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SmartPhrases: Optimizing Discharge Education in Limited English Proficiency (LEP) Spanish-Speaking Patient Encounters

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SmartPhrases: Optimizing Discharge Education in Limited English Proficiency

(LEP) Spanish-Speaking Patient Encounters

by

Somer Knight

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Abstract

Health inequities due to communication barriers exist at a high rate for those who identify with limited English proficiency. This quality improvement project aimed to decrease these inequities by providing pre-translated discharge instructions (AVS) to patients who receive surgical services and recover in the pediatric post anesthesia care unit (PACU) of a state hospital. Specifically, this project examined if the availability of pre-translated instructions (SmartPhrases) increased nurse and interpreter satisfaction with the discharge process, and improved their perceived level of equitable care they are able to provide. Discharge instructions were gathered from the participating surgical and interventionist teams, and the PACU nursing staff drafted post-anesthesia care instructions. These instructions were then translated by interpreter services and entered into the charting system as SmartPhrases to be used by the teams. This project's influence was analyzed by dispersing a survey using Likert-style questions to the nursing staff of the PACU and the interpreter services staff. The use of interpreter services was also analyzed by tracking requests made by the PACU nursing staff for 1 month. Results showed an increase in staff satisfaction in the discharge education process, as well as an improvement in their perceived level of care provided. This project provides a foundation for the use of SmartPhrases in discharge teaching for LEP patients, which is a critical step in providing equitable care to all patients.

Keywords: equity, Spanish, limited-English proficiency, discharge, nurse satisfaction

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Problem Recognition

Approximately 25,000,000, or 8% of the American population are classified as speaking English less than very well, classifying them as limited English proficiency (LEP) (Zong & Batalova, 2015). Since the 1990s, the immigrant population has seen a dramatic increase of 80% in the United States, with about 64% of those individuals identifying as Spanish-speaking (Zong & Batalova, 2015). Disparities in health care delivery for LEP individuals are heavily documented and pervasive in all settings, and while there are many factors that contribute to this, under-utilization of interpreter services is identified as both a significant and modifiable cause (Karliner et al., 2017).

Problem Identification

While the availability of interpreter services has been mandated by federal agencies, the quality and ease of access vary widely across different systems (Tam et al., 2020). Only 10-30% of participants in one study reported receiving access to interpreter services, which highlights the critical need for improvement in this service (Gutman et al., 2018). Available modes of interpretation identified in the literature are ad hoc (family or friend), professional in-person, video, and telephone. Of these various modes, in-person interpretation has been identified as the most preferred method, according to reports of higher satisfaction from the patients and their families (Joseph et al., 2017).

Inequities in the quality of discharge education and related outcomes in the LEP population are well-documented, and there seems to be a notable link between the mode of interpretation and the perceived quality of interaction. Studies show that LEP parents perceive their children's care as less than satisfactory due to many variables, such as timeliness, participation in decision making, and effective communication (Guerrero et

al., 2018). A significant portion of the population served by the University of North Carolina Children's Hospital Division of Surgical Services identifies as LEP. This entity shares interpreter services with the entire hospital campus, making the process of obtaining help when it is needed very difficult. Management within interpreter services has expressed the need for additional education for nursing staff to optimize effective use of these services (S. Pagliara, personal communication, February 9, 2021).

Problem Statement

It was discovered that patients/families who are Spanish-speaking, limited English proficient (LEP) in the hospital children's post-anesthesia care unit (PACU) may wait 60-90 minutes to receive in-person interpreter services. The wait is often extended by the need for discharge instructions, or after-visit summaries (AVS) to be translated prior to the interpreter's arrival. There are many resources available to improve the discharge process for these patients, such as the EPIC charting system, which offers a library of educational handouts in various languages, a designation for language preference within the patient's chart, and the ability to decrease the time spent to draft discharge instructions using SmartPhrases, which are pre-written templates that populate with the entry of a keyword. The utilization of SmartPhrases could decrease the PACU length of stay for this patient population by having the Spanish version of a set of instructions already available, decreasing the amount of written information that has to be translated. The goal of the proposed intervention was to increase nurse and interpreter satisfaction with the discharge process, as well as improve their perceived level of equitable care they are able to provide by allowing for a timelier discharge process.

Review of Current Literature

An English-language search was conducted utilizing PubMed, CINAHL, and Bulldog OneSearch. A total of 15 articles were obtained, including randomized control trials, case reports, perspective studies, and case control studies. Keywords used included: "professional interpreter", "language barriers", and "limited-English proficient".

