A QUALITY IMPROVEMENT PROJECT TO IMPROVE MEDICAL ASSISTANTS' CONFIDENCE LEVEL IN PROVIDING HEALTH COACHING AND EDUCATION ON HYPERTENSION TO CLIENTS IN A SAFETY NET CLINIC

By

Tam T. Chieu, BSN, RN

University of Kansas

Submitted to the School of Nursing and The Graduate Faculty of the University of Kansas in partial fulfillment of the requirements for the degree of Doctor of Practice.

Carol Buller, DNP, APRN, FNP-BC, GNP-BC

Faculty Project Committee, Chair

Jill Peltzer, Ph.D., APRN-CNS

Faculty Project Committee, Co-Chair

12 November 2018

Date Project Proposal Accepted

The DNP Project committee for Tam T. Chieu certifies that this is the approved version of the following DNP Project:

A Quality Improvement Project to Improve Medical Assistants' Confidence Level in Providing Health Coaching and Education on Hypertension to Clients in A Safety Net Clinic

Carol Buller, DNP, APRN, FNP-BC, GNP-BC

Faculty Project Committee, Chair

Jill Peltzer, Ph.D., APRN-CNS

Faculty Project Committee, Co-Chair

30 March 2019

Date Project Approved

Abstract

Hypertension is one of the leading modifiable risks for cardiovascular disease. Approximately 29% adults in the United States are diagnosed with hypertension, a statistic that continues to rise. The prevalence of hypertension among Hispanic adults was 27.8%. Factors that place Hispanic adults at higher risk for uncontrolled hypertension include a lack of access to healthcare services, high poverty rates, low education, lower health literacy and language barriers. A quality improvement project was implemented in a safety-net clinic serving a predominately Hispanic non-English speaking population in response to the need to improve the management of hypertension in their clients. The clinic relied on many volunteer medical providers but employed three bilingual Medical Assistants (MAs). The literature showed the Medical Assistant workforce is an untapped and underused resource that can help support self-management. The goal of this quality improvement project was to increase the MAs' perceived confidence in providing hypertension health coaching and education for Hispanic clients with hypertension. A baseline suvery assessing understanding of the MA's knowledge of hypertension management was obtained. A second survey evaluating the MA's confidence in providing hypertension health coaching and education was completed. Education on motivational interviewing (MI) technique and hypertension topics was delivered the general clinical staff which included the MAs. Two additional two educational sessions with topics specifically for the MAs were held. Following the third session participants were asked complete confidence level survey again. The result of the project showed that the MAs' confidence level did increase significantly after the educational/coaching sessions.

Key words: Medical Assistants, hypertension education, motivational interviewing, health coaching

Acknowlegements

This author would like to show appreciation and acknowledge the incredible support that I received to complete this project. I am thankful for Dr. Carol Buller and Dr. Jill Peltzer from the University of Kansas School of Nursing for their consistent guidance and mentorship. Dr. Buller and Dr. Peltzer are exceptional role models of professionalism and compassion and they also possess a vast knowledge that they share with their students. It was an unbelievable journey which started with some degrees of uncertainty to become a finished project. The most important lessons during this process were that I had a fulfilled learning experience and grew intellectually and emotionally as a student at the graduate level.

I would also like to offer special thanks to Dr. Jana Zaudke, Ms. Belinda Borelli, and all the supportive staff at the clinic who coordinated, advised and participated in this project. These individuals' contributions made this project possible.

Table of Contents

Introduction

Hypertension, also known as high blood pressure, is present if systolic blood pressure 140 or higher or if diastolic blood pressure is 90 or higher (Torby, Lymn & Glass, 2010). According to Balfour Jr., Rodriguez, and Ferdinand (2015), there are significant associations between hypertension and coronary heart disease, congestive heart failure, stroke and chronic hypertensive renal disease. As the single largest risk factor for cardiovascular mortality in the United States of America , it is responsible for an estimated 45% of cardiovascular deaths (Balfour Jr. et al, 2015). Healthy People 2020 identified hypertension as one of the leading modifiable risk factors. The Centers for Disease Control and Prevention (2016) reported that hypertension costs the nation $46 billion each year for healthcare services, medications, and missed days of work. Reducing the number of persons in the population with hypertension is one of the Healthy People 2020 objectives (Kung & Xu, 2015). To fulfill this objective, health care providers should ensure that evidence-based education is provided for primary prevention to reduce the incidence of hypertension and the burden of complications.

The Phenomenon of Concern

Incidence and mortality

Approximately 29% of the adult United States population are diagnosed with hypertension, a number which is expected to continue to increase (Campbell, Krim, Lavie and Ventura, 2014). There are 57 million Hispanics in the U.S and the prevalence of hypertension among adults in this group was 27.8% during 2015-2016 (Krogstad, 2016; Brooks, 2017). Hispanics are more likely to have cardiovascular risk factors of obesity and type II diabetes which further contribute to the increased morbidity and mortality associated with hypertension (Campbell et al., 2014). Hypertension is a major risk factor for cardiovascular disease and is a

significant predictor of premature death and disability (Liao, Siegel, White, Dulin and Taylor, 2016). In Hispanic population, the hypertension related-death rate increased 18.9% from 2000 to 2005, decreased 5.4% in 2009, and then increased 8.3% in 2013 (Kung & Xu, 2015).

Hypertension and its impact among Hispanic adults

Hypertension is an independent risk factor for coronary artery disease in all populations and accounts for approximately 47% of ischemic events (Shrestha, Shrestha and Vivo, 2016). Hypertension was not only directly associated with coronary heart disease but also positively associated with stroke in both sexes in a population-based Hispanic Community Health Study/Study of Latinos (Daviglus et al., 2012). In this study other risk factors of cardiovascular disease including high serum cholesterol and blood pressure levels, obesity, hyperglycemia/diabetes, cigarette smoking were identified. The prevalence of adverse cardiovascular risk profiles was higher among participants with Puerto Rican background, lower SES, and higher levels of acculturation (Daviglus et al., 2012). This would be a measure of integration of a group into a dominant culture (Vivo, Krim, Cevik, and Witteles, 2009). Lisabeth, Smith, Sanchez, and Brown (2008) confirmed the risk of stroke with high blood pressure in Hispanic population, and noted that Mexican American females who experienced a stroke were more likely to have hypertension, diabetes, or the presence of both hypertension and diabetes. Overall, hypertension was positively associated with cardiovascular disease and stroke in these studies.

Elevated blood pressure is considered a leading cause for chronic kidney disease; as chronic kidney disease is more prevalent in individuals with hypertension (Shrestha, Shrestha and Vivo, 2016). The overall prevalence of chronic kidney disease among Hispanics/Latinos was 13.7% (Ricardo et al., 2015).

Hypertension is associated with other disorders. Researchers found that in Hispanic adult population, hypertension was associated with migraines (Gardener et al., 2016), with macular degeneration (Fraser-Bell et al., 2008), and cognitive changes (Tarraf et al., 2017). Overall, evidence supports the impact of hypertension on health in Hispanic populations.

Hypertension, Hispanic adults, and health disparities

According to Health Services Research Information Central (n.d.), health status disparities refer to the variation in rates of disease occurrence and disabilities between socioeconomic and/or geographically defined population groups. Hispanics/Latinos are the largest minority group in the United States and this population is projected to grow to one-third of the US population by 2060 (Ricardo et al., 2015). The Hispanic population also remains one of the groups with the highest poverty rate which negatively impacts access to health care and contribute to vulnerability as a high-risk population (Medina-Inojosa, Jean, Cortes-Bergoderi, & Lopez-Jimenez, 2014).

Despite a lower prevalence of hypertension in Hispanics compared to other ethnic groups, the crude incidence rate of hypertension per 1000 person-years was higher in middle-aged and older adult (45–84 years) Hispanics compared with non-Hispanic Whites of the same age group (65.7 vs 56.8) (Guzman, 2012). The proportion of Hispanics/Latinos who were aware of the diagnose of hypertension, being treated with medication, or had their hypertension controlled was found to be lower compared with non-Hispanic Whites, and the percent was lowest in those without health insurance (Ostchega et al, 2007; Sorlie et al., 2014). In addition, controlled blood pressure was also substantially lower among Mexican Americans compared to other ethnic populations (Mensah et al., 2005).

The high incidence rate, inadequate control, hypertension impact, health disparities and increase mortality of hypertension are significant in Hispanic community; therefore, health care providers need to provide culturally appropriate patient-centered interventions.

Purpose Statement and Research Question

Developing approaches in the primary care setting aimed toward reducing the incidence and improving hypertension control in Hispanic population are crucial. One approach was to look at other resources at the clinic that could help improve hypertension outcomes. Nonlicensed health care personnel that include medical assistants, front desk staff, health coaches, patient navigators, and lay educators are often underused and medical assistants in particular represent an untapped resource for self-management support (Bodenhemier & Smith, 2013; Willard-Grace & et al., 2013). Therefore, patient education and health coaching by MAs may provide additional benefits in patient care.

