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Implementation of an Evidence-Based Educational Workshop and Toolkit: Menopausal Women's Healthcare Needs for the Primary Care Provider

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Section I: Abstract

This evidence-based change of practice project involved the development of an educational workshop for primary care providers (PCPs). The intent of the project was to improve PCP's knowledge of menopausal health, and to create their comfort level when discussing menopausal healthcare with clients. The workshop *Menopausal Women's Healthcare Needs for the Primary Care Provider* (Doerr-Kashani, 2014) was created in response to an identified gap in knowledge among PCPs nationally on menopause-related health issues. The workshop was designed as a resource to support PCPs to competently address women's menopause-related health issues, and enable them to provide comprehensive, evidence-based care within the existing clinic setting. The curriculum of this workshop included: a) PowerPoint presentation, b) printed current, evidence-based practice guidelines for menopausal-related conditions, and c) a CD with further evidentiary information. The companion *Toolkit* (Doerr-Kashani, 2014) provided templates for patient education designed to inform the patient, identify patient's questions to focus the visit, facilitate patient-provider communication and joint treatment decision-making. Two pilot workshops were delivered at Lifelong Brookside Clinic as a test of change. Outcome measures were pre and post-tests that assessed knowledge of menopause health care and comfort level discussing menopause. Change was measured by comparing pre and post tests for each attendee and revealed both improved PCP knowledge and comfort level. The Clinic Director subsequently decided to adopt the *Toolkit* for use at the clinic

Key words: *menopause healthcare needs, primary care provider education and menopause, patient engagement in healthcare, patient education and menopause.*

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SECTION II: INTRODUCTION

Background

Setting. This evidence-based change of practice project involved the development of an educational workshop as a resource for primary care providers (PCPs) in the community clinic setting, to increase knowledge and improve comfort with menopausal health needs. The workshop, *Menopausal Women's Healthcare Needs for the Primary Care Provider* (Doerr-Kashani, 2014), was implemented twice at Lifelong Brookside Health Clinic, in Richmond California. Lifelong Brookside Health Clinic is a federally qualified health center which provides health care to a medically underserved population. The purposes of the workshop were to improve PCP: a) knowledge and competence about menopause-related health issues, and b) comfort with conversations with clients about menopause.

The following sections describe three main issues that contributed to the development of the workshop. The first section describes the identified gap in provider knowledge. The second section describes the voluminous numbers of menopausal-aged women affected by this identified gap. The third section addresses the major healthcare issues common to menopause-aged women.

Gap in provider knowledge. The US Department of Health and Human Service (USDHHS) Council on Graduate Medical Education (COGME, 1995) reported that women have important health care needs for which they receive fragmented, uncoordinated care. They also stated "physicians had not been well prepared to meet the challenges of women's health" (p. 22). In the same report, COGME created a competency in women's health, as a provision of care to women across the life span, that called for increased training of women's health in

medical schools, and for existing physicians to take advantage of continued medical education to learn more about women's health concerns.

Florence et al. (2013) reported that the Women's Health Education Task force first added a learning competency mentioning menopause in 2001 for medical students. Thomas et al. (2014) noted the first mention of menopause-specific learning competency for nurse practitioner students was in 2013.

After reviewing the literature, it becomes apparent that two decades after the initial call for better healthcare for women, there has been little improvement with adequate educational practice in women's menopausal healthcare needs (Hsieh, Nunez-Smith, & Henrick, 2013). This gap in the education of medical students regarding women's healthcare needs has continued to be reiterated over the years (Hsieh, 2013; Nunez-Smith, & Henrich, 2013; Spencer & Kern, 2008). For example, Hseih et al. found in a survey of 100 primary care medical residents, 50 described a low level of comfort discussing symptoms related to menopause with their patients, and only three had done so more than five times in the previous six months.

Santen, Stuenkel, Burger and Manson (2014) called upon internists who provide primary care to "re-engage in menopause management." They found "most internists currently lack the core competencies and experience necessary to address menopausal issues and meet the needs of women" (p. 281). Santen et al. reported that "this situation is detrimental to women's health, leads to fragmented health care, and should change" (p. 281) and suggested providers obtain a set of core competencies to meet this identified need. They recommended that PCPs of all types need to improve their knowledge of menopause symptoms, have fingertip access to

up-to-date evidence-based treatment for managing symptoms, and tools for communicating information to patients.

Growing population of menopause-aged women. In 2010 there were nearly 64.5 million women over age 45 in the United States (US Census, 2012). This number of menopause-aged women is projected to reach 73.5 million by 2020, and 89 million by 2050 (Howden & Meyer, 2011; US Census, 2012). Women constitute the majority of the older adults in the U.S. They spend 30% of their lifetimes post-menopausal currently, expected to reach 40-50% by 2020 (Howden & Meyer). Brockie et al. (2014) affirms that due to increased longevity the European Menopause Androgen Society (EMAS) considers menopause an event of middle-age.

Menopause-related health care needs. Naturally occurring menopause is not a disease. It is a normal life stage signaling the physiologic transition terminating the reproductive years (Fantasia & Sutherland, 2014). Women frequently lack knowledge about menopause-related symptoms and their associated long-term health risks, and may be embarrassed or uncomfortable asking for advice from their health care provider (Flanagan, Serrato, Altschuler, Tallman, & Thomas, 2005; O'Dell, 2014). Women may not realize a health issue they are experiencing is a normal symptom of menopause. Conversely, the women may incorrectly attribute a pathological symptom of a potentially treatable disorder to menopause, or another benign cause, and not mention it to the provider. In addition, for many women the emotional and physical symptoms can be difficult to discuss (O'Dell, 2014).

When menopause-related symptoms are under-reported, or minimized, it can result in a missed diagnosis, negatively impacting the patients' quality of life, and the symptoms themselves can become debilitating (Brockie et al., 2014; Caple & March, 2014; O'Dell, 2014;

Ponte, Klemperer, Sahay & Chren, 2008). PCPs should both encourage menopause-aged women to discuss the symptoms they may be having, and offer evidence-based therapeutic options (Abernethy, 2008).

Fontenot and Fantasia (2014) point out that health issues increase as women age, with menopause-related conditions becoming more prevalent. For example, as women lose the estrogenic protective factor on the cardiovascular system they rapidly catch up and pass men of the same age in cardiovascular disease, which is the number one killer of women (Abernethy, 2008; Brockie et al., 2014; Mosca et al., 2011). Cardiovascular disease is frequently not identified as a menopause-related health issue by some providers.

Impact on quality of life. The physiological changes occurring due to decreasing estrogen levels can have a significant impact on a woman's quality of life throughout menopause. Women may experience onerous psychological changes related to the decreasing estrogen in menopause such as mood swings, depression, irritability, anxiety, and fatigue (Caple & March, 2014; Kornstein, 2010). Other menopause related symptoms such as insomnia, sleep disturbances, and weight gain are common during this time period (Caple & March).

Menopause related symptoms impact many aspects of a woman's life. Relationships can be impacted by hormonal mood swings. Work may be affected by impaired sleep, reduced concentration and a 'foggy' cognitive feeling. Although some of these symptoms can occur in any age group, studies show the hormone level changes resulting in estrogen depletion and other multifactorial events cause most women to have one or more of these symptoms during this time (Greenblum, Rowe, Neff & Greenblum, 2010).

Vasomotor symptoms. Hot flashes and night sweats, vulvovaginal dryness, and urinary incontinence are common conditions which women may experience during the menopausal period (Greenblum & Greenblum, 2010). The American College of Obstetricians and Gynecologists' (ACOG) Women's Health Stats & Facts (2011) report up to two-thirds of menopausal women have hot flashes, and twenty-five per cent of these women may experience hot flashes and night sweats that last from five to ten years. Fantasia and Sutherland (2014) identified vasomotor symptom as primary motivators for women to seek treatment, possibly due to the detrimental impact on quality of life. Other symptoms related to vasomotor instability are anxiety, the feeling of heart palpitations and sleep disturbances. These symptoms impact various aspects of a woman's life (Brockie, et al., 2014; Caple & March, 2014; O'Dell, 2014; Ponte, Klemperer, Sahay & Chren, 2008).

Bladder dysfunction. O'Dell (2014) points out that the common bladder dysfunctions related to advancing age are urinary incontinence, stress incontinence, overactive bladder, and interstitial cystitis, also called bladder pain syndrome. These are related to hypoestrogenic changes, causing decreased compliance in smooth muscle contractions, as well as atrophic changes. Another symptom, urogenital atrophy can cause dyspareunia, decreased sex drive, pruritus, dryness, and pain (O'Dell).

Chong, Khan and Anger (2011) report the national financial burden of stress urinary incontinence is over $12 billion, with patients paying for about 70% of routine management costs, such as pads and diapers. O'Dell (2014) describes urinary incontinence symptoms related to serious pathology as sometimes similar to normal menopausal changes, which can be overlooked. Urinary incontinence symptoms related to pathology can include symptoms of an

abnormal neurologic examination, history of cancer in the pelvis, anatomical abnormalities, or cognitive impairment. O'Dell notes these, as well as new-onset symptoms of nocturnal enuresis, hematuria, dysuria, polydipsia, persistent or recurrent urinary tract infections, or urinary retention represent just a few menopause-related issues that warrant further evaluation.

Osteoporosis. As estrogen plays a role in the production and regulation of osteoblasts and osteoclasts, estrogen depletion can also increase a woman's risk for osteoporosis which involves significant morbidity and mortality (Charnow & Harris, 2014; Florence et al., 2013). Currently eight million American women are affected by osteoporosis. An additional 34 million Americans are diagnosed with osteopenia (American Academy of Orthopedic Surgeons [AAOS], 2009).

Osteoporosis increases the risk and frequency of fractures of the hip, spine, and wrist, with 350,000 hip fractures, and an additional 1.5 million non-hip fractures attributed to osteoporosis (AAOS). Seventy percent of those who experience fractures due to osteoporosis do not regain their pre-injury state (AAOS). By 2020, half of Americans over age 50 will have weak bones, and a hip fracture makes the risk of death within three months four times more likely (Surgeon General Report on Bone Health, 2012). The financial burden associated with these fractures cost the nation $18 billion in 2005, with a cumulative cost of $474 billion predicted over the next twenty years (AAOS, 2009). Women can receive reliable risk and prevention information around bone health from their PCPs, to help prevent this disease.

Primary hyperparathyroidism. (PHPT) is more prevalent in women, and the prevalence increases with age until postmenopause when the incidence is highest (Siilin, Ljundggren &

Lundgren, 2011). PHPT is related to decreased estrogen levels, which impact calcium homeostasis, and causes increased parathyroid gland activity in an attempt to regain balance of calcium levels (Siilin et al.). PHPT is a silent, asymptomatic event that is usually detected in routine blood chemistry analysis, and confirmed with identified high levels of intact parathyroid hormone in relation to serum calcium levels (Siilin et al.). Even mild PHPT is associated with increased morbidity and mortality related to cardiac and vascular disease, nephrolithiasis, metabolic disturbances, osteoporosis, neurochemical imbalance, and muscular symptoms (Siilin et al.). In those with chronic kidney disease, elevated parathyroid levels are associated with an increased mortality or need for dialysis or renal transplant (Charnow, 2009). These are all disorders that providers should be aware of when assessing the menopausal woman.

In summary, the population of postmenopausal women is increasing. They undergo many physiologic changes with subsequent symptomology as a natural part of menopause, which may result in a significant impact on women's quality of life (Caple & March, 2014; O'Dell, 2014). It is incumbent upon PCPS to be able to communicate completely with the patient, recognize the associated symptoms clusters, undertake appropriate diagnostics, and consider evidence-based treatment recommendations when caring for the menopausal woman.

Local Problem

An evidence-based change of practice educational workshop was developed to address the local gap of primary care provider knowledge in the health care of menopause women. The Institute for Healthcare Improvement (IHI, 2015) supports testing changes by implementing a small scale test of change first, and assess for improvement based on the implemented change,

via the plan-do-study-act model. The idea in mind is if the project outcome data proved positive, there might be the optimistic goal of future replication. In planning this practice change, the best evidence was incorporated related to the health care needs of menopause-aged women, common concerns of the PCPs in meeting these needs, as well as methods to support the PCPs in meeting health care needs of menopausal women.

Needs of Menopausal Women. Much of how women respond to menopause and their decision-making process around treatment options is based on conversations they have with family members, friends and their health care provider (Caple & March, 2014; Theroux, 2009). Culture, personal beliefs and values, incorrect information, and pressure or concerns from others may influence their thoughts and decisions about what women would consider, in terms of treatment (Caple & March; Theroux, 2009).

Shih, Bost and Pawlson (2003) reported on results of a quality assurance report of managed care organizations, based on four performance measures required by the National Committee for Quality Assurance (NCQA). One of the four performance measures was management of menopause. Trudeau, Ainscough, Trent, Starker and Cousineau (2010) surveyed 58,000 menopausal women, who rated the quality of the menopause counseling they received as a whole at 50.2 out of 100, and personalization of counseling as 47.3 out of 100. Only 33.2% of these women thought they received "quality menopause information," and the NCQA determined the management of menopause in these managed care organizations was inadequate (Shih et al., 2003).

Flanagan et al. (2005) conducted the Management of Menopause Intervention study at Kaiser Permanente. This study involved a survey of 665 menopause-aged women, who had

attended appointments with their PCPs, to learn about menopause. The researchers reported that "one half of these women completing the survey stated they left medical appointments with unanswered questions" (p. 20). They also wanted more information than received from their providers (p. 20). Women also felt providers trivialized their concerns about menopause.

Women wish to know how to relieve menopause-related symptoms, and how to best care for themselves in the future (Flanagan et al., 2005). Caple and March (2014) report that a concern of women is the inability to communicate their menopause-related health concerns to their provider. Women often voice concerns that the clinician may trivialize and discount their concerns about symptoms or treatment options (Caple & March, 2014; Flanagan et al., 2005).

As PCPs provide the patient medical home, they play an important role in the healthcare of women as they age. Stormo, Saraiya, Hing, Henderson and Sawaya (2014) found that 56% of the time preventive care visits for well women are done by PCPs. Women over age 50 are also seen more frequently by PCPs than those under age 50 (Stormo et al., 2014).

Caple and March (2014) assert women may be reluctant to bring up their symptoms in a well-woman preventive care visit. Caple and March suggest PCPs can provide menopausal women support by encouraging questions, helping to clarify misbeliefs, and providing written treatment options and information to women around their menopause-related needs. Clinical treatment guidelines such as *The North American Menopause Society recommendations for the clinical care of midlife women* (2015), *Clinician's guide to prevention and treatment of osteoporosis* (Cosman et al., 2014), *AACE Guidelines for menopausal hormone therapy* (Randel, 2012), and *A practitioner's toolkit for the management of the menopause* (2014) can help PCPs

to do this by providing the patient with evidence-based education and treatment options around their menopause-related health care needs.

