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Health Literacy Intervention for Low Income Uninsured Population

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HEALTH LITERACY INTERVENTION FOR LOW INCOME UNINSURED POPULATION

By

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Abstract

Background: Health literacy (HL) requires basic skills in writing, reading, numeracy, and communication all within a health context (Berkman et al., 2011). HL is a critical element for individuals to take an active role in managing their health. The National Assessment of Adult Literacy found only 12% of adults had a “proficient” HL level. Hispanics were found to be at greatest risk for lower HL than all other ethnic groups (Kutner, Greenberg, Jin, & Paulsen, 2006). Low HL can lead to poor health outcomes including: decreased utilization of preventative services, difficulty in managing chronic conditions, and increased disparities in access to health care (U.S. Department of Health and Human Services [HHS], 2010). **Purpose:** The purpose of this project was to create a HL sensitive health presentation and handouts at a clinic for a low-income uninsured predominately Hispanic population in both Spanish and English. **Method:** The presentation was created using evidence-based resources concerning the three most common reasons for clinic visits. The presentation will be shown on a large screen television in the waiting room. **Implications to Practice:** Results, lessons learned, and data from this project will be shared by the executive director with similar clinics throughout the state in an attempt to share the knowledge gained and benefits reaped from this project. Working hard to prevent progression or development of health problems like dangerously high blood pressure, and preventing unnecessary visits to the emergency department is crucial in increasing quality of life and improving cost containment in this and other vulnerable populations.

Keywords: health literacy

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“The things which are impossible with men are possible with God” Luke 18:27

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Chapter 1: Introduction

Health literacy (HL) according to Selden, Zorn, Ratzan, and Parker (2000) is “the degree to which individuals can obtain, process, and understand the basic health information and services they need to make appropriate health decisions” (p. vi). Having HL requires basic skills in writing, reading, numeracy, and communication all within a health context (Berkman et al., 2011). The ability to use these skills in day to day life makes HL a critical element for individuals to take an active role in managing their health. This definition of HL by Selden et al. (2000) acts as one of the most common definitions of HL and was later adopted by the U.S. Department of Health and Human Services (HHS) and the Institute of Medicine (IOM) (Berkman et al., 2011; HHS, n.d.; Nielsen-Bohlman, Panzer, & Kindig, 2004; Sorensen et al., 2012). While this definition is appropriate from an individual perspective, it neglects to take into account the increasing complexity and demands of health care systems and how that can impact a patient’s HL. Since its inception in the 1970s, HL was most often viewed as an individual deficit. However, HL has evolved to include a systematic perspective with expectations for health care providers (HCPs), staff, and health care facilities. Nutbeam (2008) put it well when he said: “Health literacy means more than being able to read pamphlets and make appointments. By improving people’s access to health information, and their capacity to use it effectively, health literacy is critical to empowerment” (p. 2075).

In 2003, the National Assessment of Adult Literacy (NAAL) was administered to 19,000 adults, and acts as the most current large-scale assessment for literacy in the U.S. The NAAL given in 2003 was the first large scale measurement of literacy that also measured HL. The NAAL revealed that only 12% of adults had a “proficient” HL level; the remaining 88% of the population was considered to have “intermediate (53%), basic (22%), and below basic (14%)”

HL levels (Kutner, Greenberg, Jin, & Paulsen, 2006, p. 10). Assuming the results apply to the general population would mean that almost 9 out of 10 adults have difficulty understanding health information they encounter on a daily basis (HHS, 2010).

When evaluating HL levels combined with different demographic data, the findings made by the 2003 NAAL were even more insightful. The significant increase in low HL levels between different ethnicities, older adults, educational attainment, and income compared to younger, more educated, and wealthier counterparts is staggering. Specifically, Hispanic adults were found to have lower HL levels than any other ethnic group (Kutner et al., 2006). The problem with low HL is not unique to the U.S. A similar literacy survey in New Zealand given in 2006 revealed that 44% of adults had “inadequate health literacy” with a much higher percentage of Maori males (80%) and females (75%) with inadequate health literacy levels (Lambert et al., 2014, p. 10). Additionally, an estimated 55% of Canadian adults and an estimated 60% of Australian adults also had “inadequate health literacy,” with similar increases in “inadequate health literacy” levels for ethnic minorities in both countries (Lambert et al., 2014, p. 10). Consistent with the findings of the NAAL, HHS reports there are certain risk factors that can contribute to low HL: “older adults, racial and ethnic minorities, people with less than a high school degree or GED certificate, people with low income levels, non-native speakers of English, and people with [a] compromised health status” (HHS, n.d., Who is at risk section, para. 19). While low HL is more common in certain populations it is important to remember that low HL can be present in any sociodemographic group (Brega et al., 2015).

A. Problem Statement

Low HL can lead to a multitude of poor health outcomes including: decreased utilization of preventative services, increased medication non-adherence, difficulty in managing chronic

conditions, increased disparities in access to health care, increased utilization of emergency services, lower quality of life, lower influenza vaccination rates, and higher mortality (Berkman et al., 2011; HHS, 2010; Sarkar, Asti, Nacion, & Chisolm, 2016). Hispanics are especially affected as they are at greater risk for lower HL than all other ethnic groups (Kutner et al., 2006; Soto Mas, Jacobson, & Olivárez, 2017). Low HL creates not only serious health consequences, but severe financial ones as well.

A study by Vernon, Trujillo, Rosenbaum, and DeBuono (2009) estimated that low HL cost the U.S. economy around \$100 to \$200 billion dollars each year. When considering the future cost of low HL due to measures taken or not taken, the estimated cost is in the trillions. Another study estimated that the costs of low HL are approximately 3 to 5% of U.S. health care spending per year. The authors also estimated that individuals with low HL pay around \$150 to almost \$8,000 U.S. dollars more per year on health care than individuals with adequate HL (Eichler, Wieser, & Brügger, 2009). In addition to being financially devastating to individuals, organizations, and nations, low HL can be psychologically damaging to individuals. People with limited HL often feel embarrassed about their lack of basic skills and may even try to hide their difficulties. As a result of this and other issues, limited HL is frequently invisible to HCPs (HHS, 2010; Nielsen-Bohlman, 2004). In the HHS (2010) “National Health Literacy Action Plan” they suggested that the expense required to advance HL must be measured against the fiscal and physical sacrifices that come as a result of discounting low HL (HHS, 2010). Clearly action is indicated, but whose responsibility is it?

While interventions to promote individual HL are indispensable, HCPs must also play a crucial role in mitigating the effects of poor HL. In the HHS (2010) action plan for improving HL they stated:

Everyone has the right to health information that helps them make informed decisions. Health services should be delivered in ways that are understandable and beneficial to health, longevity and quality of life. (p. 1)

Health care providers can aid patients in obtaining usable health information to make informed decisions by: improving their communication strategies, using visual aids when educating, and using teach back methodology to ensure understanding (Brega et al., 2015; Nutbeam, 2008). All of these strategies take little time to learn and even less time to apply. Accommodating HL may seem like just another item on the busy clinical check list, however, HCPs must remember that they cannot assume that patients will apply the advice and instructions given if they are not able to understand the “what” and “why” of their care (HHS, 2010).

While HCPs can do much to enhance HL, they cannot improve HL alone. Coordination between HCPs, health care systems, and services lessens the demands on patients and enhances communication (Lambert et al., 2014). Public health workers can also play a huge role in improving HL in their communities. As opportunities are created to educate the public on common health issues, create peer support, and overcome barriers to access of health care, public health workers are improving not only individual HL but community HL as well (HHS, 2010).

B. Purpose Statement

The purpose of this project is to create HL sensitive health education materials in both Spanish and English for a clinic that serves low-income uninsured patients. The educational materials will be based on the three most common reasons for clinic visits and will be available in brochures and in slideshow form to be presented on a large television screen in the waiting room. Creating an intervention to enhance HL, especially for high-risk populations (i.e., ethnic minorities, low-income), can help: alleviate the significant economic burden for health care

systems and individuals, decrease the burden on HCPs, and improve public health. By enhancing HL in patients and organizations, patients are empowered to make important health related decisions (HHS, 2010).

Chapter 2: Literature Review

An Internet search was conducted using the Cumulative Index of Nursing and Allied Health Literature, MEDLINE, Educational Resources Information Center, PsycINFO, Google Scholar, and Cochrane Library databases; as well as the Agency for Healthcare Research and Quality (AHRQ), Centers for Disease Control and Prevention (CDC), and National Guideline Clearinghouse websites. Research articles and systematic reviews on HL were located using different combinations of the key words: health literacy, health literacy AND interventions, health literacy AND interventions AND low-income OR poverty OR low socioeconomic status. The search resulted in thousands of publications concerning HL. Therefore, limiters were: publications from May 2010 through January 2018 due to an extensive systematic review covering HL research from 1966 through May 2010, full-text available, and text printed in the English language. Similar to the findings of Taggart et al. (2012) the search terms “health literacy” retrieved a broad array of articles making the search very inclusive but with poor differentiation. Thus, a great deal of sifting was required to extract meaningful data from the 283 articles retrieved. Articles were selected if they focused on adult populations and addressed different facets of HL (e.g., HL definition, HCP perceptions of HL, methodological reviews on HL research, U.S. and foreign policy concerning health literacy).

A. Evolution of the Term “Health Literacy”

While HL is similar to literacy, they are not identical. HL stands as a distinct phenomenon from literacy, while assuming similar capabilities of reading and writing with the distinct abilities to comprehend and communicate about health-related topics and concerns (HHS, 2010). The term HL was first coined by Simonds in 1974 in “Health Education as Social Policy” written with the purpose of creating social policy that mandated certain HL standards for

grade school students. He maintained that any political activity meant to improve the life of those it serves is a matter of social policy. He further states that health education at the time was being disregarded and that to refrain from instigating health education policy was to be negligent of the social responsibilities of policy holders to protect and serve the public. Since the 1970's the term HL has evolved into a concept of core competencies required for individuals to navigate and utilize health care services, with the more recent emphasis on how health care systems are also responsible for promoting HL (Brach et al., 2012; Sorensen et al., 2012).

Originally, most research concerning HL was based in the U.S. and Canada. However, over the past decade HL research has also emerged from Australia, Asia, and Europe (Sorensen et al., 2012). This adds diversity and generalizability to the HL literature due to the application of interventions in different populations, countries, and health care systems. However, there is currently no unanimous definition of HL. The key components of HL are still under debate which makes it difficult to compare research results relating to HL from different countries with results from the U.S. The three most common definitions used in the literature come from the American Medical Association, the World Health Organization, and the HHS/IOM. Their definitions focus mainly on individual capacity to acquire and comprehend health information. Other authors emphasize the public health and systems focused components of HL (Sorensen et al., 2012). While there is great variation between what the components of HL includes, Sorensen et al. (2012) maintain that these views can be divided into two categories. The first being the principal qualities of HL such as reading, writing, speaking, and numeracy and the second being where the skills are applied (e.g., in a clinical setting, as a consumer of health care, as a member of society, or consumer of public media). In an attempt to unify their findings into one all-encompassing definition and conceptual model, the authors analyzed the numerous definitions

and conceptual models of HL throughout the literature. Their definition of HL encompasses the 17 definitions that were found in the literature:

Health literacy is linked to literacy and entails people's knowledge, motivation and competences to access, understand, appraise, and apply health information in order to make judgments and take decisions in everyday life concerning health care, disease prevention and health promotion to maintain or improve quality of life during the life course. (p. 3)

This definition emphasizes a public health viewpoint, but can be applicable to individuals as well, lending itself to greater flexibility of use. While putting forth their own definition and conceptual model of HL, Sorensen et al. (2012) call for tools and research to validate the utilization of their model and its applicability to a wide variety of contexts.

Despite differences in opinion of how HL is defined, the common theme of each definition is recognizing the need for consumers to comprehend the information necessary to maintain their health (Hernandez, 2013). As the term HL has evolved from an emphasis in social policy, to a focus on individual capabilities, the term seems to have come full circle in the more recent systematic focus; how the health care system impacts individuals and their ability to respond appropriately and vice versa (Sorensen et al., 2012). With the application of systems thinking, research now considers not only the consequences of low HL for individuals, but for health care systems as well.

B. Consequences of Health Literacy

The negative consequences of low HL are numerous and well supported by data (Best et al., 2017; Brach et al., 2012; Lee, Hoti, Hughes, & Emmerton, 2014; Sorensen et al., 2012). One study found that out of all the patients taking anticoagulation medications, only 50% aligned

with their HCP's records in their agreed upon regimen. They also found that people with low HL are more likely to: have difficulty in identifying what medications they are taking, misunderstand drug labels, and not understand instructions on how to take their medications (Brach et al., 2012). Additionally, a growing body of research supports that when compared to patients with adequate HL, patients with low HL are more likely to be readmitted to the hospital within 30 days of discharge. This creates severe financial consequences for health care systems due to the fact that Medicare and Medicaid are required to decrease reimbursements to hospitals with too many readmissions (Centers for Medicaid and Medicare Services, 2017). Validated and well supported research demonstrates that HL levels act as a predictor of patient return to the hospital within 30 days of their discharge (Mitchell, Sadikova, Jack, & Paasche-Orlow, 2012).

Lee et al. (2014) relate that health consumers with low HL find it more difficult to locate reliable sources of health information, especially online. This phenomenon is at odds with the increasing complexity of health care and the growing prevalence of patients suffering from chronic diseases that necessitates a greater participation in health care by consumers in managing their health. While the emphasis on patient centered care can create positive outcomes such as increased self-efficacy and empowerment, it requires patients already struggling to understand their health needs to play a greater role in managing their care without the skills necessary to find, understand, and utilize relevant health information (HHS, 2010). While access to health information and services aids immensely in improving health outcomes, it is still insufficient if the end users cannot adequately utilize the resources.

Low HL of parents, caretakers, or adults can make it more difficult to: understand instructions given at discharge, understand side effects of medications and how to prevent them, and identify early symptoms of serious diseases (Mitchell et al., 2012). Other studies indicate

that low HL in parents is correlated with less optimal health outcomes in their children (Sanders, Perrin, Yin, Bronaugh, & Rothman, 2014). Additional research demonstrates that parents are often uninformed when it comes to the decision of when urgent care is needed. Low HL creates insecurity in parents' ability to care for their children's acute health needs and increases unnecessary utilization of emergency services for common childhood ailments. One study that took data from 23 different states in the U.S. found that of the 12.4 million pediatric visits to the emergency room in 2005, 97.1% were discharged soon thereafter. In that study, children from low income neighborhoods were 86.1% more likely to utilize emergency services when compared to wealthier counterparts. Medicaid was the most commonly billed insurance in these encounters (Herman & Jackson, 2010). While this study did not specifically target HL as an independent variable, low HL is strongly correlated with low-income (HHS, n.d.; Mitchell et al., 2012). This trend of overutilization of emergency services is well supported by substantial research in the adult population as well (Mitchell et al., 2012). Low HL taxes individuals, government budgets, and health care systems, and monopolizes a significant amount of time, resources, and human capital. While there are numerous negative consequences associated with HL, HL is not always a risk and may even be considered an asset when appropriately developed and utilized (Nutbeam, 2008).

