

Clinical Pathways for Family Wellness Promotion for Adults in Family and Community Practice

Eva Irene Yu Maglonzo, MD, MHPed, FPAFP and the PAFP QA Committee

Background: Wellness span all categories such as health promotion, disease prevention and health maintenance. It is not merely an extensive executive check up. Health maintenance improves delivery of recommended preventive services, and may lessen patient worry. It is also a chance for physicians to strengthen their relationship. Physicians may use this time to discuss issues such as family relationships. The adult wellness recommendations should be evidence-based to gear towards optimal health and well-being in a cost-effective manner.

Methods: The PAFP Clinical Pathways Group reviewed published clinical practice guidelines and medical literature to identify, summarize, and operationalize the content of the following: history, physical examination, tools for comprehensive geriatric assessment, screening for risk factors, pharmacologic and non-pharmacologic interventions. Indicators or outcomes to develop an evidence-based clinical pathway in family medicine practice were identified.

Recommendations: Recommendations were made based on the number of visits. During the first visit, all adult patients consulting at the clinic for wellness should have a thorough history, physical examination and screening for risk factors. The laboratories to be requested will depend on these risk factors. For immunization, the following maybe given: influenza, varicella, MMR, Tdap, Hepatitis B and Human papilloma virus vaccines. Patients should be educated on appropriate diet and physical activities. Interventions to promote smoking cessation and moderate alcohol drinking should be done. Health maintenance through regular clinic visits should be advocated. Family members should also be motivated to adhere to wellness recommendations.

Implementation: Education, training and audit are recommended strategies to implement the clinical pathway for adults 19-59 years old.

INTRODUCTION

Wellness focuses on a core set of preventive service and health maintenance categories. the services with the greatest health benefit and economic value. These services span all four categories of wellness – health promotion such as appropriate nutrition and exercise, disease

prevention through screening, specific protection such as immunizations, counseling, and preventive medications.

A “health maintenance evaluation” includes:

- Identifying risk factors in one’s personal and family health history

- Performing a focused exam, as appropriate
- Obtaining needed screening tests at the right intervals
- Encouraging people to choose healthy lifestyles to maximize their health

This “checkup” can occur during an office visit devoted to health maintenance or may be covered during an office visit for other concerns.

Patients and their families and physician should have a partnership approach to maximize their health and obtain the preventive screening tests that really matter.

The health maintenance examination is an opportunity to spend focused time with patients on disease prevention and health promotion. There is no consensus on the optimal frequency, though most patients and physicians think that a yearly physical examination is important and necessary. One review found that an annual examination improves delivery of recommended preventive services, and may lessen patient worry.¹ It is also a chance for physicians to strengthen their relationship. Physicians may use this time to discuss issues such as family relationships

The adult wellness examination should incorporate evidence-based guidance toward the promotion of optimal health and well-being, including screening tests shown to improve health outcomes.

Prevalence of Preventable Diseases in Adults

Mortality due to non-communicable diseases is 28.6% based on WHO Global Estimates 2015.²

The adult risk factors include a) current tobacco smoking (2011) 27%, b) alcohol per capita consumption 5.4%, c) raised blood pressure (2008) 22.6% and d) Obesity (2008) 6.3%.

In 2013, based on the FNRI data, the prevalence of smoking among 20 years old above is 25.4% while for 10-19.99 years old it's 11.9%. 36.5% of the adults 20 years old and above are exposed to second hand smoke at home while 67.1% are exposed outside the home.²

The prevalence of current alcoholic drinkers almost doubled from 26.9% in 2008 to 48.2% in 2013. The

prevalence of current drinkers was much higher among adult males (69.3%) than adult females (28.9%). Out of 10 adults consuming alcoholic beverages, six were binge drinkers. Binge drinking was more common among males (60.8%) compared to females (38.2%) and peaks among adults age 20.0-29.9 years (63.0%).³

WHO estimated road traffic injuries as 10.5/ 100,000 population. The National Helmet Law on Motorcycle is only moderately implemented (515 in all riders and 87% on drivers) and the same thing for the National Seat Belt Law (80 for drivers). Deaths by user category on road accidents is common among Riders on motorized 2 or 3 wheelers (53%), Pedestrians (19%), drivers of 4-wheeled trucks (14%), passengers of 4 wheeled cars and light vehicles (11%), cyclists (2%) and others (1%).

Cancer

Breast cancer

The prevalence of breast cancer in the Philippines is 15% in 2010.⁴ According to the WHO published data in May 2014, breast cancer deaths in the Philippines reached 7,730 or 1.48% of total deaths. The age adjusted death rate is 22.01/100,000 population which ranks the Philippines number 30 in the world.

Cervical cancer

There are 4812 new cases of cervical cancer in the Philippines in 2010.⁴

Colorectal cancer

The prevalence of colorectal cancer in the Philippines is 7%.⁴ According to the WHO published data in May 2014, Colorectal cancer deaths in the Philippines reached 6,591 or 1.26% of total deaths. The age adjusted death rate is 11.46/100,000 population which ranks the Philippines number 59 in the world.

