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هيئة الصحة العامة
PUBLIC HEALTH AUTHORITY

Saudi Clinical Preventive Guideline

Third Edition
1444H – 2023 G
Riyadh - KSA

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Preface:

In accordance with the Kingdom's 2030 Vision to implement the health system aims to promote, protect and restore the health of both individuals and the society; meanwhile transforming the health system to be dynamic, technology enabled, as well as fosters both preventive and therapeutic health services for both individuals and the society. Public health Authority has the responsibilities of public health; commissioned the Saudi Clinical Preventive Guideline (Periodic Health Examination (PHE) previous.

And to ensure the continuity of keeping up with health global changes in many related health topics, this version (third virsion,2023) has been updated based on the latest evidence, hoping that this would help health practitioners to provide the best health services in a more efficient and beneficial way for the patients. Furthermore, to improving the quality of health services in the centers providing health care in the Kingdom of Saudi Arabia.

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Public Health Authority expresses its grateful to the contributors of the third edition of Saudi Clinical Preventive Guideline (SCP).

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- National Center for Mental Health Promotion (NCMH): Dr.Abdulhameed Alhabeeb.
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- National committee of Periodic Health Examination.

Special appreciation to Dr. Taghreed Mohammed Alghaith (PHA) for her valuable work in revising and following up the updating process, and Ms. Wala Bakri Almontashiri for her skillful work in collecting reviews and write the final update for this edition of guideline.

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CHAPTER-I

Guideline methodology

1.1- Introduction

Healthcare providers are often faced with difficult decisions and considerable uncertainty while treating patients. They rely on the scientific literature, in addition to their background knowledge, skills, experience, and patient preferences, to inform their clinical decisions. This program aimed to create an efficient, easy-to use memory aid that would remind family physicians evidence-based recommendations to use during periodic health examination. Such tool would offer family physicians rigorously evaluated task force recommendations in a format that would be easy to use in everyday practice.

Clinical Practice Guidelines (CPGs) are one of the tools that help to minimize inappropriate variation in clinical practice and to improve the effectiveness, efficiency and safety of clinical decisions. CPGs are statements that include recommendations intended to optimize patient care that are informed by a systematic review of evidence based on assessment of the benefits and harms of alternative care options (1).

Recommendations for screening come from various organizations and are constantly changing, rendering health promotion and disease prevention a daunting task. Currently, navigating the plethora of available information in a search of prevention guidelines is overwhelming. There is a need for regular updates through systematic literature reviews. Piecing together these guidelines into a single summary table for practical use in a busy clinical setting simplifies access to information and allows practitioners to provide preventive care in an efficient, evidence-based practice.

Chronic diseases management is an economic burden to the health care system (2). Savings through prevention have been explored by several sources, with emphasis on quality of life and increase in years lived (3,4).

By facilitating opportunities for prevention through easy access to best-practice guidelines, the incidence of chronic disease might decrease, resulting in improved patient-centered care and reducing cost and economic burden on the health care system.

Adequately implemented, CPGs have the potential of reducing variability and translating scientific research into clinical practice and consequently improve the quality and safety of healthcare (5,6). However, scientific knowledge is in constant change; therefore, CPGs need to be updated regularly to maintain validity (7). The obsolescence of a CPG might occur because of new scientific research, including the development of new technologies in treatment, diagnosis, economic differences, or changes in values and preferences (8,9). Updating CPGs is therefore an essential matter to be addressed in order to ensure the validity and quality of CPGs recommendations.

1.2- Improving public health status:

The Saudi Clinical Preventive Guideline is an integrated tool to follow up the health status of community members, as it collects the most important international recommendations in the areas of counseling (such as breastfeeding, smoking, etc. etc.), and clinical examination (BMI measurement, blood pressure measurement, ... etc.), and immunizations in one package for health practitioners in primary care clinics, in addition to the ease of implementation and application of these recommendations and guidelines at a professional and elaborate level.

This leads to realizing the goals of the health Vision 2030 in strengthening prevention against health risks and contributing to reducing the burden of diseases and raising the level of health.

1.3 – Updating methodology:

Saudi Clinical Preventive Guideline (SCP) is updated every 3 years since it was published in 2015. In 2023 edition update, Public Health Authority (PHA), in cooperation with the relevant government agencies, reviewed the SCP in its second edition. The contributors involved have an experience in the medical topics that mentioned in SCP, in addition to their knowledge of new guides and global recommendations related to their specialties.

The relevant government agencies use the same previously adapted guidelines, United States Preventive Services Task Force (USPSTF), The Canadian Task Force on Preventive Health Care (CTFPHC) and Royal Australian College of General Practitioners (RACGP) which were used to fill the gaps.

Recommendations and notes were collected from the relevant government agencies, final review and validation of recommendations was done by assigned consultant and relevant team in PHA.

VISION:

To provide evidence-based preventive care to attain the highest possible level of health for all.

MISSION:

To provide gold standard evidence based, age appropriate, preventive and promotive health care through family practice in primary health care setting.

VALUES:

- Holistic approach
- Respect and involvement
- Access of care
- Needs and preference
- Empowerment
- Justice and Equity
- Quality and Excellence

Objectives:

- To adapt an evidence-based guideline that focuses on comprehensive primary preventive care.
- To implement the recommended screening and preventive services to all age groups at primary health care setting.

1.4 – Guideline milestone:

The General directorate of Health Centers Affairs and Health Programs in 2013 nominated a team to develop Saudi Clinical Preventive Guideline (SCP) program to be implemented in Primary Health Care centers.