Positive outcomes of adequate HL for individuals leads to greater knowledge of health resources and risks, increased compliance with prescribed regimens, and greater resilience to adverse social, economic, and health circumstances. Some research suggests that improving parental self-efficacy (i.e., parental confidence in performing certain tasks) may act as a mediator for low HL and improve health outcomes and communication between HCPs and patients (Fry-Bowers, Maliski, Lewis, Macabasco-O'Connell, & Dimatteo, 2014). In terms of positive

benefits for the community, adequate HL increases individual participation in community health programs, creates a positive influence on social groups, and creates a greater capacity to enact change on economic and social health factors. In turn, healthier populations have greater work productivity and decreased health care utilization (Sorensen et al., 2012). These desired outcomes are the impetus behind national policy, research, and interventions focused on improving HL.

C. Health Literacy as Policy

1. United States Health Literacy Policies

Public policy is a driving force for promoting HL (Berkman et al., 2011). When the term HL was coined by Simonds (1974) he recommended that basic HL competencies be required in grades K-12, and that federal funds be used to support this initiative. While Simonds's vision of how HL should be mandated did not come to fruition, much has happened throughout the 40 years since the inception of HL that has impacted U.S. policy. Some examples of U.S. HL related policy include the HHS's "National Action Plan to Improve Health Literacy" as well as their Healthy People 2010 and 2020 initiatives with specific focus on HL and eliminating health disparities (HHS, 2010). The Patient Protection and Affordable Care Act passed in 2010, while not written specifically to target HL issues, does have certain provisions to address HL. For example, the Affordable Care Act targets improving the skills of HCPs by incorporating HL training into curriculum (Harvard T. H. Chan School of Public Health, 2015). The Plain Writing Act also passed in 2010, requires federal agencies to communicate in a way that the public can understand. While the plain writing act does not specifically target HL, federal agencies (e.g., Medicare, The Department of Veteran Affairs) are required to provide written information to patients and would-be patients in an actionable form (Plain Language Action and Information

Network, n.d.). Workshops and reports created by: The Surgeon General, AHRQ, and CDC have also addressed HL with emphasis on improving awareness and meeting the needs of specific at-risk populations (Harvard T. H. Chan School of Public Health, 2015).

Other U.S. non-governmental organizations (NGOs) are also heavily involved in promoting HL. The IOM's publication *Health Literacy: A Prescription to End Confusion* recommended actions for policy makers to improve HL (Nielsen-Bohlman et al., 2004). Other workshops and reports concerning HL have been released by: The Joint Commission on Accreditation of Healthcare Organizations and The Institute for Healthcare Improvement. Each organization has played a key role in bringing awareness to the issues caused by low HL and have offered policy solutions on how to overcome the barriers to HL (Harvard T. H. Chan School of Public Health, 2015).

2. International Health Literacy Policies

While the bulk of HL research originates from the U.S., many other countries are now conducting their own research and have put policies in place to address the health disparities that stem from low HL (Dennis et al., 2012; Hernandez, 2013). In 2012 the IOM held an international roundtable discussion on HL. "Health Literacy: Improving Health, Health Systems, and Health Policy Around the World: Workshop Summary" is a summarization of their proceedings (Hernandez, 2013). This report shared lessons learned, progress made, and change needed concerning HL in a number of countries including Canada, Australia, Italy, and Ireland (Hernandez, 2013).

Data from Canada, New Zealand, and Australia on HL levels in the general adult population are comparable to that in the U.S., with greater incidences of low HL in ethnic minorities (Hernandez, 2013; Lambert et al., 2014). Currently Canada is targeting HL

predominately through their Public Health Agency, which functions similar to the CDC in the U.S. This government focused approach carries out various projects in different provinces to target aboriginal populations and recent immigrants as they have drastically lower levels of HL (Hernandez, 2013). Australia has incorporated HL competencies as a means of gaining accreditation for health care organizations. While there is wide spread participation in improving HL in Australia, country representatives feel that the efforts are disjointed and lack unification (Hernandez, 2013). Italy faces an especially difficult situation when it comes to HL. One representative from Italy's Emilia Romagna region assumed this was due to the fact that around 50% of the Italian population drops out after graduating from middle school (Hernandez, 2013). The focus of the Emilia Romagna region is to improve HCP and healthcare organization's verbal and written communication skills. Ireland has taken an NGO approach. The National Adult Literacy Agency (NALA), is an Irish NGO that is often funded by governmental agencies. The NALA's NGO status allows room for the NALA to lobby for funding as needed and prevents constraints from lack of governmental funding. The NALA took on a project to educate citizens in Ireland who want to improve their basic literacy. While this intervention does not focus on HL specifically, improving literacy naturally leads to improvements in HL. An Irish representative of the NALA recognized that while they have made progress in promoting literacy, steps are needed to integrate HL into professional training for HCPs and require HL standards in health care accreditation (Hernandez, 2013).

In addition to the highlights of HL interventions used in different countries, the IOM's 2012 international roundtable discussion also covered difficulties and solutions in different countries' HL projects. For example, pushing HL related policies can be a challenging and slow process. Timing of suggested policies requires understanding of the political process and the

politicians in office. Defining HL can be difficult with so many different iterations of the term. However, proceedings from the IOM roundtable discussion suggested that rather than agreeing on a universal definition, it may be helpful for different countries to create a definition for HL that adequately considers the unique peoples and culture involved (Hernandez, 2013).

D. Research: Interventions and Outcomes

The research behind HL started to accelerate in the 1990s and has continued to grow extensively. This is true in large part due to the actions of multiple national organizations that have called for action in improving health literacy. In 2004, the IOM released a landmark publication entitled *Health Literacy: A Prescription to End Confusion* along with publications by the HHS with emphasis on health literacy in their “Healthy People 2010” released in 2000, and the “National Action Plan to Improve Health Literacy” released in 2010 (Nielsen-Bohlman et al., 2004). These and other organizations including the American Medical Association and the National Institutes of Health have encouraged HL as a priority in research (Berkman et al., 2011). Given that history and current national support of HL as a research priority, as of January 2019 a search of “health literacy” in PubMed revealed 14,761 articles on the subject (National Center for Biotechnology Information, n.d.).

Research interventions intended to impact HL often use one of several available validated HL assessments. In a systematic review funded by the AHRQ, Berkman et al. (2011) included a table of data on 15 different HL assessments including information on: the length required for administration, availability in different languages, and their validation in research settings. The authors noted that there is currently no “gold-standard instrument” for measuring HL, but the most commonly used instruments are the Rapid Estimate of Adult Literacy in Medicine and the Test of Functional Health Literacy in Adults (TOFHLA) (p. 3). The Rapid Estimate of Adult

Literacy in Medicine takes around 2 minutes to administer and focuses on reading skills (i.e., word identification and pronunciation) while excluding a test for numeracy. The TOFHLA assesses numeracy and reading, is available in Spanish and English, but takes 20-25 minutes to administer (Berkman et al., 2011). The Rapid Estimate of Adult Literacy in Medicine instrument's neglect of numeracy and the TOFHLA's time required to administer make them difficult to utilize in a busy office setting. The Newest Vital Sign is a HL assessment created in 2005 that assesses for reading and numeracy with questions based on the nutritional information of an ice cream label. This test is available in English and Spanish and only takes 3 minutes to administer. The Newest Vital Sign has been validated against the TOFHLA and has been tested in: multiple health care settings, patients with different health conditions, and a variety of ethnic groups (Shealy & Threatt, 2015). While there are many other HL assessment instruments, selection should keep in mind the validation of the instrument, the time available for the assessment, and the fit of the assessment to the goals of the intervention.

HL has been studied in many different contexts due to its far-reaching influence on individuals, families, communities, and health care systems. Examples of two common trends in research include interventions to improve chronic disease self-management (Buckley et al., 2015), and enhancing patient's ability to access reliable health information (Lee et al., 2014).

The findings from HL research that aims to improve self-management for chronic diseases have been very informative for creating new interventions. One systematic review found that comprehensive interventions that focused on improving disease management were moderately effective in decreasing utilization of emergency services and hospital admissions (Berkman et al., 2011). The intensive disease self-management programs also aided in decreasing disease severity and prevalence while increasing self-management activities.

Components of successful interventions include: an intensive intervention targeting disease management and adherence, theoretical basis, utilization of pilot testing previous to implementation, focus on skill development, having a health professional implement the intervention, and creating a thorough intervention (Berkman et al., 2011).

Another facet targeted in HL interventions is an attempt to enhance the abilities of health care consumers in accessing reliable health information. In order to manage their health, consumers must have the skills necessary to access, comprehend, and put to use reliable and applicable health information. A comprehensive review by Lee et al. (2014) analyzed seven publications that aimed to help health consumers locate trusted online health resources. The authors observed that health care consumers with low HL were further disadvantaged as they were also more likely to have low computer literacy. Utilizing the internet as a source of health information is becoming more and more prevalent. This assumes technological skills to navigate the internet while finding and extracting relevant and reliable information. The articles reviewed unfortunately had design flaws and relied heavily on self-report which makes it difficult to determine how to create interventions focused on improving online HL. Further research is needed to establish evidence-based interventions to train patients with low HL on obtaining reliable health information from the internet (Lee et al., 2014).

E. Health Care Involvement in Health Literacy

While HL is clearly an individual trait, a growing body of research has shed light on the fact that HL is not the sole responsibility of the individual. HL is rather a mixture of individual skills and the demands and intricacies of the health care system (Brach et al., 2012). A provocative discussion paper by the IOM (2012) entitled “Ten Attributes of Health Literate Health Care Organizations” sheds light on what health care systems can do to make changes to

better support the needs and skill levels of the patients they serve. While acknowledging that these 10 attributes are by no means an exhaustive list of ways to improve an organization's HL, it acts as a representation of cutting-edge knowledge from HL research to guide organizations down the path of improvement (Brach et al., 2012). In summary, the 10 attributes of health literate health care organizations include: (1) having specific HL leaders and champions; (2) incorporating HL into planning, appraisal, and improvement measures; (3) aiding constituents in being HL aware; (4) including the target audience in creating and assessing health materials and services; (5) preventing stigmatization against those with low HL; (6) using HL in communication strategies; (7) making health information easily accessible and navigation straight forward; (8) designing educational materials in plain language; (9) putting extra emphasis in maintaining HL in risky circumstances such as change of shift and education about medications; and (10) providing clear information on what insurance will cover and what payments are required from the patient (Brach et al., 2012). Incorporating these characteristics into the culture of the organization will create a better environment for all involved regardless of HL level.

Despite the prevalence of low HL, research indicates that HCPs struggle to identify which patients have low HL (Brega et al., 2015). This can be due in part to the fact that many individuals with low HL have learned how to hide their struggles or avoid instances that may reveal their difficulties with HL (Shealy & Threatt, 2015). Additionally, the rush of a quick-paced clinical setting often crowds out the necessary dialogue, questions, and clarifications that are needed for patients. Using HL sensitive communication and simple strategies to enhance communication can go a long way. One study by Lee et al. (2014) aimed at improving HCP communication. The authors note that while a HCP's role in educating and aiding patients make

decisions is undeniable, it is unrealistic to expect them to educate their patients on all the positive health behaviors they should be doing. On the other hand, HCPs who expect patients to rely entirely on written and verbal information they give is likewise unrealistic. While research supports that intensive HL interventions create positive outcomes, no one type of intervention is one size fits all.

In 2015 the AHRQ introduced the second edition of the “Health Literacy Universal Precautions Toolkit” (Brega et al., 2015). This toolkit is an evidence-based document that can aid HCPs and health care organizations in their efforts to enhance HL. The toolkit was developed over two years and focuses on creating research verified tools to use in the clinical setting. The toolkit includes 21 different tools including: tips on creating a HL team, HL improvement strategies, and ways to improve communication with patients. When it comes to bodily fluids, HCPs utilize “universal precautions” or assume that all bodily fluids could be contaminated (p. 1). A similar universal precautions approach should be used in regards to HL by assuming that all patients and families may find it difficult to understand the health information they are presented (Brega et al., 2015).

Creating an intervention to improve HL need not be comprehensive, expensive, and time consuming (Taggart et al., 2012). The role HCPs play in contributing to patient and health care organization’s HL can be leveraged by evidence-based tools and their unique understanding of the populations they care for. For example, by using the AHRQ’s HL Toolkit, HCPs can make simple changes like using visual aids, using plain language (e.g. using simplified language, defining medical terminology), showing simple illustrations, using teach back, and demonstration when educating patients can enhance medication adherence and decrease errors in self-administration (Brega et al., 2015; HHS, n.d.). The toolkit can also aid health care

organizations by: simplifying forms, making medical office phone tree menu options less complicated, offices easier to navigate, and granting access to information that is written in plain language in order for all patients, regardless of their HL status, to benefit. Other helpful tools created by HL specialists include the Institute for Healthcare Improvement and the National Patient Safety Foundation's "Ask Me 3" campaign aimed at empowering patients to ask three simple questions to gain a greater understanding of their health status (Institute for Healthcare Improvement & National Patient Safety Foundation, 2017).

F. Health Disparities and Health Literacy

The term "health disparities" often brings to mind racial and ethnic minorities, but there are many individual characteristics that can lead to health disparities. According to the U.S. Office of Disease Prevention and Health Promotion "race or ethnicity, sex, sexual identity, age, disability, socioeconomic status, and geographic location" are all linked to health outcomes (Office of Disease Prevention and Health Promotion, n.d., para. 1). When there are inequalities within a category, a disparity is present. Similarly, HHS (n.d.) stated that people at risk for low HL include: "older adults, racial and ethnic minorities, people with less than a high school degree or GED certificate, people with low income levels, non-native speakers of English, and people with [a] compromised health status" (para. 19). Eliminating health disparities is a key focus of "Healthy People 2020" and can be considered a national priority. HL is a key strategy in mitigating the "social, economic, and/or environmental disadvantage[s]" that lead to health disparities (Office of Disease Prevention and Health Promotion, n.d., para. 5). While much funding has been given to reduce health disparities in disadvantaged populations, the results are sometimes disappointing.

U.S. policy has led to the funding of federally qualified health centers (FQHCs) that are required to offer their services to all patients without regard to their ability to pay. Best et al. (2017) relates that despite the increased emphasis on providing care for low-income individuals and racial and ethnic minorities, these populations still underutilize important health screenings. This trend leads to cancer diagnoses in the later stages of the disease, leading to worse outcomes and less chance of survival after diagnosis. This is significant because cancer is the second leading cause of death in the U.S., and regular cancer screenings aid in earlier detection, decreased medical costs, and better health outcomes (Best et al., 2017). Despite health care access, many patients forgo regular cancer screenings and continue to use emergency services for primary care needs.