The question which helped guide this project was: "At a safety-net clinic with a predominantly Hispanic adult population, do Medical Assistant staff who received education on motivational interviewing (MI) technique and hypertension topics have increased confidence to promote health coaching and hypertension self-management education?" The purpose of this quality improvement project was to improve hypertension control of patients in the clinic by engaging and teaching MAs to provide hypertension education and health coaching to promote self-management and life style changes in patients.

The Organization

The clinic was located in a Midwest metropolitan community in a county that was also considered medically underserved. The clinic operated through charitable donations and collaboration from volunteer physicians and other members in the community. The mission of

the clinic was to “reveal God’s healing love by improving the health of the individuals and communities we serve — especially those who are poor and vulnerable” (Caritas Clinics, 2018). According to the medical director, 100% of the patients were uninsured, 80% of patients who had established care at the clinic between January 2018 and August 2018 considered themselves Hispanic, and 100% were living at or below 175% poverty level. Therefore, the clinic offered a unique opportunity for uninsured patients to receive the care they need. The most common chronic diseases encountered at the clinic include hypertension, diabetes, and depression.

The medical director identified a need to improve treatment outcomes for hypertension. The percentage of patients aged 18-85 years who had a diagnosis of hypertension and whose blood pressure was adequately controlled (<140/90mmHg) during the measurement period was the hypertension control marker used at the clinic. The clinic set an optimal goal for monthly hypertension control of greater than 75%. Hypertension control from January-July 2018 had been steady at 70%, but decreased to 60 % for August.

During a typical visit with a Spanish speaking patient, the MA obtained vital signs, weight, and an RN reviewed the medical, family, social history, and reconciled medications. Approximately 60% of the patients at the clinic had a language barrier that created challenges indelivery of traditional education about disease management by healthcare providers at the clinic. The MAs, were bilingual, and remained for the duration of the visit to interpret for the patient and healthcare provider.

Based on a clinical observation, some current clinical practices related to HTN assessment and knowledge needed to be improved. One MA shared that she is not comfortable giving diet and exercise instructions because this type of education was medical advice. The same MA had unique knowledge of a type of seasoning a Hispanic patient was using,

recognizing that it was high in sodium, the MA recommended the patient use sea salt instead. As a result, she unknowingly provided education to the patient and underestimated her abilities. This example illustrated how the MA did engage in informal education and also had a opportunity to provide culturally relevant education.

Literature Review

A review of literature was conducted to find current evidence on the effectiveness of MA utilization and use of MAs in health coaching and teaching. The search for literature started with the utilization of Pub Med, MEDLINE, CINAHL, PMC and OVID. The criteria for literature search included articles in English, published between 2008-2018, and free full text. Exclusion included articles which were published more than 10 years ago. Search terms for this review were “medical assistant”, “hypertension education”, “health coach”, and “motivational interview”. The search yielded six articles relevant to the medical assistant workforce providing health coaching and education. Articles on motivational interviewing used by medical assistants were not specifically found; however, relevant findings on benefits of MI skill were noted.

Using an untapped workforce

Health disparities and the negative impact of hypertension were concurrent issues in Hispanic/Latino population, prompting healthcare providers to look for ways to help manage hypertension efficiently. Research findings showed 50% of patients left the office visit without understanding what advice their physician gave; patients were unable to express their concerns in 25 % of visits; and 40% of primary care physicians reported not having adequate time to spend with their patients (Bodenheimer & Laing, 2007). An increased demand for primary care services for an aging population and a decrease in primary care providers will continue to create a demand-capacity discrepancy (Bodenheimer & Smith, 2013). With the inevitable physician

shortage, it becomes increasingly challenging for prescribing providers to spend adequate and quality time with their patients. Bodenheimer and Smith (2013) suggested that primary care practices could increase their capacity to meet patient demand if they delegated clinical responsibilities to non-provider team members and to patients themselves. MAs were identified as an untapped resource for self-management support by Willard-Grace and colleages (2013). Therefore, utilizing MAs at their full potential could be one of the solutions. The traditional clinical role of the MA has been typically limited to escorting patients to an exam room, taking vital signs, noting the chief complaint in the record, and then leaving the exam room unless assistance is needed with a procedure (Chapman and Blash, 2017). That traditional role limits scope of practice and productivity for MAs.

Evidence supported the use of MAs as health coaches for chronic disease management. Health Coaching (self-management support) is intended to empower patients within the health care setting and in their daily lives (Willard-Grace et al., 2013). In a randomized pilot study, researchers found that HbA1c decreased across time for the medical assistant coaching group, while increasing for the treatment as usual and no contact control groups (Ruggiero et al., 2010). Health coaching topics included healthy eating, glucose self-testing, physical activity, foot care, smoking cessation, and medication adherence. Furthermore, the medical assistant coaching group experienced significantly greater increases in perceived empowerment and a larger, although nonsignificant, reduction in perceived diabetes related problems than the treatment as usual group (Ruggiero et al., 2010). Ivey et al. (2012) found 46 Chinese-American participants with diabetes who received health coaching interventions from MAs had well-controlled HbA1c levels compared to 46 control subjects at the 6-month follow-up. In this study, the clinic staff noted possible explanations for decreased HbA1c levels in patients who received health

coaching. Health coaches were able to catch medication errors, and correct mistakes early before the patients' next physician visit; and they also helped patients navigate the medical system, which increased adherence to physician recommendations (Ivey et al, 2012). Both studies noted better controlled HbA1c levels with the use of medical assistant health coaching interventions.

Moreover, Thom et al. (2015) found the use of medical assistants trained in health coaching significantly improved the quality of care that low-income patients with poorly controlled chronic disease received from their healthcare team. In this study, 224 participants from two safety clinics were randomly assigned to health coaching arm and 217 participants were allocated to the usual care arm. English and Spanish-speaking low-income patients from two safety clinics were included. The health coaches used active listening and nonjudgmental communication; helping with self-management skills for diabetes, hypertension, and hyperlipidemia; providing social and emotional support; assisting with lifestyle change; facilitating medication understanding and adherence; navigating the clinic; and accessing community resources (Thom et al., 2015). Health coaching had a significantly greater impact on quality of care and satisfaction in Spanish-speaking patients (Thom et al., 2015). With bilingual health coaches, language and cultural barriers were more likely reduced. Thom and other colleagues (2014) reported that patients who received 12 months of health coaching had increased trust level in their primary care providers which enhanced the relationship between patients and providers. Both of these studies demonstrated an important effect of health coaching on quality of care, satisfaction, and trust level.

The medical assistant workforce is more ethnically and linguistically diverse than other health professions and therefore they are more culturally and linguistically concordant with patient populations they serve (Willard-Grace et al., 2013). MAs could be a valuable asset to

support culturally tailored-care to patients; thus, increasing the potential to enhance clinic productivity and promote patient-centered care.

Incorporating motivational interview in practice

MAs should be prepared with necessary skills and additional knowledge in order to empower their patients. In the traditional role, MAs focus on tasks such as rooming patients, measuring VS, and providing immunizations. But they often have limited interaction in health coaching and educating. Therefore, it might be challenging for MAs to know how to approach, ask questions, and counsel patients. In addition to gaining knowledge on teaching subjects, motivational interviewing (MI) technique could also be a beneficial instrument to prepare MAs as health coaches.

MI was developed as a patient-centered therapy and it is considered a therapeutic approach which helps people to work through ambivalence, insecurities, and commit to change (Hettema, Steele & Miller, 2005). In addition, it was designed to support an individual's motivation for and movement toward a specific goal by provoking and exploring the person's own arguments for change (University of Massachusetts, n.d). MI strategies have been successfully used to promote weight reduction, dietary modification, exercise, smoking cessation, and safe-sex practices (American College of Obstetricians and Gynecologists, 2009). It was found that brief MI training protocols led to increased provider knowledge and confidence, and self-reported usage of MI skills in clinical practice (Cucciare et al., 2012). In addition, the providers' ability to listen was improved (Cucciare et al., 2012). Ma, Zhou, Zhou, and Huang (2014) found that systolic blood pressure (SBP) and diastolic blood pressure (DBP) of hypertensive patients decreased during the six months of the motivational interviewing counselling. It was believed that empowerment and encouragement of the MI counselling

prompted the hypertensive patients to engage in the healthcare professionals' recommendations (Ma et al., 2014). Ren et al. (2014) reported in their meta-analysis study that MI was an effective psychological approach to control the SBP through behavior change both intervention and post-intervention follow-ups. However, compared to Ma et al. study, Ren et al. suggested that the effects of MI on DBP need additional verification. MI technique proved to be an effective method to promote behavioral change in patients. Overall, using MI can promote growth in knowledge, confidence and listening skills in health care providers as well as behavioral changes in patients after interacting with providers who used this technique.

The incorporation of MI skills in practice and increased utilization of MA workforce may provide benefits in supportive care. This combination of knowledge and skills could be used to improve quality of care in primary care settings.