Gutman et al. (2018) addressed the increased risk of adverse events among limited English proficiency (LEP) patients in the pediatric emergency department by analyzing transcripts of video-recorded pediatric ED visits that were conducted as part of a randomized control trial. There were 101 interactions total. The purpose of the study was to assess whether the use of a professional interpreter correlates with the quality of communication during discharge. Gutman et. al (2018) confirmed that interpreter use is associated with more clear instructions and enhanced communication, possibly resulting in improved safety and outcomes. The data was collected at a single academic children's hospital, which means that acuity and medical complexity are naturally higher due to referrals. This may shape interactions. Additionally, only a small number of families consented to video recording in the randomized control trial, which could result in selection bias.

Tam et al. (2020) focused on hospital staff perspectives of interpreter and provider roles in communication, modalities used, and possible barriers to enhanced communication. The investigation was conducted using focus groups consisting of Spanish interpreters, hospital attendings, residents, and registered nurses. Three perceived responsibilities were observed, which were that interpreters should provide exact

interpretation, act as cultural brokers, and maintain transparency. The groups also agreed that in-person interpreters were preferred over telephone and video. Finally, barriers identified include accessibility, overconfidence in language skills leading to the omission of interpreter services, identification of need for interpreters, and variable family dynamics. Only four disciplines within the healthcare team were included in the focus groups, which may offer a limited view of the entire team's perceptions on this topic.

Karliner et al. (2017) discussed the possibility of bedside dual-handset telephones being utilized to increase access to interpreter services in inpatient communications, thus decreasing 30-day readmission rates. Karliner et al. (2017) reported a significant decrease in readmission rates among the intervention group, with a significant reoccurrence of increased readmissions after the handsets were less accessible. The proposed explanation is that without the conveniently-placed handsets, providers demonstrated more "getting-by" behavior, which leads to more educational errors.

Guerrero et al. (2018) attempted to identify physician perspectives of both negative and positive adaptations used to communicate with LEP patients with a qualitative interview study. Eleven interviews were conducted and reviewed, and common themes were extracted. First, relationship and trust-building were affected with LEP patients since nuanced communication is lost in translation, and cultural barriers are harder to identify. It is more difficult to assess literacy because messages are passed indirectly through a third party. Lastly, time barriers are pervasive, leading to miscommunication of important details and less opportunity for "hand-on-the-door", last-minute questions (Guerrero et al., 2018). A limitation of the study was the small sample size of 11 interviews within one facility; answers may not be representative of all views.

Kamerling and Lawler (2016) addressed the possible omission of appropriate interpreter utilization due to time constraints by partnering with interpreter services in a multi-disciplinary initiative. Components of this initiative include the installation of designated interpreter lines, the programming of needed numbers into the post-anesthesia care unit (PACU) nurse's phones, and education for physicians on the appropriate use of interpreter services. Kamerling and Lawler (2016) highlight that simply having the resources available is not sufficient to ensure their correct use.

Joseph et al. (2017) conducted a systematic search and synthesis of articles to compare the use of professional, in-person interpreters to ad hoc and phone interpreters. It was confirmed that there appears to be higher satisfaction with trained interpreters versus those without formal training. Comparatively, the method of delivery (in-person or telephone) did not affect feelings of satisfaction. The sample size of this synthesis was eight, which may not be sufficient to provide an accurate depiction of the situation.

Ji et al. (2021) reviewed the literature on interpretation technology and analyzed current technology, such as direct translation software, as it pertains to cost, accessibility, sustainability, and patient/provider satisfaction. Emerging themes were comparing in-person to video and phone interpretation, and the use of direct-translation software to reduce wait times. Thirteen articles were included in the review, which may limit the generalization of the research findings.

Holland (2018) examined the use of interpreter services to promote equitable care in the LEP population. Holland (2018) highlights that without adequate interpreter services, the LEP population suffers from "objectively worse healthcare...poorer management of chronic illness...and higher rates of expensive testing in emergency

departments..." (Holland, 2018, p. 3). Holland (2018) also provides a summary of the history of interpreter services in the United States and provides recommendations for improvement moving forward.

Lor et al. (2016) explored patient perceptions of the quality of interpreter services received when addressing preventive care. This particular study by Lor et al. (2016) was derived from interviews conducted by bilingual researchers, who emphasized the quality of the interpreters' ability to provide literal, cultural, and emotional interpretation. Results revealed that poor quality could lead to compromised patient-provider relationships, reduced adherence to treatment plans, and emotional distress. There were 20 participants, all aged 33-75. This excludes the pediatric population, where parents are often the focus of discharge teaching and other communication about health status, and may not reflect patient-provider relationships of the pediatric population.

Shone (2020) examined a quality improvement project that looked to improve access to interpreter services and increase staff awareness of available resources. Shone (2020) conducted a survey to assess staff awareness of use and perceptions of usefulness, then utilized the results to re-educate the staff on processes. Post-evaluation of this education demonstrated positive results showing only 11% of healthcare providers reported difficulty accessing interpreter services, compared to 52% pre-intervention.