Provider Barriers. There are four identified barriers that may prevent PCPs from voluntarily broaching menopause related health issues with their patients. First, PCPs may believe menopause related health care is best handled in gynecology, and may not think it falls within the purview of primary care (Flanagan, 2005; Santen et al., 2014). Second, if PCPs did not receive formal training or do not address menopausal-related concerns frequently, they may feel they are lacking up-to-date, evidence-based knowledge and skills to properly manage the symptoms (Santen et al., 2014; Weaver, Newman-Toker &Rosen, 2012). The third reason is that a focused office visit of 15-20 minutes may not allow for probing questions regarding menopausal symptoms and may require a longer visit. The fourth and final reason is PCPs may have a low level of comfort with a conversation about menopause (Hseih, 2013). Each of these reasons will now be discussed in more detail.

First reason. The first reason PCPs may not address menopause related care is that PCPs may hold the perspective that this area of health care falls within the purview of gynecology (Flanagan, 2005; Santen et al., 2014). Flanagan (2005) noted this assumption allows PCPs to miss too many menopause related health concerns.

To understand why this belief exists, we learn that historically, menopause-related health care was commonly managed in primary care. The initial press reports in 2002 of the Women's Health Initiative (WHI) research found risks of hormone therapy (HT) in menopausal women outweighed the benefits (Santen et al., 2014; Stuenkel et al., 2014). Prior to this, HT was considered safe and efficacious, and was commonly handled in primary care (Santen et al.).

Following the publication of the WHI results, HT treatment declined rapidly over the following five years, and began to be handled primarily in gynecology (Santen et al.). As newer data from the WHI has emerged indicating risks primarily applied to older, rather than the younger menopausal study participants, HT use has begun to increase again. Internists have been trained in multi-system disease management (Santen et al., 2014), and PCPs are obvious candidates to care for menopausal women, including the use of HT or non-hormonal therapies (Santen et al.). The EMAS position statement *Menopause for medical students*, by Brockie et al., (2014) states "managing menopausal health is a key issue for all health professionals, not just gynecologists" (p. 67).

Second reason. The second issue relating to the gap in education of women's health care needs has been reiterated over the years (Hsieh et al., 2013; Nunez-Smith, & Henrich; 2013; Spencer & Kern, 2008). "Even experienced clinicians may have outdated or inadequate knowledge" (Flanagan, 2005, p. 21). If the PCPs did not have formal training in menopause-related symptoms, or address menopausal issues frequently, they may be concerned their knowledge is outdated, or have insufficient clinical experience to knowledgably discuss a menopause-related condition (Santen et al., 2014). Weaver et al. (2012) have noted that diagnostic skills decay over time when not used regularly. PCPs provide care for menopause-aged women, but lack of core competencies can lead to fragmented care, and "missed opportunities for risk assessment, counseling, and treatment of distressing symptoms that impair the quality of life" (Santen et al., 2014, p. 282). Santen et al. recommended that providers obtain the set of necessary competencies to meet this identified need.

Third reason. The third and somewhat pragmatically, PCPs have 15 to 20 minutes per focused patient visit. A typical busy schedule can interfere with frank, open-ended questions (Kingsberg, 2004). If the patient is scheduled for a different issue, the PCP may have insufficient time to also discuss menopause-related concerns. The PCP needs ample time to ask discerning questions and provide the necessary education and discussion about potential treatments. Lack of time may also work against the woman who is reticent to bring up menopause-related issues, leaving her to feel rushed and dissatisfied with her care.

Hess et al. (2012) asserts that identification and management of menopausal symptoms is important to improve the quality of the woman's life, and, that a specific visit focused on menopause-related health concerns is necessary. Flanagan (2005) found a personalized and focused office visit provided the most efficacious intervention. This was determined to be the only manner that can 1) "improve women's understanding of menopause, 2) provide personalized information and care, and 3) reach a high percentage of women in the targeted age group" (Flanagan, 2005, p. 20).

Fourth reason. The fourth area interfering with care of menopause-aged women is that some PCPS may be uncomfortable with the topic. Even if the provider has clinical skills training, they may be lacking in formal training or experienced delivery of individualized and personal counseling skills (Flanagan, 2005). Kingsberg (2004) suggests healthcare providers experience embarrassment, discomfort, and lack of confidence due to fear of an inadequate response when the topic is related to sexual functions, which includes menopause. Hseih et al. (2013) correlated a low level of comfort discussing symptoms related to menopause with limited training, and infrequent management of menopausal issues.

Intended Improvement

AIM Statement. The overarching goal of this DNP practice improvement project was to improve menopause care in the community-based clinic setting. Objectives included a) development of a resource in the form of an educational workshop that could be used in the community-based clinic setting to improve provider knowledge and comfort around the conversation of menopause, b) pilot the developed resource at a community clinic, and c) assess for change in knowledge of menopausal health and comfort in discussing menopausal women's health care needs after the workshop.

The AIM statement of this DNP project was to provide a pilot educational workshop to clinic staff at Lifelong Brookside Health Clinic by March, 2015; to include an overview of *Menopause related health care needs for the primary care provide* (Doerr-Kashani, 2014*)*, and to provide them with a *Toolkit* (Doerr-Kashani, 2014) which included the most current evidence-based interventions and up-to-date practice guidelines, as well as patient handouts and questionnaires.

The IHI (2015) supports piloting small-scale tests of change as part of the plan-do-study-act method to evaluate whether or not a new idea might work, eventually resulting in sustainable improvement, and potentially allowing for a larger scale change in care. This test of change was to assess if a small group of community-based clinic PCPs would show improvement in their knowledge of menopause healthcare issues, and be more willing and comfortable to have having conversations about menopause with women of this age group after attending an educational workshop.

Initially, the goal was to implement a single workshop, with the initial training as the test of change, in the plan-do-study-act (PDSA) model supported by the IHI (2015). The medical director supported implementation of the *Toolkit* (Doerr-Kashani, 2014) and requested a second workshop for the non-licensed staff to occur 10 days later. Following the PDSA methodology, changes to the training materials were made following the first workshop as different needs were identified, and before the second educational workshop was provided. The hope was that if these workshops were effective, the workshop might be made available as a resource for primary care clinics to use for PCP education..

Review of the Evidence

Search Strategy Methods. A comprehensive search for evidence was conducted. The goal of the search was to find the best possible evidence about: a) menopause-related health care of women, b) history of primary care in the care of menopausal women, c) the most efficacious methods of patient engagement, and d) the most effective methods for providing education continuing education to PCPS.

Databases and sources queried included CINAHL Complete, EBSCO, PubMed, Medscape, Ovid, Google Scholar, and Unbound Medline. The search also included legitimate *grey literature*, such as factsheets, white papers, committee reports, and government documents. Meta-analyses and systemic reviews on the subjects were included.

First, a search was done to learn the history of primary care in the care of menopausal women. The following keywords were used in this search: *menopause* and *primary care, menopause health care, women's health care, and health care competencies of menopause*, *WHI* and *menopausal women's health care*, and *WHI* and *primary care*.

Secondly, multiple literature searches were performed to find the most current, evidence-based menopause-related health care of practice guidelines W using Boolean combinations with keywords such as: *evidence-based practice guidelines* and *menopause, practice guidelines* and *menopause, menopause-related health care* and *practice guidelines*. Additional searches were performed using these keywords for: *health care competencies, primary care competencies, menopause competencies, menopause and family medicine, menopause education, health care competencies* and *family nurse practitioner, menopause competencies* and *the family nurse practitioner*, *menopause competencies* and the *physician assistant*, *health care competencies* and the *physician assistant*.

Third, a search was done to learn the most efficacious methods of patient engagement for learning. The keywords used in this search were: *patient engagement, patient engagement* and *menopause, patient education* and *primary care, patient education* and *menopause*.

Lastly a search was done to find the most effective methods for providing education to primary care providers. The following keywords were used: *provider education, geriatrics education, menopause issues* and *primary care education, women's health care, education techniques* and *health care providers, in-service* and *health care providers, educational workshops* and *health care providers,* and *continuing education* and *healthcare providers.*

Inclusion and exclusion criteria. Search limits were set to include those articles published in English, in peer-reviewed journals after 2005, with rare exception. Literature from nursing, medicine, health sciences, and social sciences were all included. An EBSCO search using the terms *menopause* and *primary care* with the above parameters yielded a search result of 516 articles after narrowing to peer-reviewed journals, academic journals, with dates after

2010, in the English language, with geography in the United States.

Clinical practice guideline handouts. The clinical practice guidelines provided in the workshops as part of the *Toolkit* generally follow the National Guideline Criteria (NGC) of the US Agency for Healthcare Research and Quality ([AHRQ], 2014). These guidelines support all researchers use and develop quality, evidence-based transparent practice guidelines, using systematically developed recommendations, grade definitions and levels of evidence regarding the net benefit. The language of the guidelines indicates both a level of evidence, as well as a recommendation grade (NGC). Guidelines coming from different specialties consistently now use this grading system, although there is variation between different groups. Each guideline offers a description of their grading system. A few algorithms and easy-to-use but nationally accepted documents were also included. For example, *A practitioner's toolkit for the management of the menopause* (2014) from Australia was included, that does not follow AHRQ standards.

Critical appraisal of literature used in intervention

Trudeau et al. (2010): Educational Needs of Women. Trudeau et al. undertook to identify the educational needs of menopausal women, and create an online educational program tailored to meet those specific needs. Menopause experts were utilized to validate findings, as well as perform satisfaction testing of the online educational component created in response to meet these needs.

Trudeau et al. (2010) interviewed menopausal women, and conducted separate focus groups of these women, along with interviews of menopause clinical experts to perform a needs assessment. Both menopausal women and menopause clinical experts each wrote down

at least 10 responses to the focus prompt: *on an educational website, I would like to be able to see or do…* (p. 147). This elicited 84 responses of menopause-specific issues that women desired education about (Trudeau et al.). A subgroup was created of women from the focus groups and expert groups to compete a 'sorting and rating task' of the 84 responses. These same individuals then ranked each of the 84 statements as to perceived importance. The 84 responses were then concept mapped into content areas, resulting in six content areas (Trudeau et al.).

The six content areas found by Trudeau et al. (2010) included information around: "*getting support, self-management and provider communication, treatment options, promoting and maintaining health, physical changes during menopause,* and *what to expect"* (p. 148). The authors found specific issues women wanted information on are: "*information about symptoms, and how to cope with/reduce them, treatments for managing symptoms, how people may experience menopause differently, alternative treatments, side effects, personal experiences, how to communicate with providers about their experience, what to expect and how to get social support"* (p. 150). Content areas of the menopause experts revealed time as the perceived greatest barrier to assessing patients' needs around menopause. Professionals identified HT as "the most typical way of treating symptoms" (p. 148), and they supported lifestyle changes as a successful way to reduce menopausal symptoms. These identified areas were subsequently used to develop and subsequently critique an online health intervention program of identified menopause needs.

Trudeau et al. (2010) conclude that although typical menopause is a normal physiological milestone in a woman's life, women still desire up-to-date information and

support to navigate confusing and conflicting health information available to them. Women wish for guidance in management of their symptoms. Increased public health education is needed, as each generation approaches menopause differently. Although the author's ultimate goal was the online menopause educational component, they concluded they also had identified women's greatest concerns around menopause. The authors concur that an educational program should be an adjunct to a patient-clinician partnership, but should not replace that relationship.

The Trudeau et al. (2010) article was critically appraised with the use of the Johns Hopkins Nursing Evidence-Based Practice Research Evidence Appraisal Tool (2015). Results of this critique can be viewed in the Evaluation Table (Appendix A). The article scored as a Level III in the area of level of evidence. Areas of limitation included small numbers of highly educated women for the focus groups. The quality rating, based on appraisal of the qualities of consistent results, control, fairly definitive conclusions, reasonable consistent recommendations based on scientific evidence, rated a B.

Grande et al., (2014): Patient and Provider Collaboration. Grande et al. conducted a meta-synthesis of methods of patient engagement. They found from the studies they reviewed that the importance of patient involvement in their own care is critical in terms of improved quality and decreased costs of patient care. They included ten articles in which there was both patient and provider participation and collaboration, which they found to be the most efficacious method of patient engagement rates. From these ten articles, Grande et al. identified the method known as 'inform, activate, and collaborate'.

Grande et al. (2014) identified four of the ten studies reviewed as having high feasibility within an existing clinical setting, and four has having low feasibility; based on how much work is required by the patient, and whether realistic investments could be anticipated of providers and their organization. These authors define high feasibility as taking advantage of existing workflows and existing human resources to become informed or encouraged to adopt more active approaches. Low feasibility was defined as involving significant patient burden, having a poor fit within a complex clinical workflow, and requiring time and work from additional human resources to accomplish (Grande et al.).

Methods such as patient decision support tools which inform and educate patients are helpful, but are unlikely to catalyze a meaningful shift in behavior (Grande et al., 2014). The power gradient between patients and providers is too steep to be overcome by methods that do not facilitate communication; particularly in the underserved population (who may benefit the most from these methods of engagement). Interventions which influence the patterns of mutual deliberation may be most likely to produce true engagement patterns. Engaging patients may not be achieved by only providing information or advocating for patients to become more activated. Tools that promote the following group of methods: inform, activate, and collaborate in engaging patients and providers together in collaboration at the point of care are the most likely to be both feasible and effective (Grande et al.).

In summary, Grande et al., (2014) found the use of patient decision support tools increases positive outcomes; including less decision conflict, improved adherence to pharmacology, improved patient confidence, and enhanced health status. Grande et al. considered the feasibility of using patient decision support tools within the existing workflow of

a short, focused visit, without requiring increases in human resources. Grande et al. reported patient decision aids, such as handouts or videos should be designed to help 'inform' the patient, and better prepare them to be an active participant in a collaborative patient-provider conversation. These handouts could be in the form of pre-visit questions and checklists, which focus the patient's needs for the provider, facilitating communication. This becomes the 'activate and collaborate' portion of the identified efficacious style of patient engagement (Grande et al). Providing the patient the opportunity to review literature prior to the visit, with the support of a staff member as needed is also a time saver through advance identification of concerns, by having the patient indicate specific questions they would like to discuss. This method creates a focused office visit that fits into the allotted time, with the provider knowing where to focus their conversation with the patient (Grande et al.).

The Johns Hopkins Nursing Evidence-Based Practice Research Evidence Appraisal Tool (2015) was used to critique the systematic review by Grande et al. (2014). The Johns Hopkins Nursing Evidence-Based Practice Research Evidence Appraisal Tool (2015) meets the review question: does this address 'my' practice question, of finding optimal manners for patient engagement and education. In terms of Quality Rating, this paper earns an 'A', being of high quality. It is well-defined, has reproducible search strategies, consistent results with large numbers of well-designed studies, and is a criteria-based evaluation of overall scientific strength. It scores a Level Four in strength of evidence, and it should be noted non-research articles can only rate a Level Four or Level Five (JHNEBP Non-Research Evidence Based Appraisal Tool, 2005). This is summarized in the Evaluation Table (Appendix A).