The Shewhart Cycle

This project aimed to improve quality of healthcare by increasing medical assistants' knowledge and confidence level in supporting patients with hypertension. Healthcare quality, as health services, should improve desired health outcomes and these outcomes should be based on the strongest clinical evidence and provided in a technically and culturally competent manner with good communication and shared decision making (Moran, Burson, & Conrad, 2017). Quality improvement projects generally consist of analyzing elements of specific areas of performance to improve outcomes (Moran et al., 2017). The Shewhart Cycle model, also known as the PDSA cycle, comprises a four-stage cyclic learning approach to adapt changes aimed at improvement (Taylor et al., 2014). The PDSA four stages include Plan (plan the test or observation, including a plan for collecting data), Do (try out the test on a small scale), Study (set aside time to analyze the data and study the results), and Act (refine the change, based on what

was learned from the test) (AHRQ, 2008). The PDSA cycle was appropriate to guide this project focus on increasing MAs' knowledge on hypertension, and confidence level to empower the MAs to be more involved in patient care.

Methods

Study Design and Sample

The quality improvement project used the PDSA cycle with a pretest-posttest design, aimed to examine the perceived confidence of MAs in providing hypertension health coaching and HTN self-management education before and after receiving educational intervention.

Participants included two MAs and a certified nursing assistant (CNA) who provided direct care to Hispanic patients with hypertension at the clinic. These staff were fluent in English and Spanish and they were encouraged to participate by the medical director as part of a larger initiative on improving hypertension control in the clinic. The project was submitted to the University of Kansas Medical Center Human Research Protection Program and deemed to be a QI project and further review was not required.

Data Collection and Instrumentation

A survey to assess the MA's confidence level was modified from a similar survey developed by St. Peter Family Practice Residency Program on Patient Self-Management for diabetic control - Robert Wood Johnson Grant on Patient Self-Management (See Appendix A). The 10-question survey used a likert scale to rate confidence pertaining to areas of hypeternsion education. The questions were modified from the original survey to ensure application to hypertension (Diabetes Initiative, n.d.). The surveys were color-coded (Black, Orange and Purple) and each participant was assigned a color to compare pre-and posttest. In addition, participants received a matching colored envelop as their survey color as a reminder. A

hypertension knowledge assessment survey was adapted from the task-shifting strategy for hypertension. This survey was used to help select appropriate topics for subsequent teaching sessions (Gayamfi & et al., 2017).

The three non-prescribing staff (2 MAs and 1 CNA) who provided supportive care for patients with hypertension at the clinic were invited to participate in the quality improvement project. An informational letter (See Appendix B) was given to the participants and verbal agreement obtained. The surverys were administered prior to an educational session on hypertension management. This general education was provided to all of the providers, nurses, MAs and nurse practitioner students at the clinic. Two additional teaching sessions for the MAs were scheduled two-months apart to provide targeted education based on initial survey results. Examples of case-scenarios were shared throughout the teaching sessions which created an interactive teaching/learning environment. This type of interaction promoted learning and understanding from both educator and participants. After the two teaching and coaching sessions were completed, the three participants completed the confidence survey again. Comparison of the pre and post survey assessed change in perceived confidence level in providing hypertension health coaching and hypertension self-management education.

Educational intervention. The educational intervention included materials on motivational interviewing, American Heart Association education about hypertension management, obtaining accurate BP reading, how to read labels, lifestyle modifications, and approximate range of systolic BP reduction from these modifications. Additionally, tips to reduce salt and sodium and advice on common chores and activities, that help burn calories from National Institutes of Health, were also provided. A bubble diagram was introduced to the MAs with common topics related to hypertension to discuss with patients at the visit. MAs were

encouraged to defer appropriate questions or concerns to prescribing providers for additional support (See Appendix C).

Data Analysis

Composite scores with means were calculated for each of the surveys. Additionally, the mean score for each question was calculated. The pretest and posttest mean scores for confidence level were put into an Excel spreadsheet. Comparison of mean scores facilitated the determination of whether the education had any effect on confidence level.

Results

The three participants completed all educational sessions, pretest and posttest confidence level surveys as well as the initial hypertension knowledge survey.

HTN knowledge survey

There were ten items on the hypertension knowledge survey to test basic hypertension knowledge. Two of the participants gave 10/10 for all the right responses. However, one participant answered “Yes” when asked if “Motivational Interviewing techniques are not useful when guiding patient to make lifestyle changes”. This provided an opportunity to introduce MI technique to the MAs. Although this participant missed the last question, it was acknowleged that all participants were familiar with the basic hypertension knowledge based on the results of this survey.

Confidence Level Survey

A level of confidence's mean score for an individual question was compared between pretest and posttest results.

Table 1: *Pretest/Posttest Confidence Level' Score for Each Question, Mean scores and Differences*

How comfortable?	**Black**	**Orange**	**Purple**	Mean score	Difference (posttest-pretest mean score)
1. Pre: asking questions about hypertension self-management	3	0	0	1	
Post: asking questions about hypertension self-management	2	3	2	2.33	1.33
2. Pre: providing education about hypertension	2	1	0	1	
Post: providing education about hypertension	3	2	1	2	1
3. Pre: checking blood pressure accurately	2	2	1	1.66	
Post: checking blood pressure accurately	3	3	1	2.33	0.66
4. Pre: talking about physical activity (exercise) with a patient	3	1	2	2	
Post: talking about physical activity (exercise) with a patient	2	3	2	2.33	0.33
5. Pre: talking about food choices (diet) with a patient	2	1	1	1.33	
Post: talking about food choices (diet) with a patient	3	3	2	2.66	1.33
6. Pre: talking about reading food labels	1	0	1	0.66	
Post:talking about reading food labels	3	3	1	2.33	1.67
7. Pre: discussing what blood pressure readings mean	1	1	1	1	

	Post: discussing what blood pressure readings mean	3	3	2	2.67	1.67
8.	Pre: asking about hypertension medications	2	1	0	1	
	Post: asking about hypertension medications	3	3	2	2.67	1.67
9.	Pre: listening and understanding what makes a patient with hypertension stressed/depressed	1	1	0	0.67	
	Post: listening and understanding what makes a patient with hypertension stressed/depressed	3	3	2	2.67	2
10.	Pre: talking to a provider about their patient with hypertension	2	1	0	1	
	Post: talking to a provider about their patient with hypertension	2	2	1	1.67	0.67

Note. Individual was asked to rate their level of confidence from 0-3 for each of the items using the scale: *0 = "Not Comfortable"; 1 = "Somewhat comfortable"; 2 = "Comfortable", 3 = "Very comfortable".*

Based on the differences of the mean scores, the interpreted results demonstrated the participants were more comfortable discussing these different hypertension topics with their patients after receiving hypertension education. However, the biggest improvements were that the participants were significantly more comfortable in "asking questions about hypertension self-management", "talking about food choices (diet) with a patient", "talking about reading food labels", "discussing what BP readings mean", "asking about hypertension medications", and "listening and understanding what makes a patient with hypertension stressed/depressed". The increase in posttest mean scores indicated the intervention had a positive impact with the level of confidence of the MAs.

In addition to examination of each question's mean score individually, the total mean score for the three participants was calculated and compared for the pre and post confidence surveys. Again, there was a substantial increase in the posttest mean score which demonstrated

that the hypertension education intervention had a significant effect on the collective MAs' confidence level (Table 2).

Table 2: *Pretest/Posttest Confidence Level's Total Score for Each Survey, Mean score, Difference*

	Pretest total score	*Posttest total score*
Black	19	27
Orange	9	28
Purple	6	16
Mean score	11.33	23.67
Difference (Posttest – Pretest mean score)	12.34	

Note: Each survey had 30 possible points.

Discussion

This quality improvement project sought to increase non-licensed personnel's knowledge and confidence to provide hypertension education to Hispanic patients at a safety-net clinic. These goals were met. The three staff expressed gratification and appreciation from the additional hypertension education they received. They also voiced how the teaching helped answer questions they did previously know. These participants asked many constructive questions. For example they expressed knowledge of normal BP reading but did not understand the meaning of systolic and diastolic numbers. Moreover, there was a lack of knowledge of how salt affected BP and why providers instructed patients to cut back on salt intake. The MAs were encouraged to use both MI skills and enhanced hypertension knowledge to educate and pursuade patients to be more involved in hypertension self-management. With the increased confidence level and knowledge, the MAs in the clinic could improve their capacity to assist patients in making healthy life-style choices.

Support from the medical director was a key component and motivator for this project. The medical director provided encouragement for the idea of empowering MA by increasing confidence level and hypertension knowledge.

Due to time restriction, the ability to look at longer term effects of the education was limited. Repeating surveys at 6 months, 12 months, arranging meetings regularly with MA for education, support and mentoring, and observing MAs in health coaching would have been helpful. The effect of this training on the improvement of BP management in the clinic was not measured.

An important lesson from this experience was to never assume that everyone has the same hypertension knowledge. The gaps in hypertension knowledge (food choices, exercise, medications, depression, obtain accurate BP readings, and how to read a label) were further identified as different topics were introduced in teaching sessions. These gaps were meticulously addressed and clarified throughout the educational process. The project shed light on an important aspect that there is always a need for additional or enhanced knowledge for clinical staff to ensure quality of care is provided.

