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# Enhancing Health Literacy Using Teach Back Method to Increase Patient Adherence to

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Enhancing Health Literacy Using Teach Back Method to Increase Patient Adherence to  
Medical Care

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### Abstract

**Background:** Health literacy is a complicated and perplexing topic for those not trained in the medical field. Patients possess pieces of health literacy to some degree, while some have none at all. Limited health literacy can pose a very threatening risk on a patient's well-being, interfering with their self-care and health maintenance, possibly creating more obstacles for the patient if health instructions and education are not clearly understood. This can lead to increased health expenditures due to treating the effects of poor health maintenance in addition to emergency room visits that may have not been necessary had the patient understood their health care instructions better. The teach-back method has proven accessible and effortless to use, while also being applicable in any health care setting globally. The teach-back method has shown to consistently increase patient proficiency in health literacy and medical knowledge, while minimizing the potential for misinterpretation.

**Method:** A training seminar for teach back method was designed to provide health care providers with knowledge and skills to apply teach-back method during patient interactions, in an effort to enhance patient health literacy and adherence to medical recommendations.

**Design:** A 1-hour educational seminar exposing providers to the teach back method, with practice cases for simulating the use of teach back, and discussion about personal scenarios and experience to enhance comfort level.

**Result:** Pre-intervention data was collected and compared to post-intervention data from participants (n=14) and found that the teach-back method not only positively improves patient health outcomes but also provider's satisfaction with the approach. Provider utilization of the teach-back method in practice increased to 100% after the educational seminar intervention. The confidence that providers possessed when it came to utilizing the teach-back method increased

from 78.57% to 100% after the intervention. In addition, 100% of providers stated they felt utilization of the teach-back method has positively impacted their patient's health outcomes.

The sustainability of the application of continuing the teach-back method was verified via provider's response to the post intervention survey where 100% (n=14) confirmed they are very likely to use the teach-back method with patients.

**Conclusion:** The teach-back method is an evidence-based tool that has been proven to be successful in implementing and evaluating the intervention of this study. Participants should exhibit an understanding and new habit in educating patients via the use of the teach-back method, to assist in maximizing the patient's level of understanding when it comes to medical instructions and knowledge.

**Keywords:** *teach-back, patients, providers, education, and communication, effective, literacy levels, health outcomes, improved*

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## **Introduction**

### **Introduction**

Health literacy is defined as the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions (National Network of Libraries of Medicine [NNLM], n.d). Patients rely heavily on health information in order to maintain their health and their family's health. Health information is typically provided through discussion with providers, consent forms, discharge paperwork, pamphlets, television commercials, and patient portals, however, millions of Americans have a difficult time understanding and acting on this information (NNLM, n.d).

In order to provide successful health care to patients, clear communication is critical; however little attention has been given to assisting and enabling patients to understand and comprehend the level of health literacy required for them to successfully make appropriate medical decisions (Institute of Medicine [IOM], 2004). The success of the shared decision-making model has to begin with appropriate health literacy. Tens of millions of adults in the United States are unable to read complex text, including medical material (NNLM, n.d). Up to 80% of patients forget medical information and instructions immediately after hearing it from their providers and over half of the information retained is incorrect (AHRQ, 2015).

Medical literacy varies greatly across patients and is partially responsible for the lack of retention when it comes to receiving medical instructions. Other contributing factors include physician medical language, an overabundance of information that needs to be communicated and limited time during a visit to do so, or patient's inability to or lack of willingness to pay attention (National Assessment of Adult Literacy [NAAL], 2018). Regardless of what hinders a patient's ability to retain medical instructions, the teach-back method can help providers capture



a patient's attention and confirm that patients understand what they need to know, because this method of teaching utilizes rephrasing by the patients to learn what they have heard and understood (Tamura-Lis, 2013).

The United States Department of Education National Assessment of Adult Literacy (NAAL) reports at least 36% of adults in America are at basic or below basic health literacy levels. Basic health literacy is the ability to self-update, interpret, and evaluate information on the determinants of health, to make informed decisions based on these understandings (National Assessment of Adult Literacy [NAAL], 2018). Multiple domains have been defined as social determinants of health such as: stress, work, social support, addiction, unemployment, food, and transport, all of which can impact a patient's knowledge and aspect on health (Matsumoto & Nakayama, 2017). About 55% of patients that are identified as having low health literacy did not graduate from high school, 44% did not speak English prior to starting school, 39% are Hispanic, 20% are Black adults, 26% are over 65 years of age, and 21% have multiple disabilities (NAAL, 2018). Significant consequences for low health literacy affect both health care providers and the patients.

Effective interventions such as the teach-back method are necessary to mitigate the consequences of low health literacy rates, which attribute to the suboptimal use of health services, impacting health outcomes negatively (AHRQ, 2015). The consequences of low health literacy rates are: lower vaccination rates, lower number of visits for health screenings such as mammography, lower use of hospital educational resources, and increased emergency room visits, consequentially resulting in higher mortality rates (AHRQ, 2015). Low health literacy has significant health consequences for patients, but also impacts health care providers and the health care system. Addressing low health literacy rates can improve the economic well-being of the

United States, but more importantly serve to equip and empower patients to better understand and manage their healthcare (National Assessment of Adult Literacy, 2018). The consequences of low health literacy rates in the United States are \$106 to \$238 billion dollars spent annually due to emergency room visits and illnesses that could have been prevented had patients understood how to better manage their health (NAAL, 2018). The cost of low health literacy (rehospitalizations due to poor health outcomes) has on the United States economy has gone from \$73 billion to \$238 billion in past ten years (Health Literacy Fact Sheets, 2017).

In an effort to improve the quality of care for patients, there is great demand for the delivery of accurate and useful quality healthcare information issued by the Centers for Medicare & Medicaid Services (CMS), especially to aid in shared patient decision-making models and value-based payment and purchasing incentives (Centers for Medicare & Medicaid Services [CMS], 2017). Increasing patient knowledge of health can help to decrease health care cost, as patients will better manage and maintain their own health and can also help to promote quality outcomes for providers.

### **Problem Description**

Low health literacy is not just an issue that affects a specific unit or a specific hospital institution, it is an issue that affects patients and the healthcare system nationwide (NAAL, 2018). The Institute of Medicine (2004) stated that if healthcare providers took the time to ask their patients to explain what they understood about their diagnosis, medication instructions, and health in general, that they would find many gaps in these patient's understanding and see the wide range of misinterpretation. While the interpretation of health information is specific to the patient, how well a patient understands it, is also something health care providers can impact (IOM, 2004). In addition to treating patients, health care providers should also make it a point to

harness the skills and expectations to assist patients to achieve the optimal level of health literacy understanding.

Limited and low health literacy affects adults in all ethnic and educational groups. Research shared by AHRQ (2015), performed to assess how health literacy affects patients. A total of 365 patients from three different states were asked to look at four pill bottles and explain how they understood the directions on the medication label. The medication labels contained directions such as “take two tablets by mouth twice daily”. It was discovered that 46% of these patients did not understand the directions on more than one medication and 38% of these patients with adequate health literacy missed at least one label (AHRQ, 2015). Health literacy challenges for patients vary widely including lack of familiarity with medical terms, lack of understanding on how the body works, challenges with interpreting numbers and risks associated with health care decisions especially complex, and providers simply not having enough time to thoroughly explain instructions and ensuring the patient’s understanding (United States Department of Health and Human Services [USDHH], 2008).

California is home to the highest number of immigrants compared to any other state in the United States. Over half of the bay area is made up of minorities, many who are immigrants (Bay Area Market Reports, 2017). Nearly 70% of the immigrants in California are functionally illiterate (Health Literacy Fact Sheets, 2017). To be functionally illiterate means these patients are unable to read the medication labels, complete a medical history form, or find an intersection on a street map (Health Literacy Fact Sheets, 2017). Having providers who are trained in and performing the teach-back method would greatly benefit these patients as it would provide the assistance they need to navigate the healthcare system while staying on top of their health.

## Gap Analysis

A needs assessment survey was conducted with health care providers from various health care organizations in the south bay via a public survey. The survey was posted publicly via a social media platform and participants were encouraged to participate if they were a healthcare provider. Credentials of participants were confirmed and verified via name and license numbers checked on their respected governing board's website. Participants included doctors, nurses, therapists, registered dieticians, nurse practitioners, and nurse practitioner students who provided responses to questions that assessed the current state of how providers currently educate patients, what they thought of in terms of the type of quality education they are providing their patients, how they felt about the amount of time they had to spend educating their patients, and if they think there should be a better way of educating patients. Questions that were asked and the responses included were (Table 1):

Table 1. Gap Analysis

Questions	Responses
What barriers do you see exist when it comes to providing health education to patients?	Language (and the lack of a translator for some interactions) Cognition Culture Time Constraint Too much information to be given to patients Degree of patient's understanding of medical terminology
Is there a common practice for educating patients as a provider?	Pictures Diagrams Discharge instructions in preferred language Translator tablets

How much time do you think you have available to spend educating patients on your shift? (On scale of 0-10 with 0 being no time and 10 being more than enough time)		Average response: 3.6 (Less than adequate amount of time)
How would you rate the quality of education you can provide for patients when you have time to educate them? (On a scale of 0-10 with 0 being below average to 10 being excellent)		Average response: 6 (Slightly above average)
Are there any tools being used to structure the way you educate patients?		No – just traditional education via speaking to patient and family
Desired State	Current State	Action Steps
<p>Minimize barriers to education especially time constraint and patient knowledge of medical terminology.</p> <p>Create a structured way for providers to educate patients (via teach back method)</p>	<p>Lack of structured way to educate patients</p> <p>Lack of time available to providers to educate patients</p> <p>Provider ranked quality of education provided to patients is just slightly above average</p> <p>Multiple barriers exist to providing quality education to patients, including time constraints and patient cognition.</p>	<p>Utilize teach back method to:</p> <ul style="list-style-type: none"> <li>-Create a structured way in which providers can easily communicate medical knowledge to patients, where it becomes a habit and becomes integrated in daily patient interaction so it does not require taking up more time to educate</li> <li>- Communicate in layman terminology to patients to assist those with limited cognition/education</li> <li>-Provide patients with information in small chunks and assess their understanding as opposed to giving them a large amount of information all at once</li> </ul>

The results from the gap analysis indicated that providing health education to patients is a challenging task due to multifactorial constraints such as: time, language, and variation in patient's health literacy levels. The gap analysis also showed that providers have less than adequate time to provide patients with education and that they have no structure to the way they provide the education aside from the traditional method of speaking and asking whether or not the patients have any questions. These barriers provide opportunities for improvement in the realm of patient education.

**Setting**

The implementation of this project took place in San Jose and San Mateo, California. Providers from a county hospital, private hospitals, skilled nursing facility, and nurse practitioner students, who specialize in internal medicine, family medicine, respiratory therapy, and acute care spinal cord, participated in the educational session. An email invitation was sent to an array of providers in addition to invitations via word of mouth, to join an educational seminar regarding the teach-back method. The participants who showed up were doctors, nurse practitioners, nurse practitioner students, registered nurses, medical assistants, and respiratory therapists. The meeting locations were public meeting spaces, organized by the author, with two contact hours, approved by the University of San Francisco (USF) to be given to participants (Appendix K and L).

The community population in San Jose is predominantly made up of Caucasians (40%), followed by Asians (30%), Hispanics (28%), and African American (2%) (World Population Review, 2019). Percentages of these people living in poverty was approximated at 10%, 6.4% of the population is unemployed, 8% are uninsured, and 9% did not have a high school diploma (World Population Review, 2019). Lacking the knowledge and foundation for an education puts these populations at a risk for misinformation when it comes to understanding health literacy and topics such as calculating blood sugar levels, calculating medications, understanding nutrition labels, and comparing health plans and coverages. The community population in San Mateo consists of Caucasians (66%), followed by Hispanic/Latinos (23%), Asians (18%), and African Americans (3%) (Kaiser Permanente, 2016). Percentages of these people living in poverty was approximated at 20%, 4.9% of the population was unemployed, 9% was uninsured, and 10% did not have a high school diploma (Kaiser Permanente, 2016).