Garcia-Jimenez et al. (2019) evaluated patient perspectives on the use of telephone interpretation services (TIS) at an urban community clinic. The goal of this study was to extract common themes that may be beneficial for quality-improvement initiatives. Focus groups were created, and findings suggest that TIS is generally well-accepted, while limited professional development for providers and provider attitudes

toward TIS are common barriers. There were 13 participants total, all over the age of 18. The findings may not be an accurate representation of similar perspectives in the pediatric population.

Baurer et al. (2014) examined system-level factors that influence the use of professional interpreters through an exploratory qualitative study. Researchers conducted interviews to discern information, of which, five themes emerged. Commitment to improvement of offered services, investment in technology, appropriate training on the correct utilization of interpreter services, the support of professional development for interpreters, and investment in telephone interpreting services were consistently identified as the most important factors to the success of interpretation services for patients (Baurer et al., 2014). Limitations of this study include a small sample size of 12 hospitals, all in California, and the omission of professional interpreters as informants.

Rorie (2015) reviewed the importance of interpreter services in providing competent care and highlighted many of the previously-identified themes while also re-visiting the importance of culturally-competent care in the overall health of all patients. Rorie (2015) also discusses the importance of using trained interpreters and limiting "getting-by" behaviors. A limitation of this article was that it does not address how to improve the availability and utilization of interpreter services.

Michalec et al. (2015) conducted a qualitative focus group study to address barriers to providers' use of interpreter services at multiple levels of healthcare. There were 36 total obstetrical service healthcare providers who participated in the focus groups, and there were no exclusion criteria for participants. Focus groups identified institution-level and individual-level factors that contribute to barriers to care. The major

points identified were the preference for in-person interpreters, time constraints, and lack of interpreter availability. All of the identified factors contributed negatively to the perceived quality and satisfaction of care (Michalec et al., 2015). Limitations of this study included all participants being from the obstetrical services unit of a single facility, which does not allow for the generalization of results.

Lopez-Bushnell et al. (2020) conducted a qualitative survey study to examine an educational intervention to increase healthcare provider knowledge of the use and importance of interpreter services regarding patient outcomes. Participants were recruited using a convenience sampling method, with a total of 198 participants completing the study. A group of 98 participants served as the control group and were surveyed before the educational intervention, and another group of 98 participants served as the intervention group and were surveyed after the educational intervention. Post-survey results found that providers who were adequately educated used interpreter services more often, and also reported improved perceived communication with their patients (Lopez-Bushnell et al., 2020). Limitations of this study include the utilization of a convenience sample, the length of time to complete the study, and different participants who completed the pre-test compared to those who completed the post-test.

<div align="center">**Needs Assessment**</div>

Target Population – PICOT Statement

Will the availability of pre-translated instructions (SmartPhrases) increase nurse and interpreter satisfaction with the discharge process and improve their perceived level of equitable care they are able to provide?

Sponsors and Stakeholders

Individuals from many disciplines have identified the strain that a lack of readily available interpreter services puts on the quality of health care delivery within our system. Physicians have expressed the need for alternative solutions and have even attempted to write discharge instructions in Spanish to ease the strain in the past. Spanish interpreters are stretched past their limits, often working entire shifts without breaks because their presence is needed continuously throughout our facility. Every member of the healthcare team recognizes and communicates the frustrations of LEP families when care is fragmented.

Nurses and support staff witness inequities that are present in encounters with LEP patients that occur due to a lack of appropriate resources. These issues have been communicated to management extensively, so the entire team is acutely aware of this issue. Physicians, nurses, and other providers on the surgery teams hold high interest and power in solving this issue: Decreasing discharge times saves the hospital and patients money, leads to increased satisfaction, and allows for better utilization of beds and resources. Physicians and nurses also hold the power to assure that their discharge instructions are clear and concise to assure that this intervention is successful. To aid in the success of this project, nurse education on the optimal use of interpreter services and cultural awareness will be provided. The professional interpreters, as well as unit management, agreed that this education would be helpful for staff members. Management has elected to make it mandatory for all nursing staff.

Organizational Assessment – SWOT Analysis

The project goals and values align with that the mission of the organization where the project was implemented. The mission of the organization is to improve the health and well-being of all patients served. This project aimed to improve the health and well-being of patients and their families who speak Spanish and identify as LEP.

Strengths

The hospital is a large hospital system with numerous resources. The hospital is an academic facility, and the staff is accustomed to frequent changes related to best practices. The children's PACU staff interacts with interpreter services staff daily, so they are very familiar with the processes and nuances of procedural discharge needs.

Weaknesses

The hospital's interpreter services group is chronically understaffed. Any changes that occur may possibly place additional strain on an already-stressed staff, although it would be temporary. This intervention will take place during the SARS-COV2 pandemic, which may limit outcome data due to decreased surgical volume.