The small sample size posed a challenge in the determination of statistical significance of the results in this project. However, based on the evaluation of mean scores from pre and posttest surveys, it indicated that level of confidence was positively associated with hypertension education.

If time had permitted, it would have been more helpful to obtain the MAs' verbal feedback on the hypertension education. More importantly, it would have been beneficial to obtain information on what they learned and would like to learn for future mentoring. That feedback would then help evaluate teaching effectiveness and use as a guidance for future

education. Because of the duration of the project, it was not possible to obtain the useful feedback.

Conclusion

This project focused on improving the level of perceived confidence in providing health coaching and education on hypertension in MA staff. Hypertension can affect any individual; however, it poses more problems for vulnerable populations because of language barriers, low socio-economic status, and lower literacy. This was currently evident in the Hispanic population in this clinic. Hypertension, as one of the many causes for the increase of chronic illnesses, healthcare cost, and mortality, should not be treated casually. It is important to educate and guide people in self-managent of hypertension and other preventable and treatable conditions with healthy lifestyle choices that are culturally congruent. MAs, who gain more confidence and additional education, may be able to help patients as health coaches helping them learn new self-management skills. Safety-net clinics provide a bridge to decrease burden of healthcare disparities; hence, it is crucial to utilize this opportunity to increase MAs' knowledge, and through health coaching increase patients' knowledge and help them to take charge of their own health. To meet the goal of Healthy People in 2020 by reducing the number of people with hypertension, all healthcare staff should provide special attention on vulnerable populations to help them to reach that goal.

References

Agency for Healthcare Research and Quality. (2008). Plan-Do-Study-Act (PDSA) Cycle | AHRQ Health Care Innovations Exchange. Retrieved from https://innovations.ahrq.gov/qualitytools/plan-do-study-act-pdsa-cycle

American College of Obstetricians and Gynecologists. (2009). Motivational interviewing: A tool for behavior change. Retrieved from https://www.acog.org/-/media/Committee-Opinions/Committee-on-Health-Care-for-Underserved-Women/co423.pdf?dmc=1&ts=20180908T1530108279

Balfour Jr, P. C., Rodriguez, C. J., & Ferdinand, K. C. (2015). The role of hypertension in race-ethnic disparities in cardiovascular disease. *Current Cardiovascular Risk Report, 9*(4). doi:10.1007/s12170-015-0446-5

Bodenheimer, T., & Laing, B. Y. (2007). The teamlet model of primary care. *Annals of Family Medicine, 5*(5), 467-481. doi:10.1370/afm.731

Bodenheimer, T. S., & Smith, M. D. (2013). Primary care: Proposed solutions to the physician shortage without training more physicians. *Health Affairs, 32*(11). Retrieved from https://doi.org/10.1377/hlthaff.2013.0234

Brooks, M. (2017). Uncontrolled Hypertension Unchanged in US Adults. Retrieved from https://www.medscape.com/viewarticle/887254

Campbell, P. T., Krim, S. R., Lavie, C. J., & Ventura, H. O. (2014). Clinical characteristics, treatment patterns and outcomes of Hispanic hypertensive patients. *Progress in Cardiovascular Diseases, 57*(3), 244-252. doi:10.1016/j.pcad.2014.08.006

Caritas Clinics. (2018). Our History – Caritas Clinics. Retrieved from https://caritasclinics.org/caritas/history

Centers for Disease Control. (2016). High blood pressure facts. Retrieved from https://www.cdc.gov/bloodpressure/facts.htm

Chapman, S. A., & Blash, L. K. (2017). New roles for medical assistants in innovative primary care practices. *Health Services Research, 52*, 383–406. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5269548/

Cucciare, M., Ketroser, N., Wilbourne, P., Midboe, A. M., Cronkite, R., Berg-Smith, S. M., & Chardos, J. (2012). Teaching motivational interviewing to primary care staff in the Veterans Health Administration. *Journal of General Internal Medicine, 27*(8), 953–961. Retrieved from https://dx.doi.org/10.1007%2Fs11606-012-2016-6

Daviglus, M. L., Talavera, G. A., Aviles-Santa, M. L., Allison, … & Stamler, J. (2012). Prevalence of major cardiovascular risk factors and cardiovascular diseases among Hispanic/Latino individuals of diverse backgrounds in the United States. *JAMA*, *308*(17), 1775-84. doi:10.1001/jama.2012.14517

Diabetes Initiative. (n.d.). *Medical assistant confidence level – A survey St Peter Family Practice residency program Robert Wood Johnson grant on patient self-management*. Retrieved from http://www.diabetesinitiative.org/resources/tools/documents/12-PROV-MAconfidencelevelsurvey_web.pdf

Fraser-Bell, S., Wu, J., Klein, R., Azen, S. P., Hooper, C., Foong, A. W. P., & Varma, R. (2007). Cardiovascular risk factors and age-related macular degeneration: The Los Angeles Latino eye study. *American Journal of Ophthalmology*, *145*(2), 308-316. doi:10.1016/j.ajo.2007.10.007

Gardener, H., Monteith, T., Rundek, T., Wright, C. B., Elkind, M. S., & Sacco, R. L. (2016). Hypertension and migraine in the Northern Manhattan study. *Ethnicity & Disease, 26*(3), 323-30. doi:10.18865/ed.26.3.323

Gayamfi, J., Plange-Rhule, J., Iwelunmor, J., Lee, D., Blackstone, S. R., Mitchell, A., … Ogedegbe, G. (2017). Training nurses in task-shifting strategies for the management and control of hypertension in Ghana: a mixed-methods study. *BioMed Central Health Services Research*, *17*(104), 1-9. Retrieved from https://doi.org/10.1186/s12913-017-2026-5

Health Services Research Information Central. (n.d.). HSRIC: Health Disparities. Retrieved from https://www.nlm.nih.gov/hsrinfo/disparities.html

Hettema, J., Steele, J., & Miller, W. R. (2005). Motivational interviewing. *Annual Review of Clinical Psychology, 1*, 91-111. doi:10.1146/annurev.clinpsy.1.102803.143833

Ivey, S. L., Tseng, W., Kurtovich, E., Lui, B., Chang, R., Liu, J., … Hubbard, A. (2012). Evaluating a culturally and linguistically competent health coach intervention for Chinese-American patients With diabetes. *Diabetes Spectrum*, *25*(2), 93-102. Retrieved from https://doi.org/10.2337/diaspect.25.2.93

Khatib, R., Schwalm, J. D., Yusuf, S., Haynes, R. B., Mckee, M., Khan, M., & Nieuwlaat, R. (2014). Patient and healthcare provider barriers to hypertension awareness, treatment and follow up: a systematic review and meta-analysis of qualitative and quantitative studies. *PLOS ONE, 9*(1), e84238. Retrieved from https://doi.org/10.1371/journal.pone.0084238

Krogstad, J. M. (2016). Key facts about how the U.S. Hispanic population is changing. Retrieved from https://www.pewresearch.org/fact-tank/2016/09/08/key-facts-about-how-the-u-s-hispanic-population-is-changing/

Kung, H. C., & Xu, J. (2015). Hypertension-related mortality in the United States, 2000-2013. *NCHS Data Brief*, (193), 1-8.

Liao, Y., Siegel, P. Z., White, S., Dulin, R., & Taylor, A. (2016). Improving actions to control high blood pressure in Hispanic communities: Racial and ethnic approaches to community health across the U.S. project, 2009-2012. *Preventative Medicine*, *83*, 11-15. doi:10.1016/j.ypmed.2015.11.027

Lisabeth, L. D., Smith, M. A., Sanchez, B. N., & Brown, D. L. (2008). Ethnic disparities in stroke and hypertension among women: The BASIC project. *American Journal of Hypertension*, *21*(7), 778-83. doi:10.1038/ajh.2008.161

Ma, C., Zhou, Y., Zhou, W., & Huang, C. (2014). Evaluation of the effect of motivational interviewing counselling on hypertension care. *Patient Education and Couseling*, *95*(2), 231-7. doi:10.1016/j.pec.2014.01.011

Medina-Inojosa, J., Jean, N., Cortes-Bergoderi, M., & Lopez-Jimenez, F. (2014). The Hispanic paradox in cardiovascular disease and total mortality. *Progress in Cardiovascular Diseases*, *57*(3), 286-292. doi:10.1016/j.pcad.2014.09.001

Mensah, G. A., Mokdah, A. H., Ford, E. S., Greenlund, K. J., & Croft, J. B. (2005). State of disparities in cardiovascular health in the United States. *Circulation*, *111*(10), 1233–1241.

Moran, K., Burson, R., & Conrad, C. (2017). *The Doctor of Nursing Practice scholarly project: A framework for success* (2nd ed.). Burlington, MA: Jones & Bartlett Learning.