**PICOT Question**

Does the teach-back method contribute to changes in health outcomes in patients compared to the dissemination of standard education material during a patient visit or over repeat encounters?

**Available Knowledge**

The search engines Cumulative Index of Nursing and Allied Health Literature (CINAHL) Complete, Cochrane Database of Systematic Reviews, Fusion, PubMed, Joanna Briggs Institute EBP Database, Academic Search Complete, and Dynamed Plus were utilized for practice methods using the following keywords and combinations thereof: *teach-back, patients, providers, education, communication, effective, literacy levels, health literacy, health outcomes, and improvement*. The initial search resulted in over 200,000 articles. Inclusion criteria for the search to yield better relevance included: scholarly peer reviewed journals, with full text, written in the English language in all communities and within the past 10 years. This populated a result of 12. Abstracts from these remaining articles were reviewed and eight of the studies utilizing the teach-back method as an intervention in promoting effective communication between patients and providers while promoting positive health outcomes, were accepted (Appendix A). The Johns Hopkins Nursing Evidence-Based Practice Rating Scale was used to sort the articles from highest to lowest strength of evidence. Secondary literature and google website searched literatures were also utilized to provide additional educational context surrounding the teach back method.

## **Literature Review**

### **Patient Teaching Models**

Traditionally, medical care providers such as physicians, nurse practitioners, and physician assistants have held the bulk of the responsibility in educating patients regarding their health and medical information (Sesser, 2018). Current, team-based care approaches include other providers such as medical assistants, nurses, residents, therapists, case managers, social workers, in addition to the conduits such as the internet, providing patients with all this information. Patients are responsible for knowing their own health status and maintaining a proactive role in their care with the implementation of patient portals. According to Sesser (2018) in order for these patients to achieve a good level of understanding, they must also be taught well in order to retain the education. Various models of patient teaching exist and can be used in various ways.

The most traditional teaching method involves lectures and demonstration (Sesser, 2018). This approach cultivated a physician/provider dominated clinical encounter and limited patient autonomy in participation with their care. This method does not involve patient participation and only requires the patient to listen to what is being taught, followed by watching the demonstration. This method lacks patient involvement and does not confirm whether or not the patient understood what was being taught.

The military teaching method is structured around “see one, do one, teach one” (Sesser, 2018). This method would allow for the patient to observe a procedure, perform the same procedure, and then teach it to another person to ensure that the training was understood. In a clinical visit setting, if the patient is at the visit alone, it would be very difficult to execute this learning method in its entirety, therefore would not confirm



whether or not the patient understood what was being taught.

Other common patient teaching models include role playing, demonstration, and discussion, all which require patients to actively participate in the learning (Sesser, 2018). While these models help patients remember educational materials through mock scenarios, they are not feasible to perform during clinic visits as opposed to a classroom or seminar setting. Discussions help to engage patients, however, there is no specific structure to how these discussions can go. If a provider does not ask open ended questions during the discussions, it may hinder patients from confirming their knowledge in the event they simply reply “yes” but still have questions when asked if they understood what was being taught.

It is not incorporated into the health care professional’s routine to assess and identify patients who are at risk for low health literacy (Bowskill & Garner, 2012), and less than 50% of internal medicine residency programs included any formal teaching on health literacy (Yin, Jay, Maness, Zabar, & Kale, 2015), therefore, interventions such as the teach-back method need to be adopted to help patients better understand their health and promote their involvement in treatment, medical decisions, and adherence. Techniques to assist health care providers improve their health communication with patients include: slowing down while speaking, repeating information, use patient appropriate language, avoiding medical jargon, and using the teach-back method to allow patients to repeat and demonstrate what they have learned. This guiding outline can help to reinforce key messages to patients and provide them with opportunities to ask questions, all while allowing the health care provider to assess and observe the patient’s understanding and adjust teaching as needed (AHRQ, 2015). Navigating the world of healthcare is technical and complicated, but it is a critical part of the provider’s role to assist patients in

understanding, so they may make better informed decisions for their lives.

### **Effectiveness of the Teach Back Model**

The teach back method is recognized by the National Quality Forum as a preferred method for validating patient's understanding of their health and care (National Quality Forum [NQF], 2018). On a cardiac catheterization unit where 600 procedures are performed annually, clinicians were determined to implement the teach-back method in an effort to increase their patient's understanding of cardiac medications, by promoting staff's use of the teach-back method in their daily practice (Miller, Lattanzio, & Cohen, 2016). Thirty patients were assessed on retention of medication knowledge upon discharge. Of the 30, only 40% of these patients, showed adequate understanding of their medications. Four out of the thirty patients, or 13.3%, were readmitted within thirty days from their discharge. Three out of the four readmitted patients had failed to demonstrate full understanding of their medication instructions at the time of discharge (Miller, Lattanzio, & Cohen, 2016). Miller, Lattanzio and Cohen (2016), utilized this data to create an intervention incorporating the teach back method, with a role-playing activity for nurses. Nurses were already concerned that the teach-back method would be time consuming and add more work to their already busy workloads, however after the training program was implemented on the teach-back method, it was found that at least 77% of nurses were utilizing it consistently in their patient interactions. After incorporating the training for discharge, a new group of thirty patients were surveyed upon discharge regarding their medication knowledge. Twenty-five of the thirty patients (83.3%) understood their medications and only two of the thirty patients were readmitted within thirty days (6.7%). While the sample size for this study was fairly small, the results reinforce the positive impact on patient health and care by initiating and maintaining a teach back method (Miller, Lattanzio, & Cohen, 2016).

Mathew, Mohan, Paul, Maideen, Jose, et al. (2017) conducted a study on memory retention for new prescription education was conducted on 150 adult patients at a tertiary care hospital on a pulmonary unit via a 6-month prospective experimental study. Patients were split between a control and intervention group. The control group received standard education with dialogue conversations between patient and provider regarding their new prescription. The intervention group received education via the teach-back method. Results showed that the group that received the teach-back method counseling showed a significant improvement in patient knowledge and memory retention, thirty percent more than patients in the control group.

At an emergency department that sees over 39,000 patients annually, a prospective quality-improvement project designed as a before-and-after study was implemented utilizing the teach-back method to evaluate and improve knowledge deficits pertaining to medication and discharge instructions. Two hundred patients participated in the project and were split into a pre and post intervention group. The preintervention group consisted of patients who received their discharge instructions via standard verbal communication between patient and providers. The post intervention group consisted of patients who received their discharge instructions via teach-back method from trained providers. The intervention consisted of teaching 68 nurses from that emergency department, how to conduct the teach-back method. The training consisted of using demonstrations and role playing after a 10-min presentation on the teach back method. Nurses were instructed to educate patients using plain language, encourage understanding, to create a shame-free environment, and to ask patients to re-state in their own words the four domains (diagnosis, medications, follow-up, and return precautions) of the discharge instructions until understanding was achieved. The training was held over four sessions to cover weekday,

weekend, day, and night shift nurses. Results showed the post intervention group 15% higher recall in discharge instructions than the pre-intervention group (Slater, Huang, Dalawari, 2017).

Dinh, Bonner, Clark, Ramsbothan, Hines (2016), analyzed 21 articles extracted from eight different databases, consisting of randomized and non-randomized controlled trials, cohort studies, before-after studies and case-control studies, the teach-back method was found to have positive effects in a wide range of health care outcomes. Implementations involved utilization of a teach-back method education program for people with chronic diseases versus education program with no teach-back method. The outcomes of interest were adherence, self-management, disease-specific knowledge, readmission, knowledge retention, self-efficacy and quality of life. The teach-back method showed positive effects in a wide range of health care outcomes including improved outcomes in disease-specific knowledge, adherence, self-efficacy and the inhaler technique.

A systematic literature search for papers published between 2003 and 2013 examining oral/aural literacy between patient and providers was conducted by Nouri and Rudd (2015). The authors wanted to explore how oral/aural literacy related to literacy skills, how literacy demands by health care providers affected patient outcomes, and how patient's speaking and listening skills affected their health outcomes utilizing three different tools. The first tool measured oral literacy demand placed by providers (via Oral Literacy Demand Framework), the second measured the patient's aural literacy (via Cancer Message Literacy Test-Listening), and the third measured both the patient and provider's oral literacy demand (via word-use measures that were assigned a numerical value). The validity of the tools were validated via patient-related outcomes. The authors found that high literacy demand is associated with reduced patient

learning, low patient oral/aural literacy is associated with poor health outcomes and recommended that the education on use of plain language and incorporation of teach-back by providers be taught during medical school education and residencies to better prepare health care providers in reducing literacy demands placed on patients (Nouri & Rudd, 2015).

Griffey, Shin, Jones, Aginam, Gross, et al, (2015) conducted a randomized control trial utilizing the teach-back method versus standard teaching of reading to patients their discharge instructions, was examined in the emergency room at St. Louis, MO at a level one trauma center. The hospital was designated in 2003 by a report that designated it as a hot spot for patients with low health literacy. Participants were randomly assigned into two groups: the group receiving discharge instructions via teach-back method by trained staff of the group receiving the standard discharge instructions without any teach-back being offered. A total of 408 patients participated and the differences between the groups were evaluated, revealing teach-back method improved comprehension of post emergency department care instructions. The teach-back method is a provider level intervention that validates improvement in communication in the health field, and a useful technique that also allows for providers to assess for comprehension to better customize the education they provide (Griffey, Shin, Jones, Aginam, Gross, et al, 2015).

In a quasi-experimental study (Pagels, Kindratt, Arnold. Brandt, Woodfin, et al, 2015) 25 family medicine residents were observed by community members who acted as standardized patients and evaluated the medical residents on their ability to measure the patient's health literacy using the teach-back method via an objective structured clinical examination (OSCE). OSCE scores from the intervention group of residents who received the training, were compared to previous graduates. The residents who utilized the teach-back method as part of their training reported an increase in health literacy knowledge and scored in the expert performance range

compared to residents who did not receive the training (Pagels, Kindratt, Arnold. Brandt, Woodfin, et al, 2015). Tailored training on the foundation of health literacy and utilization of the teach back method during medical school is substantial in promoting health literacy for patients of all socioeconomic backgrounds.

At an urban walk-in immunization clinic, Wilson, Baker, Nordstrom, & Legwand (2008) interviewed 15 mothers with one or more child via convenience sampling where their health literacy levels were assessed using the Rapid Estimate of Adult Literacy (REAL). Vaccine information statements provided by the CDC on inactive polio virus (IPV) and pneumococcal conjugate vaccine (PCV) were used as instructional materials in the teach-back method. Each mother was asked to repeat, in her own words, her own understanding of the risks, benefits, and safety of both vaccines. Their responses were quantified based on three domains: correctly naming 2 out of 3 benefits of the vaccines, correctly naming 3 out of 8 risk factors, and correctly naming 3 out of 7 safety factors for a possible total score of 3. Based off of the information on the VIS (vaccine information sheet), these mothers were unable to communicate critical information regarding vaccinations their child had received, which reiterated the importance of provider intervention and participation via the teach-back method was needed to effectively communicate instructional information to better assist promotion of self-care (Wilson, Baker, Nordstrom, & Legwand, 2008).

