bilingual templates for use with low to high tech AAC devices and on tablets like the iPad.
- These templates were developed to specifically enhance the patient-nurse bedside interactions.
- The templates cover a range of material from vital signs, bedside cares, and pain management to feelings and emotions.
- The content was developed with input from patients, nurses and family members.



University of Iowa

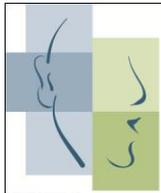
Bilingual Templates

- Each template is divided into a patient and a nurse/caregiver part.
 - On the patient's side the individual selections (buttons) are labeled in the patient's language and when selected produce the professionally translated English equivalent.
 - On the caregiver's side the buttons are labeled in English and when selected produce the professionally translated version in the patient's language



TEXT-TO-SPEECH VERSUS DIGITIZED SPEECH AND SIGN LANGUAGE VIDEOS

- Use a text-to-speech (TTS) engine if it is available in the patient's language.
- If no TTS engine is available, we have made native speaker audio recordings of the translated phrases.
- For Deaf patients we created an application that displays the signed translation of the selected template phrase.



IOWA BILINGUAL TEMPLATE

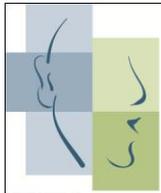
D Y N A V O X

CARE POSITION FEELINGS FOOD FAMILY & FRIENDS ENTERTAIN

CARES VITALS CARE MGMT

 IV	 FEEDING TUBE			 IV	 FEEDING TUBE
 CATHETER	 SUCTION			 CATHETER	 SUCTION
 BREATHING TUBE	 CERVICAL COLLAR			 EMPTY URINE BAG	 CHANGE URINE BAG
 DIAPER	 RESTROOM			 EMPTY COLOSTOMY	 ADJUST CERVICAL COLLAR
 PRESSURE CUFFS?	 CUFFS OFF?			 DIAPER	 PRESSURE CUFF
 INTERPRETER		 YES	 NO		