Ostchega, Y., Dillion, C. F., Hughes, J. P., Carroll, M., & Yoon, S. (2007). Trends in hypertension prevalence, awareness, treatment, and control in older U.S. adults: data

from the National Health and Nutrition Examination Survey 1988 to 2004. *Journal of the American Geriatrics Society*, *55*(7), 1056-1065. doi:10.1111/j.1532-5415.2007.01215.x

Perez, A. (2011). Self-management of hypertension in Hispanic adults. *Clinical Nursing Research*, *20*(4), 347-365. doi:10.1177/1054773811411582

Ren, Y., Yang, H., Browning, C., Thomas, S., & Liu, M. (2014). Therapeutic effects of motivational interviewing on blood pressure control: A meta-analysis of randomized controlled trials. *Internation Journal of Cardiology*, *172*(2), 509–511. Retrieved from https://doi.org/10.1016/j.ijcard.2014.01.051

Ricardo, A. C., Flessner, M. F., Eckfeldt, J. H., … & Lash, J. P. (2015). Prevalence and correlates of CKD in Hispanics/Latinos in the United States. *Clinical Journal of American Society of Nephrology*, *10*(10), 1757-66. doi:10.2215/CJN.02020215

Ruggiero, L., Moadsiri, A., Butler, P., Oros, S., Berbaum, M., Whitman, S., & Cintron, D. (2010). Supporting diabetes self-care in underserved populations. *The Diabetes Educator*, *36*(1), 127-131. Retrieved from http://journals.sagepub.com.proxy.kumc.edu:2048/doi/pdf/10.1177/0145721709355487

Shrestha, P. L., Shrestha, P. A., & Vivo, R. P. (2016). Epidemiology of comorbidities in patients with hypertension. *Current Opinion in Cardiology*, *31*(4), 376-80. doi:10.1097/HCO.0000000000000298

Sorlie, P. D., Allison, M. A., Aviles-Santa, M. L., … & Talavera, G.A. (2014). Prevalence of hypertension, awareness, treatment, and control in the Hispanic community health study/study of Latinos. *American Journal of Hypertension*, *27*(6), 793-800. doi:10.1093/ajh/hpu003

Tarraf, W., Rodriguez, C. J., Daviglus, M. L., … & Gonzalez, H. M. (2017). Blood pressure and Hispanic/Latino cognitive function: Hispanic community health study/study of Latino results. *Journal of Alzheimer's Disease*, *59*(1), 31-42. doi:10.2215/CJN.02020215

Taylor, M. J., McNicholas, C., Nicolay, C., Darzi, A., Bell, D., & Reed, J. E. (2014). Systematic review of the application of the plan-do-study-act method to improve quality in healthcare. *BMJ Quality & Safety*, *23*(4), 290-8. doi:10.1136/bmjqs-2013-001862

Thom, D. H., Hessler, D., Willard-Grace, R., Bodenheimer, T., Namajbadi, A., Araujo, C., & Chen, E. H. (2014). Does health coaching change patients' trust in their primary care provider? *Patient Education and Counseling*, *96*(1), 135-8. doi:10.1016/j.pec.2014.03.018

Thom, D. H., Hessler, D., Willard-Grace, R., DeVore, D., Prado, C., Bodenheimer, T., & Chen, E. H. (2015). Health coaching by medical assistants improves patients' chronic care experience. *The American Journal of Managed Care*, *21*(10), 685-91. Retrieved from https://www.ajmc.com/journals/issue/2015/2015-vol21-n10/health-coaching-by-medical-assistants-improves-patients-chronic-care-experience

Torby, J. M., Lynm, C., & Glass, R. M. (2010). Hypertension. *JAMA*, *303*(20), 2098. doi:10.1001/jama.303.20.2098

University of Massachusetts. (n.d.). A definition of motivational interviewing. Retrieved from https://www.umass.edu/studentlife/sites/default/files/documents/pdf/Motivational_Interviewing_Definition_Principles_Approach.pdf

Vivo, R. P., Krim, S. R., Cevik, C., & Witteles, R. M. (2009). Heart failure in Hispanics. *Journal of the American College of Cardiology*, *53*(14), 1167-1175. doi:10.1016/j.jacc.2008.12.037

Willard-Grace, R., DeVore, D., Chen, E. H., Hessler, D., Bodenheimer, T., & Thom, D. H. (2013). The effectiveness of medical assistant health coaching for low-income patients with uncontrolled diabetes, hypertension, and hyperlipidemia: Protocol for a randomized controlled trial and baseline characteristics of the study population. *The BioMed Central Family Practice, 14*(27). Retrieved from https://dx.doi.org/10.1186%2F1471-2296-14-27

Appendix A
Surveys
Medical Assistant Confidence Level Survey

DATE: _____

When talking with patients who have *hypertension*:

Please circle one answer to the right	**Responses**			
1. How comfortable are you asking questions about hypertension self-management?	*Not comfortable* 0	*Somewhat comfortable* 1	*Comfortable* 2	*Very comfortable* 3
2. How comfortable are you providing education about hypertension?	*Not comfortable* 0	*Somewhat comfortable* 1	*Comfortable* 2	*Very comfortable* 3
3. How comfortable are you that blood pressure are checked correctly?	*Not comfortable* 0	*Somewhat comfortable* 1	*Comfortable* 2	*Very comfortable* 3
4. How comfortable are you talking about physical activity (exercise) with a patient?	*Not comfortable* 0	*Somewhat comfortable* 1	*Comfortable* 2	*Very comfortable* 3
5. How comfortable are you talking about food choices (diet) with a patient?	*Not comfortable* 0	*Somewhat comfortable* 1	*Comfortable* 2	*Very comfortable* 3
6. How comfortable are you talking about reading food labels?	*Not comfortable* 0	*Somewhat comfortable* 1	*Comfortable* 2	*Very comfortable* 3
7. How comfortable are you discussing what blood pressure readings mean?	*Not comfortable* 0	*Somewhat comfortable* 1	*Comfortable* 2	*Very comfortable* 3
8. How comfortable are you asking about hypertension medications?	*Not comfortable* 0	*Somewhat comfortable* 1	*Comfortable* 2	*Very comfortable* 3
9. How comfortable are you listening and understanding what makes a patient with hypertension stressed/depressed?	*Not comfortable* 0	*Somewhat comfortable* 1	*Comfortable* 2	*Very comfortable* 3
10. How comfortable are you talking to a provider about their patient with hypertension?	*Not comfortable* 0	*Somewhat comfortable* 1	*Comfortable* 2	*Very comfortable* 3

Adapted from St Peter Family Practice Residency Program on Patient Self-Management for diabetic management Robert Wood Johnson Grant on Patient Self-Management.
http://www.diabetesinitiative.org/resources/tools/documents/12-PROV-MAconfidencelevelsurvey_web.pdf

Hypertension Knowledge Assessment

Please <u>circle the correct answer</u> to the right	**Responses**			
1. If someone's blood pressure is 115/75. It is…	*Do not know*	*Low*	*Normal*	*High*
2. If someone's blood pressure is 160/100. It is…	*Do not know*	*Low*	*Normal*	*High*
3. People with high blood pressure should take their medicine…	*Do not know*	*Everyday*	*At least a few times a week*	*Only when they feel sick*
4. Losing weight usually makes blood pressure…	*Do not know*	*Go Up*	*Go Down*	*Stay the same*
5. Eating less salt usually makes blood pressure…	*Do not know*	*Go Up*	*Go Down*	*Stay the same*
6. High blood pressure can cause heart attack, stroke and kidney problems.	*Do not know*	*Yes*	*No*	
7. Moderate to vigorous exercise 30 mins/a day 3-5 times a week lower blood pressure.	*Do not know*	*Yes*	*No*	
8. Smoking a pack of cigarettes per day will not affect a person risk of hypertension.	*Do not know*	*Yes*	*No*	
9. A person with high blood pressure should eat less fat and more fruits and vegetables.	*Do not know*	*Yes*	*No*	
10. Motivational Interviewing techniques are not useful when guiding patient to make lifestyle changes.	*Do not know*	*Yes*	*No*	

Adapted from TASSH Hypertension Knowledge Assessment.

https://bmchealthservres.biomedcentral.com/articles/10.1186/s12913-017-2026-5#Sec7

Appendix B

Letter Invitation

Letter Invitation to Participate

Subject: Knowledge and Level of Confidence in Hypertension Management Survey

Dear participants,

As a Medical Assistant who is providing care to Hispanic patients with a diagnose of hypertension, you are invited to participate in the project *Hypertension Knowledge and Implementation of Hypertension Education.*

The purpose of this project is to assess confidence level of Medical Assistants in caring for hypertensive patients through this survey, followed by an implementation of hypertension education, and evaluate the confidence level after education through the same survey. In addition, the hope of this project is to increase hypertension knowledge in Medical Assistants who wish to acknowledge and use this information to empower their patients in hypertension self-management.

The survey will take approximately 5-10 minutes to complete.

Thank you very much for your participation and completion of the survey. Please don't hesitate to contact Tam Chieu at tchieu@kumc.edu with any questions or concerns about the study.