Lung cancer

The prevalence of lung cancer in the Philippines is 14% in 2010.⁴

Hypertension

In the Philippines, 25% of adults 21 years old and above have high blood pressure.

According to the latest WHO published data in May 2014, hypertension deaths reached 20, 886 or 4.03% of total deaths. The age adjusted death rate is 38.2 per 100,000 population which ranks the Philippines as number 1 in the world.

Presyon 3 (Hypertension survey) reported an all time high prevalence of 28% in the Philippines.⁵

Coronary Heart Disease

According to the latest WHO data published in May 2014, Coronary heart disease deaths in the Philippines reached 87,881 or 16.86% of total deaths. The age-adjusted death rate is 161.43 per 100,000 population which ranks the Philippines number 29 in the world.

Diabetes

Diabetes has a 5.8% prevalence based on WHO 2016 estimates.⁶

According to the latest WHO data published in May 2014, diabetes mellitus in the Philippines reached 33,656 or 6.48% of total deaths. The age-adjusted death rate is 60.44 per 100,000 population which ranks the Philippines number 20 in the world.

In the 2014 prevalence estimates published by the International Diabetes Federation, it is estimated that there are 3.2 million cases of T2D in the Philippines with a 5.9% prevalence rate in adults between the ages of 20 and 79 years. Around 1.7 million people with T2D remain undiagnosed. The estimated cost per person with T2D in 2013 in the Philippines is \$205, which is comparable

with neighboring countries such as Thailand (\$285) and Indonesia (\$174.7).

Pneumonia

The Philippines is one of the 15 countries that together account for 75% of childhood pneumonia cases worldwide. In children aged under 5 years, pneumonia is the leading cause of mortality with a mortality rate of 23.4 x 100,000 population recorded in 2009.

Missed opportunities for vaccination contributes to pneumonia mortality. Based on the number of PhilHealth claims for 2012 and the estimated health care cost, the economic burden of pneumonia in 2012 was PHP8.48 billion for CAP-MR and PHP643.76 million for CAP-HR.

Flu

According to the latest WHO data published in May 2014, influenza and pneumonia deaths in the Philippines reached 51,889 or 9.95% of total deaths. The age-adjusted death rate is 90.4 per 100,000 population which ranks the Philippines number 46 in the world.

Asthma

According to the latest WHO data published in May 2014, asthma deaths in the Philippines reached 12,342 or 2.3% of total deaths. The age-adjusted death rate is 21.2 per 100,000 population which ranks the Philippines number 9 in the world.

Hepatitis B

Chronic hepatitis B virus (CHB) infection is a serious problem that affects over 300 million people worldwide and is highly prevalent in the Asia-Pacific region. In the Philippines, an estimated 7.3 million Filipinos or 16.7% of adults are chronically infected with HBV, more than twice the average prevalence in the Western Pacific region.

Malnutrition

In 2013 FNRI data, 1 in every 10 Filipino adults is Chronic Energy Deficient (CED). By gender, more females are energy deficient. 3 in every 10 adults are overweight and obese and more female adults are overweight and obese. The prevalence of CED is inversely related to wealth, while the prevalence of overweight and obese is positively related to wealth. From 1993 to 2013, there is a decreasing trend in the prevalence of CED from 13.9% to 10.3% but an increasing trend in the prevalence of overweight and obesity from 16.6% in 1993 to 29.9%.

CURRENT RECOMMENDATIONS

The recommendations in this Clinical Pathway is a product of the reviews of the US Preventive Service Task Force, Center for Disease Control and the DOH 2014- Clinical Care Pathways and service packages for non-communicable diseases.

Objectives

General Objective:

To improve the quality of health care of Filipino adults through health maintenance, promotive and preventive care.

Specific Objectives:

1. To assist Filipino family physicians in the provision of wellness care for Filipino adults.
2. To define the standards of care in health promotion, preventive care and health maintenance in adult men and women

METHODS OF DEVELOPMENT AND IMPLEMENTATION

The PAFP Clinical Pathways Group reviewed the previous Clinical Practice Guidelines of USPSTF on Clinical Preventive

Services for Primary Care and the DOH Service packages for non-communicable diseases. The group also reviewed published medical literature to identify, summarize, and operationalize the clinical content of primary, secondary and tertiary prevention strategies or outcomes to develop an evidence-based clinical pathway in family medicine practice.

The group adopted several strategies in developing the recommendations. The first strategy is emphasizing on evidence-based recommendations as recommended assessments and interventions. The second strategy is recognition of potential variations between patient and between specific practice settings. The third strategy is the recognition of “stakeholder groups” outside of family and community practice with careful attention to getting their opinion and support but without sacrificing the objectives of the project. The fourth strategy is emphasis on the commitment to establishment of the ultimate goal of improving the effectiveness, efficiency and quality of patient care in family and community practice.

The evidences for the patient care processes were reviewed and summarized as notes on the recommendations. The clinical pathway was then disseminated to the selected PAFP chapters and members and other stakeholders for consensus development. Dissemination was through publication in the Filipino Family Physician Journal, conference presentations and focused group discussions.

