UNITED ARAB EMIRATES
MINISTRY OF HEALTH

National Periodic Health Screening Manual

للإستفسار الرجاء الاتصال:
800 11111

@MOHUAE
www.moh.gov.ae

هيئة الصحة بدبي
DUBAI HEALTH AUTHORITY

هيئة الصحة - أبوظبي
HEALTH AUTHORITY - ABU DHABI

Preface

This manual has been designed by a team of excellence within Ministry of Health, Abu Dhabi Health Authority and Dubai Health Authority as a joint, united, collaborative initiative. It will help to guide the stakeholders and all healthcare providers in pursuit to perform the periodic health screening on the UAE population to enhance a better, healthier lifestyle within our beloved country, the United Arab Emirates.

Members Of The Periodic Health Screening Guideline Commitiee:

Dr. Haifa Hamed Fares: Head of Health Program Section, PHC Department, MOH

Dr. Zainab Murad Al Amiri: Specialist Family Physician, MOH

Dr. Ehab Abdul Rahman: Specialist Family Physician, MOH

Dr. Aeisha Al Meiheri: Specialist Family Physician, MOH

Dr. Sharinah Al Mazrouie: Section Head, CVD & Metabolic disorders, HAAD

Dr. Nahed Monsef: Director of Health Affairs Department, PHCSS, DHA

Dr. Suad Ahmed Hashim: Head of Clinical Prevention and Health promotion Unit, DHA

Table of Contents		Pages

Table of Contents **Pages**

Introduction:

The health system in the United Arab Emirates has been facing significant challenges that emerged from the increased morbidity and mortality of the population from non-communicable diseases (NCD) which includes cardiovascular disease, diabetes, osteoporosis and cancer. In 2010, the World Health Organization (WHO) reported that the NCD are estimated to account for 67% of most deaths in UAE. In the last three decades, the prevalence of such diseases has shown a dramatic increase due to socioeconomic development which is an alarming factor that hypothesis a future increase in the diagnoses of NCD within the population if no actions were taken in place.

The Ministry of health (MOH) aims to strategically enhance the health of the UAE population by promoting a healthier lifestyle that will aid in cutting down most associated diseases. Taking this into consideration, the primary health care department in the MOH has developed a preventative program, called "periodic health screening". The "Periodic Health screening" initiative is a program that aims at supporting the overall effort in fighting the high burden of NCD's. It will also improve the preventative services provided in primary health care centres and enhance the health care provider's skills.

This guideline will provide the health care professionals with clear steps to implement health promotion and disease prevention in their practice.

Goal:

To reduce the burden of the Non communicable diseases within the UAE population through early screening and in addition to promote individuals for a healthier changes in their lifestyles with the added value of gaining their trust in our healthcare system.

Objectives

1. Public awareness to the vitality of the "periodic health prevention" services within the U.A.E. population.
2. Population health empowerment that enables a more stable, healthier and positive influence within their
   lifestyle.
3. Early detection of the risk factors and /or conditions that is preventable through the screening program to cut
   back on the prevalence of the non-communicable diseases.
5. Promote a united collaboration and partnership with stakeholders that include both Governmental and
   non-Governmental entities to pursue early detection and health promotion.

Inclusion Criteria:

- National and Non-national UAE resident.
- 18 years of age and above.
- Females and Males.
- Holding a valid health card.

Service Specification:

Health care Facilities:

Healthcare facilities providing periodic health screening services must:

- Meet the requirement for JCI accreditation (preferred accreditation certificate).
- Have the minimum requirement regarding infrastructure and medical equipment to start the service.
- Assign a periodic health screening coordinator who will report & submit the service outcome to the program committee.
- Provide baseline statistical information regarding the catchment area and the target population as those listed in table (1).
- Follow and conduct regular internal audit to demonstrate the compliance with provided program policy and guidelines.
- Follow and conduct annual external audit to address the risk assessment in means to meet quality standards of excellence.
- Maintain records for all required outcome of the service, audit results, education & training activities.
- Provide patient education and information regarding available services.

Table 1:

Base line statistical information:
Health Centre Catchment Areas.
Total number of population in the catchment area including age, gender & nationality.
Total number of individuals registered in the health centre (with valid insured health cards if applicable).
Number of individuals with a BMI indicating overweight and obesity.
Number of individuals with a low BMI indicating possible eating disorder or other underlying cause.
Number of individual with diabetes.
Number of individual with hypertension.
Number of individual with dyslipidemia.
Number of individuals indicative of a depression condition.
Number of individuals with vision and hearing conditions.

