**Clinical Preventive Services and Health Care Coverage**

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# Section I: Gonorrhea, Screening

Gonorrhea is one of the most commonly reported sexually transmitted disease in the country (CDC, 2012). As per the reports of the CDC in 2012, more than 30,000 cases of gonorrhea have been reported in the country (CDC, 2012). Despite the fact that most identified cases are reported, it is difficult to estimate the incidence of gonorrhea because the infection is asymptomatic, it is never diagnosed (CDC, 2014). It also facilitates HIV transmission (CDC, 2012; Baeten & Overbaugh, 2003; Røttingen et al., 2001).



Therefore, early detection and intervention are critically important. Potential harms of the screening include false-negative or false-positive results (Chernesky et al., 2005; Gaydos et al., 2013; Schachter et al., 2003; Shrier et al., 2004; Taylo et al., 2012; Taylor et al., 2011; Van Der Pol et al., 2012a; Van Der Pol et al., 2012b; Schoeman et al., 2012; Stewart et al., 2012). It can also cause anxiety and labeling associated with positive results. The costs are high too, i.e., almost $16 billion per annum, as per a report of CDC (2012), which prescribes annual screening of gonorrhea in females, who are sexually active of all ages (Workowski & Berman, 2010). It also prescribes annual screening of gonorrhea in men, who are sexually active who have sex with other men (Workowski & Berman, 2010). It does not prescribe regular screening for general population (Workowski & Berman, 2010). The magnitude of net benefit remains moderate due to the asymptomatic nature of the infection (USPSTF, 2014a). Moreover, the high morbidity associated with untreated gonorrhea and effective of antibiotic treatment for the infection also keeps the net benefits at a moderate level (USPSTF, 2014a).

An evidence-based approach is a prerequisite in initiating gonorrhea screening in adults in America. Previously, in 2005, the USPSTF prescribed gonorrhea screening in all females, who are sexually active including pregnant women but are at an increased risk of getting infected, i.e., they are too young or have other social or individual factors involved (USPSTF, 2014a). In 2007, the Task Force prescribed gonorrhea screening in all females, who are sexually active including pregnant women of age 24 and above (USPSTF, 2014a). In 2014, the Task Force prescribed gonorrhea screening in women, who are sexually active of 24 or above years of age (USPSTF, 2014a). It also prescribes gonorrhea screening in elderly women who are prone to infection (USPSTF, 2014a). As per the American Congress of Obstetricians and Gynecologists, the prescribed age is 25 years (Burstein et al., 2010). However, for men, who are sexually active, current evidence on the effectiveness or need of gonorrhea screening remains insufficient in assessing the benefits and harms affiliated with the process (USPSTF, 2014a).

# Section II: Healthful Diet and Physical Activity, Counseling

Stroke and heart diseases are leading causes of death in America primarily due to the fact that the risk factors associated with these diseases are very common (CDC, 2015). Approximately, more than 2000 people die of cardiovascular diseases in the country everyday (Mozaffarian et al., 2016). As per the USPSTF, approximately half of the youth (adults under the age of twenty years) have high cholesterol levels or high blood pressure (USPSTF, 2014b). Most of the youth does nothing to control them and are current smokers (USPSTF, 2014b). According to the previous research, one of the best ways to control the increasing risk factors of heart related diseases is through behaviors counseling programs. These programs are performed with the help or assistance of a professional trainers, who shares tools promoting physical activity and healthy diet, helps people set goals, provides education, and regularly follows up on the people (USPSTF, 2014b). The trainers can include a number of professionals such as psychologists, health educators, exercise professionals, physiotherapists, dieticians or nutritionists, and other trained professionals (USPSTF, 2014b). The interventions can be made as low intensity (web- or print-based material with tailored feedback) and medium- and high-intensity (group counseling and face-to-face meetings or both, with text message, email, and telephone follow ups).