Dinh, Bonner, Clark, Ramsbortham, and Hines (2016) conducted quality appraisals on articles with studies involving patients over the age of 18 with one or more chronic diseases. These patients were placed into groups that either received the teach-back method or placed in the comparator groups which were education programs that did not involve the teach-back method. Findings from the systematic review supported the use of teach-back in educating

patients with chronic diseases to maximize their understanding, knowledge, adherence, and self-care in managing their diagnosis

The teach-back method creates a learning environment for the patient that is safe and non-shameful by eliminating ambiguous medical terminology and transcribing it into layman's term for the patient to interpret all while being fully involved in their care. This also gives patients the opportunity to ask appropriate questions, therefore helps to reduce medical errors, all while helping the patient make and understand medical decisions and instructions (AHRQ, 2015). The teach-back method allows the provider to continue to adjust and re-phrase their explanations and teachings until the patient fully understands what is being communicated. Any member of the health care team can use the teach-back method with patients in any setting that warrants clarification on patient's understanding of their health needs.

### **Methods and Tools for Implementing Teach-back Method**

The teach-back method can be implemented via many ways depending on the individual characteristics of where the practice is, however AHRQ (2015) has provided recommendations on how it should be done. AHRQ (2015) recommends the first step to implementation is to identify a champion who can help guide integration of the teach-back method. The second step is to have health care providers complete the short interactive learning module provided by AHRQ on their website or read the one-page fact sheet. Practice sessions are also recommended to allow for providers to role play and be more comfortable in using the process. The third step is to strategize on how and when teach-back will be used. AHRQ (2015) recommends starting small then work towards expanding. For example, health care providers may try teach-back with the last patient of the day or with patients at off-peak times, staff might use teach-back in specific situations, such as

when they are scheduling follow-up activities, then expand to using it whenever giving patients important information. The fourth step AHRQ recommends is to inform patients and families that teach-back is being used in the practice and explain its importance while also answering any questions they may have. The last step is to evaluate the implementation of the teach-back method. The *Conviction and Confidence Scale* (Appendix H) is a self-assessment tool provided by AHRQ for healthcare providers to use to evaluate their own use of teach-back. This tool can be used periodically initially, and less frequently once clinicians are more comfortable with the use of teach-back (AHRQ, 2015).

The teach-back method was implemented at a 290 bed Magnet hospital, via an instructor led interactive teaching session, for over 300 multidisciplinary team members from techs, to nurses, dieticians, and therapists from the emergency room to ambulatory care. These staff members attended a 45 to 60-minute teaching sessions designated to them by their leadership team members. Leadership teams came up with specific schedules for all staff members to attend, content for the education session included what the teach-back method was, its impact on health literacy, and strategies that can be utilized for effective communication. A pre-education survey was administered to assess the participants baseline knowledge and understanding of health literacy. Ten to twelve months after the class, a post survey was administered to assess the sustainability of the of the teach-back method in practice. The results showed that the staff members still utilized the teach-back method in their practice even months after the educational sessions and that it worked in helping patients retain medical information while boosting their health literacy (Klingbeil, Gibson, 2018).



**Rationale/Conceptual Framework**

Kurt Lewin's change theory is a three-step model that offers a framework to implement this change effort. The three phases include: unfreezing, changing, and refreezing. This method of implementing change requires prior learning from participants to be rejected and replaced in order to move toward the newly desired level of behavior. The newly learned behavior can then finally be solidified and considered as the new norm.

Health care providers often times fall complacent and develop habitual patterns and behaviors without realizing there may be newer and more efficient ways to do things. Unfreezing assists people in gaining new perspectives on how to perform things as well as helps them to unlearn old habits. Unfreezing allows for reassessment of current practices and processes in order to set the stage for change to occur. Unfreezing will begin with bringing to the health care provider's knowledge, what the teach-back method is, how it can be implemented, and the positive impact it can make in a patient's health outcome. The introduction to the teach-back method will prepare providers to open their minds to a new idea and building of a new pattern in their work habits.

Change is the transition phase of the process where new ideas can be implemented. During this phase, people will need to take on new responsibilities and tasks, which may slow down the workflow of the institution as acclimation needs to take place and chaos may need to be sorted out. However, this is also considered the investment period where in order to be effective, trust and patience needs to be present during this phase. Change will begin when health care providers begin to practice the teach-back method, implementing the new method of communication into their patient interactions.

Refreezing occurs once change has become effective and made improvements within the

institution. This phase will now solidify the new work processes of the institution (Morrison, 2014). Once providers become more fluid in integrating the teach-back method as part of their daily conversations with patients, they will have developed a new work process.

### **Specific Aims**

The project aims to improve health literacy among the adult patient population by teaching providers effective utilization and implementation of the teach back method. This project also aims to increase the knowledge of providers on the teach back method and provide methods for implementation in their clinical sites.

The overall goal is to bring awareness for implementing the teach back method in clinical practice. This project will aim to increase the utilization of the teach back method by various clinical providers during patient interactions, by 50% over a 3-month period.

By April of 2019, at least 10 providers will report an increased understanding of the teach back method, gain tools and awareness for the implementation of the teach back method, utilize the teach back method report an increase in patient health literacy as evidenced by increase in medication compliance, and report an increase in frequency of utilizing the teach back method in their clinical practice as measured by results from the post intervention surveys.

## **Methods**

### **Context/Key Stakeholders**

In order for this project to successfully be implemented, it required the participation and support of many key stakeholders. The author held the primary role, development, implementation, and evaluation of the project. Dr. Jodie Sandhu, Assistant Professor at USF is the DNP chair who helped authorize, guide, critique, assess, and

assisted in implementing and evaluation, and provide supervision and guidance for this project. DNP Committee member, Dr. Alexa Curtis, Associate Professor, helped review and guide the project. Toolkits for the intervention, were gained from The Agency of Health Care Research and Quality. Clinical providers including doctors, nurse practitioners, nurses, respiratory therapists, and nursing assistants from various health care organizations are the intervention recipients, who met at a central community site that served as the meeting grounds for the training program. The organizations in which these clinical providers work for will benefit from having a provider who knows and can teach to them how to utilize the teach-back method to improve their communication with patients. The end result will ultimately be the patients who will benefit from this as their health literacy and medical knowledge increases, which will hopefully be reflected in their life (see Appendix E).

### **Intervention**

The implementation of this method consisted of two educational training seminars. The first phase of the training occurred in January 2019, where a group of 11 health care providers: 7 registered nurses, 1 respiratory therapist, 1 nursing assistant, and 2 nurse practitioner students showed up for an in-person learning seminar at a community meeting location San Jose. Voluntary participation authorization, demographics, and email information for the participants were gathered initially. The pre-intervention questionnaire was administered to collect baseline data pertaining to the provider's current knowledge and utilization of the teach-back method. Questions on the pre-intervention questionnaire assessed for: whether or not the providers have heard of the teach-back method before, whether or not the providers have utilized the teach-back method in their practice, their knowledge in terms of the strengths, weaknesses, and usability in

practice pertaining to the teach-back method, and how often they perform patient education. Health care providers from various institutions and backgrounds in the South Bay region of California were invited and 11 participated in a two-hour training workshop offering CEU credit consisting of education and training for the use teach-back method in their field of work. The educational seminar was hosted at external meeting spaces in San Jose and San Mateo, California. Participants participated in a pre and post intervention survey, geared towards an assessment of their knowledge gained, and the ability for them to utilize the skills of Teach Back Method effectively in practice over a four-week intervention period.

The training workshop was designed for a one-hour window. A power point lecture presentation was utilized (see Appendix H) to educate them on teach-back and how to perform it. Prior to the power point presentation, the health care providers were asked to fill out a pre-assessment surveys, one of which consists of the Conviction and Confidence scale, provided by AHRQ (see Appendix H & I), and the other of their knowledge pertaining to the teach-back method and what they think about their own personal skills and performing when it comes to the teach-back method. Questions such as how much time they feel they have to educate their patients with each visit, how would they rate the quality of education they provide to their patients, how often do they use the teach-back method in their practice, and if whether or not they have a significant amount of confidence when it comes to utilizing the teach-back method were asked. The questionnaire was followed by the power point presentation on what the teach-back method is, how to use it, and examples of utilizing it.

The power point presentation was a combination of slides created by the author and a set provided by AHRQ. The slides from AHRQ discusses what the teach-back method is, who can use it, how to use it, and scenarios were provided for providers to practice with one another. The

author's power point provide similar information in addition to what health literacy is, who is affected by it, how it affects their health outcomes, and how the teach back method can positively impact patient health outcomes. Handouts with copies of the presentation were provided for providers to keep and take notes on.

After the power point presentation, providers were asked to perform the teach-back method with all their patient encounters. Case studies that offer various scenarios were also be made available for providers to work on in pairs, to simulate and practice utilizing the teach-back method in their communication. After one month, they would be contacted via email and asked to fill out a post-intervention survey in addition to the Conviction and Confidence scale as a post-assessment to see how their knowledge and skills have changed when it comes to using and implementing the teach-back method. In addition to that, a link to survey monkey were provided so they can fill out an additional survey for the author to assess how likely are they to continue using the teach-back method, and how utilizing the teach back method has impacted their patient's health outcomes as seen in their health literacy and medication compliance.

A second learning seminar was conducted a month later at a central meeting location in San Mateo, to meet the needs of interested providers, that were unable to attend at the San Jose location. Three participants, including Two doctors and a nurse practitioner participated and received the same intervention as the group in phase one.

## **GANTT**

The activities surrounding this project are broken down into four categories: project development, intervention, implementation, and evaluation. The project development consists of research, a baseline assessment, which have all been completed earlier on this year. The intervention/development and planning occurred between

December 2018 through May 2019. The project evaluation was completed by May 2019 (Appendix C).

### **SWOT Analysis**

A SWOT analysis was conducted to identify the strengths, weaknesses, opportunities, and threats to this project. While many threats were recognized, the strengths and opportunities that the project offered, showed to outweigh all in terms of benefits (Appendix F).

**Strengths:** A few strengths of this project include the cost effectiveness of the seminar, interests of providers in the education being presented, and readily available information and resources for “teach back method”. The project reiterates medical knowledge to patients while providing opportunities for providers to see where patients need help in learning about their health. In addition to that, it also provides patients a chance to teach back and display their knowledge, and teaching opportunities for providers to answer questions in order to be more thorough with patient care. This project can also decrease the risk of medication errors, improve provider relationship with patients, enhance provider interaction with patients, and increase patient education, all while also increasing medication compliance by patients, and satisfaction scores.

**Weaknesses:** Weaknesses include the teach back process itself can be time consuming to perform, especially in the event that an appointment with a patient is already running long and can decrease medication compliance if a patient learns about the side effects that they are not fond of and decides not to take the

medication even though it will benefit them. Not all providers may want to participate in learning and implementing the teach-back method and some patients may find it condescending to their knowledge if it is not performed or communicated appropriately. The lack of organizational support as a standard integration of this method into every encounter also presents as a weakness.

**Opportunities:** Opportunities include enhancing patient and provider relationship along with developing a new system to incorporate into patient care. There is also the opportunity to spread the benefits of using the teach-back method to institutions and clinics/gaining buy-in.

**Threats:** Threats include gaining provider buy in and their participation, gaining patient participation when performing teach-back, and having consistency in providers performing the teach-back method with every patient encounters and interactions, and lack of incentive for providers to continue with implementation.

### **Work Breakdown Structure**

A work breakdown structure and communication plan was created to organize and facilitate participants, their roles and responsibilities, as well as how much of the work in percentage, is required to be completed in relation to the entirety of the project. The project consists of three major work load components. The construction of an educational power point presentation for providers on the teach-back method comprises 25% of the project and will be the responsibility of the author. The training workshop for providers comprises 50% of the project workload and will also be the responsibility of the author with participation from providers. The analysis of the data from the pre and post surveys will take up 25% of the project

and will also be the responsibility of the author in addition to the Doctor of Nursing Practice program chair and committee, Dr. Sandhu and Dr. Curtis, to review. (Appendix D).