The implementation of clinical pathways to be adopted by the PAFP will be quality improvement activities in a form of patient record reviews, audit and feedback. Audit standards will be the assessment and intervention recommendations in the clinical pathway. Implementation of clinical pathways will be at the practice level and the organizational level. Practice level can be a simple count of family and community medicine practitioners using and applying the clinical pathways. Organizational outcomes can be activities of the PAFP devoted to the promotion, development, dissemination and implementation of clinical pathways.

GRADING THE RECOMMENDATION

The PAFP QA Committee met as a panel and graded the recommendations as shown in Table 1. The grading system was a mix of the strength of the reviewed published evidence and the consensus of a panel of experts. In some cases, the published evidence may not be applicable in Philippine family practice setting, so a panel grade based on the consensus of clinical experts was also used. Thus if the recommendation was based on a published evidence that is a well done randomized controlled trial and the panel of expert voted unanimously for the recommendation, it was given a grade of A-I. If the level of evidence is based on an observational study but the panel still unanimously considered the recommendation, the grade given was A-II and if the level of evidence is just an opinion but the panel still unanimously recommended it, the grade was A-III.

Table 1. Grading of the recommendations

Panel Grade Level	Evidence Grade Level		
	1	2	3
A	A-I	A-II	A-III
B	B-I	B-II	B-III
C	C-I	C-II	C-III

Panel Grade Levels

- A - All the panel members agree that the recommendation should be adopted because it is relevant, applicable and will benefit many patients.
- B - Majority of the panel members agree that the recommendation should be adopted because it is relevant, applicable in many areas and will benefit many patients.
- C - Panel members were divided that the recommendation should be adopted and not sure if it will be applicable in many areas or will benefit many patients.

Evidence Grade Levels

- I - The best evidence cited to support the recommendation is a well-conducted randomized controlled trial. The CONSORT standard may be used to evaluate a wellconducted randomized controlled trial.
- II - The best evidence cited to support the recommendation is a well-conducted observational study i.e. match control or before and after clinical trial, cohort studies, case control studies and cross-sectional studies. The STROBE statement may be used to evaluate a well-conducted observational study.
- III - The best evidence cited to support the recommendation is based on expert opinion or observational study that did not meet the criteria for level 2.

In the implementation of the clinical pathways, the PAFP QA Committee strongly recommends compliance to guideline recommendations that are graded as either A-I, A-II or B-I. However, the Committee also recommends using sound clinical judgment and patient involvement in the decision making before applying the recommendations.

NOTES ON THE RECOMMENDATIONS

First Visit

History and Physical Examination

Health Status

A complete history should be done to determine the risk factors of the adult patient.

Family History

It is important to ask for history of cancer in the family since some types of cancer are familial or genetically linked. Examples are breast cancer and colorectal cancer. Women with close relatives who have been diagnosed with breast cancer have a higher risk of developing the disease. If

Visit	Pathway Tasks				Patient Outcomes
	History and Physical Examination	Laboratory	Pharmacologic Intervention	Non-pharmacologic Interventions	
First Visit	<p>__Identify wellness need based on the risk factor. (A-II)</p> <ul style="list-style-type: none"> ➤ Health status: medical/ surgical, reproductive health ➤ Family medical history ➤ Dietary/nutrition assessment ➤ Physical activity ➤ Tobacco, substance abuse and alcohol misuse ➤ Immunization history ➤ Risk for hepatitis A and B and HIV exposure ➤ Mental health <p>__Physical status assessment (A-II)</p> <p>Blood pressure</p> <p>Weight, Height, BMI, Waist-Hip ratio</p> <p>Complete physical examination</p>	<p>Screening</p> <p>Pap smear is recommended for women 21-59 every 3 years (A-I)</p> <p>Hepatitis B screening using HbsAg and anti-HBS (A-I)</p> <p>Other laboratories/ ancillary procedures depending on the risk factors identified</p> <p>__ age</p> <p>__ gender</p> <p>- family history</p> <p>- existing diseases</p> <p>If at risk for cardiovascular diseases and obesity,</p> <p>FBS for 40-59 years old. (A-I)</p> <p>Lipid profile for men 35 years old and above and women 45 years old and above. (A-I)</p> <p><i>If with family history of colorectal cancer</i></p> <p>Colonoscopy, sigmoidoscopy or fecal occult blood test (A-I)</p>	<p>If with disease, go to specific disease conditions</p> <p>Immunizations</p> <p>Influenza (Flu): Yearly flu vaccine. (A-I)</p> <p>Tdap/Td (Tetanus, Diphtheria and Pertussis/Tetanus and Diphtheria): Adults younger than age 65 should receive a tetanus vaccine (Tdap or Td) every 10 years. (A-I)</p> <p>HPV (Human Papillomavirus) for immunocompetent adults except pregnant women (A-I)</p> <p>Ages 15 to 26 and males ages 15 to 21 should receive a three-dose series.</p> <p>Pneumococcal vaccine for 50-59 years old. (A-I)</p> <p>If with risk or no evidence of immunity</p> <p>Varicella (Chickenpox): A vaccine for adults born in 1980 or later (A-I).</p> <p>MMR (Measles, Mumps and Rubella): Adults ages 19 to 59 should have recorded in their chart at least one dose of the vaccine. (A-I)</p>	<p>__Advice wellness interventions based on identified risks (A-I)</p> <p>If with alcohol misuse, use brief behavioural interventions. (A-I)</p> <p>If with tobacco use, use 5 A strategy for smoking cessation (A-I)</p> <p>General advise</p> <p>Pinggang Pinoy (sample food plate) per age group using FNRI recommendations. (A-I)</p> <p>Regular exercise (see notes) (A-I)</p>	<p>__Optimal health and well-being (A-II), Reduction of Risk factors (A-I)</p>