Summary of literature. In conclusion, Trudeau et al. (2010) identified the areas reported consistently by women, and validated by menopause professionals, that women desire more clarification, or information on related to menopause. We also know through Grande et al. (2014) the most efficacious method of patient engagement is through the method identified as 'inform, activate, and collaborate'. Patient engagement involves providing patient-centered care, in which the patient is invested in the outcomes. *Informing* includes the use of patient decision aids such as handouts, *activate* involves requiring patients to complete lists and or questionnaires, and *collaborate* involves the provider and patient interacting to arrive at mutually agreed upon outcomes in terms of treatments. We also know the 'inform, activate and collaborate' model can be executed in an existing clinic setting without additional manpower, or involvement of additional time on the part of the provider.

Putting this together, we know women want more information about from their provider. We also know what has been determined to be the optimal method of patient engagement, which includes provider engagement. This does not tell us how to encourage their providers to see, and acknowledge women's very real concerns about menopause. Women voice concerns that providers minimize their concerns, and this creates a barrier for the woman to broach the conversation. There are also those women who are embarrassed or shy to bring up these concerns, who providers must advocate for as well, by probing and encouraging them to discuss any needs or concerns they have.

With regards to providers who have been practicing for a while, and have established methods of providing care, we do not know if they will be willing or interested in learning any of this information. We also do not know if providers are aware of their own gaps in

knowledge, or how they will receive education around an area in which they are unaware of gaps of knowledge.

Limitations. Limitations of the data include possible incorrect assumptions by both Trudeau et al. (2010) and Grande et al. (2014) that may have led to inaccurate conclusions. In the case of Trudeau et al., they acknowledged a limitation of the set of women surveyed being a highly educated group, and results may not be replicable with a set of women with less education. Grande et al. may have introduced bias by performing their meta-synthesis on specific research to support the method they had already identified as being favorable.

Future research. Recommendations for future research regarding women's identified concerns around menopause would be to include a large sample of menopausal women that represents a heterogeneous mix in terms of race, ethnicity, and educational levels. Future research should be done to survey provider's thoughts about the importance of care of menopause symptoms, the importance it plays in the quality of life of women, and what prevents providers from initiating conversations about menopause with women would be useful information in the future. It would also be informative to learn what PCPs perceive as their optimal learning method for continued education as well.

Theoretical framework

Croskerry's (2009) dual-process theory of diagnostic reasoning served as the framework to guide this project. First a description of Croskerry's theory will be provided. Next, work by Weaver, Newman-Toker, and Rosen (2012), who expanded Croskerry's theory and then applied it to education in health care will be presented.

Croskerry's Dual-Process theory. This theory originated in the Platonic-Aristotelian tradition of Greek philosophy, and is based on a dichotomy of opinion (Croskerry, 2009). The dual process theory, as applied to clinical decision making, postulates that diagnostic reasoning occurs in a process sometimes called naturalistic. In clinical diagnostics the first part of the dual process, *type one*, occurs intuitively, and is related to a reflexive or heuristic response. The second portion of the dual process, *type two* is analytical; involving deductive, deliberate reasoning (Croskerry). Croskerry described this dual process theory as a relatively straightforward universal model, with future application as a platform for teaching and education, research, and other domains within healthcare.

Croskerry (2009) further explained that in clinical diagnostic reasoning, the dichotomy of opinion occurs based on pattern recognition by the provider. In a typical clinical visit *type one* processing is primarily engaged in the experienced clinician, who makes a diagnosis based on a recognizable pattern of symptom clusters and history. When there is no clear pattern recognition the *type two* intensive analytical processes take over; particularly in areas in which the clinician lacks familiarity and experience. There is a dynamic fluctuation between the two systems, and diagnostic failure can occur if this oscillation becomes compromised. There is also an innate "tendency for the diagnostic system to default to the state requiring the least cognitive effort" (Croskerry, p. 30). For example; for a provider with limited experience, if pattern recognition occurs in a presentation consistent with a typical constellation of symptoms, the provider may allow *type one* processing to take over erroneously, without performing further assessment, and a diagnostic error could occur.

It is possible to apply the dual process theory to patient care of the menopausal women. While not producing a grave diagnostic error, another type of error could occur in dual processing. Take the example of an experienced provider who has been in practice for many years. Menopausal pattern symptom recognition may create the propensity to move the provider into whichever *type one* diagnostic reasoning process and response they have utilized historically to care for a menopausal woman. By moving intuitively into *type one* clinical processing, this standard response could occur, without taking extended time to explore the woman's symptoms further. This can be considered a *type one* diagnostic failure, particularly if the woman herself is reluctant to bring up some symptoms, and the symptoms become missed.

Weaver, Newman-Toker, and Rosen (2012) build upon Croskerry's (2009) dual process theory. Weaver et al. notes that in relationship to continuing educational (CE) models it is critical to reiterate to the learner that education and feedback operate through *type two* processes. Over time, new information can be integrated as a *type one* process through deliberate and via intentional repeat practice. Weaver et al. supports CE activities that encourage comprehensive information gathering and interviewing strategies. Weaver et al. also identified the need to involve metacognition; cognitive processes intentionally focused on self-regulation and reflection of the clinician's cognitive processes. Metacognitive processes have been determined to correlate with clinical decision making, and are sensitive to educational intervention which may attempt to mitigate decaying diagnostic skills (Weaver et al.). Finally, Weaver et al. suggest development of CE activities that incorporate into daily practice ways to access and use the electronic health record systems, or other decision-making support systems and practice guidelines (Weaver et al).

SECTION III: METHODS

Ethical Issues

This evidence-based change of practice project was created by using quality improvement (QI) methodology to improve delivery of menopause-related health care.

The Institute of Medicine (n.d.) defines quality improvement as:

> a systematic pattern of actions that is constantly optimizing productivity, communication, and value within an organization in order to achieve the aim of measuring the attributes, properties, and characteristics of a product/service in the context of expectations and needs of customers and users of that product (as cited in the University of San Francisco [USF] Doctor of Nursing Practice [DNP] Department Policy on IRBPHS Approval of DNP Practicum or Project Activity, May 8, 2014).

The author of this project completed the online *Protecting Human Research Participants* training modules developed by the National Institute of Health (NIH), to insure understanding and assurance of the wellbeing of those involved in any type of research study. The author also completed a DNP Project Approval Form: Statement of Determination, which was reviewed by the author's DNP Committee Chair and DNP Committee as well as faculty members of the USF Healthcare, Leadership, and Innovation Department. This project was deemed a change of practice project, not a research project; therefore, the USF Institutional Review Board for the Protection of Human Subjects (IRBPHS) approval was not required.

Issues related to potential loss of privacy for participants were addressed in preparation for conducting this project. The participants were licensed PCPS and non-licensed personnel at

Lifelong Brookside Clinic, in Richmond. To protect any concerns of the small number of participants who completed the *Menopausal women's health care needs for the primary care provider pre-test* (Appendix B), and *Menopausal women's health care needs for the primary care provider post-test* (Appendix C), no names were put on any instrument. Participants were instructed to pick a three-digit number to use in lieu of a name, for matching the M*enopausal women's health care needs for the primary care provider* pre-tests and post-tests (Appendices B & C) utilized for statistical analysis of the intervention. The author did not have a key matching the three-digit number to the participants involved.

Setting

Lifelong Brookside Medical Clinic. Implementation of this quality improvement project occurred in Lifelong Brookside Medical Clinic. Lifelong Brookside Medical Clinic is in an underserved area, and is a federally qualified health center (FQHC) located in Richmond, California. Lifelong Brookside Medical Clinic is under the umbrella organization of Lifelong Medical Care. Lifelong Medical Care operates ten health centers across three counties: Contra Costa, Alameda, and Marin. Lifelong's mission is to "provide high-quality health and social services to underserved people of all ages, create models of care for the elderly, people with disabilities and families; and advocate for continuous improvements in the health of our community" (lifelongmedical.org).

A formal needs assessment was not done at this clinic, rather the topic of menopause emerged from the author's academic courses, clinical training as a FNP in a variety of settings, and from a review of the evidence. This site was not chosen due to any deficits in menopausal patient care at the clinic, but rather due to the author's interest in the topic and the evidence

that suggests that menopausal healthcare needs are not being adequately ment. PCPs can benefit from education about menopause, and how to treat the symptoms of menopause with evidence-based treatment. This author received support from the Medical Director and staff to implement the project at Lifelong Brookside. There is a relatively new Clinic Medical Director, Dr. Teshina Wilson, who has implemented several positive improvements within a few months of her arrival. She brings energy, expertise, and the view that can be had only as an initial 'outsider'. Dr. Wilson agreed to be a preceptor for this project, and was very supportive of this author doing a workshop on menopause for the PCPs at Lifelong Brookside.

The clinical staff consists of full and part-time PCPs, a full-time registered nurse, and several non-licensed personnel who are all full-time. Providers vary in years of practice and area of expertise, and some work elsewhere, as well as at Lifelong Brookside. Providers practice semi-autonomously, but consult and collaborate with one another as needed. A loose interdependence exists between them. The providers are administratively coupled through Lifelong Medical Care, that provides a centralized operation unit and authority structure, via email and daily site visits by administrators to assess for clinic or staff needs. PCPs are attached to Lifelong Brookside, but occasionally non-licensed staff floats to other sites to cover those who are out for extended periods of time. Dr. Wilson, the Brookside Clinic Medical Director supports cohesiveness and interdependence with Lifelong, yet allows for flexibility to meet location specific setting demands of this complex adaptive system.

Lifelong Brookside Medical Clinic is located in Central Richmond, also called the Iron Triangle, as it is centered between three major railroad tracks that roughly define its boundaries. Lying in the heart of Richmond, it has a population of 28, 215 (City-Data.com,

2011). In terms of demographics, it is about 45% each of African American and Latino, a change from the previously 66% African American and 35% Latino in the 1980s. The median household income in 2011 was $30,835 (City-Data.com). Nearly 50% have *less than high school* listed in educational attainment (City-Data.com). About 31% of the residents are foreign born. In terms of crime index, it scores 613.2, in comparison to the U.S. average of 266.4 (City Data.com). The percentage of the population below the federal poverty level as of 2011 was 38.9%, as compared to that of Contra Costa County overall of 18.5%, or 15.9% overall in California (US Census, 2013).

Richmond. Richmond, California became nationally known when it was one of the cities used in the PBS documentary produced by L. Adelman (2008) entitled *Unnatural Causes: Is Inequality Making Us Sick?* This documentary discussed the impact on health of disadvantaged neighborhoods, class inequities, poverty, racism, and other negative social circumstances on disruption of physiology. It accurately defined the people in Richmond as a vulnerable population due to economic disadvantages, numbers of uninsured, racial and ethnic minorities, low income children, and the numbers of elderly and homeless.

Richmond was the focus of this episode of *Unnatural Causes*, due to both the negative social disadvantages listed above and because of its toxic environment. Richmond contains over 40 of the 300 plus petrochemical facilities within a two-mile radius, contributing to high levels of toxic pollution of both land and air (*Unnatural Causes*). The documentary points out the association between environmental pollution and higher lifetime risk of cancer, asthma, and other respiratory problems. Bohan and Kleffman (2010) stated the life expectancy at birth in the Richmond Triangle is 71.2 years, comparing to 82.4 years to those born 3 miles away in

East Richmond. The Contra Costa County Health Department (2010), population health data web site notes that "African Americans born between 2005 and 2007 in Contra Costa County had a shorter life expectancy than any racial or ethnic group in the country".

Piloting this educational workshop at Lifelong Brookside Clinic of Richmond seemed to provide an opportunity for the population this clinic serves. Improved provision of health care to menopausal women in this vulnerable population offers a socially responsible positive change. It supports the Jesuit tradition of the University of San Francisco of a social responsibility to support the poor and disadvantaged, and the Jesuit tradition to enable this DNP student to learn from a service experience providing much needed health care for this population. If successful, the workshop could easily translate to other primary care clinics.

Planning the Intervention

Background. Planning for an educational workshop for PCPs on menopausal women's health care needs originated with the original literature review. The USDHSS Division of nursing (2013) and COGME (1995) each promote increased education of primary care providers of healthcare of women across the lifespan. COGME (1995) first identified the gap in women's healthcare, and called for increased education of healthcare providers of women's healthcare across the lifespan. Formal education specifically around menopausal health care did not begin in medical schools until 2001 (APGO, 2005). For family nurse practitioners, a specific competency about menopausal women's health was not added until 2013. Twenty years after the COGME paper, the literature still calls for the continued need for provider training and continued education on women's health care needs, particularly in the area of menopause (Hsieh et al., 2013; Nunez-Smith, & Henrich, 2013; Santen et al., 2014; Spencer & Kern, 2008).

The Intervention. The intervention developed by this author consisted of the implementation of two workshops entitled: *Menopausal Women's Healthcare Needs for the Primary Care Provider* (Doerr-Kashani, 2014) to participants from Lifelong Brookside Medical Clinic. The goal was to increase the clinic staff's awareness of the health care needs particular to menopause-aged women, and provide up-to-date clinical practice guidelines of different menopausal women's health issues to support them in the practice change of providing comprehensive, evidence-based health care to women as they age.

The dual process theory developed by Croskerry (2009) and expanded by Weaver et al. (2012) was used to guide the development of the project. Based on this theory it is anticipated that the latest evidence-based information about menopause would be incorporated into *type two* clinical decision-making by the PCPs following the workshop that included an oral presentation and supporting literature. In time this new knowledge about menopause would move forward into a *type one* clinical decision making process via reinforcement and practice. The providers were encouraged to continue to refer to, and use the algorithms and clinical treatment guidelines, until they mastered and integrated them into the *type one* diagnostic process, which is less labor and thought intensive than the *type two* process used while still learning.

***Objectives*.** The project plan was discussed in depth with the DNP Committee, prior to implementation. The goal of the project was to successfully deliver two educational workshops *Menopausal Women's Healthcare Needs for the Primary Care Provider* to clinic staff of Lifelong Brookside Medical Clinic. The objectives of *Menopausal Women's Healthcare Needs for the Primary Care Provider* are as follows:

- heighten awareness of women's menopause-related health care needs in participants
- participants will enlarge their current list of menopause-related health care areas of need for treatment
- distribute up-to-date evidence-based practice guidelines for each area of menopause-related healthcare need for use in practice
- recognition by participants that menopausal symptoms can have a serious impact on a woman's quality of life

This author planned to hold the first educational *Workshop* for PCPs, to capture as many providers as possible. Based on the number of providers who may have been unable to attend the *Workshop,* the backup plan was to offer individual workshops as needed, to ensure all PCPs in this clinic had been provided the same information. The unpredictable nature of the clinic day was also taken into account when deciding to provide individual workshops to those unable to attend. This turned out to be unnecessary as all providers were present.