Opportunities

As a state hospital, the organization prides itself on providing care to all who need it. There is a unique opportunity to make a huge impact on vulnerable populations since they are already served by this entity. There are associated cost savings with decreased PACU time, so money may be better utilized for increased quality of care in other aspects of service. Additional education on the correct use of interpreter services will be beneficial to creating stronger relationships between nursing staff and interpreters.

Threats

The organization is a large teaching hospital with multiple surgery teams within the same specialty. Organization and dissemination of information related to changes can be a slow and tedious process. Provider hesitancy related to changes in the current process may be an issue.

Available Resources

There are many resources already available to improve staff satisfaction with the discharge process of a Spanish-speaking patient. The organization utilizes the EPIC charting system, which offers many useful tools for education, such as a library of educational handouts in various languages, a designation for language preference within the patient's chart, and the ability to decrease the time spent drafting discharge instructions using SmartPhrases, which are pre-written templates that populate with the entry of a keyword. All patients will receive discharge instructions and a printed educational handout, therefore it is an efficient method to utilize as a solution. The hospital system also has in-house interpreters for Spanish-speaking individuals, although staffing and availability can vary.

Desired and Expected Outcomes

Ideally, the utilization of SmartPhrases would allow for equitable care for the Spanish-speaking LEP population, demonstrated by increased satisfaction with the process and perceived equality of care by the nursing and interpreter services staff. While interpreters will still have to be present at the bedside for translation and adequate discharge teaching, the time spent individually translating written instructions should be moderately decreased by providing templates that can be added with a few keystrokes.

Realistically, time spent in PACU is influenced by many factors, including the availability of interpreters at any given time. However, the facility has experienced an unprecedented shortage of interpreters since the SARS-COV2 pandemic, thus this variable is not within control. Education provided to nursing staff in the Children's PACU will help streamline interpretation service use at the bedside by reviewing methods for improved communication.

A possible indirect result of the proposed intervention is that reduced time translating discharge instructions will allow interpreters to spend more time serving patients within our unit as well as others throughout the hospital. Specifically, the goal is to improve nursing and interpreter services staff satisfaction over the period of 1 month by implementing SmartPhrases in discharge teaching. To assess the effectiveness of the selected intervention, participants will complete a Likert-style survey that is both anonymous and voluntary.

Team Selection

The multi-disciplinary team consisted of one PACU nurse, the PACU clinical nurse IV, the PACU nurse manager, a pediatric general surgery attending surgeon, an attending pediatric anesthesiologist, and the interpreter services manager.

Cost/Benefit Analysis

Costs associated with this intervention were minimal. The software used to generate discharge instructions and SmartPhrases, EPIC, is the documentation system presently used by the hospital. Implementation will be carried out during normal operating hours, which means that the only cost associated with this intervention was the hourly pay of the involved team members.

Benefits of this intervention are numerous. Most importantly, patients will be able to receive more equitable care, regardless of demographics. As a result, patient satisfaction related to waiting times and communication should improve. Financially, decreased PACU times will save patients as well as the hospital money, since charges are accumulated by the minute. Faster turnover in the PACU will improve operating room hold occurrences, which are extremely expensive for the hospital. Improving nurse and interpreter staff satisfaction with the care that they are providing will likely improve career satisfaction as well.

Project Scope

This project addressed the current inequity in the care provided to Spanish-speaking LEP individuals as it relates to the quality of discharge teaching and timeliness of interpreter availability in the children's PACU through the utilization of SmartPhrases in written discharge instructions by pediatric surgery (plastics, oral/maxillary/facial, dental, general, ENT, urology, and orthopedics), interventionist teams (electrophysiology and vascular interventional radiology), PACU nurses, and anesthesiologists. The effectiveness of utilizing SmartPhrases was assessed by determining changes in nurse and interpreter staff satisfaction due to the intervention. Additionally, this project did not address discharge instruction interpretation for other specialties at this time, since this would require coordination of multiple disciplines, hindering the progress of this project. Potential barriers included provider hesitancy to alter their current practices and inconsistencies in implementation due to the transient nature of surgery residency cohorts.

Project Purpose

This project addressed the current inequity in the care provided to LEP individuals as it relates to the quality of discharge teaching and timeliness of interpreter availability in the children's PACU. The goal was to increase staff satisfaction with the processes used. Through the utilization of SmartPhrases in written discharge instructions from pediatric dentistry and general surgery teams, PACU nurses, and pediatric anesthesiologists, the workflow of the facility's professional interpreters was improved.

Objective

The objective of this project was to improve nurse and interpreter staff satisfaction with the discharge process, as well as the perceived level of equitable care provided for pediatric surgical and procedural patients that identify as Spanish-speaking LEP over the period of 1 month by implementing SmartPhrases for use in discharge teaching. SmartPhrases that are to be used by the pediatric surgical and interventionist teams and pediatric post-anesthesia care were drafted by the corresponding teams. This took approximately 2 weeks to complete. The creation of education for nursing staff on the use of interpreter services and SmartPhrases for discharge instructions took place prior to applying for IRB approval. This took take approximately 2 weeks to complete. Requests for IRB approval by the hospital and the nursing research council were submitted in fall 2021 by the DNP student. The completion time for this step was approximately 8 weeks.