The team had several meetings with the stakeholders to draw the road map for the program. The team selected a group of physicians who have an interest in evidence-based medicine and guideline adaptation. Two workshops were followed first situational analysis was done to clarify if the program is already implemented or not, secondly a group had been selected to search national and international guidelines regarding Saudi Clinical Preventive Guideline. Another workshop was attended after completing the task.

The main aim of the work group was:

- To produce an applicable, practical and friendly user guideline for health care professionals.
- To formulate an evidence based updated recommendations for SCP.
- To update this guideline every 2 years.

1.5 – Methodology for guideline appraisal:

Clinical practice guidelines (CPG) are systematically developed recommendations for appropriate health care for specific clinical circumstances. CPG reduces discrepancies between scientific evidence and clinical practice, have potential to improve the quality of care delivered.
Translating recommendations into practice require physicians 'adherence to the guideline. However, implementing guidelines is not without obstacles, patient preferences, inadequate facilities or resources, guideline complexity and physician preference and unfamiliarity are some of these. Many of these concerns may be minimized during development processes by adapting methodologies to achieve the appropriate standards of quality (15).

The clinical scope of services and purpose of the guideline and its relevance to practice was defined.
Stakeholders and professional group were involved in the process.
Piloting the guideline may ensure practicability and applicability including consideration of organizational barriers and cost implications. The credibility of guidelines also depends on editorial transparency and independence from funding bodies and in declaration of conflicts of interest by the developers.

The purpose of this document guideline is to provide an overview of the principles and methods of assessment and appraisal used within the context of the guideline's appraisal process.

Methodological process:

The appraisal of the SCP guideline was dependent on the tools for appraisal to assess the quality, consistency, applicability and accessibility.

Scope and purpose:

- To provide evidence-based approach to implement SCP in our community.
- To reduce unnecessary interventions and use best health promotion activities.
- To improve quality of life to the community members.

1.6 – Adaptation process:

Preparation:

Guideline Adaptation	2013	2014	2019	2023
Forming SCP central committee	√	--	√	--
Identify the need for implementing SCP guideline	√	--	√	--
Meeting with stakeholders	√	--	√	--
Proposed action plan (agreeing timelines, milestones)	√	--	√	--
Selecting guideline adapting group	√	--	√	--
Workshop for guideline appraisal and literature review	√	--	√	--
Task distribution to the guideline adapting group	√	--	√	--
Appraisal of the guidelines	√	--	--	--
Creating guideline recommendations	√	--	√	--
Guideline revision	--	√	√	√
Guideline editing	--	√	√	√
Internal reviewers	--	√	√	√
External reviewers	--	√	--	√
Guideline printing	--	√	Online	Online

1.6.1- The Clinical Question for Searching:

(P) Whole population.

(I) To prevent and promote health of the population by applying SCP.

(P) Family physicians, General practitioners, nurses, health educators.

(O) Improve quality of life and reduce the use of unnecessary intervention.

(H) Primary Health care settings.

1.6.2 - Searching Engine for Guidelines:

Based on the clinical question, database has been searched in the following sites: US National Guideline Clearinghouses, US Preventive Services Task Force (USPSTF), Guidelines International Network, MEDLINE search, Cochrane, National Institute of Clinical Excellence (NICE), Scottish Intercollegiate Guidelines Network (SIGN), The Royal Australian College of General Practitioners (RACGP) and Canadian Task Force on Preventive Health Care (CTFPHC).

Retrieved guidelines reviewed for date of publication, release and language. None English guidelines were excluded.
Ten guidelines retrieved and assessed by the panel; seven guidelines were excluded, as they were not relevant to the key question, currency and applicability in our community.

Critical appraisal using AGREE tool was performed to assess the quality, content, consistency, acceptability and applicability of these guidelines (16).
US Preventive Services Task Force rated high score; the panel decided to adapt this guideline as the main source. Gaps were identified; RACGP, and CTFPHC guidelines were used to fill the gaps. Strength was based on the stated recommendation grading criteria, the panel members reach a consensus after discussing the recommendations which fill the gap based on currency, applicability and prevalence of the condition in our setting.

1.6.3 - Grade Definitions After July 2012, USPSTF Assigns One Of Five Letter Grades (A, B, C, D, Or I).

Grade	Definition	Suggestions for Practice
A	The USPSTF recommends the service. There is high certainty that the net benefit is substantial.	Offer or provide this service.
B	The USPSTF recommends the service. There is high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial.	Offer or provide this service.
C	The USPSTF recommends selectively offering or providing this service to individual patients based on professional judgment and patient preferences. There is at least moderate certainty that the net benefit is small.	Offer or provide this service for selected patients depending on individual circumstances.
D	The USPSTF recommends against the service. There is moderate or high certainty that the service has no net benefit or that the harms outweigh the benefits.	Discourage the use of this service.
I Statement	The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of the service. Evidence is lacking, of poor quality, or conflicting, and the balance of benefits and harms cannot be determined.	Read the clinical considerations section of USPSTF Recommendation Statement. If the service is offered, patients should understand the uncertainty about the balance of benefits and harms.

1.7- Implementation strategies:

- Adapt the concept of SCP for health promotion.
- Integrate SCP program in primary health care setting.
- Implement recommendations for SCP based on scientific evidence.
- Training and continuing medical education for end users.