Curriculum Content. The curriculum was developed to be delivered through a PowerPoint presentation. The presentation began with the history of menopausal health care in primary care. The author discussed the projected population explosion of menopausal women by 2020, who will have unmet menopause-related health care needs, without needed changes in the existing primary care services (Howden &Meyer, 2011). Facts of menopause, such as starting at age 35, the average age of the climacteric, and the fact that HT is in use again, were presented. It was explained that due to the advent of longer life-spans, women may soon be spending 40-50% of their lifespans postmenopausal (ACOG, 2011).

Background information included The Fifth Report (COGME, 1986) indicating women receive fragmented health care, with reference to more recent articles reiterating gaps in care of menopause-aged health care was articulated. Also discussed were the importance of PCPs as a medical home, the loss of continuity of care that occurs when patients see outside providers, and the reality that the PCPs lacks readily available information regarding patient treatment or education from other providers' competed the introduction.

The PowerPoint presentation continued listing the four identified reasons which may prevent PCPs from providing comprehensive care to menopause-aged women. The first reason was the belief PCPs may have that menopause-related health care belongs in the purview of gynecology, rather than primary care, with a discussion of the historical events creating this belief (Flanagan, 2005; Santen et al., 2014). The second reason was the concern that PCPs may be lacking up-to-date, evidenced-based knowledge and skills to properly manage the symptoms (Santen et al., 2014; Weaver, et al, 2012). The third reason was the problem of fitting sensitive interview questions requiring a longer appointment, into a focused office visit of 15-20 minutes (Flanagan, 2005; Kingsberg, 2004). The fourth reason was the low level of comfort and confidence PCPs may have about having conversations about menopause (Flanagan, 2005; Hseih, 2013).

The PowerPoint included an overview of each of the main physical health care concerns, needs for assessment, and clinical management of menopausal women. These areas of concern included: cardiovascular disease, vasomotor symptoms, osteopenia and osteoporosis, vulvovaginal changes, and the endocrine disruptions which can occur with the thyroid or

parathyroid glands. Hypoestrogenic symptoms related to menopausal mood swings, insomnia, sleep disturbances, and episodes of lack of cognitive clarity were also reviewed.

The Toolkit. The workshop concluded with the presentation of the *Toolkit* (Doerr-Kashani, 2014) as a possible option to help address and support address provider concerns. The *Toolkit* provides current evidence-based clinical practice guidelines, with easy-to-use diagnosis and treatment algorithms. The accompanying CD includes all reference information, as well as some of the longer clinical practice guidelines.

The *Toolkit* (Doerr-Kashani, 2014) also furnishes the provider with templates for patient information. To support patients, the *Toolkit* also contains bilingual patient informational handouts including *What is Menopause??* (Appendix D), and the Spanish version: *Que es la menopausia*? (Appendix E). These handouts provide basic information about menopause. These were created by this author to begin to educate patients so they may be active participants in the patient-provider conversation about their menopause-related care, and to inform them to support joint decision-making on treatment.

The second handout is a patient questionnaire designed to engage the patient and have them identify their own menopause-related specific needs. The *Patient Menopause Questionnaire* (Appendix F), and the Spanish *Cuestionario de paciente* (Appendix G) directs them to identify menopause related concerns they have, and areas in which they need more information, or desire treatment for, to discuss in their focused visit with their PCP.

This patient educational approach is supported by the studies of both Thomas et al. (2006), who called for active mode learning, with supplementary written materials or toolkits, and Grande et al. (2014) who encouraged the use of patient decision support tools as a

recommended way of sharing information, and as a highly efficacious method to promote patient engagement through patient and provider collaboration. This should encourage a collaborative conversation between provider and patient, and support the focused patient visit while maintaining the 15-20 minute visit timeframe.

Staff Involvement. Those involved in intervention planning included the Clinic Medical Director, Dr. Tashina Wilson, who provided support to precept this project, as well as encourage staff attendance. Cynthia Marquez as interim clinic coordinator initially gave approval from the administrative-side to hold the workshops at Lifelong Brookside Health Clinic. Medical Assistants Laura Echevarria and Veronica Hernandez kindly assisted with the initial translation of the bilingual patient handouts. As they are both from Mexico, to ensure it was a generic Spanish translation Marisol Avash, a native Spanish speaker from El Salvador, reviewed the final document and a few changes were made to wording.

Expenses. Direct expenses incurred to this author for implement the project were $3,274.00. Materials were $237.58, travel and parking was $12.00, and the author's estimated fees of $2,762.50 were waived. Indirect costs were $237.00, giving a total cost of project implementation of $3,274 (Appendix H).

Time spent by the clinic director was included. Staff hours were not calculated, as they donated their lunch hour for the educational workshop. Informal times spent in discussion and doing translations with staff at Lifelong Brookside project were incorporated into the project and residency course practicum hours. Indirect costs were calculated based on rates to the quarter hour.

Fiscal costs to the menopause-aged women who receive good quality healthcare are immeasurable. When we try to calculate costs we are stymied, as morbidity and mortality are known to increase with age, and the menopausal-aged woman may be anywhere from her 40s and up. We do know the national financial burden of stress urinary incontinence is over $12 billion, with patients paying for about 70% of routine management costs, such as pads and diapers (Chong, Khan, & Anger, 2011). The financial burden associated with these osteoporotic fractures cost the nation $18 billion in 2005 (AAOS, 2009). The direct costs attributed to cardiovascular disease and stroke were expected to exceed $444 billion in 2010 (CDC, 2010). These numbers do not take into account costs arising due to disability, nursing homes, and loss of productivity and independence, which are impossible to calculate. When one considers patient benefits however, the costs must be measured not only in dollars, but in quality of life.

Communication Matrix. Responsibility began with this author for each deliverable and accomplishment of each milestone. Flow of information began with status reports between this author and Committee Chairperson Dr. Robin Buccheri, of USF. This communication generally occurred biweekly, although occasional issues arose which necessitated more frequent communication.

Submission of the required deliverables by this author was first to Committee Chair Dr. R. Buccheri. Following receipt of approval by Dr. Buccheri of each deliverable, they were subsequently submitted to Committee Members Dr. J. Loomis and Dr. A. Curtis for approval.

The Practicum faculty member and this author were the intermediaries between the University of San Francisco and Lifelong Brookside Health Clinic. Ms. C. Marquez was interim coordinator of Lifelong Brookside Clinic in October, 2014, and as such, was able to procure

permission for this project to be implemented at Lifelong Brookside Health Clinic. Dr. T. Wilson, Clinic Medical Director agreed to serve as preceptor for the project within Lifelong Brookside Health Clinic. Dr. T. Wilson was available for consultation as needed in preparation during the project residency, and also at the educational workshop presentation.

Implementation of the Project

The first implementation date of February 25, 2015 was scheduled at Lifelong Brookside Medical Clinic in Richmond. Five providers were anticipated at this change in practice educational workshop entitled *Menopausal Women's Healthcare Needs for the Primary Care Provider* (Doerr-Kashani, 2014). Upon arrival one provider was running quite late, and this author saw a couple of her patients to support her attendance. The diabetic educator has the largest room in this clinic, used for individual and group classes, which is where the workshop was scheduled and held. The diabetic educator's last client before lunch arrived ten minutes late, pushing the presentation back. Finally the workshop started, with five providers. There were two physicians, one nurse midwife, one physician's assistant, and one registered nurse. One of the physicians was the clinic medical director. The number of participants who were present for the first workshop, and who completed both the *Menopausal women's health care needs for the primary care provider* pre-tests and post-test (Appendices B & C) gave a *n=5* for evaluative purposes. The room was arranged in a semi-circle, to enable participants a view of the PowerPoint presentation on the computer, and also to facilitate conversation.

Upon completion of the presentation of February 25, 2015 the clinic medical director applauded the presentation and she supported this implementation, and suggested all non-licensed personnel be present to hear a subsequent workshop, so as to familiarize them with

the information. She requested the *Educational Workshop: Menopausal Women's Healthcare Needs for the Primary Care Provider* be repeated one week later on March 4, 2015 at a clinic staff meeting; for non-licensed personnel who would be also be involved in operationalizing the *Toolkit* (Doerr-Kashani, 2014). It was fortuitous to have the second workshop at the same clinic, due to time constraints and difficulties encountered scheduling a workshop at a second location, as was originally planned.

At the second educational workshop on March 4, 2015 there were six non-licensed personnel present, all of whom would have to be involved with the implementation of this project, if it went forward. Even though it was an overview, it was a challenging presentation to give, as it had to be simplified to make it meaningful for the non-licensed personnel who will be assisting with implementation. The non-licensed personnel were all experienced medical assistants. They remained present and engaged throughout the presentation, and asked a few questions for clarification at the end.

Prior to the workshop presentation on both dates, each of the attendees completed the *Menopausal women's health care needs for the primary care provider* pre-test (Appendix B). A PowerPoint presentation was used to support the Workshop, and attendees had a print-out of the PowerPoint presentation with room for notes, in their packet. There was a lively amount of discussion and questions during and following the informal presentations. At the completion, attendees completed the *Menopausal women's health care needs for the primary care provider* post-test (Appendix C). Six attendees were present at the second Workshop, and who completed both the pre-test and post-test (Appendices B & C) yielding a total of 11 attendees

for use in evaluations. This met the minimum anticipated number of participants, although it is recognized as a small number.

Planning the study of the intervention

The first educational workshop of *Menopausal Women's Healthcare Needs for the Primary Care Provider* (Doerr-Kashani, 2014) was offered to Lifelong Brookside staff on February 25, 2015, as a Plan-Do-Study-Act (PDSA) test of change. To measure the effectiveness of the workshop as an intervention to meeting the test of change, and goal of this practice improvement project, a pre-test (Appendix B) assessing both: a) current knowledge about menopause-related health issues, and b) comfort level discussing menopause related health care issues with women, was administered to the PCPs attending the workshop. The intent was to utilize the *Menopausal women's health care needs for the primary care provider* pre-test (Appendix B) as a mechanism to objectively identify baseline data prior to the intervention. Following the workshop, the identical post-test (Appendix C) questions were administered as well, so that comparative data analysis of the pre-test and post-test scores (Appendices B & C) could be used to evaluate the effects of the intervention.

The goal of the educational workshop presentation was that if the workshop was effective, the knowledge level of the participants would increase, and comfort levels about discussing menopause with their clients would improve, which would be indicated by an increase in scores on the *Menopausal women's health care needs for the primary care provider* post-tests (Appendix B), in comparison to the pre-tests (Appendix C).

Timeline. A Gantt Chart (Appendix I) was created as a tool to use to track the timeline of the project creation schedule. There were many milestones in creation of this project,

including timely and approved deliverables, such as the Qualifying Examination with required approval of the Project Prospectus and a manuscript to submit for publication. This was followed by approval of the Student Project Approval: Statement of Determination by the HLID Department. The author's DNP Committee Chairperson had to approve each deliverable before they were submitted to the remainder of the DNP Committee. Each member of the DNP Committee was required to approve each deliverable before proceeding to the next one.

Methods of Evaluation

Evaluative Instruments. The *Menopausal women's health care needs for the primary care provider* pre-tests and post-tests (Appendices B & C) each used a five-point Likert type scale, in which participants circled the number corresponding to their agreement with *strongly disagree, disagree, undecided, agree, or strongly agree* over columns correspondingly numbered one through five. There were eight items on the pre-tests and post-tests (Appendices B & C), that included four statements relating to knowledge about menopause-related health issues, and four statements relating to comfort level in discussing menopause-related health issues on the *Menopausal women's health care needs* pre-test and post-tests (Appendices B & C). The following are the statements measuring knowledge of the M*enopausal women's health care needs for the primary care provider* pre-tests and post-tests (Appendices B & C):

- PCPs are the correct practitioners to provide care for menopause-related health issues.
- I know what constitutes a menopause-related health issue.
- I believe menopause can seriously impact a woman's quality of life.
- I know the current practice guidelines around prescribing hormone therapy.

The next four statements referred to comfort levels of the providers around the discussion of menopause-related health care issues:

- I am comfortable talking to women with menopausal health concerns about self-care and non-pharmaceutical options.
- I am comfortable discussing vulvovaginal changes with a menopausal woman.
- I ask about menopause related health issues to women ~45 years of age and above.
- I recommend vaginal moisturizers or lubricants to women of menopausal age.

The present tense was used in the *Menopausal women's health care needs for the primary care provider* pre-tests (Appendix B), and the verbs, changed in the post-tests (Appendix C) to "I will" in order to measure the PCPs intended future practice. To establish face validity of the pre-test and post-test questions (Appendices B & C), the tests were reviewed by two PCPs with content expertise. There was also space on the post-test for workshop attendees to write-in subjective comments about the workshop for implementation review.

There were a total of eleven pre-tests and post-tests (Appendices B & C) completed to utilize in the evaluation process. The format for the creation of these tools was based on Harvard Brigham and Young's Women's Hospitals' Level two Outcomes required for pre-tests and post-tests. There was a one hundred percent response rate, with group one (PCPs) *n=5*, and group 2 (unlicensed personnel) *n=6*. There was also the unpredicted positive feedback from the Clinic Medical Director who requested integration of the Toolkit into the care visits of menopause-aged women in the clinic.

Strengths, weaknesses, opportunities and threats Analysis (SWOT). The SWOT analysis (Appendix J) lists many of the identified risks and assumptions of the project. First, strengths

and opportunities were assessed. Strengths identified were experience of the author with curriculum development, positive relationships with the administrators and staff at Lifelong Brookside, support from Lifelong Brookside to provide the workshop, positive experience with prior trainings, low cost, ability to present at quarterly provider meeting, and bilingual ability and support to translate documents as needed. Opportunities considered were possibility of future workshops with successful completion of these presentations, potential for change in patient care by providers, opportunity to impact many women in a positive way, and the possibility of publication to reach an even wider audience.

Weaknesses and threats to the project had to be considered, as well. Weaknesses included lack of a relationship with all the providers, difficulty in predicting the number of attendees, inability to control for equipment or site problems, lack of control over the acceptance of the deliverables; in this case the presentation, and the identified gap underlying the training, insofar as it pertains to PCPS from Lifelong Clinics. Threats were identified, as well. Concerns existed for this author about possible changes administration and clinic staff, as all agreements had been based on existing relationships, possible lack of interest from PCPs, poor attendance, inadequate funding (initial plans included catered lunches), errors in assumptions about lack of staff interest in menopause-related health issues, and the inability of the author to implement the workshop for any reason.

Budgetary return on investment plan. It is difficult to ascertain short-term or long-term return on investment for this project, based on the provision of this educational workshop including up-to-date, evidence-based practice information to the PCPS. We do know it would be detriment to both provider and patient if they are lacking knowledge of prevailing guidelines

regarding primary healthcare needs of the menopause-aged woman, current practice guidelines, or comfort in the healthcare of the menopause-aged woman. In disadvantaged areas the innate power differential due to differences in knowledge, education, and socioeconomic status between provider and patient may be amplified, and patients may be less likely to ask questions as well, compared to more advantaged areas. Any improvement in provider comfort to broach this topic will help the menopausal women they care for to receive more comprehensive quality care. The return on investment from preventive care would be two-fold; women would experience a better quality of life, and their health status would be maximized.