Sincerely,

Tam Chieu, BSN, RN, DNP student

Appendix C

Hypertension Education Materials for Toolkit

Motivational Interviewing Technique

About MI

- A patient-centered therapy
- MI helps people to work through *ambivalence, insecurities, and commit to change*

Examples:

Used to promote weight reduction, dietary modification, exercise, smoking cessation, mental health, substance abuse, and safe sex practices…

American College of Obstetricians and Gynecologists. (2009 January). Motivational interviewing a tool for behavior change. Retrieved from https://www.acog.org/-/media/Committee-Opinions/Committee-on-Health-Care-for-Underserved-Women/co438.pdf?dmc=1&ts=20150908T1530100229

Rollnick, S., Miller, W. R. (2008). Motivational interviewing. Annual Review of Clinical Psychology, 1, 91-111. doi:10.1146/annurev.clinpsy.3.022806.091432

Substance Abuse and Mental Health Services Administration. (1999). Chapter 3—Motivational Interviewing as a Counseling Style—Enhancing Motivation for Change in Substance Abuse Treatment—TOC. Rockville. Retrieved from https://www.ncbi.nlm.nih.gov/books/NBK64964/

University of Massachusetts. (n.d.). MI: Definition Principles & Approach. Retrieved from https://www.umass.edu/studentlife/sites/default/files/documents/pdf/Motivational_Interviewing_Definition_Principles_Approach.pdf

General Principles

- Express empathy through reflective listening.
- Develop discrepancy between clients' goals or values and their current behavior.
- Avoid argument and direct confrontation.
- Adjust to client resistance rather than opposing it directly.
- Support self-efficacy and optimism

MI skills (OARS)

O - Open-ended questions

A - Affirmations

R – Reflections

S – Summaries

O: open-ended questions invite elaboration and thinking more deeply about an issue.

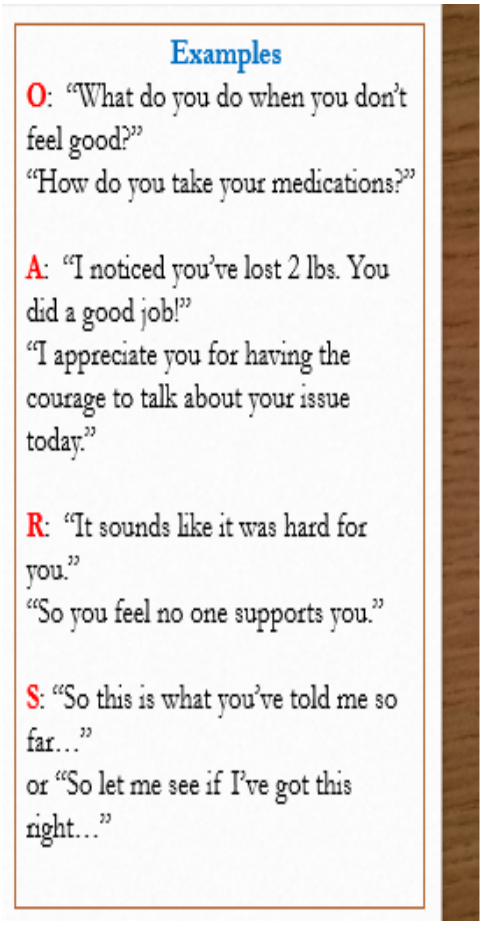
A: statements that recognize client strengths.

R: careful listening and reflective responses. Understand the issues from client's perspective.

S: recaps what has occurred in all or part of a counseling session.

MOTIVATIONAL INTERVIEW (MI)

OARS and Examples



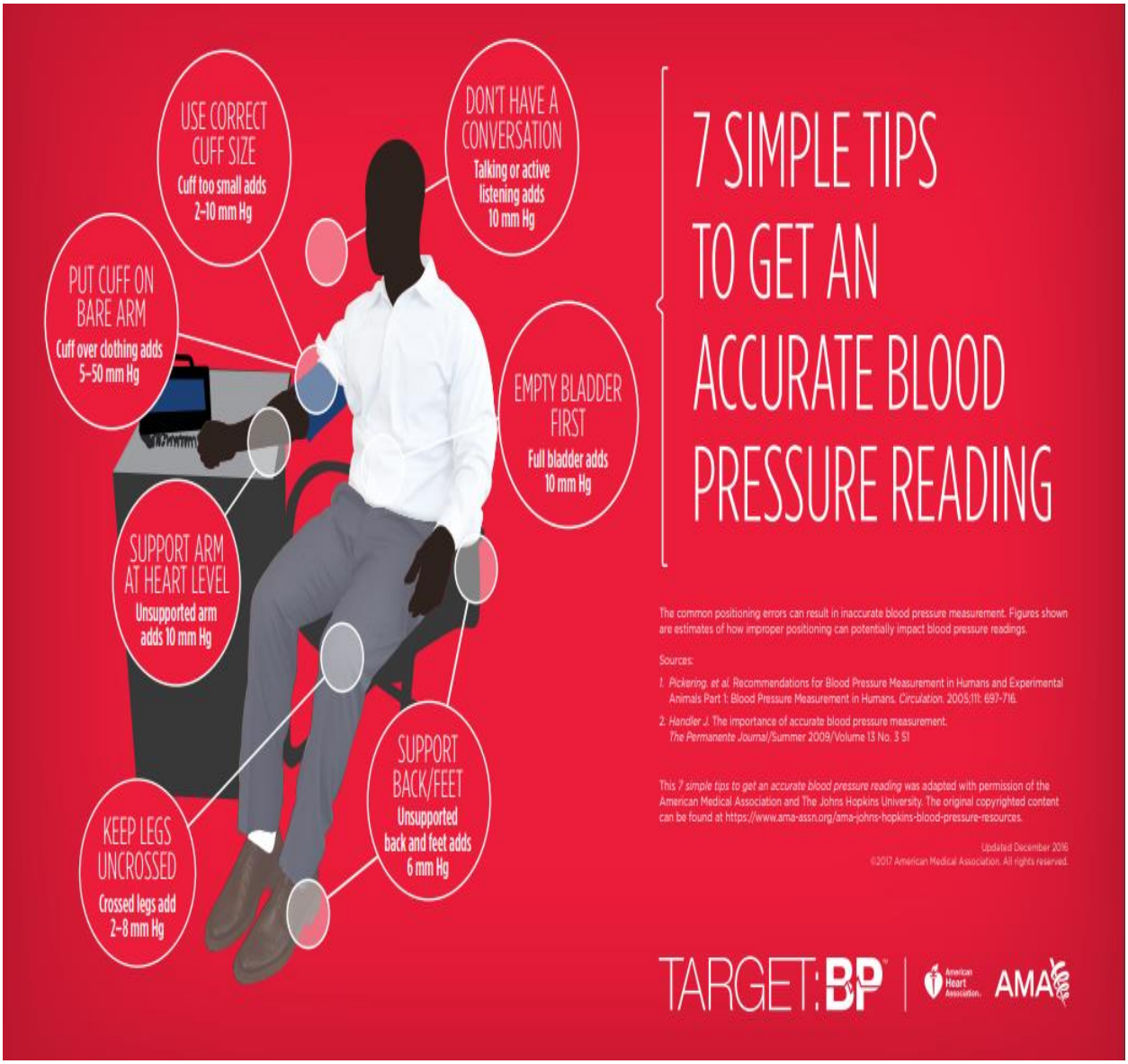
O: open-ended questions invite elaboration and thinking more deeply about an issue.

A: statements that recognize client strengths.

R: careful listening and reflective responses. Understand the issues from client's perspective.

S: recaps what has occurred in all or part of a counseling session. [10]

How to check blood pressure accurately



Bubble Diagram

Please pick a topic you like to discuss with your provider at your visit.

Adapted from "Partnering in Self-Management Support: A Toolkit for Clinicians."

Note: *Underlined text indicates a link. Refer to page 127 for the full set of web addresses used in this toolkit.*

Name:

Checklist for hypertension topics

- ☐ **Taking medications to help control high blood pressure**

  _____

- ☐ **Reducing sodium (salt)**

  _____

- ☐ **How the medications are making me feel**

  _____

- ☐ **Physical activity**

  _____

- ☐ **Smoking**

  _____

- ☐ **Losing weight**

  _____

- ☐ **Depression**

  _____

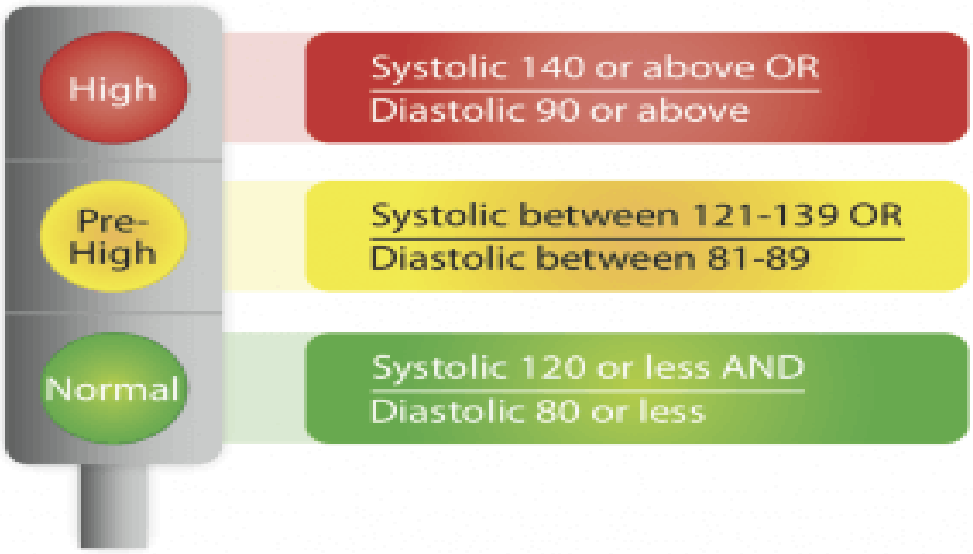
- ☐ **Diet**

  _____

- ☐ **Others**

  _____

How is my blood pressure?