Laboratory:

The following standards are to be fulfilled precisely by the Lab, whether it is an in-house laboratory or outsourced laboratory. In addition to obtaining authorization, as a reference lab to undergo the screening program and in accordance with the facilities licensing and laboratory standard provided by the region's health authority or ministry in addition to the following mandatory requirements:

- The lab building properties should include a good location, adequate lightening, proper ventilation system, available emergency exits and the proper medical waste disposal system.
- Official legalization & authorization by the health authority, and following their mandatory rules & regulations.
- All Lab sections should be separated, as in the microbiology section should be separate from the biochemistry and haematology section to avoid any possible cross-contamination.
- Safety precautions must be properly implemented and adhered by all working staff and visitors.
- Regular calibration and standardization for lab devices must be performed in accordance to the international recommendations to ensure the validity of all tests.
- Quality control and quality assurance of equipment, staff and tests are to be documented, audited and well monitored on a regular base.
- The lab preferred to be accredited by an external board such as the College of American Pathologist (CAP).
- Proficiency testing of all tests must be performed biannually or in accordance to the accrediting board's suggestion.
- Regular updating and training of staff with completion of a yearly competency checklist must be performed; to ensure the high quality of staffing and training mechanism.

Data Reporting and Collection

- The service physician is required to document all patients data related to their current health status and medical history.
- The nurse is responsible for completing daily registry and required statistics regarding the service.
- Data collection and service auditing should be done through the coordinator and sent to the program committee on a scheduled regular basis.
- All collection and reporting is to be done using automated electronic collection and reporting site.

Health care provider's duties

The service Coordinator

- The coordinator should be a trained health care provider (HCP).
- Checks the availability of all requirements needed for the service implementation.
- Training and supervising the team working within the program.
- Data collection and auditing the service regularly.
- Authorizing final reports and statistics.
- Taking active part in annual planning and improving the service.
- Participate in continuing medical education (CME).

The service physician

- Provides clinical services and patient care in accordance with this protocol.
- Participate in continuing medical education (CME).
- Provide appropriate patient education regarding the services and the screening tests
- Comply with the regulation on managing medical record and patient information as stated in the region's health ministry and/or authority.
- Must participate in training the team to ensure a smooth working flow.

The service nurse

- Ensure the availability of all equipment and registers needed for the service.
- Ensure that an appropriate patient informed consent is obtained, signed and filled.
- Preparation of client's files and appointment list in coordination with the receptionist.
- Performing and documenting client's vital signs and measurements needed for the service.
- Provide client counselling and education.
- Delivering and documenting appropriate vaccination ordered by the service physician.
- Complete the daily register and the required statistics regarding the service.
- Comply with good customer service relations with colleagues and clients.

The Health Educator

- Provide age appropriate Health education and counselling to the clients in accordance with the provided protocol.
- Assess the behavioural change's stage of the client.
- Provide the client with clear steps to implement behavioural changes
- Design health education materials
- Conduct group health educational activities in the clinic.

The Dietician

- Counsel the clients regarding proper diet according to the age and risk factors.
- Manage and follow patients who are either below or above the normal BMI range.
- Organize and conduct group sessions about nutrition in the clinic.
- Assess in conducting training program for the staff regarding nutrition.

The Receptionist

- Comply with region's health ministry or authority regulation on managing medical records, patient information and confidentiality.
- Document patient visit and arrange follow up appointments.
- Call the clients to remind them with their appointment.
- Attend service team meetings.
- Check the eligibility of each individual who is going to go through this program to ensure no duplication done at another healthcare service.
- Must be competent in I.T.
- Must keep up-to-date with any changes.
- Must maintain excellent customer service.
- Must ensure that the system is flowing smoothly to avoid long waiting time and delays.
- Must have a friendly appearance in welcoming the client with good interpersonal skills.
- Preferred a fluent bilingual in speaking and writing (Arabic and English are the prime languages).

Screening Pathway *(Appendix 1 Screening pathway)*

The services provided for the periodic health screening include risk assessment, screening measures, vaccination and counselling. Engagement in the service will be secured through appointment or walk in bases by contacting the service receptionist.