Analysis

Description of data analyses methods. Data analyses were performed on the group of PCPs, and group of unlicensed personnel, separately. This was done to accurately examine scores of the PCPs separate from the non-licensed personnel. The author could not predict how the scores between the two groups might differ, and wanted an accurate assessment of change in knowledge and comfort levels of the providers. This would be important if other parties wanted to use the curriculum of *Menopausal women's healthcare needs for the primary care provider* in the future.

Menopausal Women's Healthcare Needs for the Primary Care Provider pre-test and post-test scores were collected from both educational workshops, and compared to objectively assess for change in: 1) knowledge about menopause-related health issues and 2) comfort levels in discussing menopause-related health issues following the workshop. Data analysis comparing the participants *Menopausal Women's Healthcare Needs for the Primary Care*

Provider pre-tests and post-tests were performed using Microsoft Office Excel 2010. For each question, the 1) mean scores, and 2) standard deviations were determined.

Quantitative Findings of PCPs. The *comparison of PCPs pre-intervention and post-intervention scores mean scores for knowledge about menopause-related health issues (MRHI), and comfort level in discussing MHRI* are shown in the Data Analysis of providers in Table 1. (Appendix J). Although all of the PCPs' knowledge-related statements show a clinically significant increase, they are not statistically significant. The statement which showed the largest increase in mean scores following the educational workshop was *I know the current practice guidelines around prescribing hormone therapy*, with a difference in mean scores of 1.4.

For the statements related to comfort level, two showed a clinical significant in increase in the post-intervention mean scores, and two showed no change at all. The statement which had the largest increase in mean scores following the workshop was *I will be comfortable talking to women about menopause-related health issues over 45 years of age,* with a difference in mean scores of 0.6.

Quantitative findings of non-licensed personnel. A *comparison of the non-licensed personnel pre-intervention and post-intervention scores mean scores for knowledge about menopause-related health issues (MRHI), and comfort level in discussing MHRI* can be seen in the Data Analysis of Unlicensed Personnel in Table 2 (Appendix K). Those statements did not reflect a statistical change. All of the non-licensed personnel knowledge-related statements show a clinically significant n increase in the post-intervention mean scores. The statement which showed the largest increase in mean scores following the educational workshop was also

I know the current practice guidelines around prescribing hormone therapy, with a difference in mean scores of 1.0.

For the statements related to comfort level, three showed a clinically significant, but statistically insignificant increase in the post-intervention mean scores and t-value to T-critical score, and one showed no change at all. The statement which had no change is *I will be comfortable discussing vulvovaginal changes with menopausal women*. The statement with the largest increase in mean scores following the workshop was *I will comfortable talking to women about menopause-related health issues* over 45 years of age, with a difference in mean scores of 0.6.

Qualitative findings. An optional area for comments was included on the *Menopausal women's health care needs for the primary care provider* post-tests. Only PCPs wrote anything in this area. One person commented; "very informative toolkit and presentation, good job!" Another wrote, "…loved the presentation." The workshop with the non-licensed personnel did not make comments. It is unclear if this was due to the fact we were running late, or if this author did not instruct participants about how they might use the comments area.

Section IV: RESULTS

Program Evaluation/Outcomes

This evidence-based practice improvement project consisted of the following steps: 1) a literature review identifying a gap in PCPs knowledge of menopause-related healthcare needs and low comfort levels in discussing these health care needs with menopause-aged women, 2) review of the literature to identify the optimal intervention method to increase PCPs up-to-date clinical menopause knowledge, and increased comfort with the discussion of menopause related needs with menopause-aged women, 3) creation of an evidence-based educational

workshop as an intervention to increase knowledge of menopausal women's healthcare needs, and increase comfort with conversations of menopause related health care needs with menopausal women, 4) data analysis *of Menopausal women's health care needs for the primary care provider* pre-test and post-test mean scores to assess effectiveness of the workshop in increasing participants' knowledge of menopause-related healthcare needs and comfort levels in discussing these health care needs with menopause-aged women, and 5) creating a summary of the results.

The key success derived from this change in practice project was the effective delivery of both educational workshops to staff of Lifelong Brookside Clinic. Although statistical analysis did not find anything of statistical significance (See Tables 1 & 2 in Appendix), the analysis reveals a clinically significant change for both licensed and non-licensed personnel in both areas of knowledge and comfort. The sample size of (n=5) for PCPs, and (n=6) for non-licensed personnel was so small the lack of statistical significance was not surprising. A large sample of both types of staff would be needed to test for statistical significance. The most positive outcome was the decision by the Clinic Medical Director to implement use of the *Toolkit* (Doerr-Kashani, 2014).

Evolution of the improvement plan. Changes and challenges to the smooth implementation of this project occurred along the way. The educational workshop curriculum was created, changed, added to, and translated. Initially, the educational workshop was planned to be presented at the quarterly clinicians meeting, of all Lifelong Clinics. The goal of this was twofold; staff would be at a mandatory meeting, secluded place away from clinic interruptions, and there would be broad access to Lifelong clinicians from all of ten sites,

approximately 66 providers. This goal was not accomplished as the quarterly meeting was cancelled.

The second plan created was to present to two separate clinics, to PCPs. This changed, partly as the Clinical Medical Director requested another workshop for the unlicensed personnel. The other part was that this author was unable to locate a second clinic for implementation of this Workshop at a time when multiple PCPs would be available. The idea to serve a catered lunch was considered then rejected due to expense, and lack of outside funding.

Unfortunately, presenting to clinic staff on their lunch hours presented a dilemma even more challenging than initially anticipated. On the day of the first presentation to the PCPs, the space to be used became available nearly fifteen minutes late, requiring the workshop to become rushed. One provider was running behind, requiring the allotted time for the workshop to become shortened. The diabetic educator's room was used, and provided a satisfactory teaching and learning environment.

SECTION V- DISCUSSION

Summary

The key success achieved was the effective delivery of both presentations to staff at Lifelong Brookside Clinic. The improvement in post-test scores data indicates there was a positive change in knowledge and comfort; both from the PCPs and the non-licensed personnel. Another positive outcome was the Clinic Medical Director's decision to implement the *Toolkit*.

There were lessons learned along the way. The main one was that as many staff as possible should be involved in the preparation of a workshop like this. If input had been

solicited from clinic staff early there may have been increased interest or ownership over the educational workshop and it may have been more geared to meet the specific needs of the staff. Another lesson was to always have a back-up plan, and for important events, a back-up to the back-up plan.

This lesson dovetails on a concern of the author that the evidence underlying this workshop came from a macro perspective which identified a gap in education, knowledge and comfort of providers across the US around menopausal women's health. A needs assessment was not done at this clinic. This author felt it was important to ensure it would be a positive experience for participants to attend the educational workshop. The author did not want to insinuate that the care given to menopausal women at Lifelong Brookside had been specifically assessed and needed improvement. The fact that the topic was chosen based on a gap in menopause care, according to the literature, was reiterated at the beginning of each of the two presentations.

In terms of implications for advanced nursing practice, it was hoped that this workshop and curriculum might be able to be disseminated for use by others in their own settings in the future. The author intends to write a journal article about the project as a way to disseminate the process and findings of this project. There are other methods of dissemination. If the curriculum and toolkit were made available via the internet, on the Journal of Family Practice, Family Medicine Journals, or to the Journal for Nurse Practitioners, it would be fairly straightforward to replicate and deliver. These two methods of dissemination would create the widest impact on PCPs across the country.

Barriers and limitations to implementation

In terms of actual project implementation, identified barriers were the inability to implement the workshop at Lifelong's quarterly provider meeting, which would have been key to accessing all providers from Lifelong Medical Care. These are mandatory provider meetings, and are well attended by 66 providers from all ten Lifelong clinics. The meeting was cancelled, so it was decided to hold the educational workshops at two different Lifelong sites, as an alternative. This revision also required modification, and there were two workshops implemented in Lifelong Brookside. There was also previous turnover in Clinic Medical Directors, and there was concern was raised about a new Medical Director embracing the educational workshop.

The positive response following the initial presentation by the Clinic Medical Director caused another change: the presentation was repeated, but the second workshop was not to providers, for whom it was developed, but to non-licensed personnel. This became a positive change however, as the non-licensed personnel will be key in implementation of the program.

Presenting to the non-licensed personnel was important, as it is recognized they are the staff member rooming the patient, reviewing their medications, and obtaining more detail for the visit. Through this process, the non-licensed personnel will be the first person to hear symptoms that may be related to menopause. These non-licensed personnel have been identified as the appropriate person to then provide the information handout of the English and Spanish versions of *What is Menopause?* (Appendices D & E), and the bilingual Patient Menopause Questionnaire (Appendices F & G). It was vital these non-licensed staff understand information about menopausal-related health concerns, particularly as they are the youngest

part of the staff, and have the least personal familiarity with these issues. Several changes had to be made in the delivery of the presentation to ensure it would be done at the appropriate level. There were several questions asked that indicated lack of knowledge and also misunderstanding about menopause.

Interpretation

The anticipated outcome was for an improvement to be made in PCPs knowledge and comfort in the area of discussing healthcare needs of menopausal women, which did occur. A positive outcome that could not be predicted was the decision by the Clinic Medical Director, Dr. Wilson, to implement the uses of the *Toolkit* (Doerr-Kashani, 2014). This seems to indicate a positive response on the part of the clinic to the presentation itself, or the need the presentation addressed.

This author has considered methods in which this project improvement might be made sustainable. There is turnover in PCP and administrative staff, and there have been turnovers of Clinic Medical Director. It is conceivable the PCPs or medical assistants may retire, leave, or transfer to a different Lifelong Clinic, as well. If too many participants from the educational workshop were to leave, there may be no continued investment by future new staff in continuing this project. One manner in which sustainability might be assured is if the workshop were to be offered biannually, to be presented by the PCPs themselves. Each PCP could pick a different area of the menopause health to present, based on their own interests or expertise. This would increase PCP investment in the project, which in itself increases probability of sustainability.

Conclusions

In closing, it has been 20 years since the USDHHS-COGME published the Fifth Report, stating that women have important health care needs for which they receive fragmented, uncoordinated care, and this has continued to be an issue for menopause-related health concerns.

The population of menopausal women is increasing. Menopausal women undergo many physiologic changes with subsequent symptomology as a natural part of menopause, which can have significant impact on women's quality of life (Caple & March, 2014; O'Dell, 2014). It is incumbent upon all PCPs to be able to recognize the associated symptoms, undertake appropriate diagnostics, and consider evidence-based treatments when caring for the menopausal woman. As Brockie et al. (2014) noted in the EMAS position statement, "managing menopausal health is a key issue for all health professionals, not just gynecologists" (p. 67).

Medicare made monumental news within the health industry when it became a more involved purchaser of health care in 2007 when it was announced it would no longer pay for hospital acquired conditions and adverse events (Watcher, Foster & Dudley, 2008). That seemed to signify a new trend in improving healthcare by maintaining transparency around preventable events in the hospital setting (Watcher et al.).

This author believes it may take such an event, such as a provider not being reimbursed if they do not incorporate menopause-related healthcare into their preventive health in order for PCPs to fully make a change in practice and consistently assess symptomology and implement this change in practice around treatment for menopause-aged women. It would be

helpful if the US Preventive Services Task Force would implement a menopausal-health related guideline, or some other indicator to prompt treatment. Such a change in practice may require more enforceable guidelines to prompt providers to fully care for menopausal women.

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Lipkin, D., & Kwon, Y. (2014). Therapies and nursing care of women with vulvar dermatologic disorders. *Journal of Obstetric, Gynecologic, & Neonatal nursing 43(*2). doi: 1111.1552-6909.12286

Appendix A

Evaluation Table

Citation	Conceptual Framework	Design/ Method	Sample/ Setting	Variables Studied and Their Definitions	Measurement	Data Analysis	Findings	Appraisal: Worth to Practice
Trudeau et al., (2011). Identifying the Educational needs of menopausal women: a feasibility study. *Women's Health Issues, 21*(2), 145-152. Doi:10.1016/j.whi.2010.10.001	Bandura: self-efficacy, self-evaluation, self-attention	Design: both qualitative and quantitative Methods: Four stages included 1) needs assessment using focus groups and survey s with 24 women aged 40-55 and phone interviews with 8 health experts, 2) use of concept mapping methodology for quantifying qualitative data from part 1, to identify the core concepts, 3) development of a demonstration online educational component geared to answer women's questions about menopause, and 4) implementation of a	Sample: First part: 24 women and 8 experts, Fourth part: pilot study of 35 women and 9 health experts. Setting: focused interviews, by telephone, internet	Qualitative: Women were asked to respond to: "On a website like Chart the Change (an online site authors were piloting with information about menopause), "I would like to be able to learn, see. or do…."	Concept mapping: Of 24 statements which had been ranked by experts by importance into 6 clusters	Use of Concept Systems to perform sorting & rating task confirmed by 6 experts in content area	6 clusters of information that women wish information on regarding menopause from 84 statements 1) where to 'get support' 2) self-management and provider communications 3) treatment options, 4) how to promote and maintain health (self-treatments), 5) desire to understand physical changes occurring, 6) what to expect Each cluster included multiple statements from women &	Strength: Implementation of patient engagement methods that inform and prompt patients are good, when used with good communication processes between patient and provider to overcome the power differential that exists. 1)

		pilot study with 35 women and 9 health experts to assess knowledge gained and program satisfaction.					experts from focus group: menstrual changes, mood swings, vasomotor symptoms, night sweats, sleep problems, problems communicating with MD, fear of MD minimizing information.	Information, 2) a cue that prompts verbal interaction between provider and patient and, 3) collaboration between the two. Weakness: authors already had decided on 'information, activation and collaboration as the optimal model. L: IV Q: A

Grande, et al. (2014). A classification model of patient engagement methods and assessment of their feasibility in real-world settings. *Patient Education and Counseling 95*, 281-287. Doi.10.1016/j.ped.2014.01.016	None	Design: Meta-synthesis Objectives: 1) describe existing reviews of pt engagement methods, 2) to propose a model of pt engagement methods where the focus is on pt engagement in clinical workflows, and 3) assess the feasibility of identified method. Methods: Lit review of articles from the years 1977-2011 from peer-reviewed journals. Inclusion criteria included using patient engagement methods targeted at patients either alone, or as part of the patient provider dyad. Exclusion consisted of those articles solely targeting providers. Purpose: To determine which method of	Literature review of PubMed, Medline and Google Scholar, resulting in Identification of 10 meta-syntheses and systematic reviews. These reviews include 452 studies. Intended for use in clinic setting.	Variables looked at were delivery 1) method and medium, 2) how much patient work is required, 3) how much additional human resources are required, 4) does it fit in the clinical setting, and overall feasibility. Each of the ten reviews chosen were scored on these variables.	Two of the authors assessed articles who assigned a 'low' or 'high' rating of the variables (see the next column) and a third independent person as investigator triangulation validated the authors findings.	None	Results: provision of passive 'information' through the use of booklets, handouts, or other media. It is a unidirectional transmission of information where the patient is the passive recipient. The next category involves encouraging, the patient to perform specific behavior via asking questions, getting clarification, and sharing what is most important. A further distinction was made within methods that specifically target efficacy and confidence, and those which emphasize interaction in skill development/ or preparing to communicate. The final category; 'information + activation +	Strengths: clear identification of women's needs Limitations: selection bias-highly educated women who use the internet to get information. Focus on development of online education site beneficial for authors, not this paper. L: III Q: B

		patient engagement involving pts. partnering with providers in their own care and decision-making, while also ensuring practicality in a clinical practice. Excluded 7 studies which it included in review for others.					collaboration' adds a component which fosters patient-provider dialog, where there are expectations that the interaction involves two or more working together. This method builds on the two previous through the introduction of 'collaboration'.	