1.7.1- Implementation phase:

	2014	2015	2019	2023
Training of trainer's workshops	√	--	--	√
Pilot phase	√	--	--	--
Evaluation of the pilot phase	√	--	--	--
Dissemination	--	√	**Online**	√
Evaluation	--	√	√	√
Updating the guideline	--	√	√	√

1.7.2- Expected Barriers for Implementation:

- Limited resources at Primary Health Care Centers.
- Lack of trained motivated staff.
- unawareness of the community on preventive services.
- Organizational barriers.
- Ineffective referral system.

1.7.3- Funding Body:

Public Health Authority (PHA).

1.7.4- Conflict of Interest:

No financial or conflict of interest to disclose.

1.7.5- Update Process:

This guideline will be updated **every 2 years** unless new evidence emerges.

CHAPTER-II

Guideline content – forms

Saudi Clinical Preventive Guideline Checklist (Under 6 years)

		Date (Month/Year)	2m	4m	6m	9m	1yr	18 m	2 yr	4yr	6yr	Grade of Evidence
COUNS ELING*		Breast Feeding										B
		Passive Smoking										A
		Home safety and injury prevention										
		Accident Prevention										A
		oral hygiene										
		Gaming and screen time limit[1]										
		developmental delays and disabilities[2]										
		ADHD screening[3]										B
		Autism screening[4]										
		Adequate Sun Exposure & Vit D[5]										
PHYSICAL EXAMINATION	PHYSICAL EXAMINATION	Developmental Mile Stones[6]										
		Growth Parameters										
		Posterior Fontanel										
		Anterior Fontanel										
		Dental health and floride[7]										B
		Vision[8]										
		√ Red Reflex Test[8]										B
		√ Corneal Light Reflex for Ocular Alignment (Hirschberg test)[8]										
		√ Cover -uncover Test for Amblyopia[8]										B
		√ Visual Acuity Testing[8]										
		Ears / Hearing screening[9]										B
		CVS										
		Abdomen										
		Hernia										
		Genitalia/ Circumcision										
		Lower Limbs										
		Screening for developmental dysplasia of the hip (DDH)[10]										
		Skin										
	Labs	ABO/RH										A
		CBC										
		SICKELING Test (If not done)[11]										A
		G6PD Test (If not done)[11]										
		PKU Test (If not done)	National Newborn Screening Program									A
		TFT for Congenital Hypothyroidism	National Newborn Screening Program									A
Chemoprophylaxis	Medications	Iron supplement[12]										
		Vitamin K[13]										
		Fluoride[14]										B
		Erythromycin eye drops										A
		Vitamin D3[15]										
		National immunizations schedule**										

User Guide:

*Counseling frequency will depend on doctor's clinical judgment and case assessment.

- Refer to index for counseling details and content.
- The above recommendations must be read along with the footnotes.
- The colored box means: The screening test is not recommended at this age and need to be performed only when clinically indicated.
- **For recommended immunization based on age refer to table(1)

Saudi Clinical Preventive Guideline under 6 years Foot Note

(1) Gaming and screen time limit:

The American Academy of Pediatrics (AAP) released a set of guidelines for media use based on a child's developmental stage which are highlighted below.

Age 2 and under: avoid media use (except video chatting).

Preschoolers: No more than one hour of high-quality programming per day.

Grade-schoolers/Teens: Don't let media displace other important activities such as quality sleep, regular exercise, family meals, "unplugged" downtime.

All ages: Be a media mentor. Co-view media with your kids.

(2) developmental delays and disabilities:

The American Academy of Pediatrics (AAP) recommends that all children be screened for developmental delays and disabilities during regular well-child doctor visits at:

- 9 months
- 18 months
- 30 months

(3) ADHD screening:

The American Academy of Pediatrics (AAP) recommends an evaluation for ADHD for any child or adolescent age 4 years to the 18th birthday who presents with academic or behavioral problems and symptoms of inattention, hyperactivity, or impulsivity.

(4) Autism screening:

all children should be screened specifically for Autism Spectrum Disorder ASD during regular well-child doctor visits at:

18 months

24 months

A number of screening tools for autism spectrum disorder (ASD) have been developed and are commonly used.

The American Academy of Pediatrics does not approve nor endorse any specific tool for screening purposes.

(5) Sun Exposure & Vitamin D

Recommended Dietary Allowance (RDAs) for Vitamin D:

Age	**RDAs**
0-12 months	400 IU (10 mcg)
1-13 years	600 IU(15 mcg)

(8-2) The Corneal Light Reflex (Hirschberg Test): For testing eye alignment. When a light source is held directly in front of a patient who is staring straight ahead, normal eye alignment will reveal a symmetric reflex in the center of each pupil. If the light reflex in one eye is inwardly displaced, that eye is exotropic; if outwardly displaced, it is esotropic; and if inferiorly displaced, it is hypertropic.. The presence of an esotropia after the age of 2 months or an exotropia after the age of 6 months suggests an abnormality and needs ophthalmologist evaluation.

(8-3) The Cover-uncover Eye Test is a more accurate test for ocular alignment in the cooperative patient. Testing is done at 3 years of age with the patient looking first at a near object and

(8-4) Visual Acuity Testing: (eg, Snellen, Lea Symbols [Lea-Test], and HOTV [Precision Vision] charts)

(9) Hearing: Evaluate gross hearing by observing an infant›s response to sound; a startle response, eye blinking and turning toward the sound is normal reaction.

- Older children, whispering test can be used.

Refer child at 3 years of age for standardize audiometric testing to ENT.- (Refer to Prevention of Hearing Impairment in PHC.

(10) Screening for developmental dysplasia of the hip (DDH)

The American Academy of Pediatrics (AAP) recommends that all newborn infant's hips should be evaluated by using the Barlow and Ortolani physical examination maneuvers.

