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## Rethinking the Well Woman Visit: A Scoping Review to Identify Eight Priority Areas for Well Woman Care in the Era of the Affordable Care Act

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### A B S T R A C T

**Purpose:** The annual pap smear for cervical cancer screening, once a mainstay of the well woman visit (WWV), is no longer recommended for most low-risk women. This change has led many women and their health care providers to wonder if they should abandon this annual preventive health visit altogether. Changing guidelines coinciding with expanded WWV coverage for millions of American women under the Patient Protection and Affordable Care Act have created confusion for health care consumers and care givers alike. Is there evidence to support continued routine preventive health visits for women and, if so, what would ideally constitute the WWV of today?

**Methods:** A scoping review of the literature was undertaken to appraise the current state of evidence regarding a wide range of possible elements to identify priority areas for the WWV.

**Findings:** A population health perspective taking into consideration the reproductive health needs of women as well as the preventable and modifiable leading causes of death and disability was used to identify eight domains for the WWV of today: 1) reproductive life planning and sexual health, 2) cardiovascular disease and stroke, 3) prevention, screening, and early detection of cancers, 4) unintended injury, 5) anxiety, depression, substance abuse, and suicidal intent, 6) intimate partner violence, assault, and homicide, 7) lower respiratory disease, and 8) arthritis and other musculoskeletal problems.

**Conclusions:** The WWV remains a very important opportunity for prevention, health education, screening, and early detection and should not be abandoned.

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The Patient Protection and Affordable Care Act (ACA) of 2010 mandates that health plans cover a range of preventive services including an annual well woman visit (WWV) for free. Recent publications from the Institute of Medicine (IOM), including *Clinical Preventive Services for Women: Closing the Gaps* (IOM, 2011a) and the *Future of Nursing: Leading Change, Advancing Health* (IOM, 2011b) highlight a significant paradigm shift in U.S. health policy from treating illness to promoting health. In its

*Future of Nursing* report, the IOM articulates a vision for the health care system to intentionally promote wellness and prevent disease, one in which "primary care and prevention are central drivers of the health care system" (IOM, 2011b, p. S-1). The IOM recommendations for women's preventive services (2011a) envision the WWV as a way to address cost barriers and other disparities associated with obtaining preventive services and to reduce a woman's risk of disease, disability, and illness. These recommendations made important strides to ensure broad and more universal access to certain preventive services for women without the associated costs (such as copays or deductibles) that have been shown to deter women from seeking such services (Olchanski, Cohen, & Neumann, 2013; Robertson & Collins, 2011).

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At the same time that health plans are implementing the ACA-mandated coverage for annual WWVs without cost sharing, certain key components of the traditional WWV, such as the annual Pap smear for cervical cancer screening and the bimanual pelvic examination, are being challenged. Specifically, joint 2012 guidelines from the American Cancer Society (ACS), the American Society for Colposcopy and Cervical Pathology, and the American Society for Clinical Pathology (Saslow et al., 2012) as well as by the American College of Obstetricians and Gynecologists (ACOG, 2012b) now advocate for cervical cancer screening with a Pap smear only every 3 to 5 years in low-risk women. In 2014, the American College of Physicians issued a new clinical guideline recommending against routine screening pelvic examinations in asymptomatic, nonpregnant adult women (Qaseem et al., 2014), although the ACOG continues to recommend yearly pelvic examinations (ACOG, 2014). These changing recommendations and other campaigns to reduce the use of low-value services in health care (ABIM Foundation, 2015) have led to popular press headlines and professional editorials questioning the need for any kind of preventive care at all.

Fortunately, the ACA guarantee for a yearly WWV as a covered benefit without cost sharing has helped to protect these visits from possible extinction. Women's health experts, advocates, and organizations have responded to questions about the value of these visits with guidance for policy makers, clinicians and health care consumers. A *Consumer Guide* to the WWV (National Women's Law Center, Brigham and Women's Hospital & Connors Center for Women's Health, 2014) a WWV software application ("app"; Nurse Practitioners in Women's Health, 2014), and a comprehensive list of age-based recommendations for *Components of the Well-Woman Visit* from the ACOG Well Woman Task Force (Conry & Brown, 2015) have been released in the past year. Nevertheless, more work needs to be done to solidify the value of this preventive health visit, to help clinicians prioritize among the many potential highest value WWV elements, and to educate and empower women to fully utilize their preventive health and screening benefits (Fitzgerald, Glynn, Davenport, Waxman & Johnson, 2015; Sawaya, 2015).

## Methods

The goal of this scoping review of the literature was to answer the question: What is the state of the literature, evidence for, and current policy recommendations regarding what should be included as components of the WWV? This review followed the five steps outlined by Arksey and O'Malley (2005) and further refined by Levac, Colquhoun, and O'Brien (2010) and Daudt, van Mossel, and Scott (2013). Because the WWV is generally composed of a package of many different possible services (which may include cancer screenings, behavioral health screenings and interventions, health education and counseling, and reproductive life planning [RLP]), the scoping review method was chosen because it lends itself to rapidly mapping relevant literature covering broader and more complex research or policy-related questions, to assimilating a broad and diverse range of interdisciplinary research and nonresearch sources, and to summarizing and prioritizing among important sources and types of evidence available (Anderson, Allen, Peckham & Goodwin, 2008; Davis, Drey, & Gould, 2009; Mays, Roberts, & Popay, 2001).