All clients should be requested to do the screening every three years unless one or more of the risk factors necessitate earlier screening according to the timeline table. (Appendix 2)

The service nurse is responsible for explaining the importance of those services and discussing their consequences with the client. All participants should sign the consent form prior to starting the service to ensure a full understanding of the screening program.

Risk Assessment *(Appendix 2)*

All clients undergoing the periodic health screening program should be evaluated by the nurse using a standard risk assessment tool. This tool should be validated by the physician and available in both Arabic & English version. The tool will cover a comprehensive collection of data and medical history from the clients to help in assessing their risk. This tool includes, but not limited to, evaluation of the following:

1) Personal data.
2) Lifestyle status:
   a) Physical activity.
   b) Diet.
   c) Smoking.

3) Cardiovascular risk factors and diseases:
   a) Overweight and obesity.
   b) Underweight and eating disorder.
   c) High cholesterol.
   d) Hypertension.
   e) Diabetes.
4) Common cancers:
   a) Breast cancer.
   b) Cervical cancer.
   c) Colorectal cancer.
5) Osteoporosis.
6) Vitamin D deficiency.
7) Depression.
8) Hearing status.
9) Vision status.
10) Vaccinations.

Screening Measures:

All measurements should be explained and described to participants prior to taking them.

Physical Measurements (Must be carried out at the first visit)	**Biochemical Measurements** (Preferred to perform the tests early morning at a fasting mode but not mandatory unless requested by the physician)	**Others**
Blood Pressure	Fasting blood glucose	Visual acuity test through Snellen Chart*
Height	HbA1c	Depression score (PHQ-9 score, if required)
Weight	Lipids (Total cholesterol, HDL, LDL, TG)	Hearing assessment score*
Body mass index (BMI)	S. creatinine (Preferred)	Stool occult blood*
Waist circumference / waist hip ratio	Vitamin D3 Hydroxy Level*	Cervical Pap smear*
		Breast mammogram*
		Bone mass density for osteoporosis*

*These tests are to be performed in accordance with the standards of the region's health ministry and/or authority.

Follow up

- The screening test results are to be ready within 5-7 working days for the lab tests.
- Test results for those with the (*) are to be available within 10 working days.
- Follow-up visit is an informative educational discussion between the physician and the client to explain what tests were performed and what the results mean and reflect , then a cardiovascular risk calculation is to be completed by the service physician, and the risk will be determined accordingly.
- All results evaluation and recommendations will be documented in a Health status report and to be delivered to all participants at the end of gathering all the required results and information for the client's records.
- The service nurse should record all data in the registry file.
- A follow up plan with primary or secondary services will be set according to the client's risk assessment and positive screening test. (Appendix 4: Health Status Parameter Value for Intervention).

Health Conditions

Cardiovascular Risk Screening:

Initial visit:

All individuals aged 18 and above, attending the periodic health screening clinic should be screened for cardiovascular risks using the measurement as indicated in table 2.The frequency of the screening will be determined depending on the individual risk factors. (*Appendix 3: TimeLine for Periodic Health Screening*).

Table 2:

CVD risk measurement
• Risk assessment through risk assessment tool.
• Physical measurements: blood pressure, weight, height, body mass index and waist circumference / waist hip ratio.
• Biological measurements: fasting/non-fasting blood sugar, HbA1c level, s. creatinine, lipid profile (total cholesterol, LDL, HDL and TG).

Follow up visits:

Patients going through cardiovascular risk screening should be seen between 5 to 7 working days after the initial visit to:

- Be informed about their results
- Calculate the 10-years Cardiovascular risk using the modified Framingham Risk Score \ WHO\ISH Risk Score.*(Appendix 5)*
- Receive the appropriate action, in accordance with their risk. *(CVD risk assessment and management flowchart- Appendix 6)*

Risk Category	Follow-up visit timeline
High risk individuals	offered the first follow up appointment to the primary/secondary care within a period of 2 weeks.
Medium risk individuals	offered the first follow up appointment to their family physician / secondary care within a period of 2 months.
Normal risk individuals	general health assessment through periodic health screening clinics as indicated in the timeline. (Appendix 2)

It is the responsibility of the service to ensure that high and medium risk individuals have appropriate action done.