(11) Sickling and G6PD tests: are requested if not done. Sickling test for Newborn should be done using thin layer isoelectric focusing (IEF) or high-performance liquid chromatography (HPLC). Sickling test can be performed at

9 months.

5–30 minutes of sun exposure between 10 AM and 3 PM at least twice a week to the face, arms, legs, or back without sunscreen.

(6) **Developmental Milestones:**
Denver Developmental Chart up to 6 years to assess child development.
Growth charts: use appropriate age- sex specific growth charts to monitor child growth. Use BMI charts from age 2 years. Use the following charts:
Infants to 36 months:
- Length-for-age and Weight-for-age
- Head circumference-for-age and Weight- for- length

Children and adolescents, 2 to 20 years
- Stature-for-age and Weight-for-age
- BMI-for-age

The Posterior Fontanelle: usually cannot be palpated after two months of age;
The anterior fontanelle generally closes between 10 - 24 months of age. The fontanelles of premature infants tend to close at a later time.

(12) **Iron supplementation:** The AAP recommends that full-term, exclusively breastfed infants start 1 mg per kg per day of elemental iron supplementation at 4 months of age until appropriate iron-containing foods are introduced. Formula-fed infants often receive adequate amounts of iron (average formula contains 10 to 12 mg per L of iron) and thus rarely require further supplementation.

(13) **Vitamin K injection**: A single dose (1.0 mg) of intramuscular vitamin K after birth is effective in the prevention of classic HDN. Either intramuscular or oral (1.0 mg) vitamin K prophylaxis improves biochemical indices of coagulation status at 1-7 days.

(7) **Dental health:**
Counseling and dental examination.
Dental referral from 12 months of age then annually. for Children from Birth Through Age 5 Years
primary care clinicians should refer the baby for topical fluoride like varnish to the primary teeth of all infants and children starting at the age of primary tooth eruption.

(14) **fluoride supplements**
Prescribe oral fluoride supplementation starting at age 6 months for children whose water supply is deficient in fluoride so ask about water source:

Age	<0.3 ppm F	0.3 to 0.6 ppm F	>0.6 ppm F
0-6 months	0	0	0
6 m- 3yrs	0.25 mg	0	0
3-6 years	0.50 mg	0.25 mg	0

Ref. AMERICAN ACADEMY OF PEDIATRIC DENTISTRY2018.

(8) **vision**
(8-1) The Red Reflex Procedure:
-The red reflex is much easier to see in a darkened room, so switch off the lights,
-Use a direct ophthalmoscope with the lens power set at '0'.
-Sit about half a meter (50 cm) away. Hold the ophthalmoscope close to your eyes.
-Encourage the child to look at the light source and direct the light at the child›s eyes individually and together. You should see an equal and bright red reflex from each pupil.
-Pay attention to the color and brightness of the red reflex. It should be identical in both eyes. Any difference between the eyes, an absence of the red reflex or an abnormal color may indicate a serious illness.

(15) Infants who are exclusively breastfed or receive less than 1 liter of formula daily should be supplemented with 400 IU of vitamin D daily, starting in the first few days of life and continuing until they are 12 months of age. Supplementation should continue until the baby is weaned to at least (1 L) of whole milk per day. Whole milk should not be used until after 12 months of age. Vit D supplement may be increased to 600 IU for age 1 year through adolescence.

Saudi Clinical Preventive Guideline Checklist (6-17 years)

		Date (Month/Year)	7	8	9	10	11	12	13	14	15	16	17	Grade of Evidence
COUNSELING*		Domestic Violence and Abuse												B
		Smoking Status & Cessation												B
		substance use												
		Sun Exposure & Vit D[1]												
		STIs												B
		Depression[2]												B
		Anxiety												B
		ADHD[3]												
		Oral Hygiene[4]												-
SCREENING	CLINICAL EXAMINATION	**Obesity in Children and Adolescents: Screening[5]**												B
		Mouth Examination												
	LABS	STIs – HIV												A
		STIs – Chlamydia and gonorrhea												B
		HCV testing[6]												B
		HBV testing[6]												B
CHEMOPROPHYLAXIS	MEDICATIONS	Folic Acid[7]												A
		Fluoride[8]												
	IMMUNIZATION	Influenza (Flu vaccine)												
		Tdap/Td												
		Varicella (catch up)												
		MMR (catch up)												
		PCV												
		PPSV23												
		HPV Vaccine												
		Meningococcal												
		IPV catch up or OPV												
		Hepatitis A (catch up)												
		Hepatitis B (catch up)												
		Haemophilus Influenzae Type b (Hib)												
		National immunizations schedule**												

User Guide:

Refer to index for counseling tips and content.
- The above recommendations must be read along with the footnotes.
*Counseling frequency will depend on doctor›s clinical judgment and case assessment.
**For recommended immunization based on age refer to table(1,2)

Saudi Clinical Preventive Guideline Checklist (6-17) Foot Note

(1) Sun Exposure and Vitamin D:
5–30 minutes of sun exposure between 10 AM and 3 PM at least twice a week to the face, arms, legs, or back without sunscreen. Individuals with limited sun exposure need to include good sources of vitamin D in their diet or take a supplement to achieve recommended levels of intake.
Recommended Dietary Allowance (RDAs) for Vitamin D3(cholecalciferol):

(2) Depression screening:
The USPSTF recommends screening for major depressive disorder (MDD) in adolescents aged 12 to 18 years. Screening should be implemented with adequate systems in place to ensure accurate diagnosis, effective treatment, and appropriate follow-up.