The education for nursing staff on the use of interpreter services and SmartPhrases was disseminated after IRB approval was obtained and education continued for 2 weeks. Implementation of SmartPhrases for Spanish-speaking LEP patients began

after the educational intervention was complete and lasted 4 weeks. Data gathering began during the first week of implementation and was ongoing to allow for close monitoring of the intervention's effectiveness.

Mission Statement

The mission of this project was to provide equitable care to all children served in the children's PACU, regardless of demographics, such as native language. We strived to correct current inequities by utilizing current resources in an efficient, responsible manner.

Application of Nursing Theory

Nursing theory is evident in every facet of practice as a professional nurse. As Zaccagnini and Pechacek (2021) state "nursing theory is what differentiates us (nurses) from physicians and the medical model of practice" (p. 13). Many of the theories are all-encompassing, as they examine the therapeutic relationship from many different perspectives. This perspective illustrates an important point: If patients are simply reduced to their medical diagnosis, we are missing a substantial opportunity for improvement of the holistic well-being of the person.

Leininger's Theory of Culture Care Diversity and Universality

Madeleine Leininger developed her theory from the belief that excellent nursing care must be culturally competent. She highlighted the similarities between traditional medical care and folk medicine, citing that both can create issues and solutions. According to this theory, it is the nurse's job to identify culturally universal concepts to facilitate congruent care. This theory assumes that care is essential for optimal health and

growth, and places great emphasis on culturally congruent care (Zaccagnini & Pechacek, 2021).
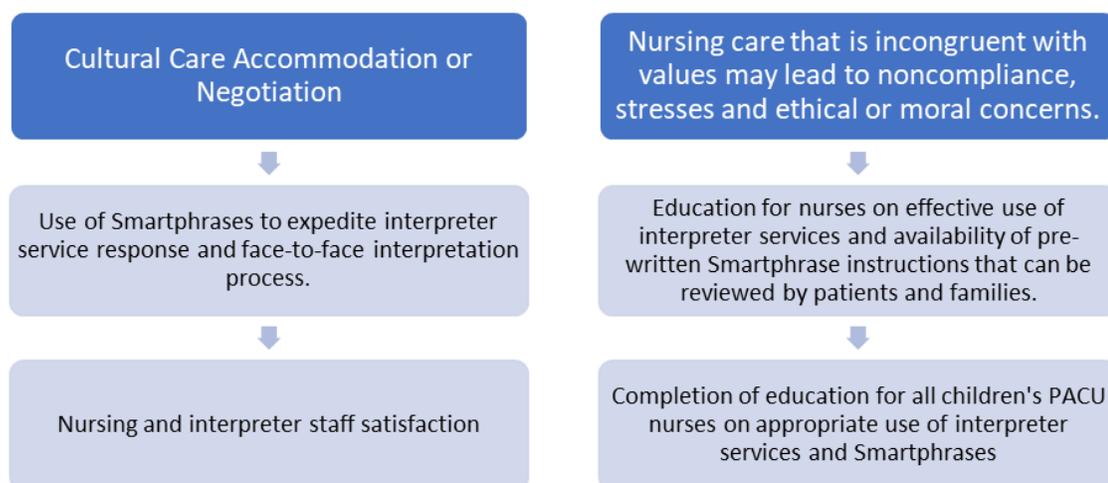
Cultural awareness starts with communication, which is hindered in the case of LEP individuals. Those who interact with interpreter services rely on them to serve as cultural brokers throughout the interaction. When lengthy discharge translation tasks occupy the time of professional interpreters, the entire team suffers from the delayed or abbreviated interactions that happen as a result, and these cultural considerations are often overlooked. This project addressed time barriers by streamlining the process of discharge translation, which will allow for more face-to-face interaction time, and enhance cultural competency through lived experiences by all participants.

Work Planning

CTE Diagram

Figure 1

Leininger's Culture Care Theory

| Cultural Care Accommodation or Negotiation	Nursing care that is incongruent with values may lead to noncompliance, stresses and ethical or moral concerns.
Use of Smartphrases to expedite interpreter service response and face-to-face interpretation process.	Education for nurses on effective use of interpreter services and availability of pre-written Smartphrase instructions that can be reviewed by patients and families.
Nursing and interpreter staff satisfaction	Completion of education for all children's PACU nurses on appropriate use of interpreter services and Smartphrases

Project Management Tool

A work breakdown structure allows the project manager to organize anticipated work and communicates the progress with all team members (Zaccagnini & Pechacek, 2021). For this project, the Gantt chart aided in planning and management.