Relevant literature was identified using Medline/Ovid, CINAHL, and Google Scholar to also identify white papers and grey literature. In addition, hand searching of the U.S. Preventive

Services Task Force (USPSTF), National Guideline Clearinghouse, and Cochrane databases, as well as the web sites of relevant professional organizations was undertaken to ensure inclusion of all possible practice guidelines or recommendations. Because of the breadth of this review, resources were limited to meta-analysis and clinical guidelines based on such analyses and focused on primary care settings, primary prevention, and preventive health guidelines, unless such resources were not available. References were generally limited to the year 2009 or later unless classic, often cited, or not yet revised/updated resources from earlier years were considered critical to the topic area. All applicable references were collected and organized by topic area in Mendeley (version 1.12, Mendeley Ltd, New York, NY).

Because this scoping literature review did not include human subjects, no institutional review board approval was required for this project.

## Results

An initial search explored mortality and morbidity data and the general reproductive health needs of U.S. women to identify priority areas for the WWV. This initial iterative process is consistent with the experiences described by other researchers who used the scoping review methodology (Arksey & O'Malley, 2005; Daudt et al., 2013; Levac et al., 2010). In addition to addressing reproductive health issues for women, the WWV of today is an important opportunity to address the prevention and modification of risk factors for and/or early detection of the current leading causes of morbidity and mortality. Table 1 presents the most recent data available regarding leading causes of death in women and Table 2 summarizes the leading self-reported sources of disability in women. Modifiable risk factors including smoking, overweight/obesity, high blood pressure, physical inactivity, and high glucose account for more than two of every five deaths in U.S. women (Danaei et al., 2009), primarily from cardiovascular disease (CVD), lung cancer, stroke, and chronic obstructive pulmonary disease (COPD). As much as one quarter of direct medical costs of the U.S. health system have been attributed to modifiable risk factors (Grunfeld et al., 2013).

Although life expectancy at birth has improved in total for U.S. women over the past two decades, morbidity and related rates of disability have increased, with the same modifiable risk factors and alcohol use contributing to the increasing years lived with disability (Fineberg & U.S. Burden of Disease Collaborators, 2013). Some recent statistical modeling predicts more disease and earlier mortality ahead for younger Americans because of the high incidence of obesity and other factors (Reither, Olshansky, & Yang, 2011). Despite the high costs of the U.S. health system, the US ranks 36th in the world in life expectancy for women (World Health Organization, 2013), and 48th in maternal mortality indicating that much more can and should be done to ensure the health and longevity of women in this country.

In this first phase of the scoping review, the morbidity and mortality data discussed were used to identify a framework of eight priority areas for the WWV. Next, separate scoping reviews were conducted for each of the eight priority areas, resulting in a total of 169 references that were collated and extracted. Figure 1 details the overall flow of the scoping review search and selection (Davis et al., 2009). To ensure methodological rigor, the detailed search strategies and terms for each of the eight priority areas were documented in detail and are available upon request (Arksey & O'Malley, 2005; Daudt et al., 2013; Havill et al., 2014).

**Table 1**  
Five Leading Causes of Death among Women in the United States by Age, 2010

Rank	Total	18–44 Years	45–64 Years	≥65 Years
1	Heart disease (23.8%)	Unintentional injury (24.0%)*	Cancer (38.3%)†	Heart disease (25.9%)
2	Cancer (22.4%)†	Cancer (19.5%)†	Heart disease (16.2%)	Cancer (19.4%)†
3	Stroke (6.3%)	Heart disease (9.8%)	Unintentional injury (5.7%)*	Stroke (7.0%)
4	Chronic lower respiratory disease (6.0%)‡	Suicide (7.1%)	Chronic lower respiratory disease (4.8%)‡	Chronic lower respiratory disease (6.4%)‡
5	Alzheimer disease (4.8%)	Homicide (3.9%)	Stroke (3.7%)	Alzheimer's disease (5.9%)

\* The most common causes of unintentional injury include motor vehicle accidents, drug overdose, and unintentional firearm-related deaths.

† Top 3 causes of cancer death in women are lung, breast, and colorectal.

‡ Chronic lower respiratory disease includes chronic obstructive pulmonary disease, chronic bronchitis, and emphysema.

Source: CDC, National Center for Injury Prevention and Control. Web-based Injury Statistics Query and Reporting System (WISQARS). Available: [www.cdc.gov/injury/wisqars](http://www.cdc.gov/injury/wisqars)

The following sections describe each of the eight proposed priority areas and summarize key findings from the scoping review of each area. Table 3 outlines the number of citations and type of evidence found for each topic area.

#### Priority Area 1: RLP and Sexual Health

Despite the availability of effective contraceptive methods to prevent unintended pregnancy, one in five sexually active women age 15 to 44 is not using any form of contraception (Salganicoff, Ranji, Beamesderfer, & Kurani, 2014), and about one-half of pregnancies in the United States are unintended (Guttmacher Institute, 2013). Significant racial and socioeconomic disparities in unintended pregnancies, preterm birth, and poor birth outcomes exist (Guttmacher Institute, 2013; Malnory & Johnson, 2011). Only 60% of women report having recently discussed contraception with their health care provider, only half have discussed their sexual history and only about one third recently discussed sexually transmitted infections (STIs; Salganicoff et al., 2014). Few women prescribed potentially teratogenic medications are provided family planning services at their primary care visits, and an estimated 6% of U.S. pregnancies are exposed to these potentially harmful medications (Schwarz, Parisi, Williams, Shevchik, & Hess, 2012).