(3) ADHD screening
The American Academy of Pediatrics (AAP) recommends an evaluation for ADHD for any child or adolescent age 4 years to the 18th birthday who presents with academic or behavioral problems and symptoms of inattention, hyperactivity, or impulsivity.

(4) Oral Hygiene:
Support tooth brushing in children.& recommend personal tooth brushing and flossing in adults to prevent gingivitis
- weak scientific evidence to recommend oral hygiene for the prevention of periodontitis

(5) BMI Plotting Charts: Children and adolescents, 2 to 20 years plot the following growth charts annually
- Stature-for-age and Weight-for-age
- BMI-for-age

- Overweight: age and gender specific BMI at ≥85th to 94th percentile.
- Obesity : age and gender specific BMI at ≥95th percentile

(6) 14-17 years This recommendation applies to who have ever are at increased risk

(7) Folic Acid
All women planning or capable of pregnancy should take a daily supplement containing 0.4 to 0.8 mg (400 to 800 µg) of folic acid at least 1 month before conception and to continue daily supplements through the first 2 to 3 months of pregnancy

(8) Fluoride:
Children aged > 6 years are considered past the age that fluoride ingestion can cause cosmetically objectionable fluorosis because only certain posterior teeth are still at a susceptible stage of enamel development.
Ask about water source:
- If <0.3ppm give fluoride 1 mg /day
- If (0.3-0.6 ppm) give 0.5 mg /day
- If (> 6 ppm) no needs for fluoride supplement

Saudi Clinical Preventive Guideline Checklist (18-59 years)

			Date (Month/Year)										Grade of Evidence
COUNSELING*			Breast Feeding										B
			Domestic Violence and use										B
			Behavioral Counseling for STIs										B
			Smoking Cessation										A
			Oral hygiene[1]										
			Alcohol use[2]										
			substance use										
			Sun Exposure and Vitamin D deficiency										
			Behavioral Counseling for Obesity[3]										B
			Depression[4]										B
SCREENING	CLINICAL EXAM		BMI & Waist Circumference[5]										
			Blood Pressure Measurmen[6]										A
			Mouth Examination										
	LABS		Blood Sugar Testing[7]										B
			HCV testing[8]										B
			HBV testing[8]										B
			Fasting Lipid Profile										B
			Pap Smear[9]										A
			Mammogram[10]										B
			Lung Cancer[11]										B
		STI	Chlamydial and Gonorrhea										B
			Syphilis										A
			HIV										A
		Colon Cancer[12]	Fecal Occult										A,B
			FIT=fecal immunochemical										
			Sigmoidoscopy										
			Colonoscopy										
			Osteoporosis[13]										B
CHEMOPROPHYLAXIS	MEDICATIONS		Aspirin[14]										C
			Folic Acid [15]										A
			statin[16]										B,C
	IMMUNIZATION**		Influenza										
			HPV vaccine										
			Tdap/Td										
			Varicella										
			MMR (Catch up)										
			Pneumococcal (PCV)										
			Pneumococcal (PPSV23)										
			Meningococcal										

		Hepatitis A										
		Hepatitis B										
		Haemophilus Influenzae Type b (Hib)										
		National immunizations schedule**										
		MOH Mother Health Passport.										

User Guide:
- Refer to index for counseling tips and content.
- The above recommendations must be read along with the footnotes.

*Counseling frequency will depend on doctor›s clinical judgment and case assessment.

**For recommended immunization based on age refer to table(2)

Saudi Clinical Preventive Guideline Checklist (18-59 years) Foot Note

(1) **Oral Hygiene:** Adults good evidence to recommend personal tooth brushing and flossing to prevent gingivitis weak scientific evidence to recommend oral hygiene for the prevention of periodontitis	(9) **Pap Smear:** The USPSTF recommends screening for cervical cancer in women after starting sexual activity age 21 to 65 years with cytology (Pap smear) every 3 years or, for women age 30 to 65 years who want to lengthen the screening interval, screening with a combination of cytology and human papillomavirus (HPV) testing every 5 years.
(2) **screening for unhealthy alcohol use** in primary care settings in adults 18 years or older, including pregnant women, and providing persons engaged in risky or hazardous drinking with brief behavioral counseling interventions to reduce unhealthy alcohol use	(10) **mammogram:** locally The Saudi Expert Panel suggests screening with mammography in women aged 40–69 years every 1 to 2 years). (Conditional recommendation; low-quality evidence) (17) - Women aged 75 years or older, the evidence to recommend for routine screening is currently insufficient.
(3) **Weight Loss to Prevent Obesity-Related Morbidity and Mortality in Adults:** Behavioral Interventions clinicians offer or refer adults with a body mass index (BMI) of 30 or higher (calculated as weight in kilograms divided by height in meters squared) to intensive, multicomponent behavioral interventions.	(11) **Lung Cancer:** The USPSTF recommends annual screening for lung cancer with low-dose computed tomography (LDCT) in adults aged 50 to 80 years who have a 20 pack-year smoking history and currently smoke or have quit within the past 15 years. Screening should be discontinued once a person has not smoked for 15 years or develops a health problem that substantially limits life expectancy or the ability or willingness to have curative lung surgery.
(4) **Depression Screening**: Ask 2 simple questions about: Mood and loss of interest in the past 2 week.	(12) **Colon Cancer Screening:** The USPSTF recommends screening for colorectal cancer in all adults aged 50 to 75 years(A). The USPSTF recommends screening for colorectal cancer in adults aged 45 to 49 years(B). - Locally based on American cancer society at the age 45 years (18) **Screening methods: Choose one of the following tests:** - FOBT=guaiac-based fecal occult blood test every year. - FIT=fecal immunochemical test every year. - Flexible Sigmoidoscopy(FSIG) every 5 years. - Colonoscopy every 10 years. - All positive results on non-colonoscopy screening tests should be followed up with timely colonoscopy.
(5) **Check BMI & Waist Circumference** / 2years in all adults aged over 18 years	(13) **Perform DEXA Scan for:** For postmenopausal women younger than 65 years who have at least 1 risk factor, a reasonable approach to determine who should be screened with bone measurement testing is to use a clinical risk assessment tool. **- postmenopausal women younger than 65 years increased risk of:** - osteoporotic fractures. - parental history of hip fracture - smoking. - excessive alcohol consumption - low body weight. No recommendation to screen asymptomatic men by USPSTF.