### **Proposed Budget / Cost Benefit**

The proposed budget of this project was calculated factoring in the DNP student salary as workshop lead, hours it will take to develop the project, handouts, materials, papers, printing, food and drinks for the in-service, gas money for traveling, and provider's time. The total came out to \$440 for the projected cost of a training workshop (Appendix G). It is estimated that patients with inadequate health literacy were 53% more likely to be readmitted to the hospital within 30 days (Kirkner, R.M, 2018). Health literacy is an individual determinant that in the grand scheme of things, impacts national finances. Low health literacy costs society an increased need for disease management, less efficient use of medical services such as increased emergency room visits, and decreased adherence to medical recommendations concerning medication management (Haun, Patel, French, Campbell, Bradham, et al, 2015). In a retrospective cohort study examining the relationship between health literacy in post-acute myocardial infarction patients and 30-day hospital readmissions, it was discovered that patients with above average health literacy had an 21% lower risk of 30-day readmissions. The results indicated that health literacy can be used as a significant predictor of 30-day readmissions (Bailey, Fang, Annis, O'Conor, Paasche-Orlow, et al, 2015).

The average daily census of county hospitals in the bay area is 274 (San Francisco Health Improvement Partnership, 2018). Looking at the statistics, if 14% of adults have below basic health literacy understanding (National Quality Forum, 2018) and 53% of those adults are more likely to be readmitted within 30 days of their discharge, with the cost for treatment of the most



common preventable readmission diagnoses costing from \$21,500 to \$51,219 per patient, the annual cost avoidance is estimated between \$437,095 to \$1.06 million dollars total per year.

### **Study of the Intervention**

The teach back method is a valuable tool to help staff ensure that regardless of a patient's health literacy level, the patient will understand the information given about their health care. The teach back method allows for staff to check patient understanding by having patients state and reiterate what they have learned about their health, in their own words. This allows for providers to confirm the patient's knowledge and also to fill in the gaps if any confusion arise.

One month after the intervention, a post intervention questionnaire was sent out for providers to answer (Appendix H & J). The post intervention questionnaire revisited the same questions included in the pre-intervention questionnaire but also included: whether or not the providers have used the teach-back method in their practice with their patients and how often, has their utilization of the teach-back method affected their patient's health outcomes positively, how likely are they to use the teach-back method in their practice with their patients, and the questions contained on the Conviction and Confidence Scale.

The Conviction and Confidence Scale measured qualitatively and quantitatively provider's perceptions about the following: (a) overall knowledge of and how convinced they are to use the teach back method, (b) confidence in their ability to use the teach back method, (c) frequency in utilizing the teach back method with patient interactions, and (d) identify which elements of the teach back method they utilized in their interactions. All elements on the survey are conducted via a likert scale (with the exception of d), with a score of 1 being the lowest and 10 being the highest.

The results were analyzed via survey monkey who provided trending and comparative data analysis to make drawing the conclusion possible. The project manager (myself) interpreted and reported results to the program director. The implementation of the teach-back method yielded positive results for these providers, therefore it behooves them to transfer the method into their own practices with their own institutions to yield the same results. They can do this by utilizing the same power point and teach-back tools provided by AHRQ to educate their leaders and gain buy in. Once that is achieved, they can hold larger educational sessions to train staff throughout the institution (Appendix G).

### **Measures/Desired Outcomes**

The desired outcomes for this project was based on three primary goals:

1. a) to improve provider knowledge by 50%, pertaining to the teach-back method as evidenced by an increase in knowledge on the post intervention survey
2. b) to increase provider's confidence by at least 80% in utilizing the teach-back method as demonstrated by survey results indicating application of teach back method in patient encounters following the training, and
3. c) to positively affect patient health outcomes with the utilization of the teach-back method demonstrated by providers perception post intervention, rated on the surveys.

### **Analysis**

The data from the pre and post intervention surveys were collected and analyzed via survey monkey, which translated the data into bar graphs and percentages. Percentile differences between pre and post intervention data was used to detect the change in the provider's learning comprehension as well as their confidence in utilizing the teach-back

method. Microsoft Word and Excel 2018 were utilized to generate charts for comparison and analysis.

### **Ethical Considerations**

This project does not violate any privacy or HIPPA concerns as it does not require any collection of personal patient data or identifiers. This project follows all the provisions of the American Nurses Association (ANA) Code of Ethics for Nurses in that:

- a) The nurse will practice with compassion and respect for the inherent dignity, worth, and unique attributes of every person.
- b) The nurse will promote, advocate for, and protect the rights, health and safety of the patient
- c) The nurse has authority, accountability, and responsibility for nursing practice; makes decision, and takes action consistent with the obligation to provide optimal patient care.
- d) The nurse collaborates with other health professionals and the public to protect human rights, promote health diplomacy, and reduce health disparities (Code of Ethics for Nurses, 2018).

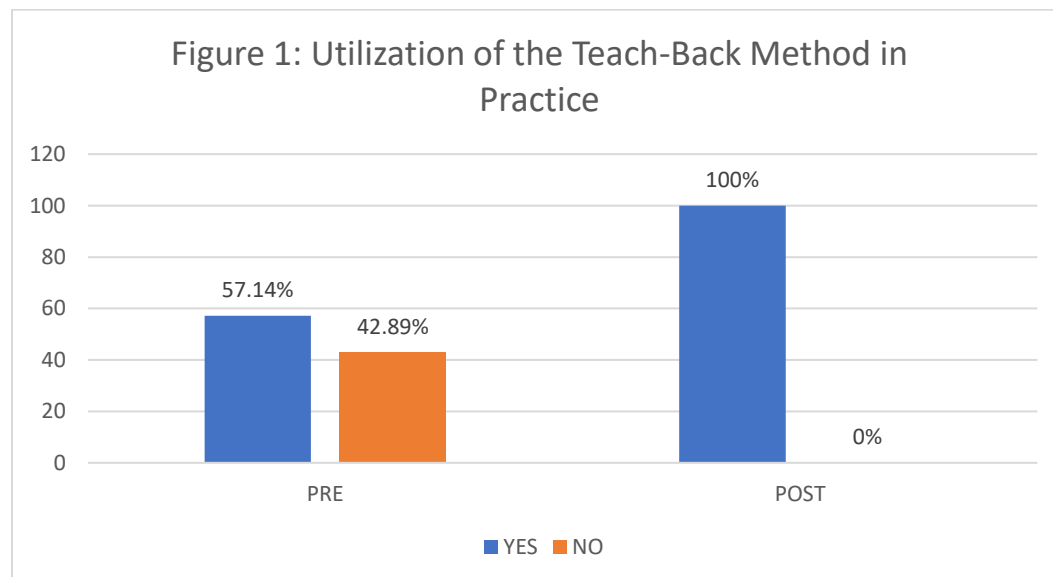
*Cura personalis* is to care for the individual person, taking care of them and caring for their individual needs. In addition to following the provisions of ANA, this project also strives to align with the values of Jesuit ethics by catering the patient experience to ensure the individual patient learns, understands, and is capable of managing their own health, as the health care provider engages in teaching behaviors that will increase awareness and growth for both them and their patients.

The challenge that this project faces is the lack of readiness to be able to utilize across all cultures due to the language barriers that will arise. While there have been multiple studies done showing the teach-back being implemented in areas such as Asia and the Middle East, with success, having a translator to cater to every language may be a challenge.

## Results

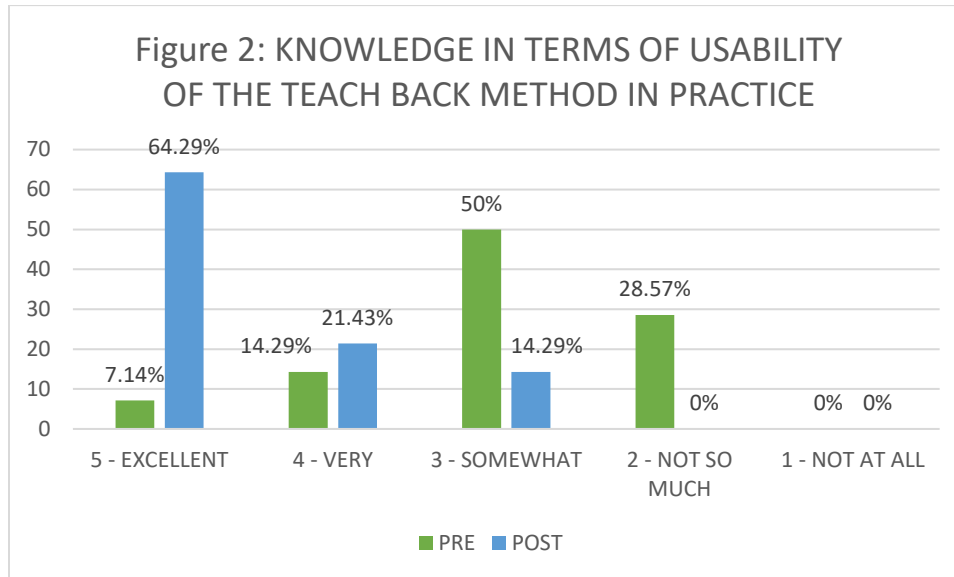
### Results

Provider utilization of the teach-back method in practice already existed prior to the intervention, however, post-intervention, utilization increased to 100% (n=14).

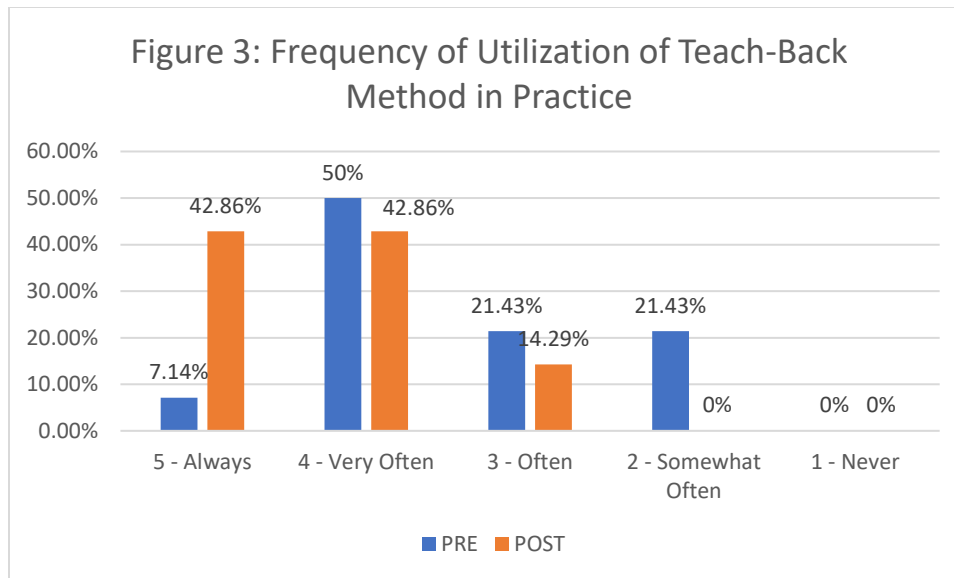


Knowledge in terms of the usability of the teach-back method and ways to implement with patients was primarily ranked as *somewhat* by 50% of providers, followed by *not so much* by 28.57%, *very* by 14.29%, and *excellent* by 7.14%. Post-intervention, knowledge in terms of the usability of the teach-back method was ranked *excellent* by 64.29% of