Best et al. (2017) noted that while health care availability has been granted to medically underserved populations, the lack of awareness of health promotion strategies, resources, and how to navigate the system (i.e., health literacy), makes full access still elusive for many. Research also showed that out of 1,900 uninsured individuals who were referred to a FQHC facility after they were informed they had abnormal labs that indicated cardiovascular risk factors, only 11% sought follow up treatment. When asked why they neglected to follow up, the majority of patients indicated that their lack of health insurance and financial means to pay for medical services prohibited them from getting care. Other unmentioned reasons for lack of follow up could be due to: the fear of a less than optimal diagnosis, difficulty getting time off work, or undocumented immigrants who are afraid of revealing their immigration status (Ambegaokar, n.d.). This reveals a huge communication gap between patients and the health care system in how FQHCs function on a payment system that is based on personal income regardless of their immigration status (Ambegaokar, n.d.; Best et al., 2017). This disconnect in

communication can lead to needless errors, increased individual health risks, and poor health outcomes (Sorensen et al., 2012).

G. Needs Assessment

There is a strong body of research to support the fact that low HL levels are more prevalent in low-income, uninsured, and ethnic minority populations. Hispanics are estimated to represent 17% of the U.S. population, approximately 54 million people, and are considered to be one of the most rapidly increasing minority populations in the U.S. (Sarkar et al., 2015; Singh, Coyne, & Wallace, 2015). Hispanic adults, especially those with low HL, are more likely than non-Hispanics to struggle with: comprehending discharge instructions, correctly dosing medications for children, inappropriate use of emergency and urgent care facilities, obtaining regular preventative screenings, and higher incidences of depression (Singh et al., 2015). Both the NAAL and the Pew Research Center verify that Hispanics have lower HL levels than any other racial or ethnic group in the U.S. (Kutner et al., 2006; Pew Research Center, 2017a; Sarkar et al., 2015). Only 9% of non-Hispanic whites have “below basic health literacy” compared to the 41% of Hispanics with “below basic health literacy” (Sarkar et al., 2015, p. 608). This remains true for Spanish dominant, bilingual, and English dominant Hispanics. Therefore, focusing intervention efforts only on Hispanics with inadequate English proficiency would neglect a significant proportion of Hispanics with limited HL (Sarkar et al., 2015).

While there is a wealth of data on HL levels in Hispanics and non-Hispanics in the U.S., there is currently no quantitative data on the HL levels of people living in Utah County (UC). However, data from the Utah Department of Health is available concerning several of the HHS (n.d.) risk factors associated with low HL (i.e., ethnic minorities, less than high school degree or GED certificate, low-income, English as a second language). Hispanics living in UC make up

11.5% of the population, with 23.4% living below the federal poverty standard versus the 11.3% of non-Hispanics living below the federal poverty standard. While 96.2% of Caucasians in UC finished high school or earned their GED, only 69.6% of Hispanics did the same (Utah Department of Health, 2015). Given the risk factors for low HL in Hispanics living in UC, a HL educational intervention for a predominately Hispanic patient population is indicated.

Despite the lack of quantitative data on HL in UC, low HL has been identified as a significant problem by local stakeholders (i.e., Utah County Health Department, United Way of Utah County, clinic director/staff) in the low-income, uninsured predominately Hispanic population served by the Volunteer Care Clinic (VCC) in UC. The VCC is a clinic that offers free care to uninsured patients living below the federal poverty standard. They offer services for acute complaints (e.g., colds, urinary tract infections) on two nights a week on a first come first serve basis. The clinic is funded through a collaboration between the Church of Jesus Christ of Latter-day Saints, the Utah County Health Department, Intermountain Healthcare, and the United Way and is operated by volunteer nurses, HCPs, medical translators, and office staff (Utah County Health Department, n.d.). There are currently no HL focused interventions being used in this clinical setting. In an attempt to mitigate the myriad of consequences associated with low HL, a HL educational intervention will be implemented for the patients of the VCC. In line with Simonds (1974) this intervention is meant to contribute to the health education of an especially vulnerable population in order to avoid what Simonds deems as social carelessness and negligence that mistreats the public trust. This intervention will identify the three most common reasons for clinic visits, and synthesize basic patient data, in order to create HL appropriate, culturally sensitive educational materials.

H. Population Identification

While demographic data is available for patients at the VCC in their charts, the information is not easily accessible at this time. The clinic director and manager estimate the population to be approximately 95% Hispanic; the majority of which struggle with limited English proficiency, and communicate either through interpreters or their children. The HCPs serving at the VCC are retired and active physicians, nurse practitioners, and physician residents. Each HCP must go through a credentialing and interviewing process with the clinic manager and director in order to volunteer. Credentialing for HCPs requires: proof of licensure, information on educational background, work experience, proof of immunizations, basic or advanced life support certification, and whether they are board approved. Staff members consist most often of volunteer students and medical translators from the local university. When patient needs exceed the expertise or scope of the clinic, then Community Health Connect, a local non-profit organization, aids in facilitating community referrals through their network of HCPs who are willing to provide certain free or discounted services.

I. Project Sponsor and Key Stakeholders

Administrators and the director of the clinic have been involved with the proposed Doctorate of Nursing Practice (DNP) project since its inception. Specifically, the clinic's executive director and the clinic manager have been fundamental to the planning phase and acted as project sponsors. They have been key players in giving relevant information about the clinic's unique characteristics and the needs of the patients who receive services. Additionally, other staff members have indicated interest in aiding in implementation. The clinic's staff, administrators, directors, project team members, and patients acted as internal stakeholders in this project. External stakeholders include community members and financial supporters of the

VCC (i.e., the Church of Jesus Christ of Latter-day Saints, the Utah County Health Department, Intermountain Healthcare, and the United Way). The project will mainly require the help of the internal stakeholders as opposed to the external stakeholders.

J. Organizational Assessment

The mission of the VCC is:

To improve lives in our community by effectively garnering volunteer support to reach out to community members, provide meaningful service opportunities without liability and help alleviate the concerns of families and individuals with unmet medical needs through free, quality care for low-income Utah County residents who do not have insurance. (United Way of Utah County, n.d., para. 1)

The mission of the VCC makes it an ideal setting for a HL intervention that aims to mitigate the significant risks caused by low HL. The administration of the clinic is excited about this project and is invested in its success. The limitations of this setting include the fact that the HCPs and staff are all volunteers. This makes interventions with HCPs and staff significantly more difficult due to their transient and non-mandatory participation at the clinic and with its objectives.

K. Assessment of Available Resources

The materials needed for this intervention include access to printing, copy machines, and paper. Other materials such as computer and software required to create the intervention will be supplied by the DNP student. If the VCC decides to disperse the health presentation information via large screen television, funding is available for purchase of the television from the head executive director (See Appendix E for full budget). This project was made financially possible

by generous funding given by the University of Nevada, Las Vegas School of Nursing DNP Project Award of \$1,340.

L. Team Selection and Formation

The team consisted of the DNP student, executive director, clinic manager, professional Spanish translation services, content expert who verified the validity of the information compiled for the health education presentation, VCC medical translators, and selected patients. The selected patients assisted in the creation of tailored, culturally appropriate health education materials for patients.

M. Cost Benefit Analysis

The overall cost of this intervention was estimated to be around \$500 or less for needed supplies and translation services (i.e., paper for recording chart information). If the VCC decides to disperse the information via brochures and slideshow presentation via large screen television, the VCC will need to print the materials and purchase the television and equipment necessary to mount it in the waiting room. The risks of this project and the interventions administered are minimal, and the potential return is great. Educating patients that attend the VCC can prevent unnecessary repeat visits back to the clinic, and ideally decrease overutilization of emergency and urgent care facilities. This can in turn decrease the financial impact created by their visits, and the workload that can sometimes last late into the night for the VCC's HCPs.

N. Scope of the Project

This project was an intervention intended to: (1) assess: the top three reasons for clinic visits and synthesize basic demographic data and (2) create relevant, HL sensitive health education materials that can be used for the patients visiting the VCC. The compiled health education materials were shared with: a content expert to ensure validity of compiled health

information, professional translators, the DNP committee chair, VCC board, selected patients, and the VCC's HCPs and staff to show assessment findings (i.e., top three reasons for clinic visits, synthesized demographic data), make necessary changes, and ensure patient understanding. The validated and relevant health education materials can then be used for patient education at the VCC if desired (See Appendix D for project tasks).

O. Mission, Goals, and Objectives

The goal of this project was to create relevant HL sensitive, culturally appropriate health education materials. The main objectives were to:

- Assess the top three reasons for clinic visits in the last year through chart reviews
- Synthesize basic demographic data (i.e., age range, ethnicity, gender, preferred language)
- Develop relevant educational materials for VCC patients in Spanish and English

Chapter 3: Theoretical Underpinnings of the Project

A. Social Learning Theory

Albert Bandura's Social Learning Theory (SLT) (1977), also referred to as Social Cognitive Theory, acts as one of the most common theoretical frameworks for health education interventions (Boon, Vos, Metzendorf, Scholten, & Rutten, 2017; Fry-Bowers et al., 2014; Sanders et al., 2014). Social Learning Theory is based in part on the belief that human behavior is a result of "a continuous reciprocal interaction between cognitive, behavioral, and environmental determinants" (Bandura, 1977, p. vii). Bandura also maintains that human behavior is heavily influenced by observation of others. While Bandura suggests that role-modeling does influence the actions of an individual, he does not propose that humans are involuntarily controlled by external forces, rather that the phenomenon of continuous interactions between a person and their environment significantly impacts human behavior (Bandura, 1977).

In a study by Chen, Wang, and Hung (2015) the authors utilized Bandura's SLT to aid in detecting individual and environmental elements that correlate with "health-promoting self-care behaviors" for patients with pre-diabetes (p. 299). Health promoting self-care behaviors were defined as actions taken by individuals to lead to and maintain good health and better quality of life. The authors found that health promoting self-care behaviors were significantly correlated with personal (e.g., knowledge about disease) and environmental (e.g., social support, empowerment) characteristics, and led to positive health outcomes in pre-diabetic patients. Another study using SLT as a theoretical basis hypothesized that risky health behaviors of teenagers are consciously or unconsciously modeled by peers and family members (Killebrew, Smith, Nevels, Weiss, & Gontkovsky, 2014). Killebrew et al. (2014) found that "peer pressure" as well as "parental influence" were two dominant factors in adolescent sexual activity and

likelihood of becoming pregnant (p. 72). Their findings suggest that teenagers who had peers who became pregnant were more likely to become pregnant themselves. Additionally, parents who were less involved with their children, provided less supervision, and had decreased expectations for their children were more likely to have children who had risky health behaviors such as unprotected sex and drug and alcohol use.

B. Culture Care Theory of Diversity and Universality

The Culture Care Theory of Diversity and Universality (CCT) was developed in the 1950s and later disseminated by Madeleine Leininger in 1991. The CCT maintains that the opinions, philosophies, wisdom, and life experiences of different cultures are significant factors in creating culturally appropriate care (Gordon, 1994). Culturally appropriate care is important as it makes patient-centered care possible, because care is given that is either congruent with cultural values or gives good reason why it is different. This helps patients feel validated, understood, and informed. Leininger maintains that failing to identify a patient's cultural values and needs can create dissatisfaction with health care services and negatively impact health and healing (McFarland, 2014).

Leininger's CCT is one of the most commonly used nursing models on cultural competence (Milton, 2016). Research supports that culturally competent care improves health care delivery, patient outcomes, and satisfaction for patients and staff, (Bhat, McFarland, Keiser, Wehbe-Alamah, & Filter, 2015). One study used the CCT as its theoretical basis in doing a web-based education intervention with nursing staff working in hospice and palliative care. Documentation audits were performed to assess how nurse's cultural competency levels were affected after the intervention. These audits revealed that the cultural competency educational intervention aided in changing nursing practice, and the consideration nurses gave to different

cultural preferences such as: identified culture, end of life care preferences, and spirituality (Bhat et al., 2015).

A study by McCullagh, Sanon, and Foley (2015) based on the CCT explored the cultural health beliefs, rituals, and practices of Hispanic migrant seasonal farmworkers in Michigan. In line with Leininger's CCT this study assessed how health care and wellbeing of individuals, families, and communities is influenced by cultural factors. Migrant seasonal farmworkers often used over-the-counter medications and home remedies to deal with health problems and limited their use of folk healers and health care facilities (McCullagh et al., 2015). These findings were somewhat different to results from another study by Amerson (as cited in McCullagh et al., 2015) showing that Hispanics like to use alternative and complementary treatments including: "herbal medications, hot and cold foods, *curanderos* (faith healers), self-prescribed antibiotics, religious rituals, and spiritual cleansing" (p. 64). Despite ethnic similarities each area, and individual will have differences. Therefore, being aware of culturally unique qualities of a population of interest aids in providing high quality care (Bhat et al., 2015; McCullagh et al., 2015).

C. Theoretical Framework

SLT and CCT were selected as the theoretical framework for this project to aid in creating an educational intervention with the aim of improving health education in a population with low HL in a culturally sensitive way. The intervention will teach basic health education on common health problems (cognitive) to empower patients in preventing future problems and take care of their basic health needs (behavioral), so that they can positively influence others (environment) (Bandura, 1977). While U.S. policy requires schools to teach basic health knowledge and skills, many Hispanics that receive care at the VCC may not have had this

opportunity in their home country (CDC, n.d.-b; Pew Research Center, 2017b). Creating basic health education in a culturally competent, HL sensitive manner can aid individuals and families in creating: change, better health outcomes, and greater satisfaction with care (McFarland, 2014; Bandura, 1977; Bhat et al., 2015).

Chapter 4: Project Plan

A. Setting

The setting for this project was a FQHC that shares its medical rooms and a separate waiting room with the VCC in UC. The VCC is one of multiple clinics in Utah that gives free care to uninsured patients who live below the federal poverty line. The VCC has two executive directors (one of which was involved with this project), a manager, and evening specific directors (i.e., Tuesday and Thursday) that have many tasks including: recruiting qualified volunteers, ensuring proper licensure and certification of HCPs, and managing patient intake. Volunteer staff include medical translators, referral managers, phlebotomists, registered and licensed practical nurses, physicians, physician residents, nurse practitioners, and office staff; staff numbers vary depending on the availability of the volunteers and current needs of the clinic.

B. Population of Interest

The population of interest was the predominately Hispanic, low-income and uninsured patients that visit the VCC. Patients and families visit the clinic for acute needs (e.g., sprained ankle, skin rash). If their needs require more chronic care or require surgical intervention referrals are made to the FQHC or to HCPs in the community who are willing to donate or heavily discount their services. While current data exists on the demographics of this clinic, it is not collected from the charts in an easily accessible format.

C. Measures, Instruments, and Activities

Paper chart reviews were conducted on adults age 18 and older to find the three most common reasons for clinic visits in the VCC records room. The chart reviews assessed: age, ethnicity, gender, primary language, patient vital signs (blood pressure, temperature, weight, height, oxygen saturation), chief complaint, and the diagnoses (up to three) listed for that visit.