Appendix B

MENOPAUSAL WOMEN'S HEALTH CARE NEEDS FOR THE PRIMARY CARE PROVIDER PRE-TEST

Strongly disagree (SD), Disagree (D), Undecided (U), Agree (A), Strongly agree (SA)	SD	D	U	A	SA
1) PCPS are the correct practitioners to provide care for menopause-related health issues	1.	2.	3.	4.	5.
2) I am comfortable talking to women with menopausal health concerns about self-care and non-pharmaceutical options.	1.	2.	3.	4.	5.
3) I routinely ask about menopause related health issues to women ~45 years of age and above.	1.	2.	3.	4.	5.
4) I know the current practice guidelines around prescribing hormone therapy.	1.	2.	3.	4.	5.
5) I know what constitutes a menopause-related health issues.	1.	2.	3.	4.	5.
6) I am comfortable discussing vulvovaginal changes with a menopausal woman.	1	2.	3.	4.	5.
7) I recommend vaginal moisturizers or lubricants to women of menopausal age.	1	2.	3.	4.	5.
8) I believe menopause can seriously impact a woman's quality of life.	1	2.	3.	4.	5.

Comments:

_____

_____

Appendix C

MENOPAUSAL WOMEN'S HEALTH CARE NEEDS FOR THE PRIMARY CARE PROVIDER POST-TEST

Strongly disagree (SD), Disagree (D), Undecided (U), Agree (A), Strongly agree (SA)	SD	D	U	A	SA
1) PCPS are the correct practitioners to provide care for menopause-related health issues.	1.	2.	3.	4.	5.
2) I will be comfortable talking to women with menopausal health concerns about self-care and non-pharmaceutical options.	1.	2.	3.	4.	5.
3) I will routinely ask about menopause related health issues to women ~45 years of age and above.	1.	2.	3.	4.	5.
4) I now know the current practice guidelines around prescribing hormone therapy.	1.	2.	3.	4.	5.
5) I now know what constitutes a menopause-related health issues.	1.	2.	3.	4.	5.
6) I will be more comfortable discussing vulvovaginal changes with a menopausal woman.	1.	2.	3.	4.	5.
7) I will recommend vaginal moisturizers or lubricant to women of menopausal age.	1.	2.	3.	4.	5.
8) I believe menopause can seriously impact a woman's quality of life.	1	2.	3.	4.	5.

Comments:

_____

_____

Appendix D

WHAT IS MENOPAUSE:

What is a menopause???
This is made to help women understand what menopause is, what symptoms may occur, and what treatments are available.

Definition: Menopause is the time that ends the years of reproduction and child-bearing.
About five years before menstruation stops, there are changes in your body, leading up to menopause. This transition time is called perimenopause.

Estrogen (an important hormone for reproduction) is decreasing. During this time it is common that your period may be heavier or lighter than usual, and you will begin to skip periods, or they may come less frequently.

After one year without a period you reach a moment called *menopause*. The average age is 51 years. After that, you are *post-menopause*.

What symptoms may occur? Symptoms vary from person to person. They may be seldom, or occur with more frequency.

Weight gain: Hormone changes during menopause impact weight and cause redistribution of fat. Also, your metabolism decreases as testosterone (another hormone) decreases, and you need less calories.

Trouble concentrating & remembering: During perimenopause, some women complain about not being able to concentrate, forgetting things, or feeling like they are 'in a fog'. Some times are better and some worse.

It may also be related to normal stresses that happen during midlife. Like other symptoms, it can be frustrating.

Loss of libido occurs in some. You may have less interested in sexual activity or intimacy.

Fatigue is a common symptom. It is defined as an ongoing feeling of tiredness, weakness, with lower energy levels than normal.

Mood swings: Menopausal mood swings are very common. One minute you might feel up, the next moment you might feel down. They can be sudden and intense, due to the fluctuations in your hormones.

Hot flashes: A hot flash is a sudden feeling of warmth and heat. It is usually most intense over the face, neck and chest. Your skin may become red and your heartbeat may speed up. Sometimes hot flashes cause sweating. As the hot flash ends, you may feel chilled.

Hot flashes can last anywhere from a few seconds to a few minutes. It might happen a few times per day, and some women have them up to 20-30 per day.

In addition to hot flashes, some women have night sweats. Again, it can be minor, or you can sweat and make the sheets wet.

Irritability is reduced patience, with feelings of stress, and you may get angry or frustrated suddenly for something that didn't bother you before. It may cause you to lash out at others. It may be related to other stress in your life.

Sleep disorders: This may involve waking up a lot at night, tossing and turning, or feeling unable to get to sleep (insomnia).

Some women describe feeling less restful when they sleep. This symptom may start 5-6 years before actually entering menopause.

Incontinence: There are 3 types of incontinence:
1) *Stress incontinence* happens when you laugh or sneeze and have an accidental release of some urine.
2) *Urge incontinence* is when your bladder is overactive, and you again loose urine.
3) *Overflow incontinence* is when you do not feel like you have a full bladder, yet you lose urine anyway.

Vaginal dryness happens with the change in hormones. The moist lining of the vagina becomes drier, and may cause itchiness and irritation. In addition to dryness, over time the skin in the vagina becomes thinner, and less elastic. Because there is less natural lubrication, it may become irritated, and more prone to infection.

Osteoporosis is when bones become less dense, and weaker. Normally old bone cells are replaced with new bone cells, but the body's ability to do handle this may change in some women after menopause. Reduced bone density means bones can be more likely to have breaks and fractures from minor falls.

If that isn't enough, what else?

- Hair & nails may grow thinner
- Sweat & body odor may change
- Some women feel depressed
- Others feel anxious and panicky
- You may get joint pain

Oh No!!! What is a woman to do???
The good news: it is unlikely you will have all of these symptoms!!!

Some things about menopause may be genetic. If your mother started menopause around age 45, and the last period at 50, it is likely you will also. But, all is not hereditary, and you can do yourself to make your menopause easier!

In general, it is important now for you to remember how to take care of yourself. Eat well and maintain a healthy weight, try to get enough sleep, and exercise 30 minutes per day, at least five days per week!

Try to find something you enjoy doing that helps with reducing stress: meditation, yoga, learning breathing exercises, tai chi, or connecting with friends. Do this more often!!

There is a medication for most things, but many have side effects, and some you can take only occasionally. Menopause is a natural event that occurs to all women. Try to find a natural solution first. If you can't; talk to your doctor about medications.

Be reassured, some things will just pass! If any of these symptoms is having a large negative impact on your life, discuss it with your doctor.

Now, one by one:

Osteoporosis: If your MD/NP suspects bone fragility they will probably offer you a DXA bone density test. If the results confirm your bones are at risk, there are a variety of prescription medications available.

Trouble concentrating & remembering: This will be better & worse, then improve. Remember, it is normal for this time in your life.

Fatigue: This will also pass! Phew!!

Mood swings, depression & irritability: This will pass, but not soon enough!! Tell your MD/NP: there are many medications which can help. These include SSRI antidepressants, and Wellbutrin (improves libido issues)!

Sleep disorders: If you have increased trouble sleeping, the worse thing is to worry about it. Relax!

Try to sleep with good sleep hygiene. Cut out caffeine after 2pm. Eat dinner a bit earlier so your stomach is not full. Avoid alcohol and nicotine too close to bedtime. Stop doing things one hour before bed that take a lot of mind power: work, computers & games. Make a regular relaxing bedtime routine.

Incontinence: Don't wait, start as young as possible to do Pelvic Floor Exercises to strengthen internal pelvic muscles. To do a Kegel (as they are also called): find the right muscle by stopping urination midstream several times. If you are successful-those are the muscles. You should do at least 3 sets of 10 repetitions per day: tighten the muscles, hold the contraction for 5 seconds, then relax for 5 seconds. Work up to keeping the muscles 10 seconds at a time, relaxing 10 seconds between contractions. Do it while driving, standing in line at the market, nobody will know!!

If you are having incontinence, start these exercises now, and talk to your MD/NP.

Weight gain: eat less, get to a good weight, and exercise more. That will help raise your metabolism, it will help your heart health, and you will feel better!

Loss of libido: although this will pass if sleep is controlled, and vaginal dryness and moods are improved, it may improve sooner. Discuss this with your MD/NP; Wellbutrin or another medication may be appropriate.

Vaginal dryness: There are many helpful over-the-counter products. Petroleum or oil-based products are *not* recommended.

Daily vaginal moisturizers include: Replens, K-Y Liquibeads, K-Y Silk-E, or Moist Again.

Lubricants, which help for dryness and improve comfort with sexual activity include Astroglide, FemGlide, Just Like Me, Pure Pleasure, ID Millenneum, and Pjur.

There are also prescription vaginal estrogen products such as Vagifem (tablet), Estrace (cream), Premarin (cream), and the Estring-vaginal ring.

Hot flashes & night sweats: Some non-pharmaceutical possibilities: hypnosis, use of a motorized or hand-held fan, breathing exercises, and dressing in light-weight layers have been shown to help.

If these symptoms become too difficult to tolerate, talk to your MD/NP. There are non-hormonal FDA approved alternatives such as the antidepressant Paxil.

There is 'hormone replacement therapy'; which is a systemic oral medication. Research has shown it is safe to take, and your MD/NP can discuss the advantages and risks to help you choose the most effective treatment.

QUE ES LA MENOPAUSIA:

Qué es la menopausia? Este documento es para ayudar a la mujer a entender que es la menopausia, los síntomas y que tratamientos están disponibles.

Definición: La menopausia es el momento en que terminan los años reproductivos. Durante unos cinco años antes, hay cambios en el cuerpo que producen este cambio; esta época se llama 'peri-menopausia'.

Estrógeno (una hormona de la reproducción) disminuye. Durante este tiempo es común que la regla puede ser más pesada o más ligera, disminuyendo su frecuencia.

Después de un año sin su regla se llega a un momento llamado 'menopausia'. La edad media es de 51 años. Después de eso, llega a la 'post-menopausia'.

¿Que síntomas pueden ocurrir? Los síntomas y la frecuencia de ellos varían de persona a persona.

Aumento de peso: Las hormonas cambian durante la menopausia y esto afecta su peso. También, su metabolismo disminuye a medida que la testosterona (otra hormona) disminuye, y su cuerpo necesita menos calorías.

Pérdida de la libido (apetito sexual) ocurre en algunas personas. Ud. puede tener menos interés en la actividad sexual o intimidad.

Irritabilidad su nivel de paciencia disminuye con la sensación de estrés, y puede enojarse o frustrarse repentinamente por casos que no le molestaban antes. Esto puede causarle que grite contra otros. Esto también puede ser relacionado a otro estrés en su vida.

Appendix E

Fatiga es un síntoma común. Es definido como la sensación de cansancio, debilidad, y niveles de energía más bajos de lo normal.

La osteoporosis es cuando los huesos se vuelven menos densos y más débiles. Es normal que las células óseas viejas sean reemplazadas por nuevas células, la capacidad del cuerpo para manejar esto puede cambiar en algunas mujeres. Reducción de la densidad ósea significa que los huesos son más propensos a tener fracturas por caídas menores.

Sequedad vaginal ocurre por el cambio de hormonas. Los tejidos húmedos de la vagina se vuelven secos, y pueden causar comezones e irritaciones.

Además de sequedad, con el tiempo la piel se vuelve delgada y menos elástica. Debido a que hay menos lubricación natural, puede irritarse, y está más propensa a infecciones.

Desordenes del sueño: Esto implica despertar muchas veces en la noche, dar de vueltas, o sentirse incapaz de poder dormir (insomnio). Algunas mujeres se sienten cansadas después de dormir. Este síntoma puede empezar 5-6 años antes de entrar a la menopausia.

Incontinencia: Hay 3 tipos de incontinencia que causa una pérdida involuntaria de orina-
1. *De esfuerzo* ocurre cuando se ríe o estornuda
2. *De urgencia* ocurre cuando la vejiga es superactiva y la orina suelta.
3. *De vejiga llena* pasa cuando no siente que la vejiga se llenó.

Cambios de ánimos son muy comunes. Por un momento se siente muy bien, y de repente puede sentirse decaída y pueden ser repentinos e intensos, debido a los cambios de las hormonas.

Problemas para concentrarse y recordar: Algunas mujeres se quejan de no poder concentrarse, olvidar las cosas, o sentir que están 'en un estupor'.

Algunas veces varían. También puede estar relacionado con estrés normal que ocurre en su vida. Al igual que otros síntomas, pueden ser frustrantes.

Sofocos son repentinas sensaciones de calor. Estos son más intensos en la cara, cuello y pecho. La piel se puede poner roja, y los latidos del corazón pueden acelerar.

Estos pueden durar desde pocos segundos hasta minutos y pueden ocurrir varias veces al día -hasta 20-30 al día.

Algunas veces los sofocos pueden causar sudoraciones. Después del sofoco se puede sentir frio.

Además de los sofocos, algunas mujeres tienen sudores nocturnos. Estos también pueden ser menores o algunas veces puede sudar hasta mojar las sabanas.

¿Si eso no es suficiente, que más puede pasar?

- El pelo y las uñas pueden crecer delgadas
- El sudor y el olor del cuerpo puede cambiar
- Algunas mujeres se sientes deprimidas
- Otras sienten ansiedad o pánico
- Pueden tener dolor en las coyunturas

¡O no! ¿Qué debe hacer una mujer?
¡¡¡La buena noticia es que probablemente no tenga todos estos síntomas!!!

Algunas cosas acerca de la menopausia es que puede ser genética. Si su madre empezó la menopausia a los 45 años, y la última regla a los 50 años, es probable que a Ud. lo hará también. Pero, no todo es hereditario, y puede hacer mucho para que su menopausia sea más fácil.