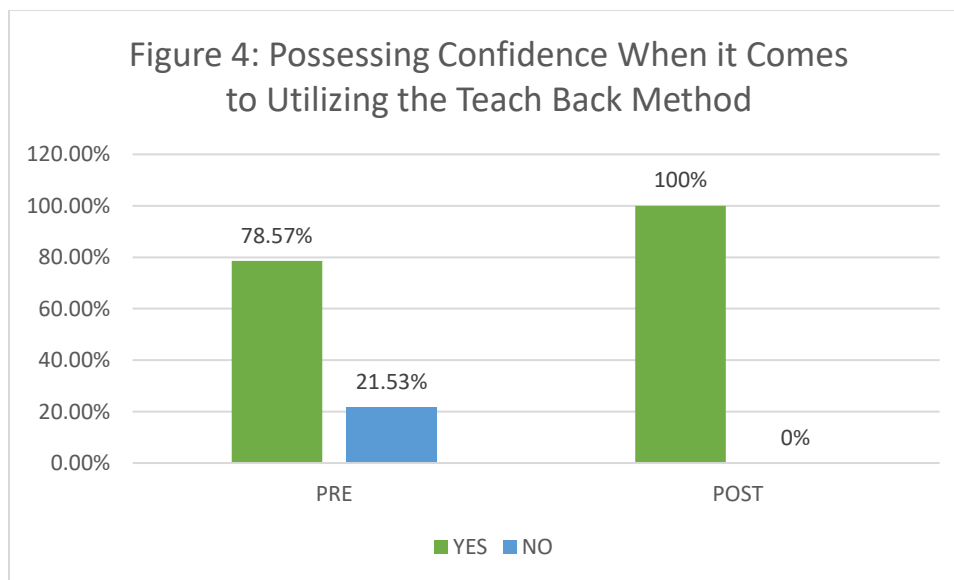
providers, *very* by 21.43%, *somewhat* by 14.29%, and *not so much* received 0%. This indicated the grasp and increase in knowledge from providers in being able to use and implement the teach-back method in their practice.



The frequency in provider's utilization of the teach-back method improved greatly after the intervention. Prior to the interventions, providers *always* using the teach-back method in their practice with patients was only 7.14%, which rose greatly to 42.86%.

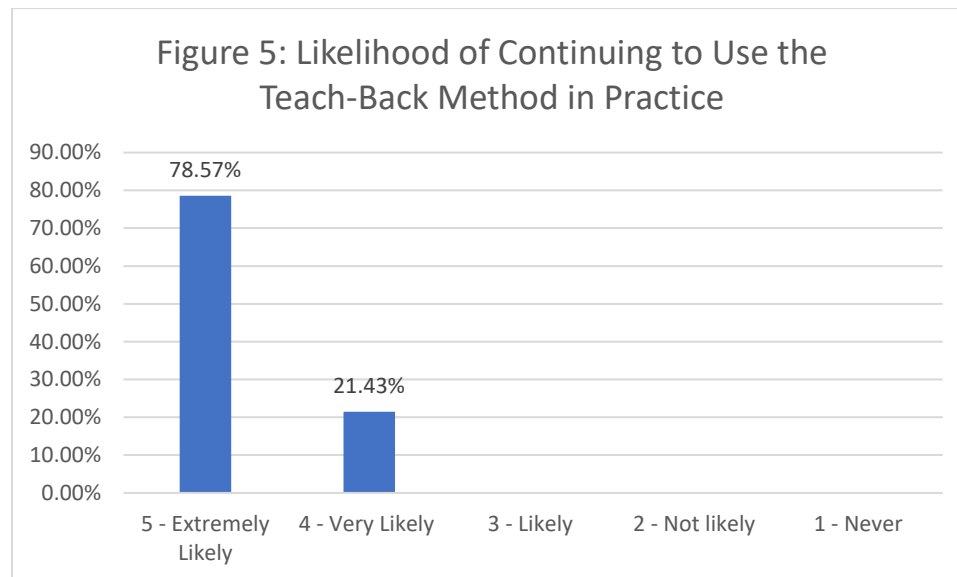


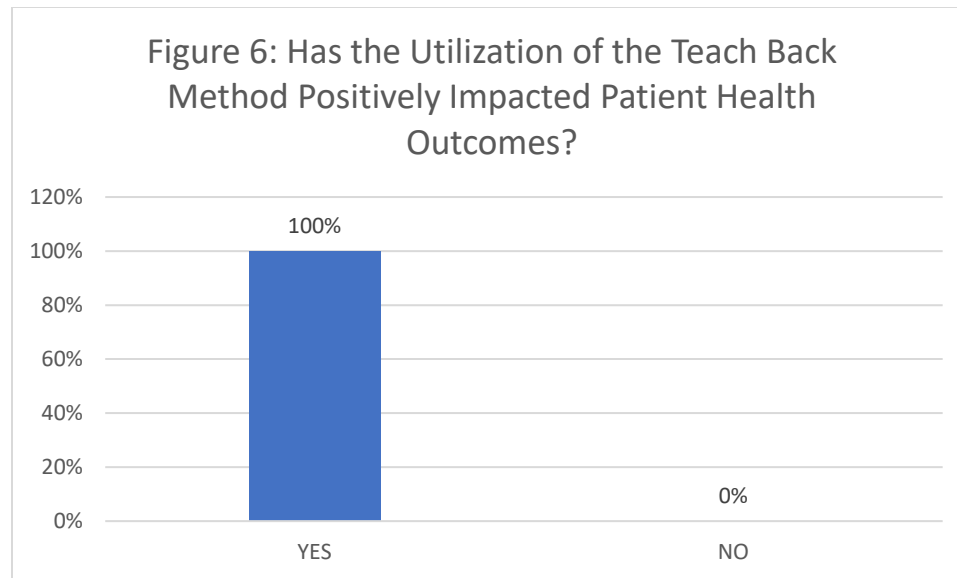
Prior to the intervention, 21.53% of providers possessed no confidence when it came to utilizing the teach-back method and 78.57% did. After the intervention, 100% of providers unanimously felt they possessed confidence.



In terms of the likelihood of continuing to use the teach-back method in practice, 78.57% of providers expressed they are extremely likely to continue, and 21.43% said they are

very likely. In terms of likely, not likely, or never, no one attested to that. In terms of seeing the teach-back method having a positive impact on patient's health, 100% of providers agreed it did for their patients. Providers described positive outcomes as: a) increase in patient participation during discussions about plans for their health, b) improvement in the ability of patients being able to teach-back to not only the providers but their family members, what they understand about their health, and c) decrease in the amount of phone calls and emails from patients, such as seeking clarification on medication instructions.





## Summary

The teach-back method proves to be of importance in provider's role when it comes to interacting with and educating patients. In addition, it also proves to positively impact patient health outcomes, which is one of the purposes for utilizing the teach-back method in patient care. The outcome data showed vast improvement from the pre-intervention baseline data on what providers originally knew about the teach-back method and how they originally felt about it. The results from these surveys show the need to utilize and maintain utilization of the teach-back method in practice.

## Interpretation

The findings from this intervention suggests that providers who learned to properly utilize the teach-back method and implement it in practice can and will positively impact their patient's health outcomes. It also showed that providers who already had some knowledge on the teach-back method, gained a great deal of confidence



and more knowledge on the usability of the teach-back method, enough to alter their commitment to continue utilizing it in their practices. This is a reflection of the success of Kurt Lewin's change theory, where providers seen here, underwent training to develop a new understanding on how to better educate patients in an effort to promote a better quality of health for their patients, have successfully developed a new workflow and have indicated they are extremely likely to continue with this new work flow.

### **Limitations**

Limitations to this project included a small sample size of providers who participated for the seminar to learn about the teach-back method and the small amount of mixed disciplines from that group. The lack of gaining more staff participation due to the time-consuming nature of the teach back method, and therefore lack of patient participation were also limiting factors of the project. This can be mitigated by providing more seminar sessions to gain more clinician participation and site visits to ensure any questions about teach-back is addressed. The pre and post assessment tools aside from the Confidence and Conviction Scale, were adapted by the author and were not tested for validity and reliability, which may possibly skew the results. The findings from this project, due to a small sample size of participants, are not generalizable knowledge, however, the structure of the intervention method could be utilized to provide education to providers on the teach-back method. The various demographics of the patients and their various medical concerns are also all factors that could have impacted the results due to the variability especially between two different locations. The patient encounter lacking standard implementation of the teach-back method also presented as a limitation.

Providers may have not remembered to implement it with every encounter therefore not every patient may have received the experience. These limitations may have further altered the results of the study.

## **Conclusions**

This project meets the objectives of increasing utilization of the teach back method to promote patient outcomes and increasing patient's adherence to their health care plans via the design and method. The evidence-based strategies for teaching providers are tools that have proven to be successful in implementing and evaluating the intervention. Participants should exhibit an understanding and new habit in educating patients via the use of the teach back method, to maximize their level of understanding when it comes to medical instructions and knowledge. With every patient interaction, there is always an opportunity to provide additional health care knowledge to the patient. While as providers, we cannot change our patient's education or socioeconomic levels that are contributing factors to their degree of health knowledge, we can surely control and change how we offer and provide services in a way that will be more meaningful for our patients.

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# Appendix A

## Literature Review

Source	Design Type	Study Design & Study Outcome Measures	Study Setting & Study Population	Study Intervention	Key Findings
Dinh, Bonner, Clark, Ramsbothan, Hines, 2016.	Systematic review of randomized, non-randomized control trials, cohort studies, before and after studies, and case control studies	Implementation of a teach-back method education program for people with chronic diseases versus education program with no teach-back method. Outcomes of interest were adherence, self-management, disease-specific knowledge, readmission, knowledge retention, self-efficacy and quality of life.	Adults age 18 and over with one or more chronic diseases from all health care settings.	Implementation of the teach-back method versus no use of the teach-back method in patient education, in 21 studies	Overall, the teach-back method showed positive effects in a wide range of health care outcomes although these were not always statistically significant. Studies in this systematic review revealed improved outcomes in disease-specific knowledge, adherence, self-efficacy and the inhaler technique.
Morony, Weir, Bell, Biggs, Duncan, Nutbeam, & McCaffery, (2018).	Cross-sectional stepped wedge cluster randomized trial	Primary outcome was a modified subscale of the Health Literacy Questionnaire, 'having sufficient information to manage health'. Secondary caller outcomes included caller confidence, perceived actionability of information and nurse effort to listen and understand. Nurse outcomes were perceptions of their communication effectiveness.	637 patients aged 18-75 and 15 maternal/child nurses with 15+ years of experience, via an Australian national pregnancy and parenting telephone helpline	Nurses randomly split into control and intervention groups. Complex intervention involved a single 2-hour group Teach-Back training session, combined with ongoing nurse self-reflection on their communication following each call and each shift.	Teach-Back benefits telephone health service users with inadequate health literacy. Teach-Back helped callers with inadequate health literacy feel listened to (OR 2.3, CI 0.98 to 5.42, p = 0.06), confident to act (OR 2.44, CI 1.00 to 5.98, p = 0.06), and know what steps to take (OR 2.68, CI 1.00 to 7.17, p = 0.06). Nurse perceptions of both their own communication effectiveness (OR = 2.31; CI 1.38 to 3.86, p<0.0001), and caller understanding (OR = 2.56; CI 1.52 to 4.30, p<0.001) both increased with Teach-Back.
Slater, Huang, & Dalawari, 2017.	Before-and-after study design (pre and post teach-back method)	Pre and post questionnaires measuring mean percent recall correct was calculated in four categories: diagnosis, medication reconciliation, follow-up instructions, and return precautions	Emergency department involving 200 randomly selected adult patients from all socioeconomic backgrounds	A Preintervention phase assessed 100 patient's retention of discharge instruction via standard verbal communication of written material. Post-intervention assessment collected data on another 100 patients retention of discharge instructions., however this group has been taught via the teach-back method by trained providers. The intervention involved 1 week of training for nurses on what is and how to utilize the teach back method	The mean percent recall correct in the teach-back phase was 79.4%, or 15 percentage points higher than the preintervention group. After adjusting for age and education, the adjusted model showed a recall rate of 70.0% pre vs. 82.1% (p < 0.005) post intervention. The teach-back method had a positive association on retention of discharge instructions in the ED regardless of age and education.