(6) Blood Pressure Recommendations: LOE: A Screen for high blood pressure in adults aged 18 years or older. Obtain measurements outside of the clinical setting for diagnostic confirmation before starting treatment. **Check BP annually for those who are at increased risk include:** adults aged 40 years or older. persons with high-normal blood pressure. overweight or obese. Screening less frequently (ie, every 3 to 5 years) is appropriate for adults aged 18 to 39 years not at increased risk for hypertension and with a prior normal blood pressure reading.	**(14) Aspirin 81 mg daily** The decision to initiate low-dose aspirin use for the primary prevention of CVD in adults aged 40 to 59 years who have a 10% or greater 10-year CVD risk should be an individual one. Evidence indicates that the net benefit of aspirin use in this group is small. Persons who are not at increased risk for bleeding and are willing to take low-dose aspirin daily are more likely to benefit.
(7) Check Fasting Blood Sugar or Hb A1c or RBS starting at the age of 35 years every 3 years **Screen all adults who are overweight (BMI ≥ 25 kg/ m2) and have additional risk factors:** - Physical inactivity - First degree relative with DM - Women who delivered baby more than 4 kg or where diagnosed with GDM. - Blood pressure ≥ 140/90 or on therapy for hypertension. - HDL cholesterol level < 35 mg/dl (0.9mmol/l) or TG > 250mg/ dl (2.82mmol/l) - Women with polycystic ovary syndrome. - Impaired glucose tolerance test or impaired fasting glucose. OR HBA1C ≥ 5.7 % - History of CVD.	**(15) Folic Acid:** All women planning or capable of pregnancy take a daily supplement containing 0.4 to 0.8 mg (400 to 800 µg) of folic acid at least 1 month before conception and to continue daily supplements through the first 2 to 3 months of pregnancy. Women at high risk for neural tube defects (NTD) like epileptic or DM or previous baby with NTD should take 4mg per day.
(8) This recommendation applies to who have ever are at increased risk.	**(16) STATIN** -The USPSTF recommends that clinicians prescribe a statin for the primary prevention of CVD for adults aged 40 to 75 years who have 1 or more CVD risk factors (i.e. dyslipidemia, diabetes, hypertension, or smoking) and an estimated 10-year risk of a cardiovascular event of 10% or greater. (B) -The USPSTF recommends that clinicians selectively offer a statin for the primary prevention of CVD for adults aged 40 to 75 years who have 1 or more CVD risk factors (i.e dyslipidemia, diabetes, hypertension, or smoking) and an estimated 10-year risk of a cardiovascular event of 7.5% to less than 10%. The likelihood of benefit is smaller in this group than in persons with a 10-year risk of 10% or greater.(C)

Saudi Clinical Preventive Guideline **Checklist (60 years and above)**

		Date (Month/Year)										Grade of Evidence
COUNSELING*		Smoking Status & Cessation										A
		Alcohol use										B
		Fall Assessment and Physical Activities[1]										B
		Dementia										
		Depression[2]										B
SCREENING	CLINICAL EXAMINATION	BMI										
		Blood Pressure Measurement[3]										B
	LABS	Blood Sugar Testing[4]										B
		Fasting Lipid Profile										B
		Mammogram[5]										B
		Lung Cancer[6]										B
		Colon Cancer[7]	Fecal Occult									A
			FIT=fecal immunochemical									
			Sigmoidoscopy									
			Colonoscopy									
		Osteoporosis[8]										A
		Abdominal US (Male 65-75) who ever smoked for abdominal aortic aneurysm[9]										B
CHEMOPROPHYLAXIS	MEDICATIONS	STATIN[10]										B,C
		Vitamin D3										
	IMMUNIZATION	Influenza										B
		Td/Tdap										B
		Varicella										B
		Zoster										
		Measles, mumps, rubella (MMR)										
		Pneumococcal (PCV)										
		Pneumococcal (PPSV23)										
		Meningococcal										
		Hepatitis A										
		Hepatitis B										
		National immunizations schedule**										

User Guide:

Refer to index for counseling tips and content.

- The above recommendations must be read along with the footnotes.

*Counseling frequency will depend on doctor›s clinical judgment and case assessment.