The chart reviews were done for the previous 12 months. On average there are 2,800 patient encounters in the VCC per year. Reviewing all 2,800 patient encounters is outside of the scope of this project. Therefore, 20 charts were selected for each month using a random number generator based on the order the patients were checked in that day. In total, 240 charts were reviewed to give a representation of different encounters throughout the year. The information collected was recorded without patient identifiers.

Findings from the most recent NAAL on HL levels for different groups and extracted chart review information aided in compiling a relevant health education presentation based on the most common reasons for clinic visits. The educational information was compiled from evidence-based resources such as: CDC, Cochrane Library, AHRQ, and UpToDate (CDC, n.d.-a). The educational materials focused on: associated symptoms; home and over the counter treatments; herbs, supplements, and/or foods to use or avoid; reasons to go to the doctor; how to prevent spread of infection; and to avoid going to the emergency room.

A content expert and a patient focus group evaluated the health education materials to assure the presentation's validity and allowed for patients to voice their opinions in order to assure cultural competence and understandability. After this process the educational materials and findings from the chart reviews were shared with the DNP committee chair, followed by the VCC board in order to gain approval and/or input for any adjustments that were needed. The presentation and findings from the chart reviews were shared with providers and staff at the VCC. Disseminating the compiled education materials and findings informed providers on the information the patients are seeing and helped encourage participation in enhancing patient education.

D. Timeline

The timeline for this project started with the writing of the project proposal that began in January 2018, and spanned to March 2019 for project defense to the DNP project committee (See Appendix A for the full timeline). Project implementation took place in the summer and fall of 2018.

E. Project Tasks and Personnel

After the three most common reasons for clinic visits were determined, health education materials that were relevant to the needs of the clinic were created. Basic health care teaching included: prevention, over the counter medications useful in relieving symptoms of the “common cold,” and signs of when to go to the doctor. Project personnel included clinic executive director, clinic manager, Spanish translators, content expert, and selected patients who guided wording, and gave input and cultural insight on how to present the information in a meaningful and interesting format.

F. Resources and Supports

Needed resources included: paper needed to record chart review information and computer software to create the health education materials. Support for this project was abundant. VCC administrators and staff, as well as other clinics in Utah that give free health care to uninsured low-income patients were invested in this project and how it could benefit the VCC patient population. Additionally, giving culturally appropriate care for minority populations is a national priority supported by U.S. laws and initiatives. In 2001 the HHS released a report entitled “National Standards for Culturally and Linguistically Appropriate Services in Health Care.” In this report they call for health care organizations to give care that is “respectful of and responsive to cultural and linguistic needs” (p. 5). This report is also

supported by the Civil Rights Act of 1964 and the World Health Organization’s call for health to be considered a human right that requires fairness without discrimination in access to and delivery of health care (HHS, 2001; World Health Organization, 2017). Delivering a HL sensitive, culturally appropriate health education intervention for patients at the VCC aids in creating equitable health care for this vulnerable population and improves their access to quality care.

G. Risks and Threats

The potential risks and threats to the project included time constraints for: chart reviews and creating the health education materials. Additionally, creating a meaningful project for the patient population at the VCC was difficult due to the transient nature of the population. Great efforts were made to ensure that patients with a primary care provider were not given services, to maintain continuity of care. Referrals were made to the local FQHC for more chronic issues, but this does not always happen for a variety of reasons (i.e., patients say they do not have a primary care provider when they do, patient neglect to follow up with referrals). Therefore, this limits the ability to create an intervention that is meant to measure outcomes and provide for more long-term health care needs. This project was designed with the unique characteristics, risks, and threats of the VCC patient population in mind in order to make an impactful intervention that was useful to patients whether they visited the clinic once or multiple times.

Another risk to the project was the method of care given at the VCC. While significant changes in the VCC infrastructure were not necessary for this intervention, change in the philosophy of care was indicated. The executive director of the VCC compared care given at the clinic as the proverbial “give a man a fish, and you feed him for a day” rather than “teach a man to fish, and you feed him for a lifetime” (Quote Investigator, n.d., para.1). Patients are often

admitted, treated, and discharged as fast as possible to make room for others in need.

Stakeholders agreed that change was needed in order to provide more holistic care for patients despite the transient nature of their care at the VCC. While HCPs are a key component in health education, the burden of the clinic falls primarily on their hands to provide rapid and efficient care to prevent longer waiting times for other patients. This seriously impacts the ability of HCPs to teach and check understanding. Instead of focusing on the HCPs to provide all the health education, this project: supported HCPs by preparing patients to ask questions during their appointment, giving patients relevant health information, and taking advantage of the long waiting time and valuable teaching opportunity (Lawson & Flocke, 2009).

H. Financial Plan

There was minimal cost to carry out this project (i.e., papers and writing materials for chart reviews). If the VCC decides to print out brochures and purchase a large screen television for dissemination of the health education materials, there will be a moderate cost for the printing, television, and needed equipment to mount it in the waiting room. There will be minimal cost to maintaining the project (i.e., the electricity required to run the television).

I. Institutional Review Board Approval

The project proposal was first sent to the DNP committee chair, the VCC board, and then the institutional review board of the University of Nevada, Las Vegas for approval before initiating the intervention. This project was initiated in the summer of 2018 after receiving notification on July 9, 2018 from the University of Nevada, Las Vegas biomedical institutional review board that the project was reviewed and considered exempt (See Appendix B). After institutional review board approval, the VCC board also approved the project and gave permission to access patient charts at the clinic facility.

Chapter 5: Implementation

A. Summary of Implementation and Results

1. Project Purpose and Initiation

The purpose of this project was to assess reasons for clinic visits within a 12-month timeframe, assemble demographic data, and synthesize health education materials that were pertinent to the needs of the patients at the VCC. The educational materials (i.e., handouts and slideshow presentation) were written after identifying the top three most common reasons for clinic visits from July 2017 to June 2018. The two hundred forty chart reviews took place over the span of three weeks. Charts were selected using a free web-based random number generator (i.e., <https://www.random.org>). Inclusion criteria comprised of patients 18 years and older. Exclusion criteria included patients that: signed in but did not receive care, were under 18 years of age, came for only a medication refill, or charts where the patient note was missing.

2. Threats and Barriers to the Project

The threats and barriers to this project were identified prior to its initiation. The barriers included time restraints in: performing chart reviews, creating educational materials, and in disseminating the information. This was a significant threat to the project's success because of the lengthy process required to accomplish these fundamental tasks within the established timeframe of the project. In order to manage the barrier of time constraints on chart reviews and educational material compilation, a key to the clinic and records room was given to the DNP student. This was done so chart reviews could be performed when the clinic was not operating, and access to the patient's charts was no longer necessary. Educational materials were then compiled, translated, and overseen by the content expert before dissemination took place. This process proved to be unexpectedly difficult as access to certified medical translators was limited

and required a great deal of networking. The Spanish translation process was started by a volunteer, but was found to be of low quality. After yet another volunteer resource fell through the documents were translated by a professional company. The whole process took four months and proved to be the longest stage of the project.

Other concerns about the project included the lack of continuity of care due to the transient nature of: the patient population, volunteer HCPs, and staff. These concerns required careful planning when creating the health education materials. Planning with these concerns in mind included: creating patient educational materials that were actionable, creating an intervention that did not require follow-up, and focusing on the patients rather than volunteer HCPs whose participation at the VCC is unpredictable. Identifying the potential threats and barriers of the project was key in appropriately tailoring the intervention to the assumed HL levels of the patient population and aided the DNP student to finish the project in a timely manner.

3. Monitoring of the Project

Project monitoring required consistent contact with the VCC executive director, manager, and DNP chair especially during the chart review, education material synthesis, and translation process. In addition, after the synthesis of the educational materials, close contact was maintained with the medical translators and content expert to make needed changes and clarifications. The content expert made a small suggestion for content revision and minor changes were made to the educational materials to improve coherence and accuracy. The patient focus group that shared feedback allowed insight into their needs and understanding and was an invaluable contribution to this project. For example, they helped change a few words to be more

colloquial (e.g., fiebre baja was change to fiebre leve) and caught two small typos. In addition, they noted that they liked the content and felt it was useful, understandable, and informative.

After the revision of the educational materials with the content expert, Spanish translation team, and patient focus group, materials were then approved by the DNP committee chair and VCC board. This project was then turned over to the VCC to disseminate the information as they deemed necessary. The clinic director and manager were given patient satisfaction and input surveys in both Spanish and English in order to assess the general understanding of the patient population and allow for input. The clinic was also given free access to the digital copy of the power point presentations so as to allow them to operate it according to their desires and make any adjustments or additions as they deemed necessary.

4. Data Collection

Retrospective chart reviews utilized patient intake reports spanning from July 2017 to June 2018 to get a representation of different chief complaints and diagnoses that were seen throughout the year. The charts were selected using a free web-based random number generator that correlated with the order the patients checked in throughout the month. Data were collected by hand from paper charts in the VCC's chart storage room and recorded on the chart review data sheet (See Appendix C). Collected data included: age, ethnicity, gender, primary language, patient vital signs to include: blood pressure, temperature, weight, height, oxygen saturation, chief complaint (up to three), and diagnoses (up to three) listed for that visit. Data were then taken from the 240 chart review data sheets and then manually entered into an excel spreadsheet.

Patients were randomly selected using the check-in list. This list is the only source of information on which patients were seen on any given day. The chart review process proved to be laborious because information recorded on the check in list lacked information used for

exclusion criteria. For example, when a randomly selected patient chart was retrieved and the patient met one of the exclusion criteria, the chart had to be put back, and another randomly selected chart was needed. This increased the time needed for data collection as charts had to be retrieved and returned by hand. Sometimes there were four to five charts that could not be used in succession, making the task more tedious than expected.

5. Data Analysis

Data from the chart reviews were analyzed using an excel spreadsheet with tables created to determine the subcategories of each variable based on the inclusion criteria and quantify their frequencies. Chief complaint and diagnosis subcategories that were similar were grouped under one term to aid in final data analysis. For example, chief complaints like stomach pain, bloating, or abdominal pain were coded under the umbrella term of stomach pain to create one synonymous subcategory. Diagnoses were listed with the name and an appropriate ICD 10 code. This allowed the data to be analyzed by either the diagnosis or ICD 10 code. Weight was standardized to pounds and height was standardized to inches and both values were rounded to the nearest whole number. BMI was also calculated. Ages of patients spanned from 18 to 80. Ages were divided into age ranges (i.e., under 20, 20-30, 31-40, 41-50, 51-60, 61-70, 71-80) to help identify trends within certain age groups rather than just looking for a correlation to an exact age. In addition to finding the most common chief complaints and diagnoses, data were analyzed using a multitude of different combinations to enrich the findings from the chart review and identify any potential trends.

B. Project Meaning

1. Results

The top three chief complaints from the chart review were: stomach pain, headache, and cough. The top three diagnoses were: hypertension, acute upper respiratory infection, and abdominal pain. The patient population was predominately female (n=162). The most common diagnoses for women were consistent with the top three diagnoses for the population as a whole. The top diagnosis for men was osteoarthritis tied with hypertension with asthma as the third most common. The only age group that did not share hypertension, acute upper respiratory infection, and abdominal pain as their top diagnoses was the 50-60-year-old group; their top diagnosis was osteoarthritis (See Appendix M for full summary of results).

2. Discussion and Analysis of Results

When analyzing the data gathered in this chart review, several limitations and observations were noted. First, as anticipated, risk factors consistent with poor HL such as: ethnic minorities, poverty, and English as a second language were abundant in this high-risk population (HHS, n.d.). Surprisingly it was also found that, roughly 68% of clinic visits were by females. Reasons as to why there were more females at the clinic compared to males are not apparent without additional information. In addition, Spanish and English preference was difficult to determine as there was no specific area to designate preference in the chart; rather the forms required to fill out at check in were either in Spanish or English. Some patients would use both languages to fill out their forms, while some patients spoke neither English or Spanish and had to pick the language they were most comfortable with. Of the patients that were diagnosed with hypertension over 80% did not have their blood pressure under control at the time of their visit (i.e., blood pressure >140/90 mmHg). Also, of note, chief complaints and diagnoses were

not listed in any particular order in the chart. Therefore, they were not selected following a standardized pattern when more than three diagnoses were present.

In a systematic review by Finley et al. (2018) the authors gathered data on reasons for visits in multiple studies that analyzed hundreds of thousands of primary care patient encounters. The three most common chief complaints and diagnoses in this chart review were consistent with the findings by Finley et al. and were listed among the most common reasons for visits in other developing and industrialized countries. Notably, the chief complaints in both the chart review performed for this project and data from Finley et al. were often focused on symptomatic complaints, rather than chronic conditions (e.g., diabetes, hypertension). This phenomenon seems logical as patients often seek care because of bothersome symptoms, rather than asymptomatic chronic conditions. The diagnoses given by providers in this chart review and the data gathered by Finley et al. showed that HCPs, while still acknowledging symptomatic diagnoses, also focused on chronic conditions. This was also commonly seen in the chart review for this project as symptomatic chief complaints were often reported by the patient, while chronic conditions like hypertension were listed as a diagnosis with sometimes no mention of the original symptomatic complaint. This reveals a difference in priorities for providers and patients.

Using a random sample of 240 charts amongst approximately 2,800 patient encounters per year allows inferences to be made about the patient population seen between July 2017 through June 2018 at the VCC. The top three diagnoses and chief complaints are therefore considered to be a valid representation of the cases seen during the 12-month duration of this retrospective analysis. Due to the patient population being predominately Hispanic (n=193), data

analysis comparing the other ethnicities (i.e., Asian, African American, Caucasian, Pacific Islander, and other) offered minimal insights.

The most common conditions reported by and diagnosed in this population are not unique when compared to primary care populations throughout the world (Finely et al., 2018). The fact that this population that was at high risk for HL, and other populations throughout the world suffered from the same illnesses means the recommendation for “universal precautions” in patient encounters is very applicable and valid (Brega et al., 2015; Finley et al., 2018). All patients can benefit from basic education on common health conditions even if they don’t struggle with HL. Targeting the patient populations that particularly struggle, as done in this project, is helpful, but in the end, assuming that all people could benefit from actionable, easy to understand material despite their HL status is a safe assumption.

3. Advancing Nursing Practice

A focus on HL advances Florence Nightingale’s concept of nursing which is a nurse’s charge to help place patients in an optimal environment to acquire better health and healing (Chism, 2017). In addition, bringing the attention of nursing professionals to enhance HL helps patients overcome barriers to care. This project and others like it have the potential to extend the benefits of better HL to vulnerable minority populations, thus helping to decrease health disparities caused in part by poor HL. This advances nursing practice by giving nurses tools to promote better health by: applying evidence-based practice and acting as advocates for patients, families, and populations. Working hard to prevent progression or development of disease, and preventing unnecessary visits to the emergency department is crucial in increasing quality of life and improving cost containment in this and other vulnerable populations.