Key themes from the sources reviewed in this topic area were the use of consistent and integrated RLP to reduce unintended and mistimed pregnancies and their consequences (Berg, Olshansky, Shaver, Taylor, & Woods, 2012; Boivin, Bunting, & Gameiro, 2013; Centers for Disease Control and Prevention [CDC], 2010a; Coffey & Shorten, 2014; Johnson et al., 2006; Malnory & Johnson, 2011; Moos et al., 2008; Taylor & James, 2011; USPSTF, 2009; Witt & Kelly, 2014). The WWV is also an important venue for preconception care regarding the ways to best promote fertility and a healthy pregnancy when a woman

**Table 2**  
Five Most Common Self-reported Causes of Disability in U.S. Women ≥18 Years United States, 2005

Condition	Estimated % of Uninstitutionalized Female Population ≥18 years
1 Arthritis or rheumatism	24.3
2 Back or spine problems	16.8
3 Heart trouble	5.4
4 Lung or respiratory problem	4.9
5 Mental or emotional problem	4.6

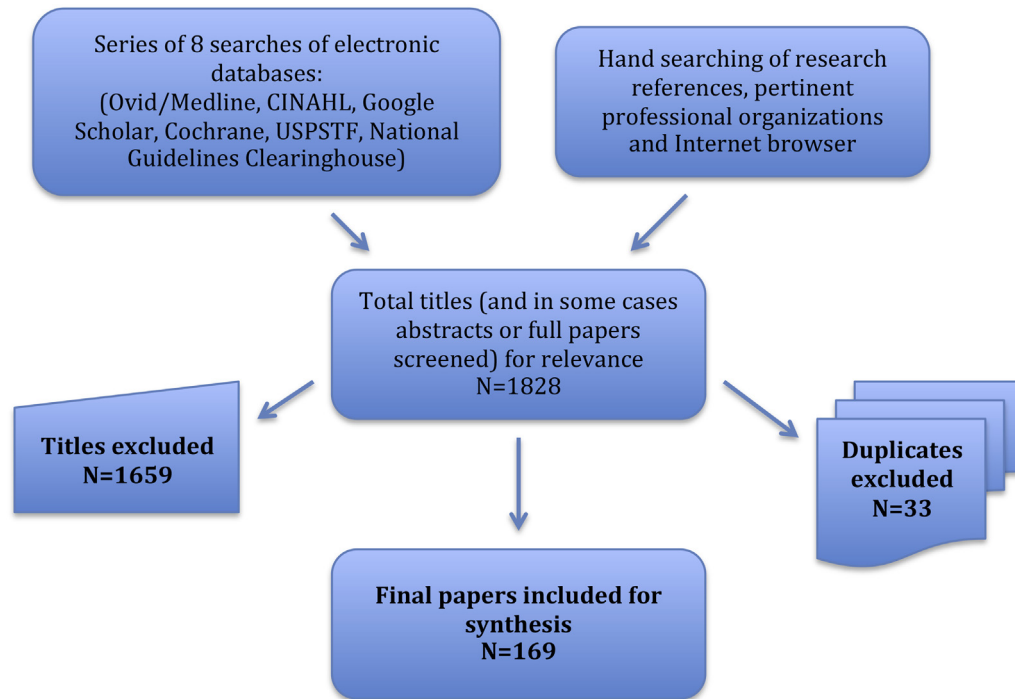
Source: Centers for Disease Control and Prevention. (2009). Prevalence and Most Common Causes of Disability Among Adults – United States, 2005. *MMWR Morbidity & Mortality Weekly Report*, 58(16), 421–426. Available: [www.cdc.gov/mmwr/preview/mmwrhtml/mm5816a2.htm](http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5816a2.htm)

wants to conceive (Cooksey, Bellanca, & Stranger-Hunter, 2014; Donnelly, Foster, & Thompson, 2014; Gavin et al., 2014; Halpern, Lopez, Grimes, Stockton, Gallo, 2013; Lopez, Tolley, Grimes, Chen, & Stockton, 2013; Paterno & Jordan, 2012). In addition, the WWV is an opportunity to educate about sexual health in general as well as regarding STI prevention (Buttaro, Koeniger-Donohue, Hawkins, & Mahan, 2014; Moyer & USPSTF, 2013b; O'Connor et al., 2014). Screening for STIs and intimate partner violence (IPV) or reproductive and sexual coercion should also be considered depending on a woman's age and risk factors (ACOG, 2013; Paterno & Jordan, 2012).

#### Priority Area 2: CVD and Stroke

Approximately one in two women in the United States will have some form of CVD—including coronary heart disease and stroke—and one in four women will die of CVD (Association of Women's Health, Obstetric and Neonatal Nurses, 2011; Go et al., 2014; Mosca et al., 2011). The high mortality rate from CVD in U.S. women translates to one death per minute (Mosca et al., 2011). More women die from CVD in this country than men, and CVD is increasing in younger women aged 35 to 44, likely owing to rising obesity rates (Lindquist, Witt, & Boucher, 2012). More women than men die from stroke and although death rates from stroke have decreased in the past decade, stroke is a leading cause of functional impairment leading to permanent disability in up to one-third of stroke sufferers (Goldstein et al., 2011). Although CVD and stroke are largely preventable, many women are either not aware of the risks or underestimate their own personal risk (Association of Women's Health, Obstetric and Neonatal Nurses, 2011; Mosca, Mochari-Greenberger, Dolor, Newby, & Robb, 2010) and are therefore less likely to take steps to prevent CVD or modify their risk factors. Even more concerning is the fact that healthcare providers tend to underestimate CVD risk in women, which can lead to missed opportunities for prevention (Pearson, 2014).