				via demonstration and role play.	
Mathew, Mohan, Paul, Maideen, Jose, Ommanakuttan, 2017.	Prospective experimental study	Assessment of memory retention of new prescription education by comparing Teach back method and standard counseling method. And also to evaluate association of age, sex, drug use in past and education in memory retention.	Pulmonary medicine department of a 500 bedded multispecialty tertiary care hospital – adult patients 18 years and older	150 patients split between a control and intervention group. The control group were taught eight counseling points about the drugs by one-way dialogue method and asked at the end if there are any questions. while patients in the teach back method builds on the standard method by asking three open ended questions to recall what was taught and correcting any misunderstandings by two-way dialogue method.	All the demographic parameters (Age, sex, drug use in past three months and education) do not show any significant association with scoring and memory retention (p value >0.05 for chi square test). The group that received teach-back method of counseling showed a significant improvement (30% more) in patient knowledge and memory retention.
Pagels, Kindratt, Arnold, Brandt, Woodfin, Gimpel, 2015.	Quasi Experimental Study	Health literacy training using didactic lectures and an objective structured clinical examination (OSCE) to evaluate health literacy knowledge and improved communication skills	Family medicine residents (N=25) lecture/simulation setting	Community members acted as standardized patients and evaluated residents on their ability to measure the patient's health literacy, using the teach-back and Ask Me 3 Methods. Pre and Post knowledge and feedbacks were obtained and OSCE scores compared from control and intervention groups., in addition to 3 month follow-up survey.	Intervention group showed an increase in health literacy knowledge and scored in the expert performance range on their OSCE compared to those who did not receive the training. Intervention group of residents also reported continued using the teach-back method more effectively, three months after the intervention.
Wilson, Baker, Nordstrom, Legwand, (2008).	Quantitative– qualitative research design	Convenience sampling was applied to obtain 15 mothers with one child (M1) and 15 mothers with more than one child (M > 1). The Rapid Esti- mate of Adult Literacy (REALM) was used to assess literacy level. Mothers were asked to restate in their own words the benefits, risks, and safety issues of the childhood vaccines. The responses were scored based on correct answers (1.0), partially correct answers (0.5), and incorrect answers (0).	Urban walk-in immunization clinic	Vaccine information statements on inactive poliovirus (IPV) and pneumococcal conjugate vaccine (PCV) were instructional materials used in the teach- back procedure. each mother was asked to repeat, in her own words, her understanding of the benefits, risks, and safety of both the vaccines. Each response was quantified regarding	The results of the investigation were mixed. The inconsistency of the mothers to communicate critical information about vaccines indicates the need to further to assess how best to assist parents in increasing their vaccine knowledge and vaccine communication skills. Unless providers use effective communication and instructional strategies, we will experience limited success in increasing maternal health literacy.

				benefits (correctly name 2 out of 3 possible benefits), risk factors (correctly name 3 out of a possible 7–8 factors), and safety issues (correctly name 3 out of a possible 6–7 factors) for a possible total score of three.	
Klingbeil & Gibson, 2018.	Evidence Based Practice Model	A descriptive pre and post – test design was used. Over 300 healthcare team members participated in a one-time, standardized instructor led educational session at a tertiary care 290 bed Magnet designated Midwest academic pediatric healthcare organization. Participants included nurses, dieticians, respiratory care practitioners, occupational and physical therapists. The nursing sample included nurses from five acute care medical surgical units, two ambulatory day surgery settings and the Emergency Department.	Clinical staff working at a 290 bed Magnet designated Midwest pediatric healthcare organization	Staff attended a 45–60 min, standardized, instructor led interactive teaching session about the impact of low health literacy, the use of open-ended questions and how to use teach-back with patients and families.	Both nurses and non-nurses demonstrated increased knowledge of the teach-back process and reported high rates of clarifying information and correcting misunderstandings when using teach back with patients and families. Staff responses revealed an overwhelming endorsement of teach back as a valuable intervention.
Miller, Lattanzio, Cohen, 2016	Quality improvement projects/research Changing practice projects/research	Administration of a pre and posttest Outcomes: methods used to implement guideline	Inpatient step-down cardiac unit with adult post op patients.	Developed a standardized assessment tool that asked 30 patients specifically if they understood the indications, timing, and adverse reactions for their procedure-specific medications to establish baseline understanding of patient's knowledge. Development of an education program via role playing for clinical nurses to practice implementation of the teach-back method.	Promising results indicate that using the teach-back method is a valid component of safe, quality nursing care. Patients appreciated the opportunity to ask questions, discuss concerns, and clarify mis- conceptions before discharge. Readmissions rate due to medication error decreased by half.

## Appendix B

## Statement of Non-Research Determination Form (SOD)

**DNP Statement of Non-Research Determination Form****Student Name:** Tram Nguyen**Title of Project:**

Enhancing Health Literacy Using Teach Back Method to Increase Patient Adherence to Medical Care

**Brief Description of Project:**

Up to eighty percent of patients forget medical information and instructions immediately after hearing it from their providers, while over half of the information retained is incorrect (AHRQ, 2015). Medical literacy varies greatly between individuals and is partially responsible for the lack of retention when it comes to receiving medical instructions. Other contributing factors include physician medical language, an overabundance of information that needs to be communicated, or patient's inability to or lack of willingness to pay attention (National Assessment of Adult Literacy [NAAL], 2018). Regardless of what hinders a patient's ability to retain medical instructions, the teach-back method can help providers capture a patient's attention and confirm that patients understand what they need to know, because this method of teaching utilizes rephrasing by the patients to learn what they have heard and understood (Tamura-Lis, 2013).

**A) Aim Statement:** to enhance provider knowledge and utilization of the teach back method with every patient encounter in an effort to enhance patient health literacy

**B) Description of Intervention:** A one-hour educational seminar will be held where the teach-back method will be discussed in terms of what it is and how it can be utilized in patient care. Health care providers will be invited via word of mouth and email invitation to participate. Providers who wish to participate will sign an acknowledgement form providing their contact information and will be given a pre-test to assess their current knowledge on the teach-back method and how often they are using it. The educational seminar will feature the teach-back method via power point, discussing what it is, how to use it, and how it will help providers better communicate with their patients as well as how it will help patients better retain information they were taught. Providers will be encouraged to practice what they've learned and integrate it into their patient encounters. Four weeks after implementation, providers will be asked the same questions in a post-test to see how much their knowledge on the teach-back method has changed and how often they are using it with their patients. Providers will also be given a questionnaire to assess if they have noticed if their patients have demonstrated an increase in understanding of on their health and whether



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or not they have noticed positive effects on their patient's health outcomes.

**C) How will this intervention change practice?** The intervention will prepare providers with knowledge on how to assist patients to retain medical information being communicated to them, via repetition of information and clarification by way of the teach-back method. When patients better understand their health information clearly, not only do they enhance their health literacy rates, but their health status improves as well.

**D) Outcome measurements:**

1. Pre and Post likert scale surveys via Conviction and Confidence Scale
2. Post likert scale survey to assess the desired outcomes for this project, based on three primary goals:
  - a) to improve provider knowledge by 50%, pertaining to the teach-back method as evidenced by an increase in knowledge on the post intervention survey
  - b) to increase provider's confidence by at least 80% in utilizing the teach-back method as demonstrated by survey results indicating application of teach back method in patient encounters following the training, and
  - c) to positively affect patient health outcomes with the utilization of the teach-back method demonstrated by providers perception post intervention, rated on the surveys.

To qualify as an Evidence-based Change in Practice Project, rather than a Research Project, the criteria outlined in federal guidelines will be used:

(<http://answers.hhs.gov/ohrp/categories/1569>)

☒ This project meets the guidelines for an Evidence-based Change in Practice Project as outlined in the Project Checklist (attached). Student may proceed with implementation.

☐ This project involves research with human subjects and must be submitted for IRB approval before project activity can commence.

Comments:

**EVIDENCE-BASED CHANGE OF PRACTICE PROJECT CHECKLIST \***

**Instructions: Answer YES or NO to each of the following statements:**

Project Title:	YES	NO
The aim of the project is to improve the process or delivery of care with established/ accepted standards, or to implement evidence-based change. There is	<input checked="" type="checkbox"/>	<input type="checkbox"/>





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no intention of using the data for research purposes.		
The specific aim is to improve performance on a specific service or program and <b>is a part of usual care</b> . ALL participants will receive standard of care.	✓	
The project is <b>NOT</b> designed to follow a research design, e.g., hypothesis testing or group comparison, randomization, control groups, prospective comparison groups, cross-sectional, case control). The project does <b>NOT</b> follow a protocol that overrides clinical decision-making.	✓	
The project involves implementation of established and tested quality standards and/or systematic monitoring, assessment or evaluation of the organization to ensure that existing quality standards are being met. The project does <b>NOT</b> develop paradigms or untested methods or new untested standards.	✓	
The project involves implementation of care practices and interventions that are consensus-based or evidence-based. The project does <b>NOT</b> seek to test an intervention that is beyond current science and experience.	✓	
The project is conducted by staff where the project will take place and involves staff who are working at an agency that has an agreement with USF SONHP.		
The project has <b>NO</b> funding from federal agencies or research-focused organizations and is not receiving funding for implementation research.	✓	
The agency or clinical practice unit agrees that this is a project that will be implemented to improve the process or delivery of care, i.e., <b>not</b> a personal research project that is dependent upon the voluntary participation of colleagues, students and/ or patients.	✓	
If there is an intent to, or possibility of publishing your work, you and supervising faculty and the agency oversight committee are comfortable with the following statement in your methods section: <i>"This project was undertaken as an Evidence-based change of practice project at X hospital or agency and as such was not formally supervised by the Institutional Review Board."</i>	✓	

**ANSWER KEY:** If the answer to **ALL** of these items is yes, the project can be considered an Evidence-based activity that does NOT meet the definition of research. **IRB review is not required. Keep a copy of this checklist in your files.** If the answer to ANY of these questions is **NO**, you must submit for IRB approval.

\*Adapted with permission of Elizabeth L. Hohmann, MD, Director and Chair, Partners Human Research Committee, Partners Health System, Boston, MA.