C. Utilization and Dissemination of the Results

1. Plan for Dissemination of Results

Dissemination of results consisted in part of presenting the final health education materials to the clinic executive directors, manager, and VCC board (See Appendix I, J, K, and L). These printed materials were accessible to patients and the presentation was displayed via a large screen television in the waiting room. Surveys were also made available to patients. Patients were asked to give input on the content of the educational materials and give any suggestions based on what they saw or read (See Appendix F and G). The handouts on the three most common reasons for patient visits were given to the clinic manager and executive director along with the original digital copy. Dissemination of the health education materials will be an important step in making progress towards improving the HL of the population of interest. Results, lessons learned, and data from this project will be shared by the executive director with similar clinics throughout the state in an attempt to share the knowledge gained and benefits reaped from this project. This can spur different HL projects that are also catered to the specific needs of the population served. In addition to dissemination to the VCC and other similar clinics, a poster presentation about this project will be given at the annual Western Institute of Nursing Conference in April 2019 (see Appendix H).

2. Future Goals and Project Follow-Up

During the process of instigating, organizing, and implementing this DNP project, valuable relationships have been made with the clinic manager, executive director, and other volunteers. One volunteer in particular has implemented a survey in the VCC to help patients connect to valuable resources in the community. He gave helpful input in the final stages of this project by informing the creation of a survey used to assess the patient's understanding of and

opinions on the presented health materials. The future goal of using the created surveys will be a crucial step in: understanding the needs of the patients, adapting the presented materials, and following up on project success. In addition, the VCC has recently implemented an electronic health record system; this makes future attempts to look up common reasons for clinic visits much easier. This process can also help the VCC understand if they are truly meeting their goal in providing for the acute care needs of this population.

Appendix A

Project Timeline

January 2018	Begin DNP project proposal
April 9, 2018	Defend DNP project proposal at UNLV
June 2018	Submission to IRB at UNLV
July 2018	IRB exemption granted Initiate chart reviews
August 2018 – January 2019	Create educational content Create English and Spanish versions
August 2018 – January 2019	Present compiled health education materials to: <ul style="list-style-type: none"> • Selected patients to ensure understanding • Content expert for validity • DNP project committee/VCC board for approval • VCC providers and staff to disseminate findings
January – February 2019	Project evaluation and write-up
March 19, 2019	Defend DNP project

Appendix B

IRB Decision Notification

Date: 07/09/2018 02:52 PM
To: "Laura Larson" <larsol3@unlv.nevada.edu>, "Susan VanBeuge" <susan.vanbeuge@unlv.edu>
From: "Joy Ramiro" <no-reply@irbnet.org>
Reply To: "Joy Ramiro" <joy.ramiro@unlv.edu>
Subject: IRBNet Board Action

Please note that UNLV Biomedical IRB has taken the following action on IRBNet:

Project Title: [1245452-1] Health Literacy Presentation for Low Income Uninsured Population
Principal Investigator: Susan VanBeuge, DNP

Submission Type: New Project
Date Submitted: June 19, 2018

Action: EXEMPT
Effective Date: July 9, 2018
Review Type: Exempt Review

Should you have any questions you may contact Joy Ramiro at joy.ramiro@unlv.edu.

Thank you,
The IRBNet Support Team

www.irbnet.org

Appendix C

Chart Review Data Sheet

Chief Complaint(s)	1. 2. 3.	Diagnosis(es) (Primary diagnosis=1)	1. 2. 3.
Age		Gender	Male Female
Primary Language	English Spanish Other _____	Ethnicity	
Weight:	Height: SaO2:	Temp:	Blood Pressure:

Appendix D

Project Tasks

- Chart reviews and data collection
- Data analysis
- Educational materials compilation
- Content expert overview
- Translation of materials into Spanish
- Education material review by Spanish and English focus group
- Approval of materials by DNP committee chair and VCC board
- Dissemination of materials to clinic

Appendix E

Budget

Item State quantity and cost/unit.	Rationale	Total Cost
Translation services for health education materials	The purpose of the project was to create health literacy sensitive educational materials in English and Spanish based on the three most common reasons for clinic visits. The clinic offers free services to uninsured, low income people living in Utah County. The population the clinic serves is predominately Hispanic, hence the need for proper professional translation of the documents.	\$440
TV and stand	Used for showing the presentation in the waiting room	\$500
TV Software and micro computer	Used for putting the presentation on the TV	\$400
Printing of chart review log	Used for data collection	\$5
Total		\$1345

Appendix F

Patient Survey English

Instructions: Please fill out the brief questionnaire about the health materials you viewed/read.

We appreciate your honest feedback and comments.

1. The information in the health materials was helpful.

Strongly Disagree Disagree Neutral Agree Strongly Agree

2. I learned something new in the brochures.

Strongly Disagree Disagree Neutral Agree Strongly Agree

3. The information was understandable.

Strongly Disagree Disagree Neutral Agree Strongly Agree

4. What did you like about the health brochures?

5. What did you not like about the health brochures?

6. Would this material be understandable to a friend or a loved one?

- a. If no what would you change?

7. Any other comments?

Appendix G

Patient Survey Spanish

Cuestionario para el paciente

Instrucciones: Favor de completar este cuestionario breve en cuanto a los materiales educativos sobre la salud que vio/leyó.

1. La información en los materiales educativos fue útil para mí.

Desacuerdo total Desacuerdo Neutral Acuerdo Acuerdo total

2. Aprendí algo nuevos de los materiales educativos.

Desacuerdo total Desacuerdo Neutral Acuerdo Acuerdo total

3. La información era comprensible.

Desacuerdo total Desacuerdo Neutral Acuerdo Acuerdo total

4. ¿Qué es lo que le gustó de los materiales educativos?

5. ¿Qué es lo que no le gustó de los materiales educativos?

6. ¿Serían comprensibles estos materiales por un amigo o un ser querido?

- a. Si no, ¿qué cambiaría?

7. Otros comentarios.

Appendix H

Western Institute of Nursing Conference Poster Presentation

Health Literacy Intervention for Low Income Uninsured Population

Laura Larson BS, RN, DNP-FNP Student

Background & Significance

Health literacy (HL) requires basic skills in: writing, reading, numeracy, and communication all within a health context (1). HL is a critical element for individuals to take an active role in managing their health. The National Assessment of Adult Literacy found only 12% of adults had a "proficient" HL level. Hispanics were found to be at greatest risk for lower HL than all other ethnic groups (2).

Low HL can lead to numerous negative outcomes including:

- Decreased utilization of preventative services
- Difficulty managing chronic conditions
- Decreased access to health care
- Increased cost of care (3).

Purpose

The purpose of this project was to create HL sensitive educational materials at a clinic for a low-income uninsured predominately Hispanic population in both Spanish and English.

Methods




A chart review was conducted to find the three most common reasons for clinic visits:

1. Hypertension
2. Acute Upper Respiratory Infection
3. Abdominal Pain

The educational materials were then created using evidence-based resources that addressed these issues.

Implications to Practice

Working hard to prevent progression or development of health problems like dangerously high blood pressure, and preventing unnecessary visits to the emergency department and urgent care facilities is crucial in increasing quality of life and improving cost containment in vulnerable populations (3).



1. Bennett, S.E., Donelan, K., Franks, R.G., Hays, R.D., Mittman, B.S., Clancy, C., et al. (2008). Health literacy and patient engagement. *Medical Care*, 46(10), 976-982.


2. National Assessment of Adult Literacy (NAAL). (2003). *Health Literacy Statistics*. Washington, DC: U.S. Department of Education, Office of Education Statistics.

3. Franks, R.G., Clancy, C., & Franks, R.G. (2003). *Health Literacy: A Guide to Improving Patient Health*. San Francisco, CA: Jossey-Bass.

4. Franks, R.G., Clancy, C., & Franks, R.G. (2003). *Health Literacy: A Guide to Improving Patient Health*. San Francisco, CA: Jossey-Bass.

5. Franks, R.G., Clancy, C., & Franks, R.G. (2003). *Health Literacy: A Guide to Improving Patient Health*. San Francisco, CA: Jossey-Bass.

6. Franks, R.G., Clancy, C., & Franks, R.G. (2003). *Health Literacy: A Guide to Improving Patient Health*. San Francisco, CA: Jossey-Bass.





Abdominal Pain

Facts

What happened?

If you suddenly get sick to your stomach, think first before going to your healthcare provider.

Ask:

- Did I eat something different than normal?
- Was the food safely prepared and handled?
- Has anyone else around me also been sick?

If you are generally healthy, a stomach virus or stomach bug will usually make you throw up or have diarrhea for only 24 hours. It is also normal to feel weak and tired for a few days afterwards, and you **probably do not** need to see a healthcare

Did you know that **abdominal pain**, also known as **stomach pain**, was one of the top three complaints at the clinic last year?



Abdominal pain can be caused by many different things. It can be as harmless as a 24-hour stomach bug or something life-threatening like appendicitis. Common causes of abdominal pain include:

- Heartburn
- Indigestion
- Ulcers
- Problems with your pancreas or gallbladder
- Heart problems
- Irritable bowel syndrome
- Certain medications



Taking medicine like ibuprofen (Motrin) or naproxen (Aleve) without food can give you a stomach ache!



Foods that are hard to digest like meat and dairy can make a stomach ache worse.



Cartagena, D. (2013). 15486[Photograph]. Retrieved from <https://phil.cdc.gov/Details.aspx?pid=15486>

Red Flags

Most of the time you do not need to see a healthcare provider for abdominal pain, but **red flags** or **alarming symptoms** that need medical care include:

- Blood in your throw up or poop
- Dark black poop
- Unexpected weight loss (around 10 pounds)
- Family history of stomach or colon cancer
- Fever higher than 102 °F
- Intense pain that lasts longer than an hour or comes and goes for 24 hours
- Heart pain or shortness of breath
- Unable to eat or drink for over a day



Prevention

Ways to prevent getting stomach aches include:

- Avoiding foods that have a large amount of fat like:
 - Red meats
 - Butter
 - Fried foods
 - Cheese
- Eating 5-6 smaller meals a day instead of 2-3 big meals
- Recognizing foods that cause pain, for example, dairy or sweets



Cartagena, D. (2012). 14416[Photograph]. Retrieved from <https://phil.cdc.gov/Details.aspx?pid=14416>

If you are not sure of any problem foods, try keeping a food diary to track what you ate and how you felt after eating.



Cartagena, D. (2012). 14442[Photograph]. Retrieved from <https://phil.cdc.gov/Details.aspx?pid=14442>

If you are already in pain try eating foods that are softer on your stomach until the pain goes away.

Remember BRAT:

- B**ananas
- R**ice
- A**pplesauce
- T**oast



Abdominal Pain. (n.d.). In Unbound Medical Resources for Apple IOS (Version 1.38) [Mobile application software]. Retrieved from <http://itunes.apple.com>
Penner, R. M., & Fishman, M. B. (2017). Evaluation of the adult with abdominal pain. In S. Grover (Ed.), *UpToDate*. Retrieved August 22, 2018, from https://www.uptodate.com.ezproxy.library.unlv.edu/contents/evaluation-of-the-adult-with-abdominal-pain?search=abdominal%20pain&source=search_result&selectedTitle=1~150&usage_type=default&display_rank=1

Common Cold

Upper Respiratory Infection

Do I have a cold?

Often a cold starts out with a sore throat and runny nose and then coughing and sneezing begins. Symptoms of the common cold include:

- Nasal Congestion
- Runny nose
- Sneezing
- Sore throat
- Cough
- Low fever
- Headache
- Body aches



Is it a Cold or Flu?

Usually a cold is milder than the flu and does not cause serious problems.

Flu	Cold
Begins very quickly	Begins slowly
Fever is usual	Fever sometimes
Very Painful body aches	Mild body aches
Chills usual	Chills sometimes
Sneezing, Stuffy nose, Sore throat sometimes	Sneezing, Stuffy nose, Sore throat usual
Headache usual	Headache uncommon



Gathany, J. (2009). 11160[Photograph]. Retrieved from <https://phil.cdc.gov/Details.aspx?pid=11160>

Did you know...

Upper respiratory infections better known as the “**common cold**” are one of the most common reasons for healthcare visits.

The common cold is caused by hundreds of different types of viruses. Since antibiotics are made to treat illnesses caused by bacteria, antibiotics **cannot** treat a cold.



Different from popular belief you can get the same cold twice! However, the second time around the cold is usually milder and lasts for less time.

Cold viruses **can stay alive** on our skin for up to **two hours**, that is why it is important to wash your hands!



The unpleasant cold symptoms we feel are caused by our body trying to fight the infection instead of damage caused by the virus itself. Talk about making yourself sick!



Mills, A. (2011). 13532[Photograph]. Retrieved from <https://ohiio.edc.gov/Details.aspx?pid=13532>

What cold treatments actually work?

- Drinking plenty of water
- Getting enough rest
- Pain medicine like **Tylenol** and **Motrin**
- Saline nose spray
- Combined over the counter **antihistamine** and **decongestant**
- Dextromethorphan (lessens cough)

What treatments could be helpful but have mixed results?

- Zinc sulfate drops
- Expectorants (mucus thinners) like guaifenesin
- Vitamins and herbal medicine like Echinacea
- Codeine

Remember: Antibiotics are made to kill bacteria. Taking leftover antibiotics or antibiotics that were not prescribed to you is not healthy and can make it more difficult for your body to fight an actual bacterial infection later.

Red Flags

Usually you do not need to see your healthcare provider if you have a cold, but sometimes the cold can become more serious than normal.



You should see your healthcare provider if:

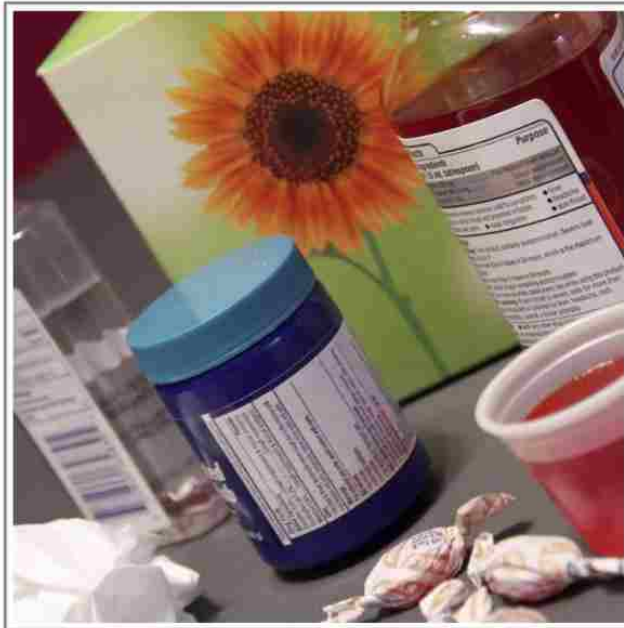
- Symptoms last for 10 days or more
- Symptoms are much worse than normal or unusual
- Green-yellow liquid is coming from one or both eyes
- If your sick child is 3 months or younger
- If your sick child is acting unusually sleepy or is difficult to wake up

How do I prevent getting a cold?