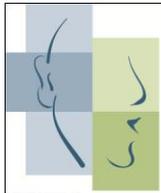
Start DynaVox - Series 5 1:49 PM



BILINGUAL TEMPLATE

SGD DEVICES AND iPad APPS

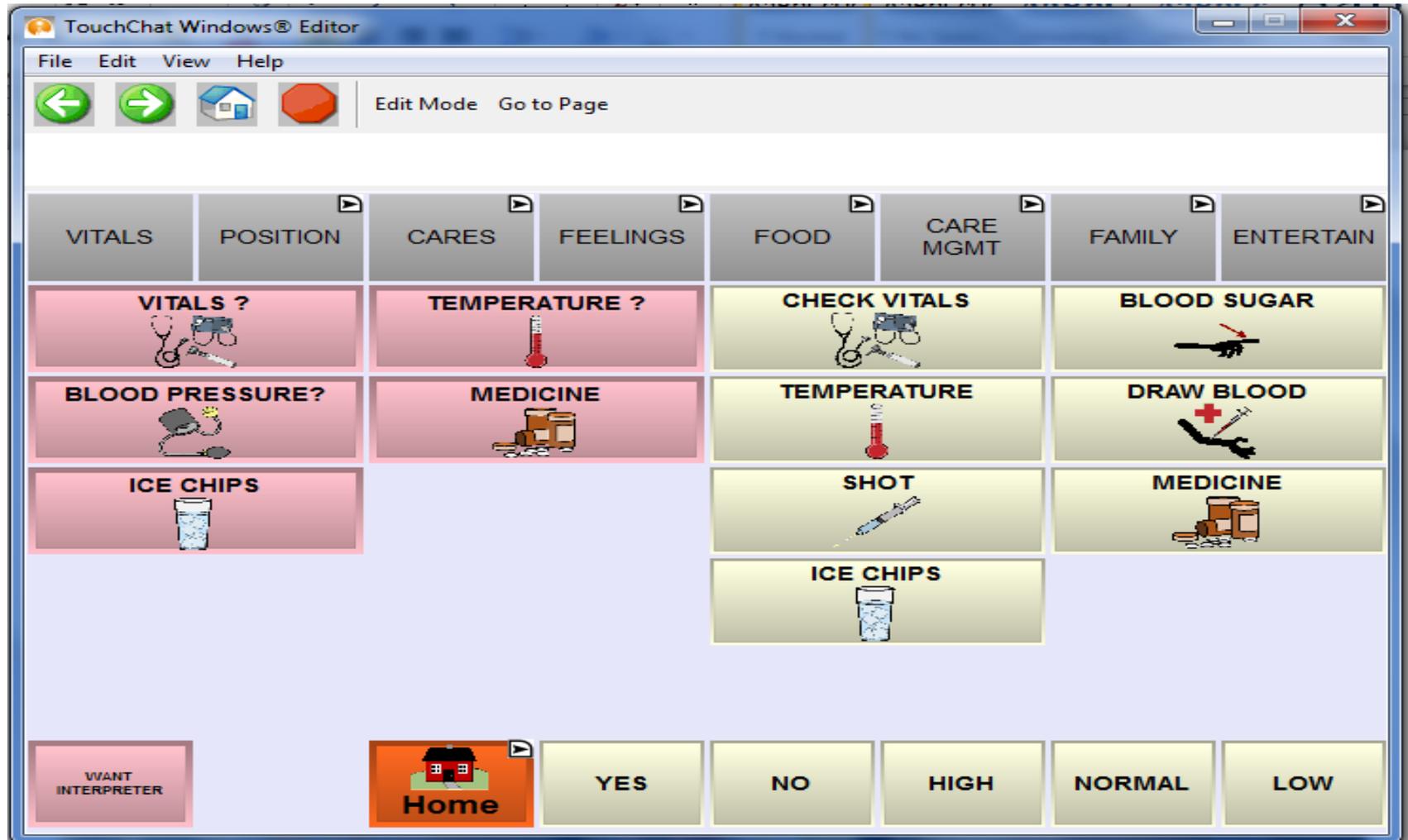
VITALS	POSITION	CARES	FEELINGS	FOOD	CARE MGMT	FAMILY	ENTERTAIN
VITALS 	TEMPERATURE 				CHECK VITALS 	BLOOD SUGAR 	
BLOOD PRESSURE 	MEDICINE 				TEMPERATURE 	BLOOD 	
ICE CHIPS 					SHOT 	MEDICINE 	
					ICE CHIPS 		
INTERPRETER 			YES	NO	HIGH	NORMAL	LOW

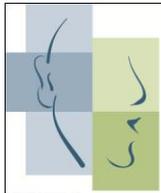


TEMPLATE FOR DEAF SIGNING PATIENTS

VITALS		POSITION	CARES	FEELINGS	FOOD	CARE MGMT	FAMILY	ENTERTAIN
VITALS 	TEMPERATURE 					CHECK VITALS 	BLOOD SUGAR 	
BLOOD PRESSURE 	MEDICINE 					TEMPERATURE 	BLOOD 	
ICE CHIPS 						SHOT 	MEDICINE 	
						ICE CHIPS 		
INTERPRETER 			YES	NO	HIGH	NORMAL	LOW	

SIGNING TEMPLATE VOCABULARY FOR TOUCHCHAT APP





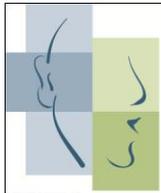
INSTRUCTIONS FOR PARTNER AIDED SCANNING

To assist patient in making choices:

- Establish a consistent Yes/No response.
- First, point to each row in turn asking, “Is it in this row?”

- When the patient makes a row selection, point to each successive box in the row and ask, “Is it this one?”

- Be sure to modify your speed according to the individual patient’s needs.
- The message board at the bottom is for you to keep track of spelled selections.