En general, ahora es muy importante que recuerde como cuidar de sí mismo. Comer bien y mantener un peso saludable, tratar de dormir lo suficiente, y hacer ejercicio 30 minutos al día, al menos 5 días a la semana.

Trate de encontrar algo que le gusta hacer, eso ayuda a reducir el estrés: la meditación, el yoga, aprender ejercicios de respiración, tai chi, o conectarse con amigos. ¡¡Haga esto con más frecuencia!!

Existen medicamentos para la mayoría de los síntomas, pero muchos tienen efectos secundarios, y algunos que solo puede tomar de vez en cuando. La menopausia es un hecho natural que ocurre a todas las mujeres. Trate de encontrar una solución natural antes de buscar medicarse. Si usted no puede; hable con su MD/NP acerca de los medicamentos.

Ahora, uno por uno:

Cambios de ánimos, depresión e irritabilidad: Esto pasará, ¡pero no tan pronto! Hable a su MD/NP; hay muchas medicamentos que pueden ayudar.

Pérdida de la libido: esto se mejora si mantiene un sueño controlado, y la sequedad vaginal y los estados de ánimo se mejorarán. Hable de esto con su MD/NP; Wellbutrin u otro medicamento puede ser apropiado.

Aumento de peso: Coma menos, mantenga un buen peso, y hacer ejercicio más regular. Esto ayuda a prevenir diabetes, o baja el nivel de azúcar de la sangre, si tiene diabetes. ¡Eso le ayudará a aumentar su metabolismo, que le ayudará la salud del corazón, y se sentirá mejor!

Desordenes de sueño: si han aumentado los problemas para dormir, la peor cosa que puede hacer es preocuparse acerca de eso. ¡Relájese!

Trata de dormir con una buena higiene del sueño. No usa cafeína después de las 2pm. Coma su cena un poco temprano para que su estómago no esté lleno. Evite el alcohol y nicotina por la tarde. Deja de hacer cosas que tomen mucha energía mental; como trabajo, computadores y juegos electrónicos, una hora antes de acostarse. Haz una rutina regular que la relaje antes de dormir.

Sequedad vaginal: Hay muchos productos útiles que no necesitan receta. No se recomiendan productivos de petróleo. Humectantes vaginales incluyen: Replens, KY Liquibeads, KY Silk- E, o Moist Again. Lubricantes que ayudan para la resequedad vaginal y ayudad la comodidad durante la actividad sexual incluyen; Astroglide, FemGlide, Just Like Me, Pure Pleasure, ID Millenneum y Pjur. También hay productos de estrógenos vaginales con receta; Vagifem (comprimido), Estrace (crema), Premarin (crema), y el anillo vaginal; 'Estring'.

Problemas para concentrarse y recordar: Recuerde que es normal para esta época de su vida; a veces sería mejor, y otras peor

Fatiga: Esto también pasará. ¡¡Fufe!!

Osteoporosis: Si su MD/NP sospecha de huesos frágiles ellos probablemente le ofrecerán un examen 'DXA' (de la densidad de los huesos). Si los resultados confirman que sus huesos están en riesgo, hay una variedad de medicamentos de venta con receta disponibles para el tratamiento.

Incontinencia: No esperes, empieza lo más joven posible hacer ejercicios pélvicos para fortalecer los músculos pélvicos. Para hacer un Kegel (como también se le llama): encontrar el músculo correcto de teniendo el flujo del orina varia veces. Si Ud. logra interrumpir su flujo de orina esos son los músculos. Debe hacerlo al menos 3 series de 10 repeticiones por día. Apretar los músculos, mantenerla contracción durante 5 segundos, después relájese durante 5 segundos. Trabajar hasta mantener los músculos 10 segundos a la vez, relaja 10 segundos entre las contracciones. Hazlo mientras maneja durante las luces rojas, esperando en cola en el mercado, ¡¡nadie lo sabrá!!

Si tiene incontinencia, empiece estos ejercicios ahora, y hable con su MD/NP.

Sofocos y sudores nocturnos: Hay opciones que no necesitan receta: la hipnosis, el uso de un ventilador, ejercicios de respiración, y vestirse en ropas livianas. Si estos síntomas se vuelven demasiado difíciles de tolerar, hable con su MD/NP. Hay medicamentos sin hormonas aprobados por la FDA como la pastilla antidepresiva Paxil. Hay una "terapia de reemplazo hormonal" con ventajas y riesgos. Hable con su MD/NP para elegir el tratamiento más eficaz para Ud.

Appendix F

PATIENT MENOPAUSE QUESTIONNAIRE (to be completed prior to clinic visit)

_____ _____

Patient name Date

Basic understanding:

I understand what menopause is _____ or _____

	Yes	No
	Check if symptom present	Check if you wish to discuss medication or other treatment
Weight gain	_____	_____
Trouble concentrating	_____	_____
Memory problems	_____	_____
Mood swings	_____	_____
Irritability	_____	_____
Hot flashes	_____	_____
Sleeping problems	_____	_____
Incontinence	_____	_____
Vaginal dryness	_____	_____
Loss of interest in sex	_____	_____

I would like to have more information

about:_____

Appendix G

CUESTIONARIO DEL PACIENTE (por favor rellene antes de la visita)

_____ _____

Nombre Fecha

Comprensión básica:

Entiendo que es la menopausia _____ o _____

Sí No

	Marque si síntoma es presente	Marque si quiere discutir medicamentos o tratamiento
Aumento de peso	_____	_____
Problemas para concentrarse	_____	_____
Problemas de recordar	_____	_____
Cambias de humor	_____	_____
Irritabilidad	_____	_____
Sofocos	_____	_____
Desordenes del sueno	_____	_____
Incontinencia	_____	_____
Sequedad vaginal	_____	_____
Pérdida del apetito sexual	_____	_____

Quiero más información de:_____

Appendix H

EXPENSES

Direct Expenses		**Projected**	**Actual**
Workshop creation: NP hrs @ $50/hr:			
Creation of English patient handouts			
4 hrs each x 2	8 hrs	0.00	450.00
Creation of Spanish patient handouts			
15 hrs each	30 hrs.	0.00	1,500.00
PowerPt/curriculum	10 hrs.		500.00
Implementation			
2 hrs./each time x 2 implementations		0.00	200.00
Pre & Post tests	2.75hrs		137.50
Printing & copying		236.00	30.68
Travel expenses		0	10.00
CD Creation Service		0	187.00
Folders		5.00	19.90
Parking		4.00	4.00
Clinical Director time 1.75 hrs @ $100/hr		0	175.00
Staff time (lunch hour)		0	0.00
Subtotal Direct Expenses		***$249.00***	***$3,212.08***
Indirect Expenses			
Workshop space		0	62.00
12 staff members (donated lunch time)		0	0
Subtotal Indirect Expenses		***0***	***$62.00***
Total project Budget		**$249.00**	**$3,274.08**

APPENDIX I

GANTT CHART OF PROJECT TIMELINE

Project timeline for Menopausal Women's Healthcare Workshop																		
	2014								2015									
Event	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Choose project topic	1																	
Complete Qual Chair Memo	15																	
Choose committee members	31																	
DNP Milestone Approval Form signed		1																
Complete DNP Project Approval Form			6															
Submit DNP Project Approval Form for Chair approval			11															
Submit Project Approval for approval			18															
Project Approval to Dept			22															
Dept. approval of DNP Project			25															
Submit Prospectus to comm.						30												
Submit Manuscript to chair							15											
Prospectus to comm.								1										
Submit Manuscript to Chair						21												
Chair returns Manuscript							5											
Get project preceptor																		
Train 1st class- pilot (PDSA)									22									
Train 2nd classes										5								
Analyze pre & post tests data										6								
Complete paper											21							

APPENDIX J

DATA ANALYSIS OF PROVIDERS: TABLE 1.

Table 1.
PROVIDERS: COMPARISON OF PRE-INTERVENTION AND POST-INTERVENTION MEAN SCORES & T-VALUE FOR KNOWLEDGE ABOUT MENOPAUSE-RELATED HEALTH ISSUES (MHRI) AND COMFORT LEVEL IN DISCUSSING MENOPAUSE RELATED HEALTH ISSUES. *Df=4* for all

Variable	Pre-Intervention M (SD)	Post-Intervention M (SD)
Knowledge about Menopause-Related Health Issues:		
PCPS are the correct providers To provide care for MHRI	3.80 (0.85)	4.60 (0.28)
I know the current practice Guidelines around prescribing Hormone therapy	2.40 (1.84)	3.80 (0.85)
I know what constitutes a MRHI	3.80 (0.85)	4.20 (0.57)
I believe menopause can seriously Impact a woman's quality of life	4.40 (0.42)	5.00 (0.00)
Comfort Level in Discussing Menopause-Related Health issues:		
I will be comfortable talking to women about MRHI >45 yrs	3.80 (0.85)	4.40 (0.42)
I will routinely ask about MRHI	3.00 (1.41)	3.20 (1.27)
I will be comfortable discussing vulvovaginal changes with a menopausal woman	4.20 (0.57)	4.20 (0.57)
I recommend vaginal Moisturizers or lubricants	4.60 (0.28)	4.60 (0.28)

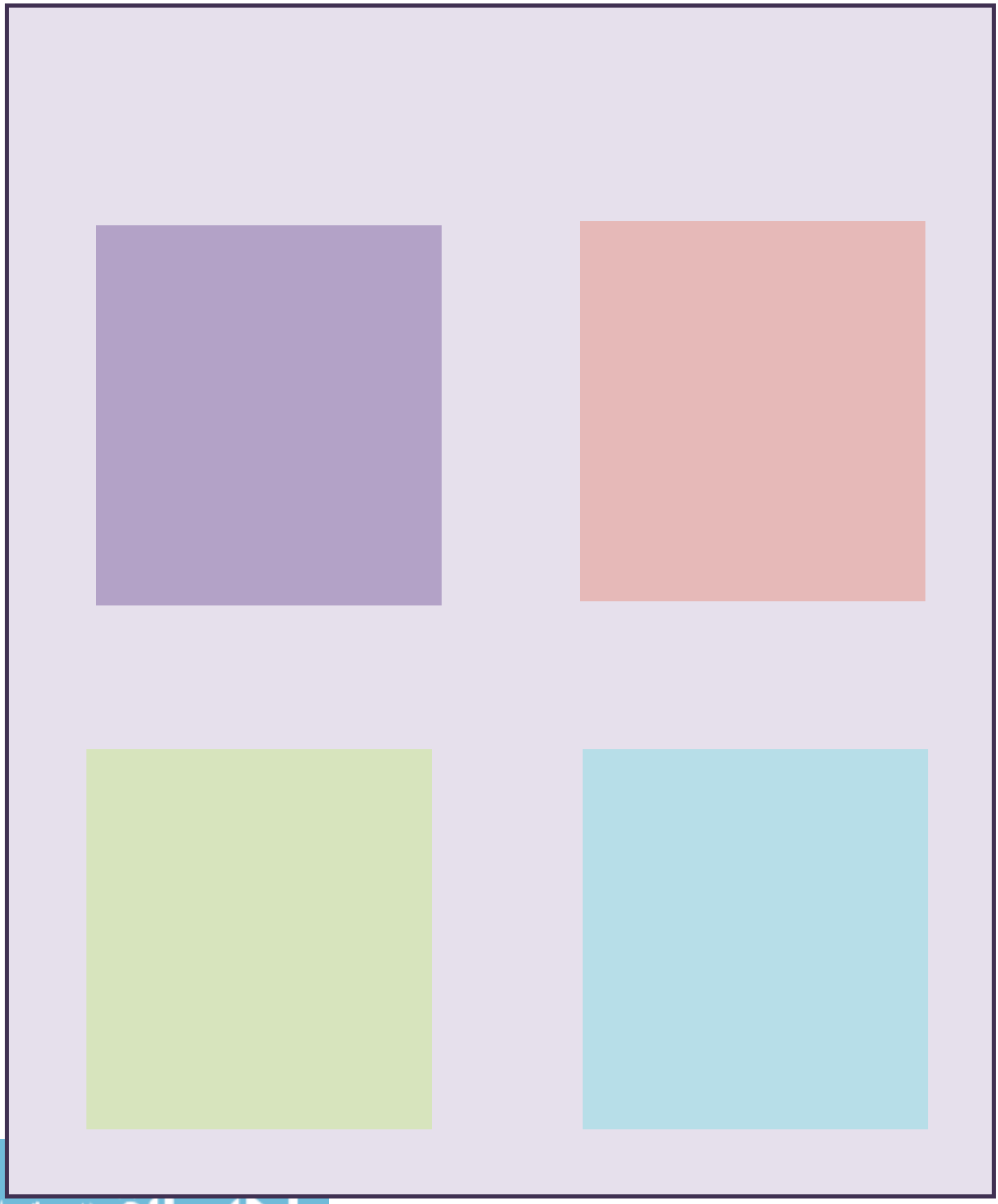
APPENDIX K

DATA ANALYSIS OF NON-LICENSED PERSONNEL: TABLE 2

Table 2.
NON-LICENSED: COMPARISON OF PRE-INTERVENTION AND POST-INTERVENTION MEAN SCORES & T-VALUE FOR KNOWLEDGE ABOUT MENOPAUSE-RELATED HEALTH ISSUES (MHRI) AND COMFORT LEVEL IN DISCUSSING MENOPAUSE RELATED HEALTH ISSUES.
df=5 for all

Variable	Pre-Intervention M (SD)	Post-Intervention M (SD)
Knowledge about Menopause-Related Health Issues:		
PCPS are the correct providers To provide care for (MRHI)	3.50 (1.77)	4.17 (1.30)
I know the current practice Guidelines around prescribing Hormone therapy	3.00 (2.12)	4.17 (1.29)
I know what constitutes a MRHI	3.17 (2.00)	4.17 (1.30)
I believe menopause can seriously impact a woman's quality of life	4.33 (1.18)	4.83 (0.83)
Comfort Level in Discussing Menopause-Related Health issues:		
I will be comfortable talking To women about MRHI >45 yrs	3.40 (1.77)	4.00 (1.41)
I will routinely ask about MRHI	3.67 (1.65)	3.83 (1.53)
I will be comfortable discussing Vulvovaginal changes with a Menopausal woman	3.83 (1.53)	3.83 (1.53)
I will recommend vaginal Moisturizers or lubricants	4.33 (1.18)	4.5 (1.06)

Appendix L

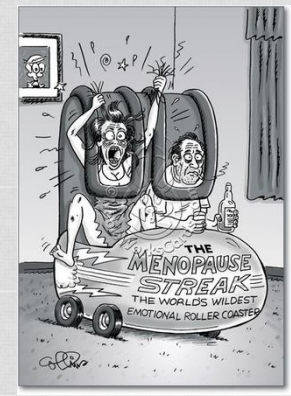


Appendix M

PowerPoint Presentation

AN EDUCATIONAL WORKSHOP: MENOPAUSAL WOMEN'S HEALTH CARE NEEDS FOR THE PRIMARY CARE PROVIDER

Pamela Doerr-Kashani, DNP(c), RN, PHN



FACTS ABOUT MENOPAUSE- DID YOU KNOW:

- It starts around the age of 35 as estrogen fluctuations occur
- Average age is between 51-54
- Hormone replacement therapy is in use again, for select patients!