Individuals with overweight /obesity or are underweight / have an eating disorder will be referred to dietitian clinic or the Healthy lifestyle Centre (HLC) to receive comprehensive counselling regarding weight management. (See HLC protocol)

Osteoporosis Screening:

Initial visit:

All clients aged 65 years and above attending the periodic health screening should be screened for osteoporosis by using the central Dual Energy x-ray Absorptiometry (DEXA Scan).

Those who are below 65 years, risk factors evaluation should be done for them. *(See table 3, 4 and 5).*

Table (3):
Indications for BMD Testing.

Older Adults (age ≥ 50 years)	Younger Adults (age < 50 years)
• All women and men age ≥ 65 years • Menopausal women, and men aged 50-64 years with clinical risk factors for fracture: – Fragility fracture after age 40. – Prolonged glucocorticoid use†. – Other high-risk medication use*. – Parental hip fracture. – Vertebral fracture or osteopenia identified on X-ray. – Current smoking. – High alcohol intake. – Low body weight (< 60 kg) or major weight loss (>10% of weight at age 25 years). – Rheumatoid arthritis. – Other disorders strongly associated with osteoporosis such as primary hyperparathyroidism, type 1 diabtes, osteogenesis imperfecta, uncotrolled hyperthyroidism, hypogonadism or premature menopause (< 45 years), Cushing's disease, chronic malnuttion or malabsorption, chronic liver disease, COPD and chronic inflammatory conditions (e.g., inflammatory bowel disease)	• Fragility fracture. • Prolonged use of glucocorticoids.* • Use of other high-risk medications.† • Hypogonadism or prematur menpause. • Malabsorption syndrome. • Primary hyperparathyroidism. • Other disorders strongly associated with rapid bone loss and/or fracture.

***Note:** Atleast 3 months cumulative therapy in the previous year at prednisone equivalent dose >7.5 daily

†(Refere to table 5)

Table (4):

Medical Conditions that may be associated with an increased risk of osteoporosis		
AIDS/HIV	Hyperparathyroidism	Pernicious anemia
Amyloidosis	Hypogonadism, primary and secondary (e.g., amenorrhea)	Rheumatoid arthritis
Ankylosing spondylitis	Hypophosphatasia	Severe liver disease, especially primary biliary cirrhosis
Chronic obstructive pulmonary disease	Idiopathic scoliosis	Spinal cord transsection
Congenital porphyria	Inadequate diet	Sprue
Cushing's syndrome	Inflammatory Bowel Disease	Stroke (CVA)
Eating disorders (e.g., anorexia nervosa)	Insulin-dependent diabetes mellitus	Thalassemia
Female athlete triad	Lymphoma and leukemia	Tumor secretion of parathyroid hormone-related peptide
Gastrectomy	Malabsorption syndromes	Thyrotoxicosis
Gaucher's Disease	Mastocytosis	Weight loss
Hemochromatosis	Multiple myeloma	
Hemophilia	Multiple sclerosis	

Table (5):

Drugs that may be associated with reduced bone mass in adults		
Aluminum	Gonadotropin-releasing hormone agonists	Progesterone, parenteral, long acting
Anticonvulsants (Phenobarbital, phenytoin)	Immunosuppressants	Supraphysiologic thyroxin doses
Cytotoxic drugs	Lithium	Tamoxifen (premenopausal use)
Glucocorticosteroids and adrenocorticotropin	Long-term heparin use	Total parenteral nutrition

Table (6):
WHO definitions based on BMD measurements at the spine, hip or forearm by DEXA scan

Category	BMD range	T-score
Normal	Within 1 SD* of a "young normal" adult.	At -1.0 and above
Low bone mass (osteopenia)	Between -1.0 and -2.5 SD* below of a "young normal" adult.	Between -1.0 and -2.5
Osteoporosis#	BMD is 2.5 SD* or more below that of a "young normal" adult.	At or below -2.5

*SD is Standard deviation.
Patients in this group who have already experienced one or more fractures are prone to have severe or "established" osteoporosis.

Follow up visits
Clients eligible for BMD testing are to be informed about the results, and offered a follow-up appointment at their PHC or secondary care, with consideration to the BMD results and risk factors.

Screening intervals
If the client has normal results, DEXA scan is to be repeated every 3 years or earlier if there is any index of suspicious.

Vitamin D testing
In the first visit and then periodically (if indicated), all clients attending the periodic health screening clinic should be screened for vitamin D deficiency. According to the results, management plan is to be decided.