Remember cold viruses can stay alive on our skin for 2 hours, and on other objects for even longer! This is why it is important to wash your hands and objects that are touched often.

Tips on preventing spread of the common cold include:

- Cleaning hands often, especially after coughing, sneezing, or blowing your nose
- Try to stay away from those that are sick
- Avoid touching your face especially with dirty hands



Cartagena, D. (2012). 14444[Photograph]. Retrieved from <https://phl.cdc.gov/Details.aspx?pid=14444>

Centers for Disease Control and Prevention. (n.d.). Common colds: Protect yourself and others. Retrieved from <https://www.cdc.gov/features/rhinoviruses/>
 Sexton, D. J., & McClain, M. T. (2018). The common cold in adults: Diagnosis and clinical features. In J. A. Melin (Ed.), *UpToDate*. Retrieved August 22, 2018, from https://www.uptodate-com.ezproxy.library.unlv.edu/contents/the-common-cold-in-adults-diagnosis-and-clinical-features?topicRef=6868&source=see_link
 Sexton, D. J., & McClain, M. T. (2018). The common cold in adults: Treatment and prevention. In J. A. Melin (Ed.), *UpToDate*. Retrieved August 22, 2018, from https://www.uptodate-com.ezproxy.library.unlv.edu/contents/the-common-cold-in-adults-treatment-and-prevention?topicRef=4014&source=see_link

High Blood Pressure



Gathany, J. (2005). 7882[Photograph]. Retrieved from <https://phil.cdc.gov/Details.aspx?pid=7882>

High Blood Pressure Facts

High blood pressure or **hypertension** is a common but dangerous problem. 1 out of 3 adults in the US have high blood pressure, and only half of them have it under control.

High blood pressure is sometimes called the "**silent killer**" because you rarely feel symptoms. Many people do not know they have high blood pressure or do not take care of it because they "**feel fine.**" You do not have to "**feel sick**" to have dangerously high blood pressure!

Normal

Less than
120/80

Elevated

Between
120-129/80

Hypertension

At or above
130/80

Emergency

At or above
180/120 this
would be an
emergency, get
medical help
soon!

The Numbers

Blood pressure is measured by two different numbers. Each number has a different name and measures the pressure in your heart at different times.

120/80

Systolic

This is the first number in the blood pressure measurement. This number tells us how much force is given during a heart beat.

120/80

Diastolic

This is the second number in the blood pressure measurement. This number tells us how much force is given while the heart is resting.

What is high blood pressure?

High blood pressure means there is more pressure or force in your blood vessels than normal. Having high blood pressure is okay from time to time, like when you exercise. When it happens over a long time it can slowly wear out your heart and blood vessels. This makes them weaker and less able to do their job. You need your blood pressure measured at 3 different visits to be diagnosed with hypertension.



Hypertension can lead to heart disease and stroke, two of the leading causes of death in America. Other problems from high blood pressure include:

- Heart attack
- Heart failure
- Chronic kidney disease

Controlling your blood pressure can help prevent these and other serious long-term problems.



How do I manage my blood pressure?

Managing or taking control of your blood pressure can be challenging! You will be most successful when you work together with your healthcare provider and make lifestyle changes.

Tips for having a healthy blood pressure include:

Take medicine correctly (do not skip days or take only part of the dose) even if you “feel fine.”

Make healthy lifestyle changes like:

- Doing 30 minutes of exercise most days
- Eating a variety of fruits and vegetables
- Choosing foods with low:
 - Salt
 - Saturated fat
 - Cholesterol



Mills, A. 14089[Photograph]. Retrieved from <https://phil.cdc.gov/Details.aspx?pid=14089>

Lifestyle changes

like **regular exercise**

and a **healthy diet** are **just as important** as taking medicine for your blood pressure! After making some of these changes you may feel great, but it is still important to take your medications and talk with your healthcare provider about your blood pressure.

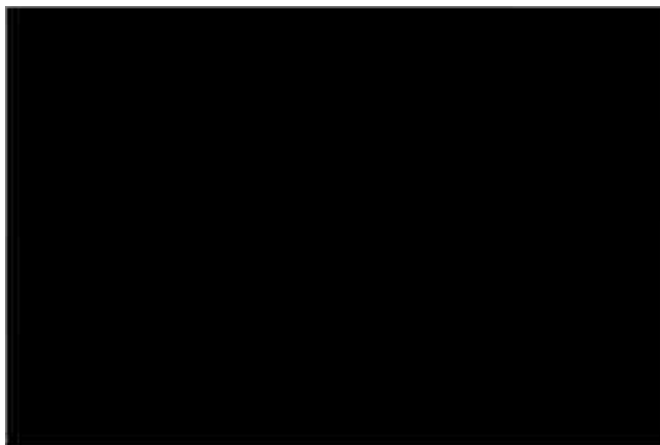
Remember you don't have to feel sick to have high blood pressure!

Goals for Controlling my Blood Pressure:

1. _____
2. _____
3. _____



American College of Cardiology/American Heart Association Task Force. (2017). Guideline for the prevention, detection, evaluation and management of high blood pressure in adults. Retrieved from <http://professional.heart.org/hypertension>.
Centers for Disease Control and Prevention. (n.d.). High blood pressure. Retrieved from <https://www.cdc.gov/bloodpressure/>



Dolor abdominal

¿Qué pasó?

Si siente malestar estomacal repentino reflexione por un momento antes de acudir al médico.

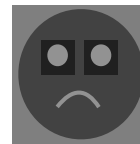
Pregúntese:

- ¿Comí algo diferente de lo habitual?
- ¿Se preparó los alimentos de manera segura?
- ¿Alguien cercano a mí ha estado enfermo?

En una persona sana, un virus estomacal sólo suele producir vómitos y diarreas durante 24 horas. Es normal sentirse débil y cansado los días posteriores y es **probable que no** necesite consultar con un profesional de la salud.

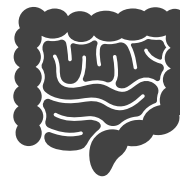
Datos

¿Sabía que el **dolor abdominal**, también conocido como **dolor estomacal**, fue una de las tres principales dolencias por la que consultaron en nuestra clínica el año pasado?



El dolor abdominal puede tener diferentes causas; puede deberse a algo inofensivo, como lo es un virus estomacal, o puede ser síntoma de algo que ponga en riesgo su vida, como en el caso de la apendicitis. Las causas comunes del dolor abdominal son:

- acidez estomacal
- indigestión
- úlceras
- problemas en el páncreas o en la vesícula
- problemas del corazón
- síndrome del colon irritable
- algunos medicamentos



El tomar medicamentos tales como ibuprofeno (Motrin) o naproxeno (Aleve) con el estómago vacío puede causarle dolor abdominal.



Los alimentos que son difíciles de digerir, tales como las carnes y los lácteos, pueden agravar el dolor de estómago.



Cartagena, D. (2013). 15488[Photograph]. Retrieved from <https://phil.cdc.gov/Details.aspx?pid=15488>

Señales de alerta

Por lo general, no es necesario acudir al médico por dolor abdominal; sin embargo, pueden aparecer síntomas o señales de alerta que requieren atención médica, tales como:

- heces con sangre o vómito con sangre
- heces de color negro
- pérdida inesperada de peso (alrededor de 10 lbs o 4,5 kgs)
- antecedentes familiares de cáncer de colon o de estómago
- fiebre mayor a 102 °F (38.8 °C)
- dolor intenso que dura más de una hora o que aparece y desaparece durante un lapso de 24 horas
- dolor en el corazón o dificultad para respirar
- incapacidad de comer o de beber por un lapso superior a un día



Prevención

Entre las formas de prevenir el dolor abdominal se incluyen:

- evitar los alimentos que contienen mucha grasa, tales como:
 - carnes rojas
 - mantequilla
 - comidas fritas
 - queso
- comer entre 5-6 comidas pequeñas diarias en lugar de 2-3 comidas grandes
- reconocer las comidas que le provocan dolor, por ejemplo, los lácteos o las golosinas



Cartagena, D. (2012). 14416[Photograph]. Retrieved from <https://phil.cdc.gov/Details.aspx?pid=14416>

Si no está seguro si un determinado alimento le causa problemas, recomendamos hacer un listado de los alimentos que consume para hacer un seguimiento y comentar cómo se sintió después de comerlos.

Si ya siente dolor, ingiera alimentos menos pesados para su estómago hasta que el dolor desaparezca. Recuerde:

- Bananas**
- Arroz**
- Puré (Compota) de manzana**
- Tostadas**



Cartagena, D. (2012). 14442[Photograph]. Retrieved from <https://phil.cdc.gov/Details.aspx?pid=14442>

Abdominal Pain. (n.d.). In Unbound Medical Resources for Apple iOS (Version 1.38) [Mobile application software]. Retrieved from <http://itunes.apple.com>
Penner, R. M., & Fishman, M. B. (2017). Evaluation of the adult with abdominal pain. In S. Grover (Ed.), *UpToDate*. Retrieved August 22, 2018, from https://www.uptodate.com.ezproxy.library.unlv.edu/contents/evaluation-of-the-adult-with-abdominal-pain?search=abdominal%20pain&source=search_result&selectedTitle=1~150&usage_type=default&display_rank=1

Resfrío común

Infección de las vías respiratorias superiores

¿Estoy resfriado?

A menudo, el resfrío comienza con dolor de garganta y secreción nasal. Luego, aparecen la tos y los estornudos. Entre los síntomas del resfrío común se incluyen:

- escurrimiento nasal
- congestión nasal
- estornudos
- dolor de garganta
- tos
- fiebre leve
- dolor de cabeza
- dolor es musculares



¿Es un resfrío o es una gripe?

Por lo general, el resfrío es más leve que la gripe y no causa problemas graves.

Gripe	Resfrío
Comienza muy rápidamente	Comienza despacio
Fiebre, habitual	Fiebre, a veces
Fuerte dolor de cuerpo	Leve dolor de cuerpo
Escalofríos, habituales	Escalofríos, a veces
Estornudos, dolor de garganta y congestión nasal, a veces	Estornudos, dolor de garganta y congestión nasal, habituales
Dolor de cabeza, habitual	Dolor de cabeza, no es habitual



Gathany, J. (2009). 11160[Photograph]. Retrieved from <https://phil.cdc.gov/Details.aspx?pid=11160>

Sabía que...

Las **infecciones de las vías respiratorias superiores**, más conocidas como **“resfrío común”**, son una de las causas más comunes que llevan a las personas a acudir al médico.

El resfrío común es causado por cientos de diferentes tipos de virus. Dado que los antibióticos están hechos para tratar enfermedades causadas por bacterias, **no pueden** tratar un resfrío.



A diferencia de lo que se cree, es posible contraer el mismo resfrío dos veces. Sin embargo, la segunda vez suele ser más leve y durar menos tiempo.

Los virus responsables del resfrío **pueden permanecer vivos** en nuestra piel hasta por **dos horas**, motivo por el cual es tan importante lavarse las manos.



Los desagradables síntomas del resfrío que sentimos se deben a que nuestro propio cuerpo trata de combatir la infección en lugar del daño causado por el virus en sí. ¡Hable de enfermarse!



Mills, A. (2011). 13532[Photograph]. Retrieved from <https://ohh.cdc.gov/Details.aspx?oid=13532>

¿Qué tratamientos funcionan?

- Tomar mucha agua
- Descansar lo suficiente
- Tomar medicamentos tales como **Tylenol** y **Motrin**
- Colocarse spray nasal salino
- Una combinación de **antihistamínicos** y **descongestivos** de venta libre
- Dextrometorfano (disminuye la tos)

¿Cuáles tratamientos pueden ser útiles, pero dar resultados mixtos?

- Gotas de sulfato de zinc
- Expectorantes (diluyente de mucosidad) como la guaifenesina
- Vitaminas y hierbas medicinales como la equinacea
- Codeína

Recuerde: los antibióticos están hechos para matar las bacterias. El tomar sobras de antibióticos o antibióticos que no le fueron recetados no es saludable y puede hacer que, en el futuro, a su cuerpo le resulte más difícil combatir una infección bacteriana.

Señales de alerta

Por lo general, no es necesario acudir al médico por un resfrío, pero a veces el resfrío puede agravarse.

Acuda al médico si:

- los síntomas duran más de 10 días
- los síntomas se agravan o son inusuales
- un líquido verde amarillento sale de uno o de sus dos ojos
- su hijo enfermo es menor de 3 meses
- su hijo enfermo se encuentra inusualmente soñoliento o es difícil despertarlo

¿Cómo puedo evitar resfriarme?

Recuerde que los virus responsables del resfrío pueden permanecer vivos en nuestra piel durante 2 horas y ¡hasta más tiempo en otros objetos! Por eso es importante lavarse las manos y los objetos que tocamos con frecuencia.

Para prevenir el contagio del resfrío común aconsejamos:

- lavarse las manos con frecuencia, en especial después de toser, estornudar o soplarse la nariz
- mantenerse alejado de las personas enfermas
- evitar tocarse la cara, especialmente cuando las manos están sucias



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Hipertensión arterial



Gathany, J. (2005). 7882[Photograph]. Retrieved from <https://phil.cdc.gov/Details.aspx?pid=7882>

Datos sobre la presión arterial alta

La **presión arterial alta** o **hipertensión** es un problema común pero peligroso. En los EE.UU., 1 de cada 3 adultos padece hipertensión arterial y sólo en la mitad de los casos está controlada.

Se suele decir que la hipertensión es el "**asesino silencioso**" ya que rara vez se presenta con síntomas. Muchas personas no saben que tienen presión arterial alta o no se cuidan porque se "**sienten bien**". Recuerde que no tiene que "**sentirse enfermo**" para padecer hipertensión arterial grave.

Normal	Elevada	Hipertensión	Emergencia
Menor a 120/80	Entre 120-129/80	En o por encima de 130/80	En o por encima de 180/120 se considera emergencia. Obtenga ayuda médica inmediata.

Los números

La medición de la presión arterial consta de dos números. Cada número tiene un nombre distinto y mide la presión del corazón en diferentes momentos.

120/80

Sistólica

Es el primer número en la medición de la presión arterial, el cual indicia la fuerza empleada durante un latido del corazón.

120/80

Diastólica

Es el segundo número en la medición de la presión arterial, el cual indica la fuerza empleada mientras el corazón descansa.

¿Qué es la hipertensión arterial?

La presión arterial alta indica que hay mayor presión o fuerza en los vasos sanguíneos que lo habitual. El tener presión arterial alta de vez en cuando es normal, como cuando realizamos ejercicio físico, pero cuando persiste durante un tiempo prolongado puede desgastar lentamente al corazón y a los vasos sanguíneos, volviéndolos más débiles y menos capaces de hacer su trabajo. Para diagnosticar la presión arterial será necesario medirla en 3 momentos distintos.