https://edrugsearch.com/comprehensive-list-blood-pressure-medications/

Date: _____

Systolic (upper number): _____

Diastolic (lower number): _____

High blood pressure may affect:

- **Kidneys:** increases your risks of kidney failure and need for dialysis
- **Heart:** increases your risks of heart attacks and heart failure
- **Brain:** increases your risks of strokes

Keeping your blood pressure under control will help keep you healthy and prevent complications

Sharp Rees-Stealy Medical Centers: http://www.measureuppressuredown.com/hcprof/find/Toolkit/toolkit.pdf

Salt reduction, diet and exercise recommendations

Things you can do to help lower high blood pressure

Common chores	Sporting activities
❖ Washing and waxing a car for 45–60 minutes ❖ Washing windows or floors for 45–60 minutes ❖ Gardening for 30–45 minutes ❖ Wheeling self in wheelchair for 30–40 minutes ❖ Pushing a stroller 1 1/2 miles in 30 minutes Raking leaves for 30 minutes ❖ Shoveling snow for 15 minutes ❖ Stair walking for 15 minutes	❖ Playing volleyball for 45–60 minutes Playing touch football for 45 minutes Walking 2 miles in 30 minutes (1 mile in 15 minutes) ❖ Shooting baskets for 30 minutes ❖ Bicycling 5 miles in 30 minutes ❖ Dancing fast (social) for 30 minutes Performing water aerobics for 30 minutes Swimming laps for 20 minutes ❖ Playing basketball for 15–20 minutes Jumping rope for 15 minutes ❖ Running 1 1/2 miles in 15 minutes (1 mile in 10 minutes)

Tips To Reduce Salt and Sodium

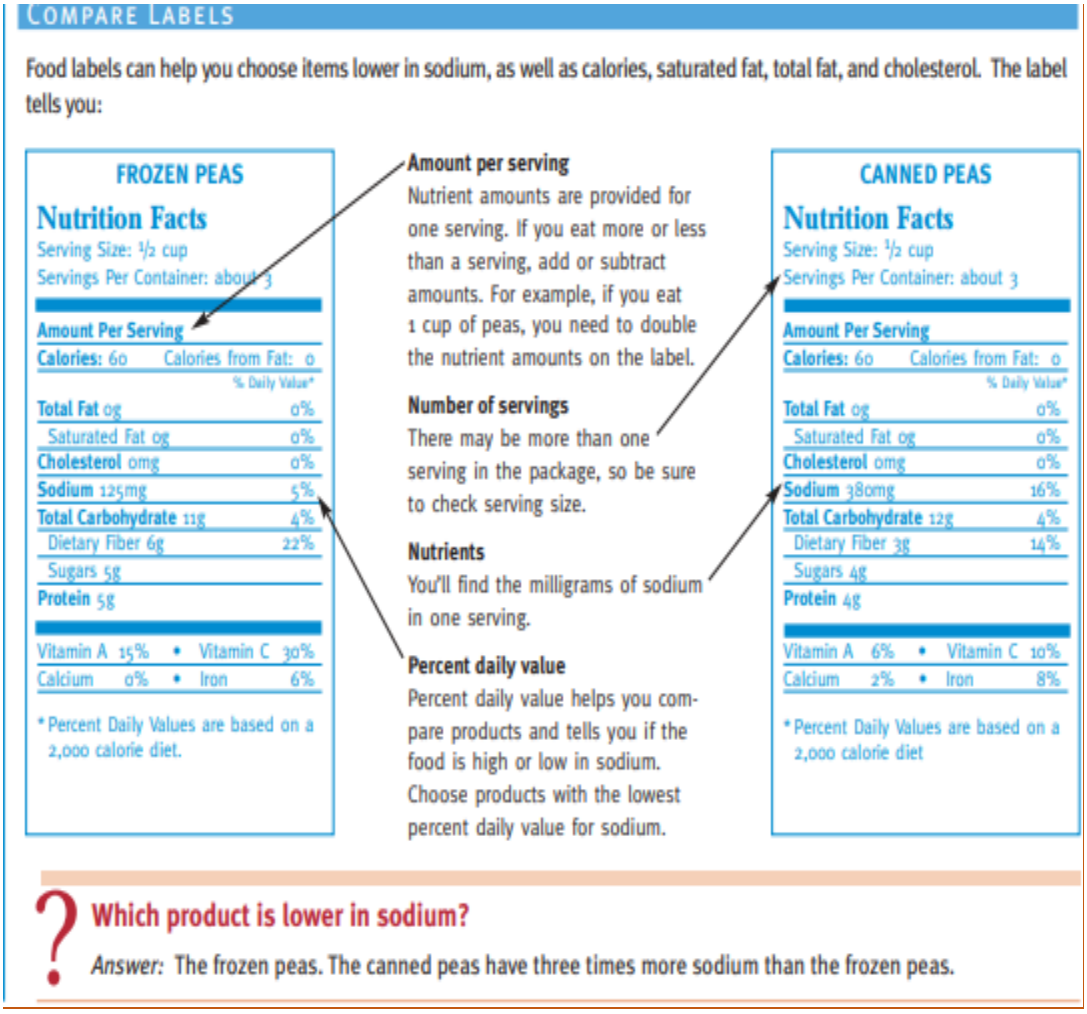
- Buy fresh, plain frozen, or canned "with no salt added" vegetables.
- Use fresh poultry, fish, and lean meat, rather than canned or processed types.
- Use herbs, spices, and salt-free seasoning blends in cooking and at the table.
- Cook rice, pasta, and hot cereal without salt. Cut back on instant or flavored rice, pasta, and cereal mixes, which usually have added salt.
- Choose "convenience" foods that are low in sodium. Cut back on frozen dinners, pizza, packaged mixes, canned soups or broths, and salad dressings—these often have a lot of sodium.
- Rinse canned foods, such as tuna, to remove some sodium.
- When available, buy low- or reduced-sodium or no-salt-added versions of foods.
- Choose ready-to-eat breakfast cereals that are low in sodium.

National Institutes of Health. (2003). Your guide to lowering blood pressure. Retrieved from https://www.nhlbi.nih.gov/files/docs/public/heart/bhp_low.pdf

Modification	Recommendation  	Approximate SBP Reduction (Range)
Reduce weight	Maintain normal body weight (body mass index 18.5–24.9 kg/m2)	5–20 mm Hg/10 kg
Adopt DASH eating plan	Consume a diet rich in fruits, vegetables, and low-fat dairy products with a reduced content of saturated and total fat	8–14 mm Hg
Lower sodium intake	a. Consume no more than 2,400 mg of sodium/day; b. Further reduction of sodium intake to 1,500 mg/day is desirable, since it is associated with even greater reduction in BP; and c. Reduce sodium intake by at least 1,000 mg/day since that will lower BP, even if the desired daily sodium intake is not achieved	2–8 mm Hg
Physical activity	Engage in regular aerobic physical activity such as brisk walking (at least 30 min per day, most days of the week)	4–9 mm Hg
Moderation of alcohol consumption	Limit consumption to no more than 2 drinks (e.g., 24 oz beer, 10 oz wine, or 3 oz 80-proof whiskey) per day in most men, and to no more than 1 drink per day in women and lighter weight persons	2–4 mm Hg

American Heart Association/American Stroke Association. Retrieved from http://www.heart.org/idc/groups/heart-public/@wcm/@hcm/documents/downloadable/ucm_480133.pdf

Choose food with low Sodium (Na)