**For recommended immunization based on age refer to table(2)

Saudi Clinical Preventive Guideline (60 years and above) Foot Note

(1) **Fall Assessment and Prevention:** Risk Assessment: -History of falls -Mobility problems -Poor performance on the timed Get-Up (up go test) Counsel for interventions to minimize risk of fall including: -Exercise therapy (working on gait, balance, and muscle strengthening in the legs), Diet, and vitamin D supplementation psychological health and cognition, vision, environmental conditions, diet.	(6) **Lung Cancer** The USPSTF recommends annual screening for lung cancer with low-dose computed tomography (LDCT) in adults aged 50 to 80 years who have a 20 pack-year smoking history and currently smoke or have quit within the past 15 years. Screening should be discontinued once a person has not smoked for 15 years or develops a health problem that substantially limits life expectancy or the ability or willingness to have curative lung surgery.
(2) **Depression Screening:** - Use Geriatric Depression Scale (short form)	(7) **Colon Cancer Screening:** Choose one of the following tests: The USPSTF recommends screening for colorectal cancer in all adults aged 50 to 75 years(A). Locally based on American cancer society at the age 45 years (20) Screening methods: gFOBT=guaiac-based fecal occult blood test every year FIT=fecal immunochemical test every year Flexible Sigmoidoscopy every 5 years Colonoscopy every 10 years. All positive results on non-colonoscopy screening tests should be followed up with timely colonoscopy.
(3) **Blood Pressure Recommendations:** Annual screening for adults aged ≥ 40 years . - Obtain measurements outside of the clinical setting for diagnostic confirmation before starting treatment. - **Check BP annually for those who are at increased risk include:** adults aged 40 years or older. persons with high-normal blood pressure. overweight or obese.	(8) **Perform DEXA Scan:** The USPSTF recommends screening for osteoporosis with bone measurement testing to prevent osteoporotic fractures in women 65 years and older. No recommendation to screen asymptomatic men by USPSTF.
(4) **Check Fasting Blood Sugar** or Hb A1c or RBS starting at the age of 35 years every 3 years * Screen all adults who are overweight (BMI ≥ 25 kg/ m2) and have additional risk factors: Physical inactivity First degree relative with DM Women who delivered baby more than 4 kg or where - diagnosed with GDM Blood pressure ≥ 140/90 or on therapy for hypertension HDL cholesterol level < 35 mg/dl (0.9mmol/l) or TG > 250mg/dl (2.82mmol/l) Women with polycystic ovary syndrome Impaired glucose tolerance test or impaired fasting glucose. OR HBA1C ≥ 5.7 % History of CVD.	(9) Men Ages 65 to 75 Years who Have Ever Smoked The USPSTF recommends one-time screening for Abdominal Aortic Aneurysm (AAA) with ultrasonography in men ages 65 to 75 years who have ever smoked.
(5) **Mammogram** (Locally The Saudi Expert Panel suggests screening with mammography in women aged 40–69 years every 1 to 2	(10) **Statin:** -The USPSTF recommends that clinicians prescribe a statin for the primary prevention of CVD for adults aged 40 to 75 years who have 1 or more CVD risk factors (i.e. dyslipidemia,

years). (Conditional recommendation; low-quality evidence) (19) Women aged 75 years or older, the evidence to recommend for routine screening is currently insufficient.	diabetes, hypertension, or smoking) and an estimated 10-year risk of a cardiovascular event of 10% or greater. (B) -The USPSTF recommends that clinicians selectively offer a statin for the primary prevention of CVD for adults aged 40 to 75 years who have 1 or more CVD risk factors (i.e dyslipidemia, diabetes, hypertension, or smoking) and an estimated 10-year risk of a cardiovascular event of 7.5% to less than 10%. The likelihood of benefit is smaller in this group than in persons with a 10-year risk of 10% or greater.(C)

CHAPTER-III

Counseling skills

3.1- Counseling Skills:

3.1.1- Counseling is a systematic process which gives individuals an opportunity to explore and clarify the ways of living more resourcefully, with a greater sense of well-being.
The counselor's role is to facilitate the client work in a way that respect the client's values, personal resources and capacity for self-determination.

The following skills are necessary for counseling:

3.1.2- Attending Behavior:

Involves our behaviors which include paying full attention, in an acceptable and supportive way, to the client. An attempt to build a certain amount of rapport with their client but not to an extent that would allow them to become emotionally involved

3.1.3- Communication Skills:

- Active listening is the most fundamental component of interpersonal communication skills, actively showing verbal and non-verbal signs of listening.
- Effective questioning skills (open-ended questions).
- Clarification: use of open questions to ensure the correct message has been received and to enable expanding on certain points as necessary.
- Paraphrasing (the counselor uses different words to restate in a nonjudgmental way what the client has said. Aiming to help the client to know that the counselor is aware of the client's perspective and has heard what he or she has said.
- Reflective responses (responds to feelings). Affective reflection in an open-ended, respectful manner of what the client is communicating verbally and nonverbally, both directly through words and nonverbal behaviors as well as reasonable inferences about what the client might be experiencing emotionally.
- It is important for the helper to think carefully about which words he/she chooses to communicate these feelings back to the client.
- Empathetic response: Placing self in the client's situation while remaining objective. Empathizing requires the counselor not to be judgmental and to be sensitive and understanding.
- Negotiation skills (a process by which compromise, or agreement is reached while avoiding argument).
- Structuring and Summarizing: repeating a summary of what has been said back to client in their word.

3.1.4- Advice Skills:

The ability to give advice in a positive, constructive way is an art. Here are three points to help us offer advice with effectiveness and compassion.

Listen first While this rule is true for all good communication, it is doubly true when we wish to give advice.
By first listening, we open a space for the speaker to more fully describe the situation and for us to more fully understand it. In addition, when we listen first, it makes it more likely that the other will then listen to what we have to say.

Ask permission It can be experienced as un-welcome intrusion into personal business. It might also be seen disrespectful, as implying that a person is incapable of caring for himself and resolving his own issues. Asking if our advice is desired shows respect for others and prevents resentments.