Visit	Pathway Tasks				Patient Outcomes
	History and Physical Examination	Laboratory	Pharmacologic Intervention	Non-pharmacologic Interventions	
		<p><i>If with risk for breast cancer mammography. (A-II)</i> <i>If overweight and obese</i></p> <p>FBS (A-I) <i>If with exposure to HIV, screen with Enzyme immunoassay. (A-II)</i></p> <p><i>If with 30 pack years of smoking and currently smoke or quit 15 years ago, do lung CT scan (A-II)</i></p> <p>For High risk women (A-III) Chlamydia Gonorrhea Syphilis</p>	<p>Hepatitis B Administer Hepatitis B vaccine intramuscularly at 0, 1, 6 months. (A-I)</p> <p>Hepatitis A Administer Hepatitis A vaccine. (A-I)</p>		
Variations	Neurologic examination: as needed for patients at risk for neurological disorders		<p>Women planning or capable of pregnancy (A-I)</p> <p>400-800 ug of folic acid</p>		

Visit	Pathway Tasks				Patient Outcomes
	History and Physical Examination	Laboratory	Pharmacologic Intervention	Non-pharmacologic Interventions	
Second Visit	___ Physical status assessment (A-II) ___ Mental assessment (A-II) ___ Risk factor assessment (A-II) ___ Assess patient's compliance to laboratories requested (A-II) ___ Identify wellness need of family members (A-III) ___ Assess social wellness (A-III)	follow up result if abnormal, treat corresponding disease ___ Interpret results of laboratories and ancillary procedures to the patient ___ If there are laboratories not done, remind patient	___ Multivitamins if diet is deficient (A-II) ___ Immunization (A-I) Continue subsequent doses of vaccination not given during initial visit ___ Prescribe medications based on the identified diseases (A-I) ___ Women of reproductive age: iron, folic acid and vitamin E (A-II) ___ Vitamin E supplementation (A-II)	___ Diet advice ___ Physical activity advice ___ Social and behavioral advice ___ Continuing care advice Injury prevention ___ Advice continuance and adherence to wellness interventions such as proper nutrition, exercise, immunization and screening tests. ___ If non-adherent, do motivational counseling ___ Advise to have other family members screened	___ Patient outcome Adherence to preventive services (a-III) ___ Family outcomes Willing to participate in wellness interventions (A-III) Increased satisfaction in family support using Family APGAR (A-II)
Variations					

Visit	Pathway Tasks				Patient Outcomes
	History and Physical Examination	Laboratory	Pharmacologic Intervention	Non-pharmacologic Interventions	
Continuing Visit	___ Family wellness assessment (A-I) ___ Identify wellness need based on age group and risks. (A-I)	Age and risk appropriate tests (A-I)	Age specific immunizations and chemoprophylaxis (A-I)	___ Patient Monitor continuous compliance (A-I) ___ Family members Advice wellness interventions based on age group and sex (A-I)	___ Patient outcome Greater satisfaction Higher levels of resilience (A-III) ___ Family outcome Entire family utilizing health promotion, disease prevention and specific protection strategies (A-I)
Variations					

one had one first-degree female relative (sister, mother, daughter) diagnosed with breast cancer, the risk is doubled. If two first-degree relatives have been diagnosed, the risk is 5 times higher than average. In some cases, a strong family history of breast cancer is linked to having an abnormal gene associated with a high risk of breast cancer, such as the *BRCA1* or *BRCA2* gene. In other cases, an abnormal *CHEK2* gene may play a role in developing breast cancer.⁹

Those with first-degree relatives who have had colorectal adenomas or cancer are at risk for colorectal cancer. The risk increases for those with first-degree relatives who developed cancer at a younger age or those with multiple affected first-degree relatives.

Nutrition

Assess nutritional status using anthropometric measurements such as height, weight and body mass index.

Physical Activity

Increased physical activity has been associated with decreased risk of cardiovascular disease and increased life expectancy.⁸

The family physician should give an exercise prescription indicating the Frequency, Intensity, Type and Timing or duration (FITT). The type should be suited to the interest and health status of the patient. General recommendation is 30 minutes of moderate intensity aerobic activity such as brisk walking, dancing, swimming or cycling on level terrain, 5 days per week or 25 minutes of vigorous intensity aerobic activity such as jogging, swimming continuous laps or cycling uphill, at least 3 days per week.⁸

In implementing physical activity programs., it should include the following: warm-up and cool down and need for medical evaluation.