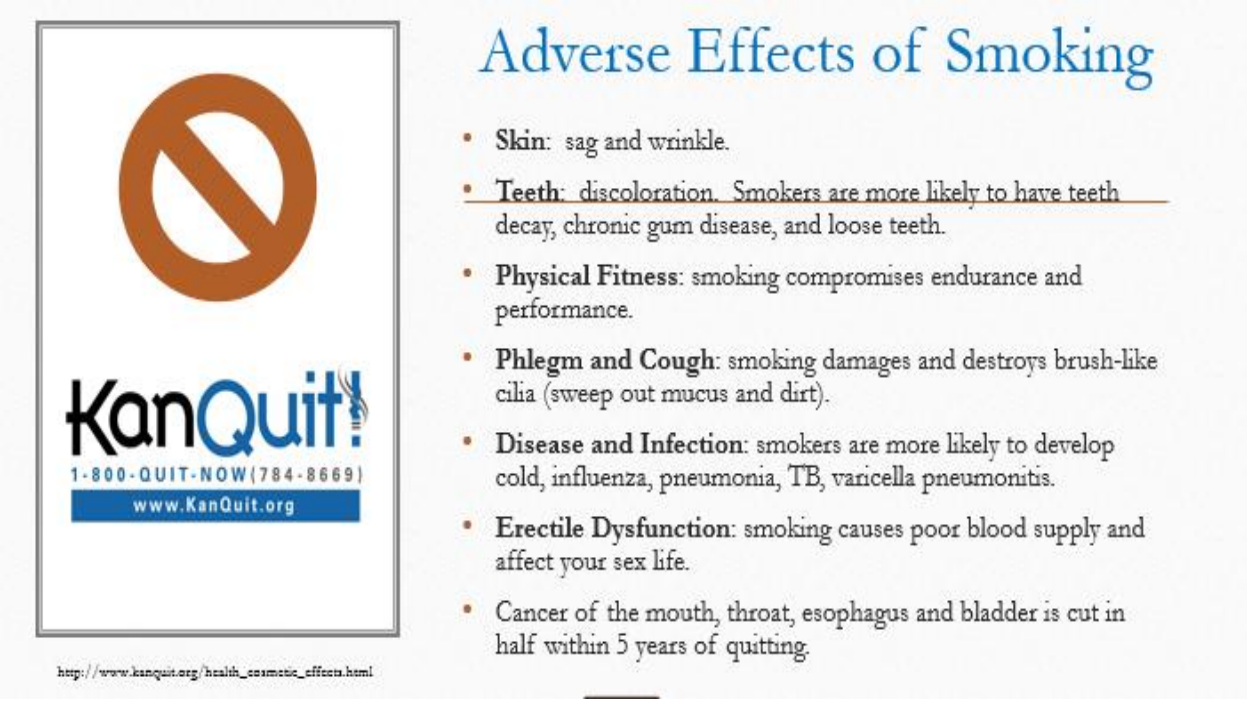


https://www.nhlbi.nih.gov/files/docs/public/heart/hbp_low.pdf

Take medications as directed

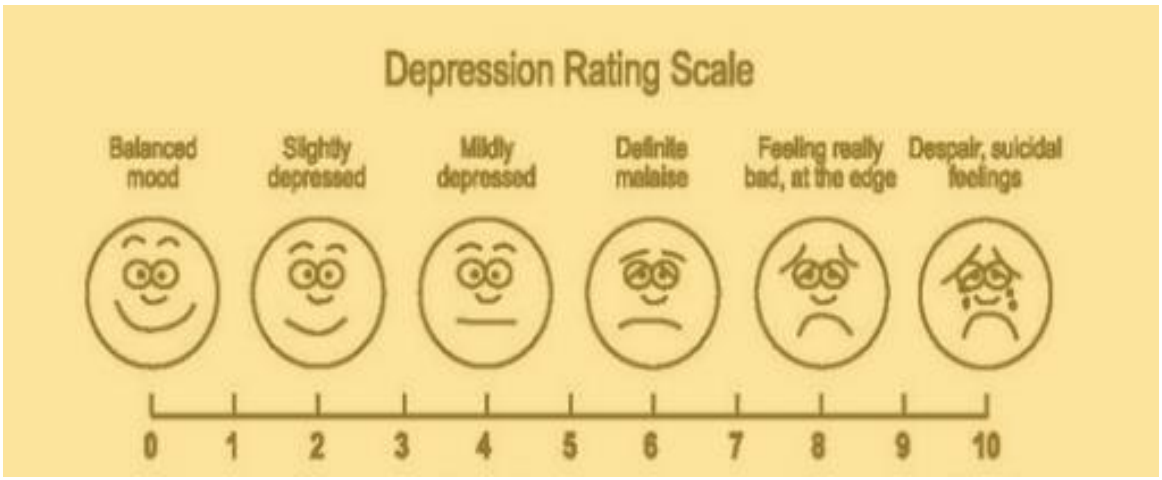
WomenHeart: https://cdn.ymaws.com/www.womenheart.org/resource/resmgr/Infographics/Infographic_-_What_is_medica.pdf

Adverse effects of smoking



http://www.kanquit.org/health_cosmetic_effects.html

DISCUSS WITH YOUR PROVIDER ON HOW TO QUIT SMOKING OR JOIN KANQUIT PROGRAM: 1-800-QUIT-NOW



1-10 Depression Scale

8-10 despair, suicidal feelings

6-7 feeling really bad, at the edge

5 definite malaise, insomnia

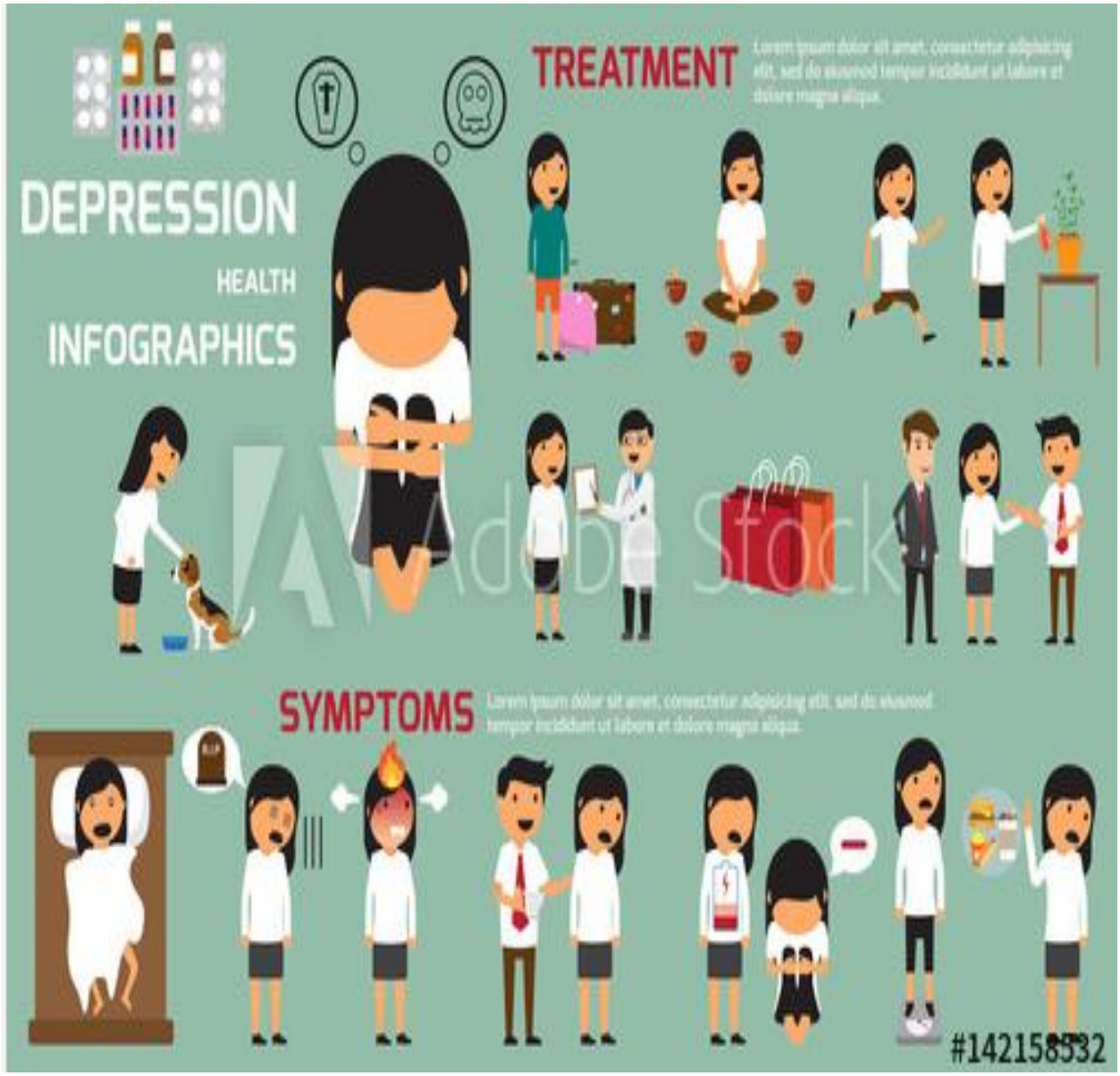
3-4 depression slightly stronger

1-2 minorly depressed mood

0 absence of symptoms

http://www.thehealingpathwithchildren.com/2016/10/24/worry-bag-daily-rating-scale-anxiety-depression/

Depression



https://stock.adobe.com/images/depression-signs-and-symptoms-infographic-concept-despair-psychology-adult-miserable-depressed-heartbroken-vector-flat-cartoon-illustration-poster-sad-guy-man-character-vector-illustration/142158532