Evidence from this topic area highlights the importance of consistently measuring and counseling women about their blood pressure and body mass index and encouraging weight loss when indicated (Eckel et al., 2014; Goldstein et al., 2011; Jensen et al., 2014; LeFevre, 2014; Lindquist et al., 2012; Moyer, 2012; Wilkinson et al., 2013). A cardiovascular risk calculator can also be used to assess and counsel regarding risk (Goff et al., 2014; The Fifth Joint Task Force on the European Society of Cardiology and Other Societies on Cardiovascular Disease Prevention in Clinical Practice, 2012). A woman's obstetric history should also be assessed because a history of preeclampsia or gestational diabetes can increase her risk of CVD (Mosca et al., 2011). Screening for tobacco use at every visit and offering



**Figure 1.** Flow diagram of scoping literature search and selection. Limits applied: English language, full text, 2009–Oct 2014. Reference: based on the flow diagram presented by Davis et al., 2009.

advice about quitting is also very important for the prevention of CVD and stroke (Glantz & Gonzalez, 2012; Goldstein et al., 2011). Finally, the cardiovascular benefits of regular physical activity and a healthy diet should be stressed (Kulick et al., 2013; McCullough et al., 2011; Rees et al., 2013; Wang et al., 2014).

### Priority Area 3: Prevention, Screening, and Early Detection of Cancers

Although the WWV has historically been associated with a pap smear for cervical cancer screening, a U.S. woman today is 20 times more likely to die from lung cancer, 10 times more likely to die from breast cancer, and 8 times more likely to die from colon cancer than from cervical cancer (ACS, 2014b). The WWV is an opportunity to discuss cancer prevention with patients, because lifestyle factors can impact a woman's chance of developing many cancers.

Smoking is linked to at least 15 different types of cancer and is estimated to cause about one-third of all U.S. cancer deaths, while overweight and obesity are estimated to contribute to one-sixth of cancer deaths, including from breast cancer (ACS, 2014a). Lee et al. (2012) estimated that physical inactivity causes approximately 12% of the burden of disease for breast and colon cancer in the United States. Although a light to moderate level of alcohol intake may be associated with cardiovascular benefits (O'Keefe, Bybee, & Lavie, 2007), alcohol intake of more than 1 drink per day for women is linked to a variety of cancers, in particular breast cancer. The relative risk of breast cancer increases by 5% to 11% for light drinking (of up to 1 drink/day) and by 22% to 40% for alcohol intake of two to three drinks per day (Demark-Wahnefried & Goodwin, 2013). Certain strains of the human papilloma virus (HPV) are associated with vulvar, vaginal, cervical, anal, and oropharyngeal cancers in women and

prevention of these high risk HPV infections can decrease the incidence of these cancers (Petrosky et al., 2015).

Cancer experts encourage cancer prevention by vaccination against HPV (Petrosky et al., 2015), avoidance of tobacco products (including secondary smoke), maintenance of a healthy body mass index, regular physical activity, avoiding or limiting alcohol intake, and eating a healthy diet (ACS, 2014a; International Agency for Research on Cancer, 2014). Analysis of observational data from the Women's Health Initiative study found that women who most closely followed the ACS guidelines for nutrition and physical activity had a 22% lower incidence of breast cancer, a 52% lower incidence of colorectal cancer, and a 27% lower incidence of endometrial cancer as compared to women who did not or only very minimally followed the guidelines (Thomson et al., 2014).

In addition to discussing ways to reduce the risk of cancer, the WWV is also an opportunity to educate patients about and perform or refer patients for recommended cancer screenings. Cancer screenings are now free under the ACA, but many disparities have existed in the rates of screening among obese women and women of difference race and ethnicity, socioeconomic status, and geographical location (CDC, 2012; Cohen et al., 2008). Current rates of screening for breast, cervical, and colon cancers are significantly below Healthy People 2020 targets. The primary risk factor contributing to cervical cancer deaths today is being rarely or never screened (Saslow et al., 2012). Although about three-quarters of American women have had cervical and breast cancer screening, only 59% of eligible women report being up to date with screening for colon cancer (CDC, 2012). In the case of ovarian and uterine cancers, no routine screening tests are available.