• Warm-up and Cool-down

Exercise sessions always should be preceded by a 5-minute warm-up and followed by a 5-minute cool-down.

The warm-up should consist of general calisthenics, stretching exercises, or exercising at a lower intensity level than the target zone. Warm-up prepares the body for exercise, enhances exercise performance and decreases the chances of injury. Muscles that are warmed-up are easier to stretch and prepared for the more intense activity of the workout itself. Warm-up helps the body's physiology gradually progress from rest to exercise. Warm-up also helps spread synovial fluid through the joints to help protect the articular spaces and, therefore, prevent injury.

Cool-down is just as important as warm-up. The cool-down entails decreasing the intensity of the exercise gradually. The body needs to slow down gradually to its resting level following the challenge of exercise. Stopping abruptly causes blood to pool in the exercised body parts, diminishing the return of blood to the heart. Less blood return can cause dizziness and fainting or even caused cardiac abnormalities.¹⁰

Medical Evaluation

In formulating the exercise prescription, the target heart rate should be included. The type of exercise will depend on the health status of the patient after a thorough medical evaluation.

Tobacco Use

Smoking poses risks for cancer and chronic diseases such as stroke, coronary artery disease, respiratory diseases. Smoking causes about 90% (or 9 out of 10) of all lung cancer deaths. More women die from lung cancer each year than from breast cancer.

Smoking causes about 80% (or 8 out of 10) of all deaths from chronic obstructive pulmonary disease (COPD). Cigarette smoking increases risk for death from all causes in men and women. (USPSTF, 2010, 2014)

To get the smoking history, ask the following questions:

1. I have NEVER smoked, or I have smoked less than 100 cigarettes in my lifetime.

2. I stopped smoking BEFORE I found out I was _____ (condition), and I am not smoking now.
3. I stopped smoking AFTER I found out I was _____ (condition), and I am not smoking now.
4. I smoke some now, but I cut down on the number of cigarettes I smoke SINCE I found out I was _____ (condition).
5. I smoke regularly now, about the same as BEFORE I found out I was _____ (condition).

After initial screening and patient was noted to have difficulty quitting smoking, the Fagerstrom nicotine dependence test may be used. The Fagerström Test for Nicotine Dependence is a standard instrument for assessing the intensity of physical addiction to nicotine. The test was designed to provide an ordinal measure of nicotine dependence related to cigarette smoking. It contains six items that evaluate the quantity of cigarette consumption, the compulsion to use, and dependence.

In scoring the Fagerstrom Test for Nicotine Dependence, yes/no items are scored from 0 to 1 and multiple-choice items are scored from 0 to 3. The items are summed to yield a total score of 0-10. The higher the total Fagerström score, the more intense is the patient’s physical dependence on nicotine.

In the clinic, the Fagerström test may be used by the physician to document indications for prescribing medication for nicotine withdrawal.

Alcohol Misuse

Screening for alcohol misuse can accurately identify men whose amount and patterns of consumption may meet criteria for alcohol dependence and increase their risk of associated morbidity and mortality from disease and accidents.¹⁵

Risky or hazardous alcohol use means drinking more than the recommended daily, weekly, or per-occasion amounts resulting in increased risk for health consequences. For example, the National Institute on Alcohol Abuse and Alcoholism (NIAAA) and the U.S. Department of Agriculture define “risky use” as consuming more than 4 drinks on any day or 14 drinks per week for men, or more than 3 drinks on any day or 7 drinks per week for women (as well as any level of consumption under certain circumstances). “Harmful alcohol use” (defined by the International Statistical Classification of Diseases and Related Health Problems, Tenth Revision) is a pattern of drinking that causes damage to physical or mental health

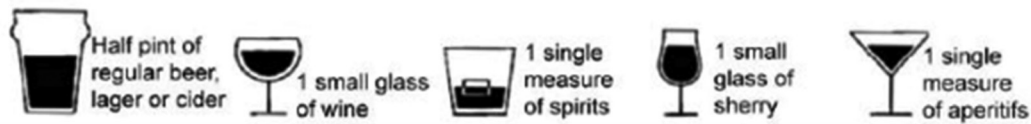
The USPSTF considers the AUDIT-C screening for alcohol misuse in the primary care setting as it takes on 1-2 minutes to complete.

Below is the copy of the questionnaire, units of drinks and scoring:

AUDIT – C

Questions	Scoring system					Your score
	0	1	2	3	4	
How often do you have a drink containing alcohol?	Never	Monthly or less	2 - 4 times per month	2 - 3 times per week	4+ times per week	
How many units of alcohol do you drink on a typical day when you are drinking?	1 - 2	3 - 4	5 - 6	7 - 9	10+	
How often have you had 6 or more units if female, or 8 or more if male, on a single occasion in the last year?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily	

This is one unit of alcohol...



...and each of these is more than one unit



Scoring

The AUDIT-C is scored on a scale of 0-12.