WHY this topic?

1995: USDHHS FIFTH REPORT FINDING- WOMEN RECEIVED FRAGMENTED, UNCOORDINATED CARE

WHAT HAS CHANGED SINCE THEN?

LITERATURE INDICATES LITTLE CHANGE

- 1995: COGME- called for increased training of women's health in med school, encouraged CMEs for existing practitioners
- 2008: Gap in care reiterated-Spencer & Kern
- 2013: Note 3/100 residents had discussed menopause symptoms with pts >5x in previous 6 months, and 50 of 100 describe a low level of comfort with topic-Hsieh et al
- 2014:"Competency in Menopause Management: Whither Goes the Internist?" -Santen et al

WHY NOT JUST REFER TO WOMEN'S HEALTH?

- Can create a loss in continuity-of-care
- Patients can poorly report what other providers have instructed or prescribed; leaving the primary care provider reluctant to address symptoms after specialty has started treatment
- 23 million women >age 45 in 2010- expected to reach 50 million in 5 years!!!

WHAT IS BEING DONE ELSEWHERE?

- EMAS Position Statement:
- "The menopause, or the cessation of the menstrual cycle, is the result of ovarian aging and is a natural event experienced by most women in their late 40s or early 50s. With increasing longevity the menopause can now be considered a mid-life event. Thus managing menopause is a key issue for all health professionals, not just gynecologists".

Maturitas, 78 (2014); 67-69

LET'S ADDRESS PROVIDER CONCERNS ONE BY ONE

FOUR CONSIDERATIONS THE PRIMARY CARE PROVIDER MAY HAVE

- **Is it in the purview of primary care? (Santen et al, 2014)**
- **If patients have been referred to gyn for a while, may not feel current in up-to-date, evidence-based knowledge and skills to competently manage symptoms (Weaver, Newman-Toker & Rosen, 2012)**
- **How to do in a focused office visit of 15-20 minutes?**
- **Comfort level with the topic....**

ARE MENOPAUSE-RELATED ISSUES IN THE PURVIEW OF THE PRIMARY CARE PROVIDER???

WOMEN'S HEALTH IS A COMPETENCY FOR MD'S, PA'S & NP'S…

Physicians

- 1995-2001: COGME-recommendations for women's health competencies in medical school
- 1997-2002: Internal Medicine adds core competencies in women's health: questions on certification exam
- 2005: APGO & WHEO create women's health care competencies for medical students, including issues related to menopause

Nurse Practitioners

- 2002: Competency added-include patients of all ages and in all phases of the individual and family life cycle (including reproductive health)
- 2013: Provide patient-centered health care; to include reproductive health care including sexual health, prenatal & postpartum, & postmenopause.

Physician Assistant

- 2010: Medical care across the lifespan to include women's health

LACK OF UP-TO-DATE, EVIDENCE-BASED KNOWLEDGE &

(WEAVER, ET AL., 2012)

UP-TO-DATE?

- Unused skills become rusty, be it a physical or mental skill
- If there has been a period of time in which the provider has referred to women's health, they may not be aware of current practice recommendations or changes
- Can being 'out of practice' create difficulty starting the conversation?

HOW TO DO A MENOPAUSE-RELATED WOMEN'S HEALTH ISSUES VISIT IN A 15 MINUTE FOCUSED VISIT??

TIME CONSIDERATIONS

- The typical visit of 15-20 minutes
- Starting the conversation
- Keeping it focused
- Is it reimbursable??

COMFORT LEVEL WITH THE TOPIC?

CROSKERRY'S THEORY

- 'Dual-process theory of diagnostic reasoning'
- Type One; intuitive (reflexive or heuristic)
- Type Two; analytical; involves deduction & deliberate reasoning
- When there is no familiarity & experience, the brain switches to Type Two analytical processing-with new information
- Metacognitive processes: reflective processing

"I may look like I have no problems dealing with menopause, but if people could hear what I was thinking, I'd be in a mental hospital."

WHAT ARE WE TALKING ABOUT

- Cardiovascular disease
- Vasomotor symptoms
- Osteopenia & osteoporosis
- Bladder dysfunction
- Vulvovaginal changes
- Hypo & hyper thyroid
- Primary hyperparathyroidism

FIRST SYMPTOMS?

- THE MORE COMMONLY KNOWN ONES- MAY START DURING PERI-MENOUPAUSE:
  - Hot flashes & night sweats
  - Insomnia & sleep disturbance
  - Mood changes; minor irritability, depression
  - Cognitive 'fogginess'

HEALTH CONCERNS, CONTINUED…

- MENOPAUSAL (AKA POST-MENOPAUSAL):
  - #1-This group of women has lost the protective estrogenic factor, and very rapidly catch up to men of the same age in terms of
    - Cardiovascular disease –the #1 killer of women, 35,000 per year!
    - Coronary artery heart disease
    - Hyperlipidemia
    - ↑ coagulation, ↓ fibrinolysis

ALSO INCREASE MENOPAUSAL; RISK FOR CVD/CAD

- Hypertension
- Diabetes (women develop at increased rates)
- ↑ LDL & triglycerides/↓ HDL
- ↑ prostaglandin-thromboxane B2
- Sedentary lifestyle
- Obesity (and, ↓ lean tissue, ↑ in adipose tissue)
- Not age-related: hx of preeclampia ↑ risk of CVA/HTN

SPEAKING OF HOT FLASHES…

- Vasomotor symptoms are the main motivator for women to seek treatment!
- Affects up to 80% of women
- Average duration up to 13 years; the sooner they start, the longer they last (JAMA, 2/2015)
- Night sweats
- Impact on quality of life!

CONSIDERED DIFFERENTIALS FOR A PATIENT WITH NIGHT SWEATS

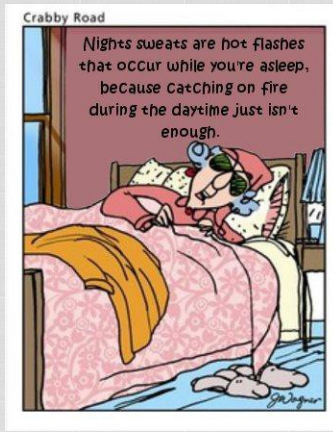
- Anxiety
- Autonomic neuropathy
- Endocarditis
- Leukemia
- Myelofibrosis
- Hyperthyroidism
- Hypoglycemia
- HIV/AIDS
- TB
- Sleep apnea
- Pheochromocytoma
- Cancer
- Lymphoma
- Medications
- (Menopause)

OTHER HYPOESTROGENIC CHANGES

- Bladder dysfunction
- Vulvovaginal changes
- Incontinence
- Osteopenia & osteoporosis
- Hypothyroidism
- Hyperparathyroidism
- Low vitamin D levels

BLADDER DYSFUNCTION & VULVOVAGINAL CHANGES

- Urogenital atrophy
  - Dyspareunia
  - Pruritis
  - Dryness
  - Pain
- Overactive bladder
- Interstitial cystitis
- Incontinence
  - Women are reluctant to discuss this
  - National financial burden >$12 BILLION
  - Patients usually pay ~ 70% of costs
  - Depending on symptomology, may be possible pathology, warrants further investigation



OSTEOPENIA & OSTEOPOROSIS

- 8 million Americans have osteoporosis/ 34 million American women with osteopenia
- Cause of 350,000 hip fractures & 1.5 million fractures of spine & wrist/year
- 70% of those with osteoporotic fractures do not regain pre-injury state
- A hip fracture increases risk of death within 3 months four times more likely
- Financial burden $18billion-2005; cumulative cost of $474 billion within next 20 years

PRIMARY HYPERPARATHYROIDISM

- More prevalent in women
- Incidence highest in postmenopausal women
- Silent, asymptomatic event-usually only detected in routine blood chemistry analysis
- Even mild PHPT is asso. with increased morbidity and mortality r/t cardiac & vascular disease, nephrolithiasis, metabolic disturbances, osteoporosis, neurochemical imbalance & muscle symptoms

HORMONE THERAPY

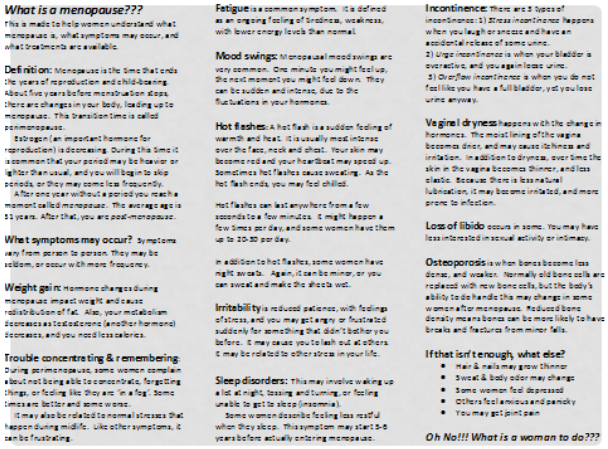
- Assess each patient individually based on need
- Best begun within 3 years of menopause
- Efficaciousness declines in those > 5 yrs menopausal
- Starting age 65+-increased risk of dementia and cognitive decline
- 10 years approximate time limit

WOMEN'S CONCERNS (TRUDEAU ET AL, 2010)

- Through concept-mapping, determined main concerns:
  - Promoting & maintaining health
  - Treatment options for symptoms
  - Physical changes of menopause
- Subcategories:
  - Information and solutions about hot flashes
  - Relieving night sweats
  - How to cope with symptoms
  - Information of side effects of possible medications
  - Provider communication
  - Self management strategies

HOW TO MAKE THIS WORK

- The use of patient decision support tools increases positive outcomes; including less decision conflict, improved adherence to pharmacology, improved patient confidence, and enhanced health status (Grande et al., 2014).
- Patient decision aids, such as handouts or videos should be designed to help *inform* the patient, and better prepare them to be an active participant in a collaborative patient-provider conversation.
- The *inform, activate and collaborate* is the identified most efficacious style of patient engagement (Grande et al).



What is a menopause???

This is made to help women understand what menopause is, what symptoms may occur, and what treatments are available.

Definition: Menopause is the time that ends the years of reproduction and child-bearing. About five years before menstruation stops, there are changes in your body, leading up to menopause. This transition time is called perimenopause.

Estrogen (an important hormone for reproduction) is decreasing. During this time it is common that your period may be heavier or lighter than usual, and you will begin to skip periods, or they may come less frequently.

After one year without a period you reach a moment called menopause. The average age is 51 years. After that, you are post-menopause.

What symptoms may occur? Symptoms vary from person to person. They may be seldom, or occur with more frequency.

Weight gain: Hormone changes during menopause impact weight and cause redistribution of fat. Also, your metabolism decreases as testosterone (another hormone) decreases, and you need less calories.

Trouble concentrating & remembering: During perimenopause, some women complain about not being able to concentrate, forgetting things, or feeling like they are 'in a fog'. Some times are better and some worse.

It may also be related to normal stresses that happen during midlife. Like other symptoms, it can be frustrating.

Fatigue is a common symptom. It is defined as an ongoing feeling of tiredness, weakness, with lower energy levels than normal.

Mood swings: Menopausal mood swings are very common. One minute you might feel up, the next moment you might feel down. They can be sudden and intense, due to the fluctuations in your hormones.

Hot flashes: A hot flash is a sudden feeling of warmth and heat. It is usually most intense over the face, neck and chest. Your skin may become red and your heartbeat may speed up. Sometimes hot flashes cause sweating. As the hot flash ends, you may feel chilled.

Hot flashes can last anywhere from a few seconds to a few minutes. It might happen a few times per day, and some women have them up to 20-30 per day.

In addition to hot flashes, some women have night sweats. Again, it can be minor, or you can sweat and make the sheets wet.

Irritability is reduced patience, with feelings of stress, and you may get angry or frustrated suddenly for something that didn't bother you before. It may cause you to lash out at others. It may be related to other stress in your life.

Sleep disorders: This may involve waking up a lot at night, tossing and turning, or feeling unable to get to sleep (insomnia).

Some women describe feeling less rested when they sleep. This symptom may start 5-6 years before actually entering menopause.

Incontinence: There are 3 types of incontinence: 1) *Stress incontinence* happens when you laugh or sneeze and have an accidental release of some urine.
2) *Urge incontinence* is when your bladder is overactive, and you again lose urine.
3) *Overflow incontinence* is when you do not feel like you have a full bladder, yet you lose urine anyway.

Vaginal dryness: happens with the change in hormones. The moist lining of the vagina becomes drier, and may cause itchiness and irritation. In addition to dryness, over time the skin in the vagina becomes thinner, and less elastic. Because there is less natural lubrication, it may become irritated, and more prone to infection.

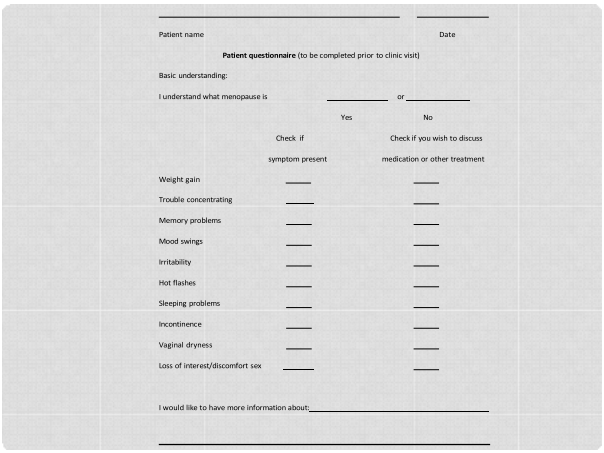
Loss of libido occurs in some. You may have less interested in sexual activity or intimacy.

Osteoporosis is when bones become less dense, and weaker. Normally old bone cells are replaced with new bone cells, but the body's ability to do handle this may change in some women after menopause. Reduced bone density means bones can be more likely to have breaks and fractures from minor falls.

If that isn't enough, what else?

- Hair & nails may grow thinner
- Sweat & body odor may change
- Some women feel depressed
- Others feel anxious and panicky
- You may get joint pain

Oh No!!! What is a woman to do???



_____ _____

Patient name Date

Patient questionnaire (to be completed prior to clinic visit)

Basic understanding:

I understand what menopause is _____ or _____

	Yes Check if symptom present	No Check if you wish to discuss medication or other treatment
Weight gain	____	____
Trouble concentrating	____	____
Memory problems	____	____
Mood swings	____	____
Irritability	____	____
Hot flashes	____	____
Sleeping problems	____	____
Incontinence	____	____
Vaginal dryness	____	____
Loss of interest/discomfort sex	____	____

I would like to have more information about:_____

_____