Timeline

SmartPhrases that are to be used by participating surgical, anesthesia, and interventionist teams were drafted by the corresponding team members, which took approximately 8 weeks to complete. After SmartPhrases and the creation of nurse education were complete, applications for approval of the project by the university were submitted, and approval took approximately 1 week. Once university approval was obtained, requests for IRB approval by the nursing research council (NRC) were submitted, and this process took approximately 8 weeks to complete in the fall/ spring of 2021. After approval by the NRC, the project was re-submitted to the university for approval of requests for changes.

Implementation of SmartPhrases for Spanish-speaking LEP patients began after IRB approval was obtained, during the spring 2022 semester. The implementation period for this project lasted 4 weeks. During this time, nursing education took place for approximately 1 week. Data gathering was performed concurrently with implementation and lasted for the duration of this phase. Interpretation of data took place after the implementation phase. Adjustments to the intervention and re-evaluation will be ongoing (Figure 2).

Figure 2

Project Planner
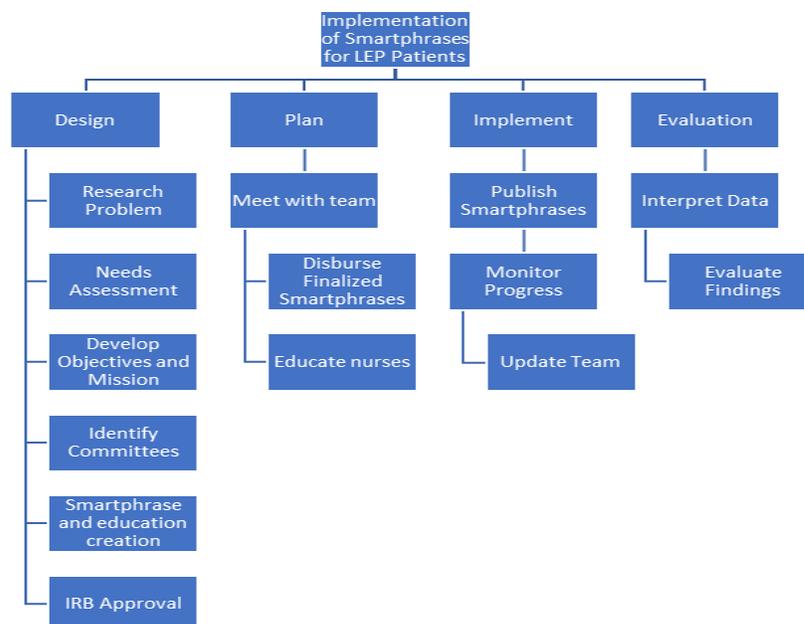
Budget

This project was implemented with resources that are already available through the hospital system, therefore, there was no monetary requirement in addition to the salaries that are already being paid to team members. The project leader volunteered time to implement and monitor the progress of the project. Compensation for Smartphrase development and translation is included in the salaries of participating staff since quality improvement is an expected task of hospital employees. Staff education took place during work hours; therefore, no additional compensation was needed. All educational material was virtual and was dispersed through hospital email, accruing no additional costs.

Planning Evaluation

The goal of this quality improvement project was to provide equitable care for LEP Spanish-speaking patients by implementing SmartPhrases for children's PACU discharge instructions.

Pre-Intervention Process

A patient or family who is classified as LEP must receive services from a professional language interpreter for any communication of health information with the medical team, which includes the signing of consents for procedures, updates on medical status, and discharge teaching, among other reasons. Additionally, discharge instructions must be translated to the native language at the time of discharge. Currently, a member of the healthcare team enters a request for translation or interpretation into a system-wide program, called ServiceHub. The request appears in a queue, where the available interpreters can see and assign themselves to the case.

With this system, there is no way to plan ahead, which means that all requests are given the same priority regardless of the situation. Once the case reaches the top of the queue and is assigned to an interpreter, the process of translation may begin. Notably, some interpreters are working from home on the translation process, so they may have to reassign the patient to an in-house interpreter for teaching. The process of reassignment takes around 40 minutes to complete. After the discharge information is translated, the patient is added back into the queue by the translating interpreter to wait once again for discharge teaching.

In preliminary data evaluation, it was discovered that patients may wait an hour or longer to receive in-person interpreter services, which is often prolonged by the need for

discharge instruction translation prior to the arrival of said interpreter since a member of the interpreter team has to manually translate the entire document before bedside interpreter services can be initiated. Unfortunately, studies show that limited availability and long wait times create a potential barrier to the use of in-person interpreters because of time constraints on all parties, which leads to the omission of this critical step in patient education. This leads to the possibility of increased legal and ethical concerns.

Plan-Do-Study-Act Model

Plan

Over the course of this quality improvement project, satisfaction with the discharge process and perceived level of equitable care improved, as demonstrated by the survey results. Additionally, the providers and nurses gained a greater understanding of the appropriate use of interpreter services and experienced an increased level of comfort and confidence when using this service.