Key themes from the literature reviewed for this topic area include the importance of systematically screening for tobacco



**Table 3**  
Summary of Citations Reviewed for Each Priority Area

Priority Area	No. of Citations Reviewed	Details
1. Reproductive life planning and sexual health	27	6 systematic reviews, 2 covering STI including HIV screening; 2 looking at contraceptive interventions; majority of articles discursive reviews or expert opinion
2. Cardiovascular disease and stroke	17	8 clinical guidelines, 5 systematic reviews; strong evidence and high degree of consensus with regards to the goals of primary prevention, although specifics of interventions (e.g., the recommended duration and frequency of exercise) varies slightly from source to source
3. Prevention, screening and early detection of cancers	31	For each type of cancer (breast, ovarian, cervical, colon, lung and uterine) $\geq 2$ sources of guidelines were examined; in most cases the guidelines reviewed were evidenced based, but in some cases—e.g., recommendations regarding pelvic examinations and teaching self-breast awareness—recommendations were based primarily on expert opinion
4. Unintended injury	17	5 systematic reviews related to brief screening for alcohol use/misuse; no systematic reviews or outcomes-based resources were found regarding prevention of unintended drug overdose, but 2 expert opinion resources and 1 paper describing a validated screening question for primary care were found
5. Anxiety, depression, substance misuse and suicidal intention	31	6 systematic reviews regarding depression screening and collaborative care outcomes, 1 meta-analysis; 6 references regarding substance abuse screening; guidelines from Canada and the U.S. regarding routine depression screening do not agree, with the Canadian Task Force on Preventive Health Care recommending against routine screening in primary care and the USPSTF recommending routine screening as long as a collaborative care model is in place; consensus does exist regarding the benefits of alcohol screening and brief interventions in primary care; recommendations regarding drug use screening are based almost entirely on expert opinion at this stage; 10 references regarding suicide screening and prevention in primary care were reviewed, including 3 systematic reviews
6. Assault, intimate partner violence and homicide	13	7 systematic reviews highlight the lack of a validated psychometric screening tool for health care settings, lack of improved outcomes data (with the exception of 1 perinatal IPV program) and limited evidence on long-term health benefits of universal screening; controversy in this area exists: ACOG and the USPSTF recommend for the universal screening of women for IPV, whereas WHO and the Canadian Task Force guidelines recommend against routine screening
7. Lower respiratory disease	16	7 systematic reviews; strong consensus exists regarding the importance of smoking cessation to prevent respiratory (and other) diseases
8. Arthritis and musculoskeletal problems	17	1 systematic review explored the effects of interventions to improve exercise and physical activity for people with chronic musculoskeletal pain generally; 6 articles were found regarding arthritis, mostly examining the risk factors for and epidemiology of arthritis with evidence mostly from survey data and observational research, although 1 prospective study was consistent with the others in finding that obesity, injury and heavy workload are risk factors for osteoarthritis; no papers regarding interventions for the prevention of arthritis were found 7 systematic reviews explored evidence for the prevention of and screening for osteoporosis. Clinical guidelines from the North American Menopause Society provided evidence-based recommendations for the role of calcium and vitamin D in perimenopausal and postmenopausal women but offered a stronger recommendation for this intervention than the USPSTF systematic reviews on the topic

*Abbreviations:* ACOG, American College of Obstetrics and Gynecology; HIV, Human Immunodeficiency Virus; IPV, Intimate Partner Violence; STI, Sexually Transmitted Infection; USPSTF, U.S. Preventive Services Task Force; WHO, World Health Organization.

use and acting to help women quit (Wilkinson et al., 2013). In addition, the WWV provides an opportunity to educate women about the cancer prevention benefits of HPV vaccination, a healthy diet, moderate alcohol intake, and maintaining a normal body mass index (Aune et al., 2012; Danaei et al., 2009; Demark-Wahnefried & Goodwin, 2013; Thomson et al., 2014). Screening for breast, cervical, ovarian, colon, and lung cancers should be encouraged according to current guidelines and based on individual and genetic risk factors (Moyer, 2014; Moyer & USPSTF, 2014; Seibert, 2014; Smith et al., 2015). Finally, it may be beneficial to educate women regarding the warning signs for breast, ovarian, and endometrial cancers and for health care providers to have a high index of suspicion in women presenting with such symptoms so that further screening for cancer can be offered, as indicated (ACOG, 2011, 2014; Bloomfield et al., 2014; Goff, 2012; Lockwood-Rayermann, Donovan, Rambo, & Kuo, 2009; Qaseem et al., 2014; Smith et al., 2015).

#### Priority Area 4: Unintended Injury

Unintended injury is the leading cause of death in females under 45 and causes almost one-quarter of the deaths to women aged 18 to 44. These deaths are primarily from motor vehicle accidents and accidental drug overdose (CDC National

Center for Injury Prevention and Control, 2014b). Alcohol, sleep deprivation, and distracted driving have been shown to significantly increase the risk of injuries and collisions (Anderson et al., 2009; CDC National Center for Injury Prevention and Control, 2014a; Senthilvel, Auckley, & Dasarathy, 2011; Ship, 2010). Unintended injury deaths from poisonings, primarily by illegal and prescription drug overdose, increased 172% for women and girls between 1999 and 2005 (Hu & Baker, 2009).

A previous 2007 recommendation to counsel patients about seatbelt use was not updated by the USPSTF in 2014 owing to lack of evidence for efficacy in primary care settings (USPSTF, 2014). In fact, most of the references found for this topic area highlighted that the most proven strategies for reducing unintended injuries occur at the local community, state, or national level. For motor vehicle injuries, laws such as those mandating child seats, seatbelts, motorcycle helmets, prohibiting driving with a blood alcohol level over 0.08%, and distracted driving have a proven track record for saving lives (Ship, 2010; USPSTF, 2014). Mass media campaigns to educate the public have also proven to be successful at reducing rates of unintended injuries. Examples of successful campaigns have included public education about the risks of impaired driving (calling or texting, sleep deprivation, drug or alcohol impairment) and prescription overdose as

well as the benefits of seatbelts, bicycle and motorcycle helmets (Anderson et al., 2009; CDC National Center for Injury Prevention and Control, 2014a, 2014b; Community Preventive Services Task Force, 2015).