Each AUDIT-C question has 5 answer choices. Points allotted are:

a = 0 points, b = 1 point, c = 2 points, d = 3 points, e = 4 points

- **In men**, a score of 4 or more is considered positive, optimal for identifying hazardous drinking or active alcohol use disorders.
- **In women**, a score of 3 or more is considered positive (same as above).
- However, when the points are all from Question #1 alone (#2 & #3 are zero), it can be assumed that the patient is drinking below recommended limits and it is suggested that the provider review the patient's alcohol intake over the past few months to confirm accuracy.³
- Generally, the higher the score, the more likely it is that the patient's drinking is affecting his or her safety.

Immunization History

Ask history of the vaccines received based on the Philippine Foundation for Vaccination guidelines 2015.

Risk for Hepatitis A and B and HIV Exposure

Inquire about eating habits, water source, history of blood transfusion, sexual practices, intravenous drug use and history of hepatitis in the mother.

Mental Health

The USPSTF recommends screening in all adults regardless of risk factors. However, a number of factors are

associated with an increased risk of depression. Among general adult populations, prevalence rates vary by sex, age, race/ethnicity, education, marital status, geographic location, and employment status. The Patient Health Questionnaire-9 (PHQ-9) is used for screening.

Nine good- or fair-quality trials addressed screening in general adults (5 trials; n = 2924) The evidence from 5 RCTS, in addition to indirect evidence reviewed for the 2009 recommendation, supports moderate certainty that screening for depression in general adults is of moderate net benefit.¹⁷

Physical Examination

Blood pressure (See hypertension pathway)

Body Mass Index

To date, body mass index is the best available anthropometric estimate of body fatness for public health purposes. Higher BMI usually means higher body fat and as BMI increases, especially from values equal to or greater than 30, health risk increases.

Complete physical examination is needed to look for other risk factors.

Laboratory Tests

Screening based on risk factors

Women's Health Screening

Pap smear

Screening women age 21 to 65 years every 3 years with cytology provides a reasonable balance between benefits and harms. Among women age 30 to 59 years, HPV testing combined with cytology (co-testing) every 5 years offers a comparable balance of benefits and harms.¹⁸

Mammography

The USPSTF recommends for routine breast cancer screening in women aged 50-74 every 2 years.¹⁹

Colonoscopy

The USPSTF recommends for routine colon cancer screening for adults aged 50-69 years old.

Screening colonoscopy can be done every 10 years, whereas screening by checking stool for microscopic blood requires annual stool testing.

Four pragmatic randomized clinical trials (RCTs) evaluating 1-time or 2-time flexible sigmoidoscopy (n = 458 002) were associated with decreased CRC-specific mortality compared with no screening (incidence rate ratio, 0.73; 95% CI, 0.66-0.82).^{20,21,22}

Five RCTs with multiple rounds of biennial screening with guaiac-based fecal occult blood testing (n = 419 966) showed reduced CRC-specific mortality (relative risk [RR], 0.91; 95% CI, 0.84-0.98, at 19.5 years to RR, 0.78; 95% CI, 0.65-0.93, at 30 years).^{23,24,25}

Sensitivity of colonoscopy to detect adenomas 6mm or larger ranged from 75% (95% CI, 63%-84%) to 93% (95% CI, 88%-96%).

Four (n = 4821) of the 9 CTC studies allowed for the estimation of sensitivity of colonoscopy generalizable to community practice. Compared with CTC or colonoscopy plus CTC (eg, segmental unblinding), the sensitivity for colonoscopy to detect adenomas 10mm and larger ranged from 89% (95% CI, 78%-96%) to 98% (95% CI, 74%-100%) and for adenomas 6mm and larger ranged from 75% (95% CI, 63%-84%) to 93% (95% CI, 88%-96%).

Lung cancer

The US Preventive Service Task Force recommends annual screening for lung cancer with low-dose computed tomography in adults aged 55 to 80 years who have a 30 pack-year smoking history and currently smoke or have quit within the past 15 years.²⁶ Screening should be discontinued once the individual has not smoked for 15 years or develops a health problem that significantly limits life expectancy or the ability or willingness to have curative lung surgery. Heavy smoking means a smoking history of 30 "pack years" or more. A "pack year" is smoking an average of 1 pack of cigarettes per day for 1 year. For example, a person could have a 30 pack-year history by smoking 1 pack a day for 30 years or 2 packs a day for 15 years.

Four trials reported the effectiveness of screening with LDCT for lung cancer in patients with personal smoking exposure: one large good-quality trial reported screening was associated with reduced lung cancer and all-cause mortality reductions of 20 percent (95% CI, 6.8 to 27.6) and 6.7 percent (95% CI, 1.2 to 13.6), respectively. Three small European trials (two fair- and one poor-quality) showed no benefit of screening. When the three good- or fair-quality trials were combined in random effects meta-analysis,

the relative risk of lung cancer mortality was 0.81 (95% CI, 0.72 to 0.91). One trial evaluated chest x-ray screening in over 150,000 participants from the general population and reported no benefit of screening in this group or in a subset with personal tobacco smoke exposure. The reported sensitivity of LDCT for detecting lung cancer ranged from 80 to 100 percent and specificity from 28 to 100 percent in six studies; each study varied in its reporting method. The harms associated with LDCT screening included radiation exposure ranging from 0.61 to 1.5 mSv per scan, some degree of overdiagnosis of lung cancer that varied by study, and a high rate of false-positive examinations, which were typically resolved with further imaging. Most patients with positive results who underwent an invasive procedure were diagnosed.