All members of the pediatric surgery teams (general, orthopedics, ear/nose/throat, plastics, oral/maxillary/facial, urology, dentistry), the attending interventionists from vascular interventional radiology and electrophysiology, and PACU nurses were involved in the implementation of the SmartPhrases as they were responsible for inserting the original surgery instructions Smartphrase into the discharge instructions. All members of the interpreter services staff were involved during implementation since interpreters are assigned at random to patients and were responsible for inserting the pre-translated Smartphrase into the discharge document. All nurses in the children's PACU were involved in the implementation period since patients are assigned in the order that they receive procedural care. A pediatric anesthesiologist was involved in the creation of a

Smartphrase for the post-anesthesia care portion of discharge instructions. Attending surgeons from the corresponding teams were involved in the creation of a Smartphrase for post-surgery care.

Do

In fall 2021, SmartPhrases that are to be used by the pediatric surgery and interventionist teams, and pediatric post-anesthesia care were drafted by the corresponding teams. Discharge instructions and educational material were submitted with IRB applications. Requests for IRB approval by the hospital and the nursing research council were submitted during the fall 2021 semester, and again in the spring 2022 semester by the DNP student.

The creation of education for PACU nurses on optimizing interpreter services was completed by the interpreter services manager and the DNP student, with input from pre-operative nurses and interpreters during the fall 2021 semester. This education was implemented after project approval. Implementation of SmartPhrases for LEP patients took place alongside nurse education.

Study

Data gathering was performed starting with implementation and continued for its duration. Interpretation of data happened after 4 weeks of implementation. Specifically, staff satisfaction will be evaluated using a Likert-style survey.

Act

Throughout the completion of this project, methods to ensure the longevity of this intervention and continuous improvement towards the goal were and will continue to be considered. Adjustments to the intervention and re-evaluation will be ongoing.

Threats and Barriers

A possible threat to this project was an operational risk since unclear or poorly communicated changes to the discharge process during the implementation of SmartPhrases in the children's PACU could have stalled the discharge process. A lack of communication among the interpreter services team related to the dissemination of translated documents caused a minor delay in the process during week one, but improved as the project continued.

During the implementation of this project, the first barrier identified was a lack of communication between the physician contacts for some of the surgical specialties involved and their colleagues, which include attending physicians, fellows, advanced practice providers, and residents. Specifically, there seemed to be a correlation between lack of communication and the size of the surgical team. The second barrier also involved communication, though this time it was between the interpreter services manager and their staff members. To remedy this issue, the project leader increased communication with the manager of this department by telephone and email to assure that she was reminded of the project's active status. To improve this project for future success, closer attention should be paid to the communication of instructions on the implementation process, as well as increased updates on the progress of the project.

Monitoring of Implementation

The DNP student conducting this project spent between 10 and 20 hours per week during the 4 weeks of implementation directly monitoring the progress within the unit. There were frequent check-in sessions with the PACU staff, members of the surgical teams, and professional interpreters in an attempt to identify and correct any possible

issues in the implementation process. Additionally, staff members were encouraged to reach out to the DNP student via email or text message immediately if there were any identifiable issues.

Project Closure

At the end of week 4, a Qualtrics survey was sent to all staff members of the children's PACU and interpreter services. The survey will remain open for 1 week, and then the results will be analyzed to determine staff satisfaction with the project. Improvements to the use of SmartPhrases in Spanish discharges will be ongoing and the staff will continue to utilize the SmartPhrases provided.

<div align="center">

Interpretation of Data

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To assess nurse and interpreter satisfaction with intervention, all participants were invited to complete a 2-item survey. The survey consisted of Likert-style statements in which the participants had the options of "strongly disagree", "somewhat disagree", "neither agree nor disagree", "somewhat agree", and "strongly agree". At the end of the 1-week response period, 10 participants completed the survey.

The first item of the survey was "The implementation of Spanish SmartPhrases for discharge teaching improved my satisfaction with the current process of the Spanish-speaking patient." Two participants selected "neither agree nor disagree", two selected "somewhat agree", and six selected "strongly agree". These results were encouraging since 80% of those who chose to respond to the survey felt that this intervention had a positive impact on the improvement of this process. Results are shown in Table 1 and Figure 3.
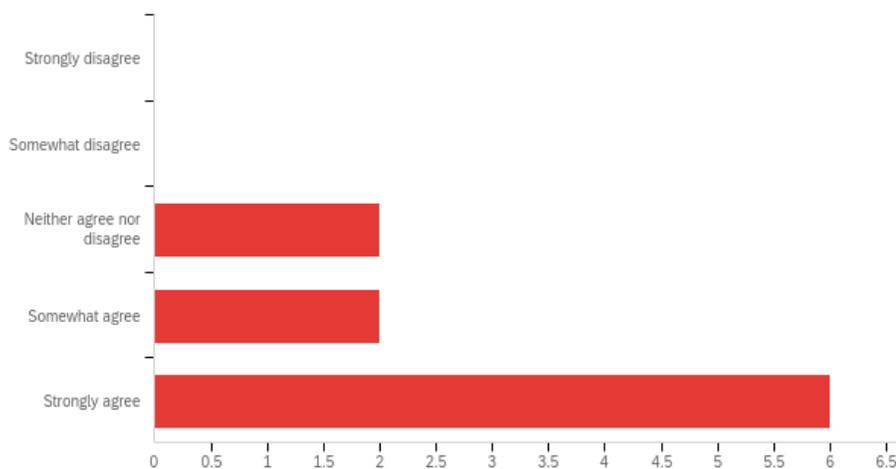
Table 1