Evidence for this priority area highlights the role that screening for sleep disorders, distracted driving, and alcohol and illicit drug use and misuse may help to identify women at risk of unintended injury and brief and repeated primary care counseling interventions or discussions may be effective in reducing problem substance use and its associated risks (Botelho, Engle, Mora, & Holder, 2011; Clossick & Woodward, 2014; Dinh-Zarr, Goss, Heitman, Roberts, & DiGuseppi, 2004; Jonas, Garbutt, & Amick, 2012; Kaner et al., 2007; Kanny, Liu, Brewer, & Garvin, 2012; Kottke et al., 2013; Moyer & USPSTF, 2013a; Smith, Schmidt, Allensworth-Davies, & Saitz, 2010).

#### *Priority Area 5: Anxiety, Depression, Substance Misuse, and Suicidal Intention*

One in four women surveyed in 2008 reported having depression or anxiety in the past 5 years (Ranji & Salganicoff, 2011). Women are particularly at risk for depression during pregnancy and the postpartum period. Suicide is the fourth leading cause of death in women age 18 to 44 (CDC, 2014b).

High levels of stress related to work or financial issues are reported by approximately one-quarter of women surveyed (Ranji & Salganicoff, 2011). Results from the National Health Interview Survey conducted by the CDC found that among women 25 or younger with less than a high school diploma, 8% serious psychological distress in the past 30 days (CDC, 2014). Anxiety and depression very often coexist with each other and with other physical illness, substance misuse, chronic pain, and/or eating disorders (Joffres et al., 2013; Mitchell et al., 2013). Women with anxiety and depression tend to have more complex medical needs and may present for health care at three to five times the rates of women without mental health issues, but research suggests these women tend to get fewer preventive health services (Anxiety and Depression Association of America, 2014; Grunfeld et al., 2013). Although substance misuse was also discussed in priority area 4: injury prevention, women who misuse or are dependent on drugs and/or alcohol often have untreated comorbid depression and anxiety. Mental health problems are often intricately intertwined with substance misuse and increase suicide risk, impacting quality of life, relationships and work. Women who abuse substances are at higher risk of suicide (LeFevre & USPSTF, 2014), and people with a history of substance abuse have higher rates of depression (Joffres et al., 2013). In addition to the risk of injury, substance abuse is associated with higher rates of IPV, homelessness, infectious diseases, (including STIs), and unplanned pregnancy (Goodman & Wolff, 2013).

Evidence from this topic area supports the promotion of adequate sleep and teaching of cognitive and/or mindfulness based strategies to buffer the effects of stress and promote wellness (Kottke et al., 2013). Screening for anxiety and depression is recommended for women in the postpartum period as well as other times if these conditions are suspected based on clinical presentation, other risk factors, or comorbidities and brief screening tools are available and can be easily integrated into primary care settings (Combs & Markman, 2014; Croicu, Chwastiak, & Katon, 2014; Gilbody, House, & Sheldon, 2005; Kroenke, Spitzer, Williams, & Löwe, 2009; Mitchell et al., 2013; Narayana & Wong, 2014; O'Connor, Whitlock, Beil, &

Gaynes, 2009). Screening for drug and alcohol misuse as part of the WWV may help to identify women with mood or anxiety disorders as well as women at risk for suicide (Agerwala & McCance-Katz, 2012; Connor, Gaynes, Burda, Soh, & Whitlock, 2013; Goodman & Wolff, 2013; Halloran, 2013; Pilowsky & Wu, 2012; Saitz, 2010; Shapiro, Coffa, & McCance-Katz, 2013). Women who screen positive or are suspected of having anxiety or depression, substance abuse, and/or suicidal ideation should be treated promptly and provided with follow-up care (Ahmedani et al., 2014; Archer et al., 2012; Butler et al., 2011; LeFevre & USPSTF, 2014; McDowell, Lineberry, & Bostwick, 2011).

#### *Priority Area 6: Assault, IPV, and Homicide*

Two out of every five women report some form of sexual violence in their lifetime, with 19% of women reporting being raped (Breiding et al., 2014). Almost one-half of those rapes are by an intimate partner (Breiding et al., 2014). Almost one in three women report having experienced physical violence by an intimate partner in her lifetime (Breiding et al., 2014). Forty percent of women who are murdered are killed by an intimate partner (Feldman, 2013).

Women with IPV exposure experience more depressive symptoms and report higher levels of poor health than women who have never been abused (Bonomi, Anderson, Rivara, & Thompson, 2007) and tend to have more chronic health problems (Zolotor, Denham, & Weil, 2009). IPV is associated with increased risks of STIs and poor pregnancy outcomes (Zolotor et al., 2009). IPV may also be associated with sexual and reproductive coercion, increased rates of STIs transmitted infections and unintended pregnancy (ACOG, 2012a, 2013; Hess et al., 2012).