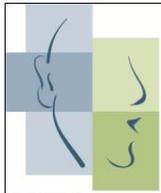


KOREAN-ENGLISH MENU TEMPLATE

메뉴 Menu

기본 필요사항 Basic Needs	신체 부위 통증 Body Parts Pain	통증 정도 Pain Scale	감정 Feelings
사람들 People	개인 용품 Personal Items	질문 Questions	방 관련용품 Room Items
증상 Symptoms	대화 Talk	자판(키보드) Keyboard	빈 페이지 Blank Template

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web site: www.mayer-johnson.com



KOREAN-ENGLISH FEELINGS TEMPLATE

감정 Feelings

긴장돼요
anxious



끔찍해요
awful



모르겠어요
confused



혼란스러워요
disoriented



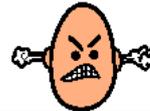
좌절돼요
frustrated



외로워요
lonely



화가나요
mad



괜찮아요
okay



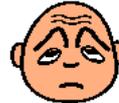
슬퍼요
sad



무서워요
scared



피곤해요
tired



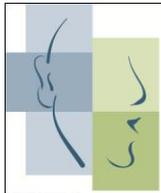
불편해요
uncomfortable



통증
pain



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KOREAN-ENGLISH CHAT TEMPLATE

대화 Talk

안녕하세요
Hello



잘 지내세요?
How are you?



감사해요
Thank you



안녕히가세요
Goodbye



사랑해요
I love you



혼자있고 싶어요
Leave me alone



모르겠어요
I don't know



뭐라고요?
What?



괜찮아요
Is everything ok?



지금 말고요
Not now



멈추세요
Stop



잠깐 기다리세요
Wait a minute



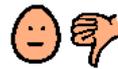
같이 있어주세요
Stay with me



저희 가족은
어디 있나요?
Where is my family?



준비가 안됐어요
I'm not ready



무서워요
I'm scared

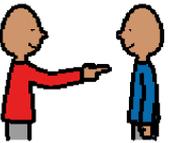
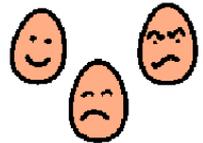


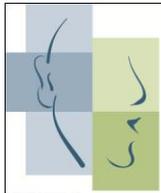
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KOREAN-ENGLISH BILINGUAL PAGES

D Y N A V O X

Welcome, Korean-2012.

<p>혈압/체온 Vital Signs</p> 	<p>조절 Adjustments</p> 	<p>신체적 필요 Physical Needs</p> 	<p>음식 / Food</p> 
<p>요청 Requests</p> 	<p>감정 Feelings</p> 	<p>병원방문 The hospital visit</p> 	<p>병원비 Finances</p> 
<p>어떠십니까?</p> 	<p>끝났습니다. 다음에 뵙겠습니다.</p> 	<p>How do you feel?</p> 	<p>I'm finished. See you later!</p> 



KOREAN-ENGLISH VITAL SIGNS PAGE

D Y N A V O X

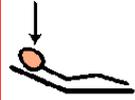
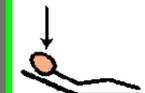
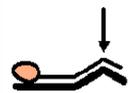
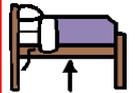
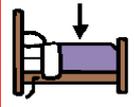
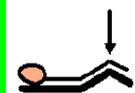
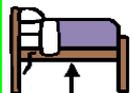
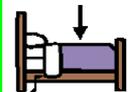
Welcome, Korean-2012.

저의 혈압과 체온이 어떻습니까? 				The vital signs are normal. 	The vital signs are abnormal. 		
		무슨말인지 잘 모르겠어요 	처음화면으로 				Close 

KOREAN-ENGLISH ADJUSTMENTS PAGE

D Y N A V O X

Welcome, Korean-2012.