Distribution of Responses to Satisfaction with Spanish SmartPhrases for Discharge

Teaching

Satisfaction	Frequency	Percentage
Strongly disagree	0	0
Somewhat disagree	0	0
Neither agree nor disagree	2	20
Somewhat agree	2	20
Strongly agree	6	60

Figure 3

Response to Item 1: Satisfaction with Spanish SmartPhrases for Discharge Teaching

The second item of the survey was "The implementation of Spanish SmartPhrases for discharge teaching improved my perceived level of equitable care provided to the Spanish-speaking patient." Two participants chose "neither agree nor disagree", one chose "somewhat agree", and seven chose "strongly agree". Once again, these results are

encouraging since 80% of those who participated felt that this intervention had a positive

impact on providing equitable care to the targeted group. Results are shown in Table 2
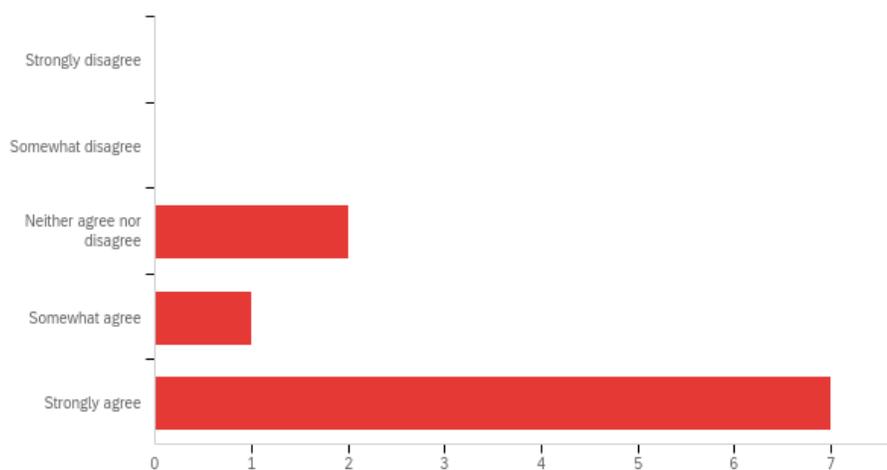
and Figure 4.

Table 2

Distribution of Responses to Perceived Level of Equitable Care

Satisfaction	Frequency	Percentage
Strongly disagree	0	0
Somewhat disagree	0	0
Neither agree nor disagree	2	20
Somewhat agree	1	10
Strongly agree	7	70

Figure 4

Response to Item 2: Perceived Level of Equitable Care

As another component of this quality improvement project, we chose to track the rate of interpreter services utilization for the Spanish-Speaking patient during the 4-week implementation phase by tracking the number of requests made by nursing staff, and the number of interpreter notes entered after services were completed, indicating that they provided a service to the patient. Of the 36 Spanish-speaking patients who received services in the Children's PACU, there were 36 requests made by the nursing staff for interpretation services on their behalf. This indicates that 100% of patients who were identified as Spanish speaking were offered access to interpreter services. Of the 36 requests that were submitted, 35 interpreter notes were present in the patients' charts, indicating that 97.2% of patients received the translation and/or in-person interpretation services.

Process Improvement Data

As a result of this project, the children's PACU has an established system for utilizing SmartPhrases in the discharge process for Spanish Speaking, LEP patients. Those who are responsible for initiating and carrying out this process, nurses and interpreters, reported a significant (80%) increase in satisfaction with this process when compared to the process used prior to this intervention. In addition, it was determined that interpreter services are being utilized as they should be for Spanish-speaking patients. On further review of the one patient who had an interpreter request placed on their behalf, but did not use the service, it was determined that the parents elected to forgo services due to the potential wait time. It is anticipated the project's process can continue to be improved, which will continue to indirectly improve other factors such as wait times.

This project will be sustained by the DNP student, the nurse manager of the children's PACU, and the manager of interpreter services. In the future, this team would like to examine wait times and how they are influenced by SmartPhrases use. Additionally, further collaboration with surgical teams to expand the variety of SmartPhrases available will further improve this process.

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