**STUDENT NAME (Please print):**

Tram Nguyen Mendoza, DNP(c), MSN, RN

**Signature of Student:**

**DATE** 10/15/2018

**SUPERVISING FACULTY MEMBER (CHAIR) NAME (Please print):**

Prabjot (Jodie) Sandhu, DNP, FNP-C, PA-C, CNL

**Signature of Supervising Faculty Member (Chair):**



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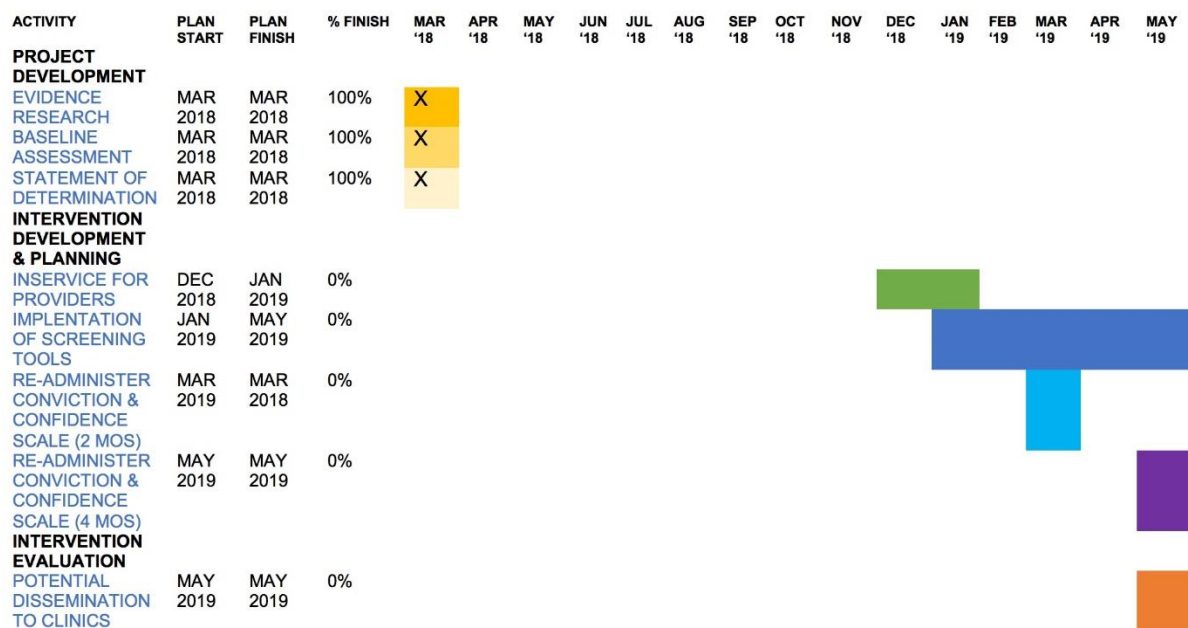
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**DATE** 10/15/2018

# Appendix C

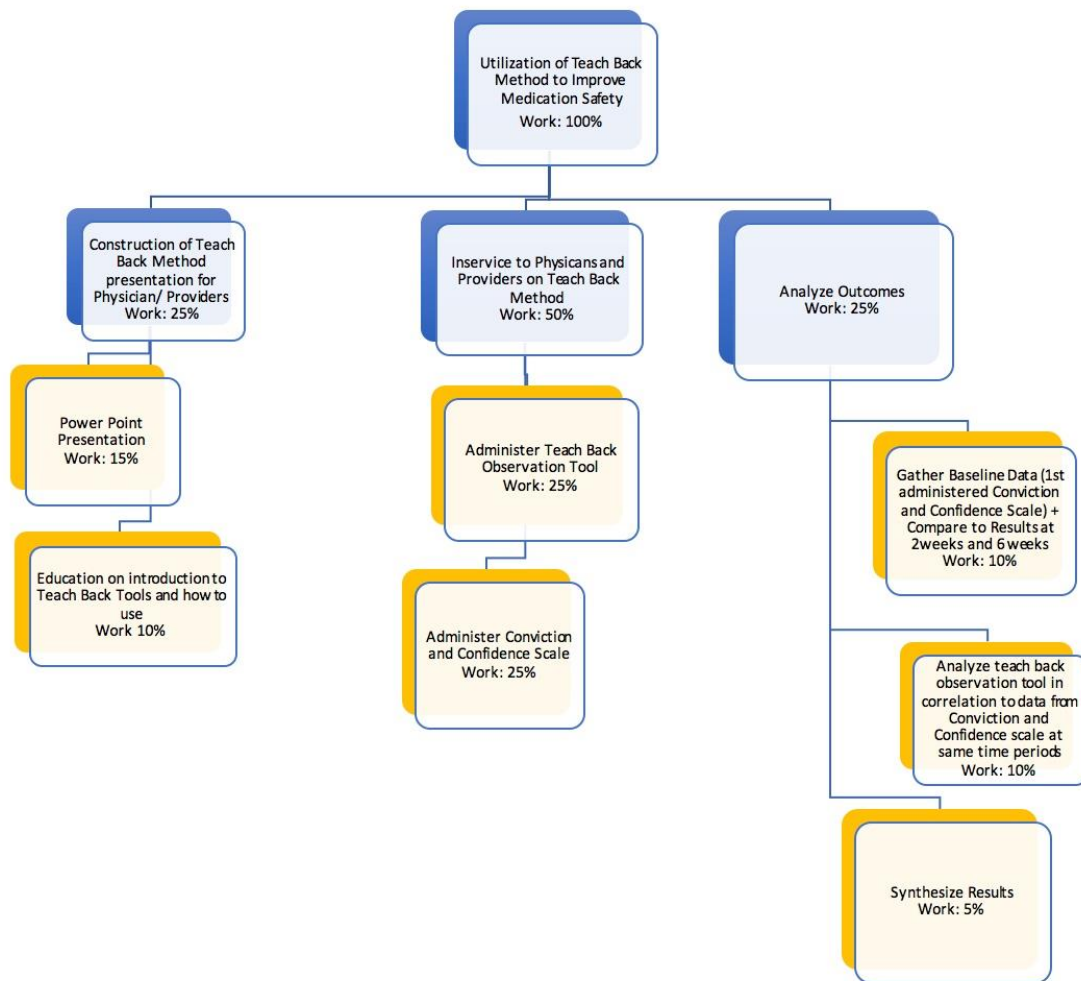
## Gantt Chart

(BOXES MARKED WITH X INDICATES COMPLETED)



# Appendix D

## Work Breakdown Structure



## Appendix E

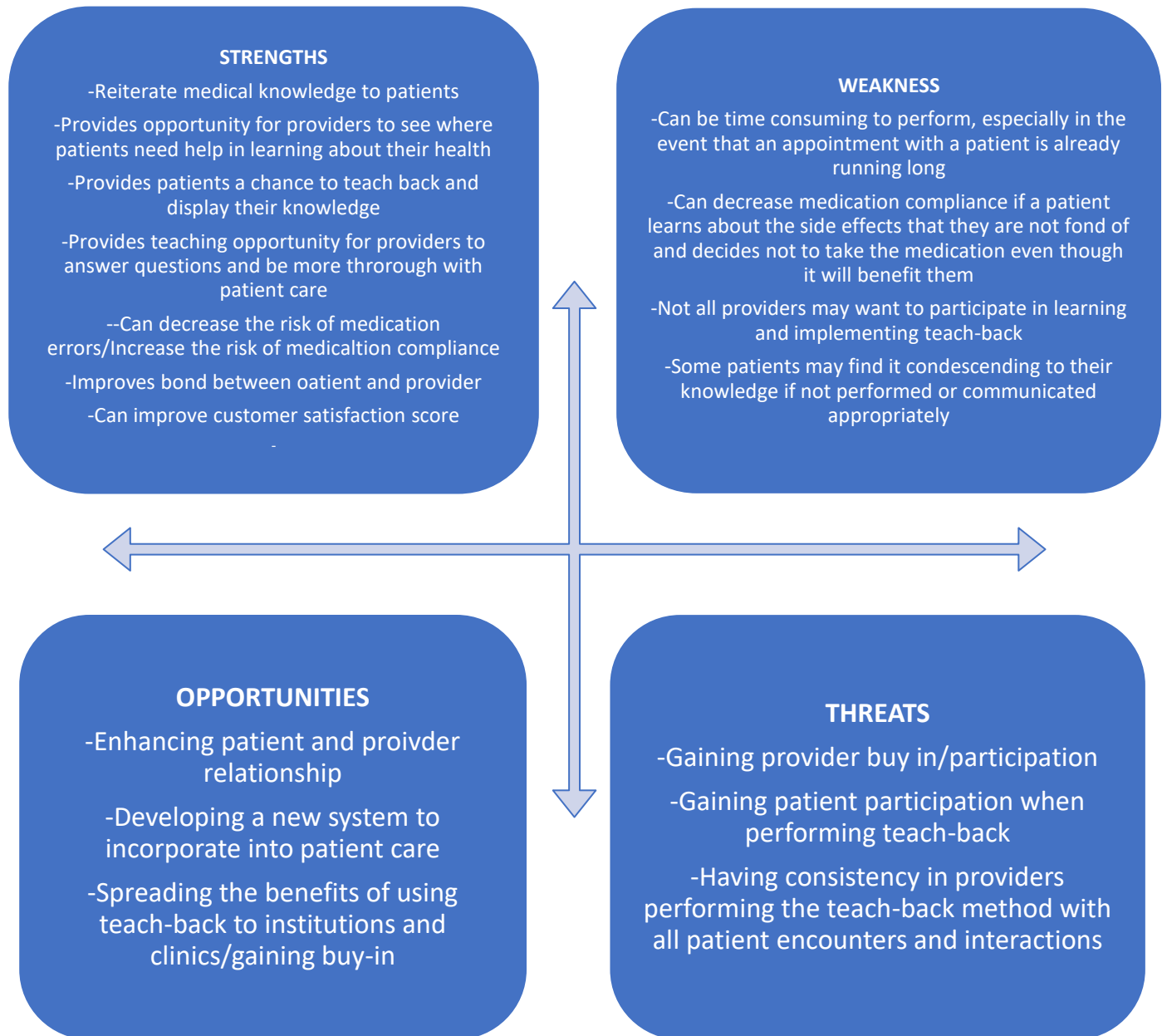
## Responsibility/Communication Matrix

Stakeholder	Project Role	Item/Event	Special Instructions
Student	Develop appropriate presentation to educate providers on the Teach Back method (who/what/why/how) and introduce them to the intervention tools that will be part of the intervention	Change in practice	Increase provider awareness on the teach back method and the positive health outcomes associated with utilizing the teach back toolkits
DNP Chair: Dr. Jodie Sandhu	Authorization, guidance, critique, and assessment of implementation and evaluation. Supervision and guidance of project	Change in practice: Utilizing Teach-Back Method to enhance health literacy and patient compliance	Provides supervision, assistance, and support in the development of the project. Assist and support with the development and approval of the DNP project.
Committee Member: Dr. Alexa Curtis	Authorization, guidance, critique, and assessment of implementation and evaluation. Supervision and guidance of project	Change in practice	Provides supervision, assistance, and support in the development of the project. Assist and support with the development and approval of the DNP project.



Appendix F

SWOT ANALYSIS



# Appendix G

## Proposed Budget

### Project Budget

EXPENSES	ASSOCIATED COST
RN SALARY (\$75 for 1 hour of training x 2 hours) including: -DEVELOPMENT OF PRESENTATION/EDUCATION -PREPARATION OF WORKSHOP	\$150
HAND OUTS PAPER PRINTING	\$50
FOOD/DRINKS X 2 SESSIONS	\$200
GAS/TRAVEL	\$40
<b>TOTAL COST</b>	<b>\$440</b>
REVENUE	ASSOCIATED COST
NP ANNUAL CONTRIBUTION (based on 12 visits per day and reimbursed at \$70 per patient)	\$436,800
<b>RETURN ON INVESTMENT</b>	<b>\$436,360</b>

MOST COMMON PREVENTABLE HOSPITAL ADMISSIONS:	CARDIAC (HEART ATTACKS)	RESPIRATORY (PNEUMONIA)	GASTROINTESTINAL (GI BLEEDS)	SURGICAL (HIP FRACTURES)
COST FOR TREATMENT PER PATIENT	\$21,500	\$51,219	\$23,207	\$30,000
AVERAGE DAILY CENSUS OF BAY AREA COUNTY HOSPITALS	274			
14% PATIENTS WITH BELOW BASIC HEALTH LITERACY	.14 X 274 = <b>38.36</b>			
53% MORE LIKELY TO BE READMITTED	.53 X 38.36 = <b>20.33</b>			
<b>COST AVOIDANCE</b>	20.33 X \$21,500 = <b>\$437,095</b>	20.33 X \$51,219 = <b>\$1,061,612</b>	20.33 X \$23,207 = <b>\$471,798</b>	20.33 X \$30,000 = <b>\$609,900</b>

## Appendix H

### Proposed CQI Method and Data Collection Tools



## Conviction and Confidence Scale

Fill this out before you start using teach-back, and 1 and 3 months later.