Hypertension

See Hypertension pathway

Diabetes

The USPSTF recommends screening adults 40-70 years old for abnormal blood glucose as part of cardiovascular risk assessment using FBS or HbA1c is recommended for screening. (USPSTF 2015)

Dyslipidemia

The USPSTF found good evidence that lipid measurement can identify asymptomatic men and women who are eligible for preventive therapy. They concluded that the benefits of screening for and treating lipid disorders in all men 35 years and older, and women 45 years and older at increased risk of CHD substantially outweigh the potential harms. Good-quality evidence shows that total cholesterol, LDL-C, and HDL-C are independent predictors of coronary heart disease risk, and ratios of total cholesterol to HDL-C (total cholesterol/HDL-C) or LDL-C to HDL-C (LDL-C/HDL-C) classify risk better than total cholesterol alone. Although the triglyceride level is a strong univariate predictor of coronary events, its association with coronary heart disease

events is reduced substantially by adjustment for other risk factors.

The optimal interval for screening is uncertain. On the basis of other guidelines and expert opinion, reasonable options include every five years. An age to stop screening has not been established.

Sexually-transmitted Infection

Age is a strong predictor of risk for chlamydial and gonococcal infections, with the highest infection rates occurring in women aged 20 to 24 years, followed by females aged 15 to 19 years. Chlamydial infections are 10 times more prevalent than gonococcal infections in young adult women.² Among men, infection rates are highest in those aged 20 to 24 years.¹

Other risk factors for infection include having a new sex partner, more than 1 sex partner, a sex partner with concurrent partners, or a sex partner who has an STI; inconsistent condom use among persons who are not in mutually monogamous relationships; previous or coexisting STI; and exchanging sex for money or drugs.

Hepatitis B

The Department of Health and the Hepatology Society of the Philippines recommend screening using HbsAg and antiHbs to all Filipinos because of the high prevalence of Hepatitis B in the country.

Pharmacologic Interventions

Immunization

Influenza vaccine

The quadrivalent or trivalent vaccine is recommended annually for all adults 50 years and above, healthcare workers, residents of chronic care facilities and nursing homes, those with chronic diseases, pregnant women in the second or third trimester without a flu shot in the last

12 months, HIV/AIDS, immunosuppressed and students and other persons in institutional settings.

Pneumococcal vaccine

Pneumococcal vaccine is recommended for 50-59 years old. PCV13 should be given first followed by PPSV23 after 1 year. For those with previous PPSV23, PCV 13 should be given at least 1 year after the most recent dose then PPSV23 5 years after the initial dose.³⁰

Tetanus vaccine

Adults with an unknown or incomplete history of a 3-dose primary series with tetanus and diphtheria toxoid-containing vaccines should complete the primary series that includes 1 dose of Tdap. Td 0.5 ml should be given intramuscularly with the second dose given 4-8 weeks after the first dose and the third dose at 6-12 months after the second dose. It may be given as booster every 10 years.

MMR

Recommended for all adults particularly those without evidence of immunity and travellers. Give 2 doses at 0 and 1 month.

Varicella

Recommended for all adults without evidence of immunity, travellers, teachers, healthcare workers, non-pregnant women of child-bearing age and military personnel. Give 2 doses at 0 and 1-2 months

HPV vaccine

Immunocompetent adult until age 26 should receive a 3-dose series of HPV vaccine at 0, 1-2, and 6 months.

Special population

Pregnant women are not recommended to receive HPV vaccine, although there is no evidence that the vaccine poses harm. If a woman is found to be pregnant after initiating the HPV vaccination series, delay the remaining doses until after the pregnancy. No other intervention is needed. Pregnancy testing is not needed before administering HPV vaccine.

Hepatitis A vaccine

Adults who seek protection from hepatitis A virus infection may receive a 2-dose series of single antigen hepatitis A vaccine at either 0 and 6-12 months or 0 and 6-18 months. Adults may also receive a combined hepatitis A and hepatitis B vaccine as a 3-dose series at 0, 1, and 6 months. Acknowledgment of a specific risk factor by those who seek protection is not needed.

Hepatitis B vaccine

All Filipinos who were screened and has no evidence of immunity should be given Hepatitis B vaccine. The vaccine is administered at 0, 1 and 6 months.

Non-pharmacologic Interventions

Counseling

Behavioral counseling interventions for alcohol misuse vary in their specific components, administration, length, and number of interactions. They may include cognitive behavioral strategies, such as action plans, drinking diaries, stress management, or problem solving. Interventions may be delivered by face-to-face sessions, written self-help materials, computer- or Web-based programs, or telephone counseling. For the purposes of this recommendation statement, the USPSTF uses the following definitions of intervention intensity: very brief single contact (≤ 5 minutes), brief single contact (6 to 15 minutes), brief

multicontact (each contact is 6 to 15 minutes), and extended multicontact (≥ 1 contact, each > 15 minutes). Brief multicontact behavioral counseling seems to have the best evidence of effectiveness; very brief behavioral counseling has limited effect.³⁵

The USPSTF found that counseling interventions in the primary care setting can positively affect unhealthy drinking behaviors in adults engaging in risky or hazardous drinking. Positive outcomes include reducing weekly alcohol consumption and long-term adherence to recommended drinking limits. Since brief behavioral counseling interventions decrease the proportion of persons who engage in episodes of heavy drinking (which results in high blood alcohol concentration [BAC]), indirect evidence supports the effect of screening and brief behavioral counseling interventions on important health outcomes, such as the probability of traumatic injury or death, especially that related to motor vehicles.