La hipertensión puede provocar enfermedades cardíacas y accidentes cerebrovasculares, dos de las principales causas de muerte en los Estados Unidos. Otros problemas de la presión arterial alta incluyen:

- infartos
- insuficiencia cardíaca
- enfermedad renal crónica

El controlar su presión arterial puede ayudar a prevenir estos y otros problemas graves a largo plazo.



¿Cómo controlo mi presión arterial?

El manejar o controlar la presión arterial puede ser un desafío, pero obtendrá mejores resultados si trabaja en conjunto con un profesional de la salud y realiza cambios en su estilo de vida.

Consejos para tener presión arterial saludable:

Tomar correctamente la medicación (no saltar días ni tomar sólo una parte de la dosis) incluso si se “siente bien”.

Realizar cambios saludables en el estilo de vida, tales como:

- ejercicio físico regular durante 30 minutos
- ingerir una gran variedad de frutas y verduras
- escoger alimentos bajos en:
 - sal
 - grasas saturadas
 - colesterol



Mills, A. 14089[Photograph]. Retrieved from <https://phil.cdc.gov/Details.aspx?pid=14089>

Los **cambios en el estilo de vida** tales como el **ejercicio físico regular** y una **dieta saludable** son **tan importantes** como el tomar los medicamentos para la presión arterial. Luego de realizar algunos de estos cambios tal vez se sienta bien, pero todavía es importante que tome su medicina y hable con su médico sobre su presión arterial. **Recuerde que puede padecer hipertensión arterial aún cuando no se sienta enfermo.**

Objetivos para controlar mi presión arterial:

1. _____
2. _____
3. _____

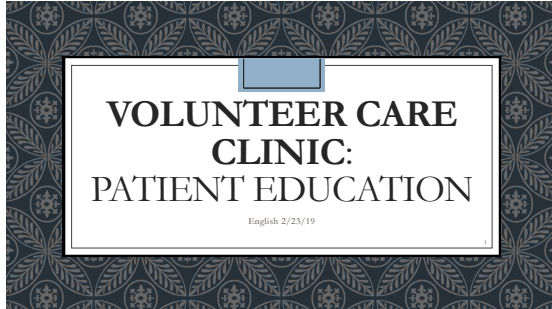


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Appendix K

Educational Presentation English



Abdominal Pain: Facts

- Did you know that **abdominal pain**, also known as **stomach pain**, was one of the top three complaints at the clinic last year?
- Abdominal pain can be caused by many different things. It can be as harmless as a 24-hour stomach bug or something life-threatening like appendicitis.



Abdominal Pain: Facts

Common causes of abdominal pain include:

- Heartburn
- Indigestion
- Ulcers
- Problems with your pancreas or gallbladder
- Heart problems
- Irritable bowel syndrome
- Certain medications




Abdominal Pain: What happened?

If you suddenly get sick to your stomach, think first before going to your healthcare provider.


Ask:

- Did I eat something different than normal?
- Was the food safely prepared and handled?
- Has anyone else around me also been sick?



Abdominal Pain: What happened?


If you are generally healthy, a stomach virus or stomach bug will usually make you throw up or have diarrhea for only 24 hours. It is also normal to feel weak and tired for a few days afterwards, and you **probably do not** need to see a healthcare provider.



Abdominal Pain: Red Flags

Most of the time you do not need to see a healthcare provider for abdominal pain, but **red flags** or **alarming symptoms** that need medical care include:

- Blood in your throw up or poop
- Dark black poop
- Unexpected weight loss (around 10 pounds)



Abdominal Pain: Red Flags

Other **red flags** include:

- Family history of stomach or colon cancer
- Fever higher than 102°F
- Intense pain that lasts longer than an hour or comes and goes for 24 hours
- Heart pain and/or shortness of breath
- Unable to eat or drink for over a day



Abdominal Pain: Prevention

Ways to prevent getting stomach aches include:

- Avoiding foods that have a large amount of fat, for example fried foods, butter, and cheese
- Eating 5-6 smaller meals a day instead of 2-3 big meals



Abdominal Pain: Prevention

Ways to prevent getting stomach aches include:

- Recognizing foods that cause pain, for example, dairy or sweets.
- If you are not sure of any problem foods, try keeping a food diary to track what you ate and how you felt after eating it.



Abdominal Pain: Prevention

If you are already in pain try eating foods that are softer on your stomach until the pain goes away. Remember BRAT:

- **B**ananas
- **R**ice
- **A**pplesauce
- **T**oast



High Blood Pressure: Facts

- High blood pressure was also one of the most common problems seen at the clinic last year!
- **High blood pressure** or **hypertension** is a common but dangerous problem.
- 1 out of 3 adults in the US have high blood pressure, and only half of them have it under control.



High Blood Pressure: Facts

- High blood pressure is sometimes called the "**silent killer**" because you rarely feel symptoms.
- Many people do not know they have high blood pressure or do not take care of it because they "**feel fine.**"



High Blood Pressure: Facts

You do not have to “feel sick” to have dangerously high blood pressure.

- This is why it is important to check your blood pressure often and to follow the instructions given by your healthcare provider.
- You can check your blood pressure at a healthcare clinic, some pharmacies, or at home with a blood pressure cuff that you can buy.



High Blood Pressure: What is it?

- High blood pressure means there is more pressure or force in your blood vessels than normal.
- Having high blood pressure is okay from time to time, like when you exercise. When it happens over a long time it can slowly wear out your heart and blood vessels. This makes them weaker and less able to do their job.



High Blood Pressure: What is it?

- You need your blood pressure measured at 3 different visits to be diagnosed with hypertension.
- Hypertension can lead to heart disease and stroke, two of the leading causes of death in America.



High Blood Pressure: What is it?

- Other problems from high blood pressure include:
 - Heart attack
 - Heart failure
 - Chronic kidney disease
- Controlling your blood pressure can help prevent these and other serious long-term problems.



High Blood Pressure: The Numbers

	Systolic	Diastolic	
	<ul style="list-style-type: none"> • First number • Amount of force given during a heart beat 	<ul style="list-style-type: none"> • Second number • Amount of force when the heart is resting 	
Normal Blood Pressure	Less than 120/80	Elevated Blood Pressure	Between 120-129/80
Hypertension	At or above 130/80	Hypertensive Emergency	At or above 180/120 this would be an emergency, get medical help soon!

High Blood Pressure: Management

- Managing or taking control of your blood pressure can be challenging!
- You will be most successful when you work together with your health care provider and make lifestyle changes.



High Blood Pressure: Management

Tips for having a healthy blood pressure include:

- Take medicine correctly (do not skip days or take only part of the dose) even if you "feel fine."
- Make healthy changes in what you eat like choosing:
 - A variety of fruits and vegetables
 - Foods that are low in:
 - Salt
 - Saturated fat
 - Cholesterol



High Blood Pressure: Management

Other tips for having a healthy blood pressure include:

- Adding 30 minutes of activity in your day. You can even break it up into 3 different 10-minute sessions

Lifestyle changes like regular exercise and a healthy diet are just as important as taking medicine for you blood pressure!



High Blood Pressure: Management

After making some of these changes you may feel great, but it is still important to take your medications and talk with your healthcare provider about your blood pressure.

Remember you don't have to feel sick to have high blood pressure!



Common Cold: Facts

- Did you know that **upper respiratory infections** better known as the "**common cold**" were one of the most common reasons for clinic visits last year?
- There are hundreds of different types of viruses that cause the common cold.



Common Cold: Facts

- Did you know you can get the same cold twice? The second time around the cold is usually milder and lasts for less time.
- Children in the US get about 5-7 colds per year, while adults get about 2-3 colds per year.
- Cold viruses **can stay alive** on our skin for up to **two hours!**



Common Cold: Facts

- Smoking puts you at greater risk for a more serious cold.
- The unpleasant cold symptoms we feel are most often caused by our body trying to fight the infection instead of damage caused by the virus itself. Talk about making yourself sick!
- Often colds start with a sore throat and runny nose and then coughing and sneezing begins.



Common Cold: Do I have a cold?

Symptoms of the common cold include:

- Nasal congestion
- Runny nose
- Sneezing
- Sore throat
- Cough
- Low fever
- Headache
- Body aches



Common Cold: Cold or Flu?

- Telling the difference between the cold and flu can be difficult since they have very similar symptoms.
- Generally, a cold is milder than the flu, and does not usually cause serious problems.



Common Cold: Cold or Flu?

In general:

Flu	Cold
Begins very quickly	Begins slowly
Fever is usual	Fever sometimes
Very painful body aches	Mild body aches
Chills usual	Chills sometimes
Sneezing, stuffy nose, sore throat sometimes	Sneezing, stuffy nose, sore throat usual
Headache usual	Headache uncommon

Common Cold: Red Flags

Usually you do not need to see your healthcare provider if you have a cold, but sometimes the cold can become more serious than normal.

You should see your healthcare provider if:

- Symptoms last for 10 days or more



Common Cold: Red Flags

Other red flags include:

- Symptoms are much worse than normal or unusual
 - For example: you have shortness of breath or wheezing
- Green-yellow liquid coming from one or both eyes
- If your sick child is 3 months or younger
- If your sick child is acting unusually sleepy or is difficult to wake up



Common Cold: Treatments

Treatments that **work well** in treating symptoms of the common cold include:

- Drinking plenty of water
- Getting enough rest
- Pain medicine like **acetaminophen** (Tylenol) and **ibuprofen** (Motrin)
- Saline nose spray



Common Cold: Treatments

Combined over the counter **antihistamine** and **decongestant** (like pseudoephedrine)

- Together these drugs work better than just using one or the other
- Decongestants should only be used for three days to prevent **rebound congestion** (congestion caused by using the medicine too long)

Over the counter **dextromethorphan** (lessens cough)



Common Cold: Treatments

Treatments that **could be helpful** but research has **mixed results**:

- Zinc sulfate drops
- Expectorants (mucus thinners) like guaifenesin
- Vitamins and herbal medicine like echinacea
- Humidifiers
- Codeine



Common Cold: Treatments

Remember:

The common cold is caused by viruses.

Antibiotics are made to **kill bacteria**. Using antibiotics to treat viruses can cause more harm than good. Do not ask your healthcare provider for antibiotics if you have a cold. Taking leftover antibiotics or antibiotics that were not prescribed to you is not healthy and can make it more difficult for your body to fight an actual bacterial infection later.



Common Cold: Prevention

- Remember cold viruses can **stay alive on our skin for 2 hours**, and on other objects for even longer!
- This is why it is important to wash your hands and objects that are touched often (like light switches and door knobs).



Common Cold: Prevention

Tips on preventing spread of the common cold include:

- Cleaning hands often, especially after coughing, sneezing, or blowing your nose
- Try to stay away from those that are sick
- Try not to touch your face especially with unwashed hands



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Appendix L

Educational Presentation Spanish



Dolor abdominal: datos

- ¿Sabía que el **dolor abdominal**, también conocido como **dolor estomacal**, fue una de las tres principales dolencias por la que consultaron en nuestra clínica el año pasado?
- El dolor abdominal puede tener diferentes causas; puede deberse a algo inofensivo, como lo es un virus estomacal, o puede ser sintoma de algo que ponga en riesgo su vida, como en el caso de la apendicitis.



Dolor abdominal: datos

Las causas comunes de dolor abdominal son:

- acidez estomacal
- indigestión
- úlceras
- problemas en el páncreas o en la vesícula
- problemas del corazón
- síndrome del colon irritable
- algunos medicamentos



Dolor abdominal: ¿qué pasó?

Si siente malestar estomacal repentino reflexione por un momento antes de acudir al médico.

Pregúntese:

- ¿Comí algo diferente de lo habitual?
- ¿Se preparó los alimentos de manera segura?
- ¿Alguien cercano a mí también ha estado enfermo?



Dolor abdominal: ¿qué pasó?

En una persona sana, un virus estomacal, en general, sólo produce vómitos y diarreas durante 24 horas. Es normal sentirse débil y cansado los días posteriores y es **probable que no** necesite consultar con un profesional de la salud.



Dolor abdominal: señales de alerta

En general, no es necesario acudir al médico por dolor abdominal; sin embargo, pueden aparecer **síntomas** o **señales de alerta** que requieren atención médica, tales como:

- heces con sangre
- vómito con sangre
- heces de color negro
- pérdida inesperada de peso (alrededor de 10 lbs o 4,5 kgs)



Dolor abdominal: señales de alerta

Señales de alerta:

- antecedentes familiares de cáncer de colon o de estómago
- fiebre mayor a 102 °F o 38,8 °C
- dolor intenso que dura más de una hora o que aparece y desaparece durante un lapso de 24 horas
- dolor en el corazón o dificultad para respirar
- incapacidad de comer o beber por un lapso superior a un día



Dolor abdominal: prevención

Entre las formas de prevenir el dolor abdominal se incluyen:

- evitar los alimentos que contienen mucha grasa, por ejemplo, comidas fritas, mantequilla y queso
- comer entre 5-6 comidas pequeñas diarias en lugar de 2-3 comidas grandes



Dolor abdominal: prevención

Entre las formas de prevenir el dolor abdominal se incluyen:

- reconocer las comidas que le provocan dolor, por ejemplo, los lácteos o las golosinas
- si no está seguro si un determinado alimento le causa problemas, recomendamos hacer un listado de los alimentos que consume para hacer un seguimiento y comentar cómo se sintió después de comerlos.



Dolor abdominal: prevención

Si ya siente dolor, ingiera alimentos menos pesados para su estómago hasta que el dolor desaparezca. Recuerde:

- **bananas**
- **arroz**
- **puré (compota) de manzana**
- **tostadas**



Hipertensión arterial: datos

- La **presión arterial** o **hipertension**, fue una de las tres principales dolencias por la que consultaron en nuestra clínica el año pasado.
- La **presión arterial alta** es un problema común pero peligroso.
- En los EE.UU., 1 de cada 3 adultos padece hipertensión arterial y sólo en la mitad de los casos está controlada.



Hipertensión arterial: datos

- Se suele decir que la hipertensión es el "**asesino silencioso**" ya que rara vez se presenta con síntomas.
- Muchas personas no saben que tienen presión arterial alta o no se cuidan porque se "**sienten bien**".



High Blood Pressure: Facts

You do not have to "feel sick" to have dangerously high blood pressure.

- This is why it is important to check your blood pressure often and to follow the instructions given by your healthcare provider.
- You can check your blood pressure at a healthcare clinic, some pharmacies, or at home with a blood pressure cuff that you can buy.



High Blood Pressure: What is it?

- High blood pressure means there is more pressure or force in your blood vessels than normal.
- Having high blood pressure is okay from time to time, like when you exercise. When it happens over a long time it can slowly wear out your heart and blood vessels. This makes them weaker and less able to do their job.



High Blood Pressure: What is it?

- You need your blood pressure measured at 3 different visits to be diagnosed with hypertension.
- Hypertension can lead to heart disease and stroke, two of the leading causes of death in America.



High Blood Pressure: What is it?