There is a rich and prolific literature base looking at IPV screening and outcomes, including an active controversy regarding the benefits of universal versus targeted screening for IPV (ACOG, 2012a; Feldman, 2013; IOM, 2011a; Moyer, 2013a; Nelson, Bougatsos, & Blazina, 2012; O'Campo, Kirst, Tsamis, Chambers, & Ahmad, 2011; Rhodes, 2012; World Health Organization, 2013; Zolotor et al., 2009). No single, reliable, or validated screening tool for IPV in primary care settings was found in this review (Bair-Merritt et al., 2014; Rabin, Jennings, Campbell, & Bair-Merritt, 2009; Taft et al., 2013). Nevertheless, given the potential physical, social, sexual, and psychological harm that comes from IPV, the sources highlight the need for expanded and coordinated primary care and public health efforts to provide support for and resources to women who disclose IPV (Moracco & Cole, 2009).

#### *Priority Area 7: Lower Respiratory Disease*

Chronic obstructive pulmonary disease is an umbrella term that includes emphysema and chronic bronchitis, and together these three chronic respiratory diseases are the fourth leading cause of death in U.S. women (CDC, 2014b). At least 40% of these deaths could be prevented (Yoon, Bastian, Anderson, Collins, & Jaffe, 2014). Although second-hand smoke and indoor, outdoor, and occupational pollutants contribute to the development of lower respiratory disease in the United States, smoking is a factor in 90% of chronic obstructive pulmonary disease cases (Dolan, 2014). Rates of smoking in U.S. women have increased in recent decades and so too has the prevalence of chronic obstructive pulmonary disease in women, who may even be more susceptible to the effects of smoking (Global Initiative for Chronic Obstructive Lung Disease, 2014). Encouraging smoking

cessation is the most effective intervention health care providers can make to improve quality of life and increased life span (McIvor et al., 2009). Research in England has shown that although women are more likely to use tobacco cessation services, they are less likely to achieve short-term success with quitting (Bauld, Bell, McCullough, Richardson, & Greaves, 2010). U.S. national ambulatory medical care survey data were used to estimate the prevalence of office visits where smoking treatment was prescribed (Ritchey, Wall, Gillespie, George, & Jaman, 2014). Despite what is known about the risks of smoking and benefits of quitting, that research showed no improvement in the rates at which health care providers provided smoking cessation assessments or treatment between 2005 and 2010, suggesting that there is considerable room for improvement in how the health care system delivers smoking cessation interventions (Ritchey et al., 2014).

Evidence for this topic area supports the use of consistent and integrated primary care-based smoking cessation counseling and other supportive smoking cessation interventions such as nicotine replacement and pharmacotherapy (Aveyard, Begh, Parsons, & West, 2012; Chaney & Sheriff, 2012; Fiore et al., 2008; Hartmann-Boyce, Stead, Cahill, & Lancaster, 2013; Joseph et al., 2011; Lai, Cahill, Qin, & Tang, 2010; McIvor et al., 2009; Papadakis et al., 2010; Rice, Hartmann-Boyce, & Stead, 2013; USPSTF, 2015).

#### *Priority Area 8: Arthritis and Musculoskeletal Problems*

At least one in five U.S. women report having been diagnosed with arthritis, and significantly larger percentages of African American and Latina women report having this condition (Brady, Jernick, Hootman, & Sniezek, 2009; CDC, 2009; Ranji & Salganicoff, 2011). Arthritis is not only very prevalent, but it is the most common cause of disability in Americans. Arthritis—a term that can refer to many different rheumatic diseases and conditions that effect the joint—causes activity and work limitations and severe joint pain for millions of American women. Osteoporosis is another condition that affects millions of U.S. women. One in two women over age 65 experience an osteoporosis-related fracture (Powell, O'Connor, & Greenberg, 2012). These fractures are associated with high cost, high mortality, and functional limitations (Lim, Hoeksema, & Sherin, 2009).

Evidence supports education regarding maintaining a healthy body mass index, even modest weight loss, if indicated, and regular physical activity to promote optimal joint health and reduce joint-related morbidity for women (Blagojevic, Jinks, Jeffery, & Jordan, 2010; Brady et al., 2009; CDC, 2010b; Coakley et al., 1998; Howe et al., 2011; Jordan, Holden, Mason, & Foster, 2010; Toivanen et al., 2010). In addition, a healthy diet including adequate calcium and vitamin D may reduce the risk of osteoporosis (Bilezikian, Holick, Nieves, & Weaver, 2006; Moyer, 2013b; Rawlins, 2009) and appropriate screening for low bone density offers opportunities for intervention (Nelson & Haney, 2010).

#### **Discussion**

By applying a population health perspective and a clearly defined scoping review method to explore the current state of evidence for and policy recommendations regarding what should be included as components of the WWV, at least eight priority areas were identified. This approach is useful today, but

can also evolve with changing epidemiologic evidence to inform, guide, and shape priority areas for the WWV of today and in the future.

In terms of the scoping review process itself, it was clear that no one database or search term provided even close to a totality of relevant references for each of the eight priority areas. The challenge of searching multiple data bases and using many search terms and strategies highlights the importance of systematic and scoping reviews as an opportunity to provide comprehensive summary information to busy primary care providers and policy makers. In addition to the challenges of conducting thorough and comprehensive reviews, disparities in levels of evidence were found between topic areas.

There was an abundance of practice guidelines, systematic reviews, and generally higher quality evidence found regarding prevention of CVD and stroke, smoking cessation, cancer screening and early detection, and screening for IPV. However, when multiple guidelines exist, they often fail to agree (such as regarding routine screening for depression or IPV) and may not always be evidence based (Ferket et al., 2010; Wright et al., 2011). The literature search of other topic areas, such as RLP and sexual health, injury prevention for adults, and prevention of arthritis and muscular skeletal disorders, revealed recommendations based primarily on expert opinion, indirect observational evidence, and/or general consensus. In these areas, a more systematic analysis of interventions and outcomes is clearly needed.