The overall magnitude of net benefit of getting involved in healthful diet and physical activity for reducing the risks of cardiovascular diseases is positive but small (Siu, 2015). Moreover, since the harms associated with the training sessions are at most small, the Task Force concludes that the net benefits of the counseling are small particularly for the individuals who do not have obesity or are at high risk for cardiovascular diseases (Siu, 2015). Therefore, only the individuals who are willing to take advantage of the counseling services are the ones most likely to benefit from it (Siu, 2015). The clinical considerations with regard to population include adults of 18 years or older, who are of normal weight or are overweight. However, it does not include the people with known cardiovascular risks such as people with obesity, diabetes, abnormal blood glucose level, dyslipidemia, and hypertension (Whelton et al., 1992). People with obesity are provided with intensive, multicomponent interventions (Moyer, 2012). Similarly, adults with dyslipidemia, hypertension and other cardiovascular risks are provided with intensive counseling as well (LeFevre, 2014). However, very limited evidence concerning the effects of such behavioral interventions is present in the literature.

# Section III: Aspirin for the Prevention of Cardiovascular Disease, Preventive Medication

An evidence-based approach is a prerequisite in initiating (low or high) dose of aspirin in patients with cardiovascular diseases. In America, cardiovascular diseases are one of the leading causes of mortality. It causes 1 in 3 death in the country (Heron, 2013; Mozaffarian et al., 2015). The net benefits of using aspirin to prevent cardiovascular diseases are evidently clear (Baigent et al., 2009). For this reason, guidelines continuously prescribe aspirin for people with history of stroke or myocardial infarction (JBS3 Board, 2014; Smith et al., 2011). In 2009, the Task Force prescribed age-, sex- and outcome-specific use of aspirin (NIHCEN, 2013). Later, the prescriptions were updated in 2016 (USPSTF, 2016). The policy prescriptions have been updated based on concurrent reviews on aspirins and colorectal (Chubak et al., 2015), a decision model (Dehmer et al., 2015), and additional evidence about harms (Guirguis-Blake et al., 2015).

The USPSTF prescribes aspirin for the prevention of cardiovascular disease for both men and women (USPSTF, 2009). Previously, the age range for each of the gender remained different from each other (USPSTF, 2009). According to the archived summary prescriptions on use of aspirin, in this regard, the Preventive Services Task Force prescribed men with age of 45 to 79 years only when the potential harm due to increased gastrointestinal hemorrhage are overcome by the potential benefits due to reduction in myocardial infarctions (USPSTF, 2009). Similarly, women aged 55 to 79 years were prescribed to use aspirin in the same manner as well (USPSTF, 2009). For men and women aged 80 years or more, the summary prescribed that the evidence was insufficient (USPSTF, 2009).



However, in 2016, the USPSTF updated the prescriptions. It prescribed initiating low-dose of the medicine for primary prevention of cardiovascular disease in adults (both men and women) aged 50 to 59 years (USPSTF, 2016). However, the adults must have 10-percent or greater 10 years risks of the disease (USPSTF, 2016). Also, the adults must have be willing to keep taking the low-dose of aspirin for the next years, have a life expectancy of ten years, and are not at an increased risk of bleeding (USPSTF, 2016). For adults, with age 60 to 69 years, the decision to initiating low-dose aspirin must be taken on individual basis (USPSTF, 2016). Moreover, the current evidence does not support initiating aspirin use in adults younger than 50 years of age, and older than 70 years of age (USPSTF, 2016).

Additionally, initiating low-dose aspirin to prevent cardiovascular diseases is in the best interests of the insurance companies as well. Studies have shown that secondary prevention of cardiovascular diseases through prescribing of aspirin is cost-effective in low to medium income countries (Ortegón et al., 2012; Lim et al., 2007; Megiddo et al., 2014). However, only a minority of adults assesses the insurance programs in these countries (Basu & Millett, 2013). Additionally, approximately fifty-percent of the people are able to show adherence to pharmacotherapy in long-term observational cohorts (Jackevicius & Mamdani, 2002; Kopjar et al., 2003; Benner et al., 2002). Overall, aspirin remains effective for public health. However, it is unclear that which sub-group of the medicine is most effective (Greving et al., 2011).

# Section IV: Concluding Remarks

More research work, both academic and commercial, with regard to the asymptomatic nature of the infection, the high morbidity associated with untreated gonorrhea and effective of antibiotic treatment for the infection must be carried out for increasing the magnitude of net benefit of prescribing gonorrhea screening in the country. Similarly, aspirin remains effective for overall public health but it is unclear that which sub-group of the medicine is most effective. Therefore, more research must be carried out in this context.

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