- Other problems from high blood pressure include:
 - Heart attack
 - Heart failure
 - Chronic kidney disease
- Controlling your blood pressure can help prevent these and other serious long-term problems.



High Blood Pressure: The Numbers

	Systolic	Diastolic	
	<ul style="list-style-type: none"> • First number • Amount of force given during a heart beat 	<ul style="list-style-type: none"> • Second number • Amount of force when the heart is resting 	
Normal Blood Pressure	Less than 120/80	Elevated Blood Pressure	Between 120-129/80
Hypertension	At or above 130/80	Hypertensive Emergency	At or above 180/120 this would be an emergency, get medical help soon!

High Blood Pressure: Management

- Managing or taking control of your blood pressure can be challenging!
- You will be most successful when you work together with your health care provider and make lifestyle changes.



Hipertensión arterial: cómo controlarla

Consejos para tener una presión arterial saludable:

- Tomar correctamente la medicación (no saltar días ni tomar sólo una parte de la dosis) incluso si se "siente bien".
- Realice cambios saludables en su alimentación; escoja:
 - variedad de frutas y verduras
 - alimentos bajos en:
 - sal
 - grasas saturadas
 - colesterol



Hipertensión arterial: cómo controlarla

Otros consejos para tener una presión arterial saludable son:

- realizar 30 minutos de actividad física diaria
 - puede ser en 3 sesiones de 10 de minutos cada una
- Los cambios en el estilo de vida tales como el ejercicio físico regular y una dieta saludable son tan importantes como el tomar los medicamentos para la presión arterial.



Hipertensión arterial: cómo controlarla

- Luego de realizar algunos de estos cambios tal vez se sienta bien, pero todavía es importante que tome su medicina y hable con su médico sobre su presión arterial.
- Recuerde que puede padecer hipertensión arterial aún cuando no se sienta enfermo.



Resfrío común: datos

- ¿Sabía que las infecciones de las vías respiratorias superiores, más conocidas como "resfrío común", fue una de las tres principales dolencias por la que consultaron en nuestra clínica el año pasado?
- El resfrío común es causado por cientos de diferentes tipos de virus.



Resfrío común: datos

- ¿Sabía que es posible contraer el mismo resfrío dos veces? Sin embargo, la segunda vez suele ser más leve y durar menos tiempo.
- Los niños en los EE.UU. padecen alrededor de 5 a 7 resfríos por año, mientras que los adultos tienen aproximadamente 2 a 3 al año.
- Los virus responsables del resfrío pueden permanecer vivos en nuestra piel hasta por dos horas.



Resfrío común: datos

- El fumar lo pone en mayor riesgo de contraer un resfrío más grave.
- Los desagradables síntomas del resfrío que sentimos se deben a que nuestro propio cuerpo trata de combatir la infección en lugar del daño causado por el virus en sí. ¡Hable de enfermarse!
- A menudo, el resfrío comienza con dolor de garganta y secreción nasal. Luego, aparecen la tos y los estornudos.



Resfrío común: ¿estoy resfriado?

Los síntomas del resfrío común son:

- congestión nasal
- escurrimiento nasal
- estornudos
- dolor de garganta
- tos
- fiebre leve
- dolor de cabeza
- dolor de músculos



Resfrío común: ¿resfrío o gripe?

- El diferenciar el resfrío de la gripe puede ser difícil ya que sus síntomas son muy similares.
- Usualmente, el resfrío es más leve que la gripe y no suele causar problemas graves.



Resfrío común: ¿resfrío o gripe?

Por lo general:

Gripe	Resfrío
Comienza muy rápidamente	Comienza despacio
Fiebre, habitual	Fiebre, a veces
Fuerte dolor de cuerpo	Leve dolor de cuerpo
Escalofríos, habituales	Escalofríos, a veces
Estornudos, dolor de garganta y congestión nasal, a veces	Estornudos, dolor de garganta y congestión nasal, habituales
Dolor de cabeza, habitual	Dolor de cabeza, no es habitual

Resfrío común: Señales de alerta

- Por lo general, no es necesario acudir al médico por un resfrío, pero a veces el resfrío puede agravarse.
- **Acuda al médico si:**
 - los síntomas duran más de 10 días



Resfrío común: Señales de alerta

Acuda al médico si:

- los síntomas se agravan o son inusuales
 - por ejemplo: presenta sibilancias o tiene dificultad para respirar
- un líquido verde amarillento sale de uno o de sus dos ojos.
- hijo enfermo tiene menos de 3 meses
- su hijo enfermo se encuentra inusualmente soñoliento o es difícil despertarlo.



Resfrío común: tratamientos

Los tratamientos que **recomendables** para tratar los síntomas del resfrío común son:

- tomar mucha agua
- descansar lo suficiente
- tomar medicamentos tales como **acetaminofeno (Tylenol)** e **ibuprofeno (Motrin)**
- usar spray nasal salino



Appendix M

Data Results Summary

Population Characteristic

Demographics	Number
Gender	
Women	162
Men	78
Ethnicity	
Asian	3
African American	7
Caucasian	17
Hispanics	193
Pacific Islander	4
Other	5
None selected	11
Age Group	
Under 20	14
20-30	47
30-40	44
40-50	55
50-60	45
60-70	31
70-80	4
Sample size	240

Top Three Chief Complaints

Demographic	Complaints (# with complaint)
Gender	
Women	<ol style="list-style-type: none"> 1. stomach pain (24) 2. HA (23) 3. cough (13)
Men	<ol style="list-style-type: none"> 1. fever (8) 2. stomach pain (7) 3. cough (6) HA (6)
Ethnicity	
Asian	<ol style="list-style-type: none"> 1. HTN (1) knee swelling (1) knee pain (1) chest pain (1) hip pain (1) genital lump (1)

African American	<ol style="list-style-type: none"> 1. stomach pain (5) 2. diarrhea (2) heartburn (2)
Caucasian	<ol style="list-style-type: none"> 1. thyroid disease (3) 2. ear pain (2) breast lump (2) stomach pain (2)
Hispanic	<ol style="list-style-type: none"> 1. HA (25) 2. stomach pain (24) 3. cough (16)
Pacific Islander	<ol style="list-style-type: none"> 1. sprained ankle (1) HTN (1) heavy periods (1) congestion (1) irregular periods (1) diabetes (1) UTI (1) HA (1) vision problems (1)
Other	<ol style="list-style-type: none"> 1. cough (2) 2. SOB (1) ear pain (1) dizziness (1) back pain (1) ringing in the ear (1) breathing problems (1) ankle swelling (1) thyroid disease (1) HA (1)
None selected	<ol style="list-style-type: none"> 1. back pain (3) 2. HA (2) sore throat (2)
Age Group	
Under 20	<ol style="list-style-type: none"> 1. fever (4) sore throat (4) 2. HA (3)
20-30	<ol style="list-style-type: none"> 1. stomach pain (9) 2. HA (7) 3. cough (3) chest pain (3) pain with urination (3)
31-40	<ol style="list-style-type: none"> 1. stomach pain (8) 2. dizziness (5) 3. back pain (4)
41-50	<ol style="list-style-type: none"> 1. stomach pain (8) 2. cough (6)

	<ul style="list-style-type: none"> 3. pain with urination (5) chest pain (5) HA (5)
51-60	<ul style="list-style-type: none"> 1. HA (10) 2. HTN (5) cough (5) fever (5)
61-70	<ul style="list-style-type: none"> 1. HTN (3) vision problems (3) 2. stomach pain (2) sore throat (2) back pain (2) dizziness (2) head injury (2)
71-80	<ul style="list-style-type: none"> 1. ear ringing (1) knee pain (1) back pain (1) elevated PSA (1) breast lump (1) worried about prostate cancer (1)

Top Three Diagnoses

Demographic	Diagnosis (# with diagnosis)
Gender	
Women	<ul style="list-style-type: none"> 1. HTN (12) 2. ABD pain (11) 3. URI (10)
Men	<ul style="list-style-type: none"> 1. OA (5) HTN (5) 2. asthma (4)
Ethnicity	
Asian	<ul style="list-style-type: none"> 1. HTN (1) patellofemoral syndrome (1) OA (1) bartholin cyst (1) chest pain (1) quadriceps tendon strain (1)
African American	<ul style="list-style-type: none"> 1. ABD pain (2) 2. IBS (1) GERD (1) RUQ edema (1) HTN (1) anemia (1) chalazion (1)

	<p>infertility (1) constipation (1) stiff neck (1) epididymitis (1) gastroenteritis (1)</p>
Caucasian	<p>1. hypothyroidism (1) 2. HTN (1) amenorrhea (1) ABD pain (1) URI (1) N/V (1) anxiety UTI (1) depression (1) hcg positive (1) MCL tear/sprain (1) cerumen impaction (1) ganglion cyst (1) bacterial conjunctivitis (1) hemorrhoids (1) bone bruise (1) ABD bloating (1) vomiting (1) fibroadenoma (1) fibrocystic breast tissue (1) bilateral perforation of TM (1) CHF (1) rib pain (1) ulcer (unspecified) (1) folliculitis (1) hepatic vein thrombosis (1)</p>
Hispanic	<p>1. HTN (11) 2. ABD pain (10) H. pylori (10)</p>
Pacific Islander	<p>1. PCOS (1) insulin resistance (1) HTN (1) URI (1) overweight (1) ankle sprain (1) urinary frequency (1) blurry vision (1) hormonal imbalance (unspecified) (1)</p>
Other	<p>1. asthma (1) hyperthyroidism (1) acute sinusitis (1)</p>

	<p>hypercholesterolemia (1) medial malleolus swelling (1) labyrinthitis (1) URI (1) eustachian tube dysfunction (1)</p>
None selected	<p>1. URI (2) HTN (2) 2. tension HA (1) hypothyroidism (1) low back pain (1) mastodynia (1) cellulitis (1) edema (unspecified) (1) hypercholesterolemia (1) breast lump (1) foreign body in hand (1) constipation (1) seasonal allergies anxiety (1) myopia (1)</p>
Age Group	
Under 20	<p>1. URI (2) acute pharyngitis (2) tinea pedis (2)</p>
20-30	<p>1. ABD pain (3) URI (3) H. pylori (3)</p>
31-40	<p>1. H. pylori (4) 2. ABD pain (3) 4. HTN (2) URI (2) UTI (2) back muscle strain (2) hcg positive (2) vertigo (2) acute sinusitis (2) anemia (2) AOM (2) BPPV (2) acute pharyngitis (2)</p>
41-50	<p>1. ABD pain (4) 2. HTN (3) Bronchitis (3) UTI (3) asthma (3) hypothyroidism (3)</p>

51-60	<ol style="list-style-type: none"> 1. HTN (6) 2. URI (4) OA (4)
61-70	<ol style="list-style-type: none"> 1. HTN (5) 2. concussion (2) URI (2) OA (2)
71-80	<ol style="list-style-type: none"> 1. HTN (1) OA (1) hematuria (1) elevated PSA (1) breast mass (1),

Acronym key URI: acute upper respiratory infection, UTI: urinary tract infection, OA: osteoarthritis, hcg: human chorionic gonadotropin, PSA: prostate-specific antigen, MCL: medial cruciate ligament, HA: headache, HTN: hypertension, GERD: gastroesophageal reflux disease, ABD: abdominal, TM: tympanic membrane, IBS: inflammatory bowel syndrome, RUQ: right upper quadrant, N/V: nausea and vomiting, CHF: congestive heart failure, PCOS: polycystic ovarian syndrome, BPPV: benign paroxysmal positional vertigo, AOM: acute otitis media, SOB: shortness of breath

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Curriculum Vitae

Laura Larson, BS, RN

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Education

-
- Doctor of Nursing Practice, Family Nurse Practitioner** | UNLV | Las Vegas, NV **Sep 2016 -- Current**
- Cumulative GPA: 3.82/4.00
 - DNP Project Award from the University of Nevada Las Vegas School of Nursing **Feb 2019**
"Health Literacy Intervention for Low Income Uninsured Population" \$1,340
- Bachelor of Science, Major: Nursing, Minor: International Development** | BYU | Provo, UT **Sep 2008 – Apr 2014**
- Cumulative GPA: 3.72/4.00
 - Awarded full-tuition and half-tuition academic scholarships **Sep 2010 – Apr 2014**
 - Board member of the Student Nurses Association at Brigham Young University **Aug 2011 – Apr 2012**
 - \$1,500 ORCA grant recipient for research on adults with type I diabetes **Feb 2012**

Work Experience

-
- Labor & Delivery Nurse** | Utah Valley Regional Medical Center | Provo, UT **Sep 2014 – Feb 2016**
- Motivated and empowered mothers during their unique pregnancy complications and labor progression
 - Employed critical thinking, initiated action, and maintained composure during acute and emergent situations
 - Monitored fetal heart tracings and uterine contractions; appropriately intervened when fetal stress was indicated
 - Trained and experienced in placing intrauterine pressure catheters and fetal scalp electrodes
 - Neonatal resuscitation certified
- Home Health Nurse** | Private Residence | Provo, UT **Jun 2014 – Sep 2014**
- Assisted an elderly woman in her home with daily activities, medication administration, and wound care
 - Coordinated care with local wound clinic, physician, and hospital staff to ensure optimal health and morale
- Research Assistant** | Brigham Young University College of Nursing | Provo, UT **Dec 2010 – Apr 2014**
- Dedicated 1000+ hours on literature reviews and other research treating various topics including type I diabetes, vitamin D supplementation, medication adherence, and mental illness in the homeless population
 - Presented lecture on grant funded research about adults with type I diabetes at a university conference
 - Created and implemented intervention workshops for children with type I diabetes

Clinical Experience

-
- Senior Practicum** | Utah Valley Regional Medical Center | Labor & Delivery Unit | Provo, UT **Jan 2014 – Apr 2014**
- Completed 216 hours with preceptor in labor and delivery setting
 - Worked with unit manager to create educational document used to help unit nurses better implement evidence-based practice
- Study Abroad Practicum** | Tonga **Apr 2012 – May 2012**
- Performed nutritional teaching, health assessments, blood glucose and blood pressure screenings in community centers for 200+ people
 - Gathered and distributed 1,000+ hygiene kits, 60 newborn kits, and 200+ miscellaneous supplies (e.g., gloves, hand sanitizer, toothbrushes) to local schools and hospitals

Volunteer Experience

-
- President Youth Mentor Group** | Hot Springs, AR **Nov 2016-Aug 2017**
- Met bi-weekly with group of young women ages 12-18 to participate in personal development activities
 - Participate together in multiple service projects and leadership building exercises
- United Way Volunteer Care Clinic** | Provo, UT **Jan 2014 – Apr 2015**
- Weekly volunteer as a nurse for low-income individuals and families with acute conditions
 - Cooperated with physicians to perform lab tests, shots, bracing, and appropriate interventions for patients
- Full-time Volunteer for Non-profit organization** | South Korea **Jun 2012 – Dec 2013**
- Mastered the Korean language and taught free English classes to native Koreans
 - Motivated, trained, and supervised fellow volunteers about effective communication and administration