<p>더 편안하게 해주세요.</p> 	<p>머리를 올려주세요.</p> 	<p>머리를 내려주세요.</p> 	<p>발을 올려주세요.</p> 	<p>I am going to adjust your body.</p> 	<p>Would you like your head raised?</p> 	<p>Would you like your head lowered?</p> 	<p>Would you like your feet raised?</p> 
<p>발을 내려주세요.</p> 	<p>침대를 올려주세요.</p> 	<p>침대를 내려주세요.</p> 		<p>Would you like your feet</p> 	<p>Would you like your bed raised?</p> 	<p>Would you like your bed lowered?</p> 	
		<p>무슨말인지 잘 모르겠어요</p> 	<p>처음화면으로</p> 				<p>Close</p> 

KOREAN-ENGLISH HOSPITAL STAY QUESTIONS

D Y N A V O X

Welcome, Korean-2012.

<p>통역사와 이야기할 수 있을까요?</p>	<p>대기실에 저를 기다리는 사람이 있나요?</p>	<p>의사 선생님과 이야기할 수 있을까요?</p>	<p>간호사와 이야기할 수 있을까요?</p>	<p>Would you like me to contact an interpreter?</p>	<p>Would you like me to check the waiting room?</p>	<p>Could I get the doctor for you?</p>	<p>Could I get the nurse for you?</p>
<p>목사님과 이야기할 수 있을까요?</p>	<p>저를 위해 불러줄 수 있는 사람이 있습니까?</p>	<p>전화를 사용할 수 있을까요?</p>	<p>이메일을 보낼 수 있을까요?</p>	<p>Could I contact a pastor for you?</p>	<p>Can I contact someone for you?</p>	<p>Could I call someone for you?</p>	<p>Would you like to send an e-mail?</p>
<p>컴퓨터를 사용할 수 있습니까?</p>	<p>제가 읽을 수 있는 한국 책이 있습니까?</p>	<p>제가 볼 수 있는 한국 잡지가 있습니까?</p>	<p>제가 볼 수 있는 한국 영화가 있습니까?</p>	<p>Would you like to use a computer?</p>	<p>Could I get you some Korean books?</p>	<p>Could I get you some Korean magazines?</p>	<p>Would you like to watch a Korean movie?</p>
<p>음악을 들을 수 있을까요?</p>		<p>무슨 말인지 잘 모르겠어요</p>	<p>처음 화면으로</p>	<p>Would you like to listen to music?</p>			<p>Close</p>

SPANISH-ENGLISH BILINGUAL PAGES

D Y N A V O X



Senas Vitales
Vital Signs



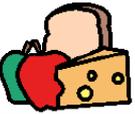
Ajustos
Adjustments



Necesitas Fisicas
Physical Needs



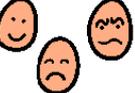
Comida/
Food



Pedidos
Requests



Sentimientos
Feelings



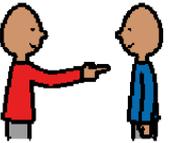
La visita en el
hospital
The hospital visit



Finanzas
Finances



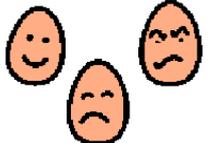
Como se siente?



He Terminado. Nos vemos!

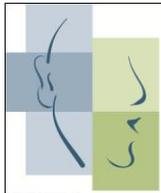


How do you feel?



I'm finished. See you later!



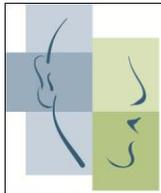


Spanish-English Vital Signs Page

D Y N A V O X

Welcome, SP-ENG-PICS-NOV11.

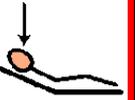
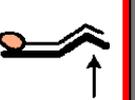
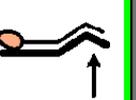
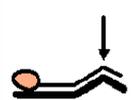
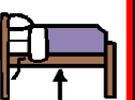
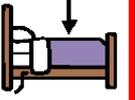
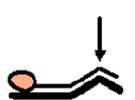
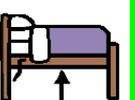
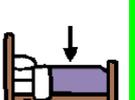
<p>Cuáles son las señas vitales?</p> 				<p>I am going to check your vital signs.</p> 	<p>The vital signs are normal.</p> 	<p>The vital signs are abnormal.</p> 	
			<p>Cerrar</p> 				<p>Close</p> 



Spanish-English Adjustments Page

D Y N A V O X

Welcome, SP-ENG-PICS-NOV11.