Nutrition

The Food and Nutrition Research Institute of the Philippines recommends the following:

1. Eat a variety of foods. For adults, it is recommended to consume the following:
8 glasses of water, 6-8 servings of rice products, 2-3 servings of fruits, 3 servings of vegetables 1 glass of milk, 3-4 servings of fish, shellfish and meat products, 5-8 tsps of sugar and sweets and 8 tsp of fats and oil.
2. Limit alcohol drinking to one drink per day for women and two drinks for men.
One alcoholic drink is equivalent to one and half ounce distilled beverage such as gin or 12 ounces or a bottle of beer or four ounces wine or half glass wine or an ounce of 100 proof whiskey.
3. Consume safe foods and water to prevent diarrhea and other food-and water-borne diseases.

4. Use iodized salt to prevent Iodine Deficiency Disorders.

The Pinggang Pinoy (sample food plate) for adults can be viewed at the FNRI website.

Physical Activity

The Center for Disease Control recommends the following physical activities for adults:

1. For additional and more extensive health benefits, adults should increase their aerobic physical activity to 300 minutes (5 hours) a week of moderate-intensity, or 150 minutes a week of vigorous-intensity aerobic physical activity, or an equivalence combination of moderate- and vigorous-intensity activity. Additional health benefits are gained by engaging in physical activity beyond this amount.
2. Adults also should do muscle-strengthening activities that are moderate- or high-intensity and involve all major muscle groups on 2 or more days a week, as these activities provide additional health benefits.
3. There should also be a warm up and cool down before and after each exercise.

Patient Outcomes

Primary care and health service use were also studied in the USA using an interactional analysis instrument to characterize patient-centered care in the primary care setting and examine its relationship with healthcare utilization.³⁴ A total of 509 adult patients at a university medical center were randomized into groups receiving care by family physicians or general internists. An adaptation of the Davis Observation Code was used to measure patient-centered practices; the main outcome measures of the study were the patients' use of medical services and accrued charges over one year. The results indicated that higher amounts of patient-centered care were related to a

significantly decreased annual number of visits to specialty providers, less frequent hospitalizations, and fewer laboratory and diagnostic tests. Total medical charges for the year were also significantly reduced.

Second Visit

If non-adherent to regimen, do Motivational interviewing (MI) and Counselling. A large and expanding number of controlled research studies of MI have demonstrated that it is significantly (10–20%) more effective than no treatment and at least as effective as other viable treatments for a wide variety of problems ranging from substance use to reducing risky behaviors and increasing client engagement in treatment. There is a dose effect such that more sessions tend to produce more behavioral change, and yet MI typically operates as a brief treatment with higher cost effectiveness than the alternatives. Furthermore, MI outcomes appear durable up to 1 year posttreatment. MI has been proven effective in a variety of formats, although it may work best as a prelude to other treatments and is least amenable to a group format. MI also works for clients regardless of problem severity, age, or gender, and may even work better for ethnic minority clients and without a specific treatment manual.³⁶

Continuing Visit

History and Physical Examination

Continue follow up of utilization of preventive health services based on the recommendations. Correlate with physical examination findings.

Laboratory Tests

Interpret results of tests/ancillary procedures done. Frequency will depend on the specific recommendations.

Pharmacologic Interventions

Recommend appropriate pharmacologic interventions based on results.

Non-pharmacologic Interventions

Recommend appropriate non-pharmacologic interventions based on results. Continue motivational and primary care counselling when needed.

Patient Outcomes

Wellness visits has the following benefits for patients: a) increases patient awareness of education and counseling as an essential component of preventive care, b) provides increased opportunity for providers to tailor education and counseling services to the risk factors and preventive care women need across the lifespan within the framework of personalized medicine, c) allows patients and providers the time and space to develop and build relationships creating an environment where education and counseling can succeed and d) removes the financial barrier many women face when they do not have the resources to seek out education and counseling services when cost sharing is required.

RECOMMENDATIONS FOR IMPLEMENTATION

Clinic Level

Include wellness recommendations at every adult clinic visit based on the pathway. Utilize the Clinical Pathway on Wellness for Adults in various clinics for quality assurance purposes.

Organizational Level

PAFP Interventions such as the Kalusugan ng Pamilya Mo Aalagaan Ko project, training of barangay

health workers on wellness strategies to empower the community, lay fora on wellness, smoking cessation, healthy heart etc.

Health System Level

For the government to have evidence-based wellness recommendations institutionalized as part of Phihealth benefits.

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