A limitation of the scoping review presented here was the use of only a single reviewer. The use of a formal appraisal tool by a team of reviewers in the field of women's health would certainly strengthen any priority recommendations that develop from this or future scoping reviews.

#### *Implications for Policy and/or Practice*

Although epidemiologic data formed the basis for these eight proposed areas of prevention in well woman care, this scoping review found relatively little data regarding the cost/benefit of these WWV preventive services. Olchanski et al. (2013) reviewed the cost-effectiveness literature related to preventive services for women and found a gap in health economic research, particularly related to screening and counseling of women in the primary care setting. Such research would be necessarily difficult and expensive to conduct because it may take decades to see the outcomes and cost/benefit of this package of services. However, there is some precedent for testing a package of services. Grunfeld et al. (2013) showed that a "prevention practitioner" within a primary care setting could implement clinically important prevention and screening for chronic disease in a cost-effective manner. In addition, Maciosek, Coffield, Flottemesch, Edwards, and Solberg (2010) analyzed a package of 20 preventive services including tobacco cessation advice and assistance, alcohol abuse screening, some cancer screenings, depression screening, and daily aspirin use and found that such a package could extend or save lives at neutral cost—even at a net cost savings. With a more clearly defined and comprehensive package of WWV services such as those proposed in this review, health promotion interventions for the WWV could become operationalized and outcomes measurement of the suggested priority WWV services could be undertaken.

As with cost-benefit research, it would also take decades to measure the health outcomes of many of the WWV interventions suggested in this paper, limiting the usefulness of evidence-

based research to make policy and clinical care decisions today. In addition, less tangible aspects of a yearly WWV may not be measured adequately by outcomes-based research. More than a decade ago, in an editorial in the *Annals of Internal Medicine*, Laine (2002) wondered how we could measure these less tangible aspects of the yearly physical examination ritual, such as patient-provider relationship. One possible answer to that question comes from Jones, Carson, Bleich, and Cooper (2012), who found that trust in a patient's physician was predictive of attempts to lose weight among patients with hypertension. In a survey of New England women, Becker, Longacre, and Harper (2004) found that women considered the patient-provider relationship as one of the most important aspects of the annual examination visit, over test seeking. In Andrist's (1993) study of breast cancer surgeons and their attempt at providing symmetry in the patient-physician relationship, she found that the "use of self in patient encounters" and "empowering patients" were tools that patients' found positive in the patient-provider relationship. The ritual of a more or less yearly WWV exchange between patient and provider has the potential to build a relationship from which interventions to promote health may become more effective over time.

Although cost, effectiveness, and resource availability remain important in considering the WWV of today, how best to support health care providers providing this service remains another important concern. Health care providers who are used to doing a particular test (pap smear) or procedure (bimanual examination) may feel they lack the confidence or experience to provide less tangible education and counseling services. Some health care providers may need education and support as they gain comfort conducting many of the brief screening and counseling interventions discussed herein. A shift may be necessary to promote policy strategies and support health care providers as they work to integrate more education and counseling into the WWV (National Women's Law Center, 2014).

Brown (2011) proposes a two-tier, stepped-care model for behavioral screening and intervention, which may be a helpful way of thinking about the role of the WWV provider. The WWV provider would serve to provide a first tier level of assessment, intervention, and follow-up services to address mild to moderate behavioral risks or conditions. The second tier would include a variety of specialty-based referral resources for patients in greatest need. The current trend toward innovative health care delivery models such as medical homes and population management programs means that preventive health and health promotional services can be offered to patients from an integrated team of physicians, nurses, social workers, mental health, public health professionals, and lay health educators working together (Brown, 2011; Doolan-Noble et al., 2013). Also extremely important is the need for better reimbursement for the most effective primary care prevention interventions, which could certainly improve implementation (Yarnell, Pollak, Ostbye, Krause, & Michener, 2003).

A final and significant concern to any practicing health care provider is a lack of time to accomplish or even touch on all of the eight intervention/topic areas recommend by this review. The ACA mandate for WWV does take into account that more than one visit may be necessary to cover all the WWV elements (IOM, 2011a). In addition, not every woman will require each intervention every year and many women see more than one provider so that each provider may cover certain elements of the WWV (Ranji & Salganicoff, 2011; Stormo, Sariya, Hing, Henderson, & Sawaya, 2014).

## Conclusions

Cervical cancer screening and pelvic examinations—the most commonly associated elements of the WWV—no longer warrant annual implementation for most women. However, Epidemiologic evidence suggests that a number of other important and evidence-based preventive services, screenings, and interventions need to be a priority if the WWV of today is going to deliver on its promise to reduce a woman's risk of disease, disability, illness, and death.

WWV recommendations need to continue to evolve, as epidemiologic evidence, community, and individual needs change over time. Evidence-based and timely prevention has the potential to reduce health care costs, disability, and death while improving the quality and quantity of women's lives. It is time for health care providers and policymakers alike to rebrand the WWV visit of today as a yearly comprehensive visit for RLP, prevention, screening, and health promotion—not just a pap smear and pelvic examination anymore.

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### Author Descriptions

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