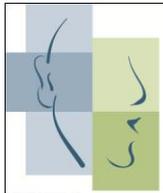
<p>Necesito acomodarme mejor.</p> 	<p>Podría levantarme la cabeza?</p> 	<p>Podría bajarme la cabeza?</p> 	<p>Podría levantarme los pies?</p> 	<p>I am going to adjust your body.</p> 	<p>Would you like your head raised?</p> 	<p>Would you like your head lowered?</p> 	<p>Would you like your feet raised?</p> 
<p>Podría bajarme los pies?</p> 	<p>Podría levantar la cama?</p> 	<p>Podría bajar la cama?</p> 		<p>Would you like your feet</p> 	<p>Would you like your bed raised?</p> 	<p>Would you like your bed lowered?</p> 	
			<p>Cerrar</p> 				<p>Close</p> 

SPANISH- ENGLISH HOSPITAL STAY QUESTIONS

D Y N A V O X

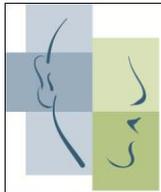
Welcome, SP-ENG-PICS-NOV11.

<p>Podría hablar con un intérprete?</p>	<p>Hay alguien en la sala de espera esperán -dome?</p>	<p>Podría hablar con el doctor?</p>	<p>Podría hablar con una enfermera?</p>	<p>Would you like me to contact an interpreter?</p>	<p>Would you like me to check the waiting room?</p>	<p>Could I get the doctor for you?</p>	<p>Could I get the nurse for you?</p>
<p>Podría hablar con un pastor?</p>	<p>Hay alguien que puede contactar por mí?</p>	<p>Podría usar el teléfono?</p>	<p>Le podría enviar un e-mail a alguien?</p>	<p>Could I contact a pastor for you?</p>	<p>Can I contact someone for you?</p>	<p>Could I call someone for you?</p>	<p>Would you like to send an e-mail?</p>
<p>Podría usar una computadora?</p>	<p>Hay libros en español que puedo leer?</p>	<p>Hay revistas en español que puede leer?</p>	<p>Hay algunas películas en español que puedo mirar?</p>	<p>Would you like to use a computer?</p>	<p>Could I get you some Spanish books?</p>	<p>Could I get you some Spanish magazines?</p>	<p>Would you like to watch a Spanish movie?</p>
<p>Podría escuchar música?</p>			<p>Cerrar</p>	<p>Would you like to listen to music?</p>			<p>Close</p>



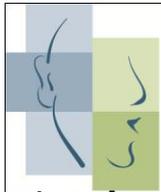
EFFECTIVE COMMUNICATION REQUIRES TEAM WORK

- A key element of each template is to provide the patient with an effective means to request an interpreter if they feel the need to go beyond what is available on the templates.
- The template content was developed with input from patients, nurses and family members.
- We continue to adapt our templates to meet the specific communicative needs associated with the medical needs of patients across the hospitals (e.g. the needs of urology as opposed to trauma patients).



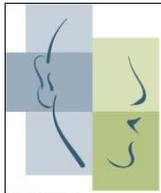
SUMMARY

- SLPs working to implement bilingual AAC solutions with hospitalized LEP patients must adopt a dynamic assessment approach to insure that changes in the patients' medical status can be accommodated to insure optimal patient-provider communication.
- To accomplish this it is essential to work collaboratively with the nursing staff and the facility's interpreter service.



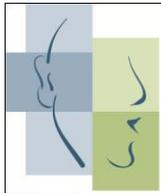
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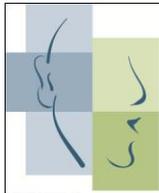
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Conflict of Interest Disclosure:

The authors do not have any financial or contractual relationship with any commercial developer or vendor