Name: \_\_\_\_\_

Check one: ☐ Before - Date: \_\_\_\_\_  
☐ 1 month - Date: \_\_\_\_\_  
☐ 3 months - Date: \_\_\_\_\_

1. On a scale from 1 to 10, how **convinced** are you that it is important to use teach-back (ask patients to explain key information back in their own words)?

Not at all important Very Important

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

2. On a scale from 1 to 10, how **confident** are you in your ability to use teach-back (ask patients to explain key information back in their own words)?

Not at all confident Very Confident

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

3. How often do you ask patients to explain back, in their own words, what they need to know or do to take care of themselves?

- ☐ I have been doing this for 6 months or more.  
☐ I have been doing this for less than 6 months.  
☐ I do not do it now, but plan to do this in the next month.  
☐ I do not do it now, but plan to do this in the next 2 to 6 months.  
☐ I do not do it now and do not plan to do this.

## Conviction and Confidence Scale continued

4. Check all the elements of effective teach-back you have used **more than half the time in the past work week.**
- ☐ Use a caring tone of voice and attitude.
  - ☐ Display comfortable body language, make eye contact, and sit down.
  - ☐ Use plain language.
  - ☐ Ask the patient to explain, in their own words, what they were told.
  - ☐ Use non-shaming, open-ended questions.
  - ☐ Avoid asking questions that can be answered with a yes or no.
  - ☐ Take responsibility for making sure you were clear.
  - ☐ Explain and check again if the patient is unable to teach back.
  - ☐ Use reader-friendly print materials to support learning.
  - ☐ Document use of and patient's response to teach-back.
  - ☐ Include family members/caregivers if they were present.

# Appendix I

## Power Point Presentation for Educating Providers on Teach-Back Method

### UTILIZING THE TEACH BACK METHOD TO ENHANCE PATIENT ADHERENCE

Trish Nguyen-McDonnell, MD, RN

### DISCLOSURES

- No financial affiliations with any teaching agencies, organizations, or companies for the project.
- The content of this presentation is adapted from: One the actual sources from AHRQ, NIH, and others.
- This presentation is part of a University of San Francisco (USF), SFHP project implementation intervention.
- All participants are voluntary.
- No source or disclosure of participants will be used and no financial disclosure is anticipated.

### WHAT IS THE TEACH-BACK METHOD?

- A way of communicating with patients
- A way to ensure that patients understand what you've told them
- Requires the patient to explain in their own words what they need to know/do to take care of their health
- You ask them to teach back what you have educated them on

### USING TEACH BACK METHOD

10 Elements of Competence for Using Teach-Back Effectively

1. Have a clear goal for what you want to teach.
2. Prepare a teaching plan (language and media) that is:
3. In plain language
4. Ask the patient to explain back, using their own words.
5. Ask the patient to explain back, using their own words.
6. Ask the patient to explain back, using their own words.
7. Ask the patient to explain back, using their own words.
8. Ask the patient to explain back, using their own words.
9. Ask the patient to explain back, using their own words.
10. Ask the patient to explain back, using their own words.

### HOW TEACH BACK METHOD LINKS TO HEALTH LITERACY

The Patient Protection and Affordable Care Act of 2010, Title V defines health literacy as the degree to which an individual has the capacity to obtain, understand, and use basic health information and services to make appropriate health decisions.

Health literacy ability can be broken down into three parts: the patient's ability to obtain, understand, and use basic health information and services to make appropriate health decisions. The patient's ability to obtain, understand, and use basic health information and services to make appropriate health decisions is the patient's ability to obtain, understand, and use basic health information and services to make appropriate health decisions.

### Hidden Barriers to Communicating with Patients

Chronic Patients

- Education/Literacy/Language
- Health Literacy: The capacity to:
- Obtain, process, understand basic health information and services
- Make appropriate health care decisions (act on information)
- Access/navigate health care system

### Using a Health Literacy Universal Precautions Approach

- Structuring the delivery of care as if everyone may have limited health literacy
- You cannot tell by looking
- Higher literacy skills = understanding
- Anxiety can reduce ability to manage health information
- Everyone benefits from clear communication

### Red Flags for Low Literacy

- Frequently missed appointments
- Incomplete registration forms
- Non-compliance with medication
- Unable to name medication, explain purpose or dosing
- Identifies pills by looking at them, not reading label
- Unable to give coherent, sequential history
- Ask fewer questions
- Lack of follow-through on tests or referrals

In 2004, the Institute of Medicine issued a report on health literacy called "A Prescription to End Confusion." That report describes that 80 million adults have trouble understanding and acting on health information. They go on to document how health information is unnecessarily complex, and that clinicians throughout the health care system need health literacy training to improve how we communicate.

Healthy People 2010 made improving communication and health literacy one of their key target areas. And ICAHO has mandated that patients be given information that they understand.

### Our Expectations of Patients are Increasing...

- Accession
- Refill
- Refill
- Refill
- Refill
- Refill
- Refill
- Refill
- Refill
- Refill

### "Show Me How Many Pills You Would Take in 1 Day"

Patient Safety: Medication Errors

- "How would you take this medication?"
- 40% did not understand instructions in a 1-hour
- 40% did not understand instructions in a 1-hour
- 40% did not understand instructions in a 1-hour

### Rates of Correct Understanding vs. Demonstration "Take Your Tablets by Mouth, Twice Daily"

Low Marginal Adequate Patient Literacy Level

### Strategies to Improve Patient Understanding

- Print out "teach-back" or "teach-back"
- Use Teach-Back Method
- Demonstrate these problems
- Use clearly written educational materials

### HOW TO UTILIZE TEACH BACK METHOD

### Teach-back

Confirm patient understanding

"Tell me what you've understood."

"I want to make sure I explained your medication clearly. Can you tell me how you will take your medicine?"

### 7 Tips for Clinicians

- Use plain language
- Limit information (3-5 key points)
- Be specific and concrete, not general
- Demonstrate, draw pictures, use models
- Repeat/summarize
- Teach-Back (confirm understanding)
- Be positive, helpful, empowering

### This is not a test of the patient's knowledge. It is a test of how well you (the provider) explained the concept.

Plan your approach

Start slowly and use consistently

"Think and Check"

Clarify and check again

### CONCISE

Practice

Use the show-me method

Use handouts along with teach-back

### EXAMPLES

You just covered diabetic education with your patient and would like to ensure they understood the education.

You just showed your patient how to use a glucometer and want to make sure they understood how to use it.

You just educated your patient on lifestyle modifications to control their hypertension and would like to see how they are doing.

You just educated a patient on when to use a rescue inhaler for asthma.

### IDENTIFYING THE GOOD AND BAD

GOOD

BAD

### REFERENCES

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Use the Teach-Back Method. Teach-Back Method. Agency for Healthcare Research and Quality. Retrieved from <http://www.ahrq.gov/healthliteracy/>

## Appendix J

## Pre and Post Intervention Surveys



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**PRE-INTERVENTION SURVEY**

- 1. Prior to today, have you heard of the teach-back method?** YES NO NOT SURE
- 2. Prior to today, do you utilize the teach-back method in your practice and interaction with patients?** YES NO NOT SURE
- 3. How knowledgeable are you in terms of strengths, weaknesses, and usability in practice when it comes to the teach-back method?**  
5-Excellent 4-Very Knowledgeable 3-Knowledgeable 2-Fair 1-Poor
- 4. How often do you perform patient education and teaching with your patients?**  
5-Always 4-Very Often 3-Often 2-Somewhat often 1-Never
- 5. How much time do you feel you have to educate your patients with each visit/interaction?**  
5-More than Enough 4-Somewhat Enough 3-Just Enough 2-Less than Enough 1-No Time
- 6. How would you rate the quality of education you feel you provide for your patients?**  
5-Excellent 4-Very Good 3-Good 2-Fair 1-Poor
- 7. How often do you use teach-back method in your practice?**  
5-Always 4-Very Often 3-Often 2-Somewhat often 1-Never
- 8. Do you have a significant amount of confidence when it comes to utilizing the teach-back method?** YES NO





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POST-INTERVENTION SURVEY

**1. Prior to today, have you utilized the teach-back method in your practice and interaction with patients?**  
YES NO

**2. How knowledgeable are you in terms of the strengths and weaknesses for the usability of the teach-back method in practice?**

5-Excellent 4-Very Knowledgeable 3-Knowledgeable 2-Fair 1-Poor

**3. How often do you perform patient education or teaching with your patients?**

5-Always 4-Very Often 3-Often 2-Somewhat often 1-Never

**4. How much time do you feel you get to educate your patients with each visit/interaction?**

5-More than Enough 4-Somewhat Enough 3-Just Enough 2-Less than Enough 1-No Time

**5. How would you rate the quality of education you feel you provide for your patients?**

5-Excellent 4-Very Good 3-Good 2-Fair 1-Poor

**6. How often do you use teach-back method in your practice?**

5-Always 4-Very Often 3-Often 2-Somewhat often 1-Never

**7. Do you have a significant amount of confidence when it comes to utilizing the teach-back method?**  
YES NO

**8. In the past month/since learning about the teach-back method how often have you used it in your practice with patients & Why or Why not?**

**9. Has your utilization of the teach-back method affected your patient's health outcomes positively?**  
(Please explain) YES NO

**10. How likely are you to continue to use the teach-back method in your practice and interaction with your patients?**

5 – Extremely Likely 4-Very Likely 3-Likely 2-Possibly 1-Not likely

## Appendix K

## USF Letter of Support



School of Nursing and  
Health Professions  
2130 Fulton Street  
San Francisco, CA 94117  
Tel 415.422.6681  
usfca.edu/nursing

January 25, 2019

The University of San Francisco supports the work of Tram Nguyen Mendoza for her DNP Scholarly project, titled: Enhancing Health Literacy through the use of Teach Back Method in Primary Care. The project adds value to the work of promoting health literacy and engaging providers with an active role in supporting their patient's ability to manage their health.

The Teach Back Method is an Evidenced Based Model designed to increase patient education and adherence to treatment goals. The student will conduct an approved workshop series for providers in the Bay Area community of healthcare providers.

This work promotes an increase in knowledge and tools that can facilitate a change in clinical practice and ideally improve health outcomes for a variety of populations.

We look forward to seeing the impact of Tram's project in the community.

Sincerely,

*P. Sandhu*

Prajiot (Jodie) Sandhu, DNP, FNP-C, PA-C, CNL  
Director of Clinical Training NP Programs  
Assistant Professor FNP Program



## Appendix L

### CEU Approval

Dr. Sandhu and Ms. Tram,

I am happy to approve this educational seminar for “contact hours” (not CEUs) per California BRN guidelines. Please adjust your materials accordingly. You may already be on this but, since this is my first time approving such an offering, please be sure to follow all relevant instructions [here](#).

I have reviewed the materials for course content (which is acceptable), course requirements, course objectives, instructor requirements, and additional requirements (contact hours). Please be sure to comply with the rules linked above around proof of attendance and advertisement. Also, please return the attendance list to Kate Davis (cc'd here) so that we can properly issue certificates as well as keep records as required by rules.

I have attached my comments and/or suggested edits. Please make minor edits as requested. Whether you do anything with the objectives are totally up to you. They are approved as is, but you may also choose to edit them further. (No pressure; it's up to you.)

Please let me know if you have any questions – and good luck! It looks like a great program!

As an aside, I normally don't do this work, but am filling in until I reassign it to someone. In the meantime, it's great learning for me!

Sincerely,

Dean Baker