Offer without insisting It is worth keeping in mind that even after we have listened, we can never know with certainty what is best for another person. By not insisting, we can increase the chances of our words being considered.

COUNSELING CHECK LIST

STEPS	SKILLS	SCORING				
		1	2	3	4	5
Exploration of the problem	Establish good relationship: Welcome the client greets him, introduce yourself					
	Call by name or the name he likes, marital status, job					
	Use helpful non-verbal communication Suitable position posture and proper eye contact....					
	Show welcoming and willing to help					
	Attending behavior show interest, give attention, active listening					
	Be sensitive to verbal and non-verbal cues					
	Show empathy					
Enable the client to explore the problem from his own Idea, Concern, Expectation and Effect (ICEE)	Open ended questions,					
	Use paraphrasing,					
	Reflecting feelings					
	Help the client to be specific					
	Summarizing					
	Acceptance & non-judgmental attitude					
Understanding & defining goals	Help the client to recognize behavior pattern, inconsistency and feeling					
	Appropriate sharing of the knowledge, experiences and feeling					
	Reach a new understanding of the problems, See the problem in a new perspective					
	Focus on what to be done to enable the client to cope more effectively					
	Define goals					
Action	Use creative thinking, problem solving and decision making					
	Help the client to consider the action, consider its cost and consequences plan for it, implement it and evaluate it.					

CHAPTER-IV

Child & Adult immunization recommendations

Introduction:

The public health authority (PHA) recommends routine vaccination to prevent 17 vaccine-preventable diseases that occur in infants, children, adolescents and adults. Immunization process stimulate the body's own immune system to protect the person against subsequent infection or disease (WHO). Immunization is an important part of Saudi Clinical Preventive Guideline for both children and adults. (Table1) shows the National Immunization Schedule for ages from birth to 18 years in Saudi Arabia.

Table1: Recommended Vaccinations for Children and Adolescents Under 18

Birth	2 mos.	4 mos.	6 mos.	9 mos.	12 mos.	18 mos.	24 mos.	4-6 yrs.	11 yrs.	12 yrs.	18 yrs.
			BCG						Tdap		
HepB	HepB	HepB	HepB								
	RV	RV	RV								
	Dtap	Dtap	Dtap			Dtap		Dtap			
	Hib	Hib	Hib			Hib					
	PCV	PCV	PCV		PCV						
	IPV	IPV	IPV								
			OPV		OPV	OPV		OPV			
				Measles							
				MCV4	MCV4						MCV4
						HepA	HepA				
						Varicella		Varicella			
									*HPV	*HPV	
					MMR	MMR		MMR			
			Influenza								

*For female only

Table2: Recommended Vaccinations for adult from 18 and older

Vaccine*	Influenza[1]	Tdap or Td[2]		MMR[4]	Varicella[5]	Herpes zoster[6]	HPV[7]	Pneumococcal		Hep B[10]	MCV4[11]	Other Vaccinations
		Adults[2]	Pregnant[3]					PPSV23[8]	PCV[9]			
Date and signature												

Timing / indication:

1- [1]dose annually.

2- [1]dose Tdap then Td booster every 10 years.

3- pregnant women (for each pregnancy between 27 & 36 weeks).

4- for unvaccinated individuals, premarital and post-natal women if no evidence of immunity or prior disease (1 or 2 doses depend on indication).

5- if no evidence of immunity or prior disease (2 doses 8 weeks apart).

6- 2 doses 2-6 m apart for adult age 50 years or older.

7- 3 doses (0, 1-2, and 6 m) from the first dose catch up immunization for female age 15-26 years.

8- 1 dose adults aged 65 years or older (1 year after PCV 13 dose) from the first dose.

9- 1 dose adults with comorbid/immunocompromised conditions and adults aged 65 years or older.

10- 3 doses (0, 1m, and 6m) if no previous immunization or no evidence of immunity.

11- 1 dose depending on indication, then booster every 5 years if risk remains.

ABBREVIATIONS

SCP	Saudi Clinical Preventive
PHA	Public Health Authority
PHC	Primary Health Care Center
CPG	Clinical Practice guidelines
USPSTF	united states Preventive Services Task Force
CTFPHC	US Capital Letters Canadian Task Force on preventive health care
NICE	National Institute of Clinical guidelines Network
SIGN	Scottish Intercollegiate Guidelines Network
RACGP	The Royal Australian College of General Practitioners
AGREE	The Appraisal of Guidelines for Research and Evaluation
RDA	Recommended Daily Allowance
IEF	Iso-electric focusing
HPLC	High performance liquid chromatography
DEXA SCAN	Dual energy x-ray Absorbtiometry
NTD	Neural tube defects
CVR	Cardiovascular risk
STI	Sexually transmitted infections
EPI	Expanded program of immunization practices
ACIP	The advisory committee on immunization practices
Tdap/ Td	Tetanus, diphtheria,a cellular pertussis Vaccine
DTaP	Diphtheria ,tetanus,acellular pertussis Vaccine
MCV4	Meningococcal Conjugate Quadrivalent Vaccine
PCV13	Pnemococcal Conjugate Vaccine
PPSV23	Pnemococcal Polysaccharide Vaccine
IPV	Inactivated Poliovirus Vaccine
OPV	Oral poliovirus Vaccine
CDC	Center for Disease Control and Prevention

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وقاية

هيئة الصحة العامة
PUBLIC HEALTH AUTHORITY

SaudiCDC
www.cdc gov.sa