Cancer Screening
In the periodic health screening clinic, clients will be offered screening for breast, cervical and colorectal cancer according to the recommendation from the national guidelines of each cancer as per the region's health ministry and/or authority's standards/guidelines.

Vision Screening

In the first visit, all clients aged 60 and above must be screened for vision impairment using simple visual acuity measure
(Snellen chart). The test should also be considered for clients complaining about their vision.

Hearing Screening

All individual aged 60 and above should be screened for hearing impairment using Hearing handicap Inventory for the
Elderly Screening Questioner (HHIE-S) (Appendix 7). Individual with a score more than 10 points should be referred for additional hearing evaluation.

Depression Screening

In the first visit, all clients aged 18 years and above attending the periodic health screening service should be screened for depression (if needed) using Patient Health Questionnaire (PHQ-9) (Appendix 8). Depending on the individual score, a treatment action should be initiated as stated in Table (7).

Table (7):
Proposed treatment action for depression.

PHQ-9 Score	Depression Severity	Proposed Treatment Action
0 - 4	None - minimal	None.
5 - 9	Mild	Watchful waiting; repeat PHQ-9 at follow up.
10 - 14 15 - 19	Moderate	Treatment plan, consider counselling, follow-up and/or pharmacotherapy.
20 - 27	Moderately Severe	Active treatment with pharmacotherapy and /or psychotherapy.
	Severe	Immediate initiation of pharmacotherapy and, if severe impairment or poor response to therapy, expedited referral to a mental health specialist for psychotherapy and/or collaborative management.

*From Kroenke K, Spitzer RL, Psychiatric Annals 2002; 32:509521-.

Vaccination

In the first visit, all clients should be assessed for their vaccination status especially for seasonal influenza, pneumococcal and tetanus / diphtheria vaccine. Clients should be offered the above mentioned vaccine according to the national
immunization guideline. *(Appendix 9)*

Appendices

Healthy lifestyles Centre

What is Healthy Lifestyles Centre?

The Healthy Lifestyle Centre (HLC) aims to assist members of the community in achieving healthier behaviours and informed health care decisions. This is achieved through comprehensive counselling, education, diagnostic and preventative services. This centre supports the client in taking the right route for positive changes into their lifestyle.

It consists of a team of dietitians, health educators, and nurses providing comprehensive lifestyle management care for the treatment and prevention of diet related diseases, overweight, obesity and weight-related medical conditions including eating disorders.

The HLC team have a multidisciplinary programs and services where they work closely with clients to identify and modify behavioural (e.g., exercise, diet) and psychological (e.g., stress) factors that contribute to obesity/eating disorders as well as to promote healthy eating and exercise habits for an improved lifestyle experience.

The Healthy Lifestyles Centre will have a mini gym, a teaching kitchen, consultation rooms and activity room. The establishment of this unique facility reflects commitment to promoting healthy lifestyles.

Goal

An initiative to help the community in making informed, voluntary, and health-promoting behaviour changes, by thinking critically about lifestyle choices that will enhance wellbeing.

Target Group

All individuals age 18 and above that have abnormal body mass index (BMI).

HLC Principles:

The HLC service is centred on the principles of self-management and long-term changes in health-behaviours, ranging from intensely supervised (one-to-one) to home-based (independent) programs.

Consultations are based on the principles of:

(1) Self-management
(2) Incorporating motivational interviewing
(3) Working in collaboration with the client to design the optimal program that is tailored to them.
(4) Developing self-efficacy through progressive overload and specific goal-setting.

Supporting the clients to better manage themselves is critical to ensure that their physical activity and lifestyle changes are sustainable for the long run.

The program places a strong emphasis on self-empowerment and self-management. Proven health-behaviour change strategies are implemented to ensure long-term adherence for improved health and quality of life outcomes.

How will it work?

The healthy lifestyle centre offers a comprehensive assessment by a health educator and dietitian, all of whom have expertise in lifestyle and weight management. The team collaborates with families to develop individualized treatment plans and nutrition therapy.

The health educator will help the client in changing their behaviour by incorporating new habits. Clients will be assisted in setting their own healthy lifestyles goals (this includes managing their health status, physical activity and diet) and tailor a program to encourage them to pursue further. The health educator will also discuss obstacles that might get in the way of achieving goals and how they can overcome it.

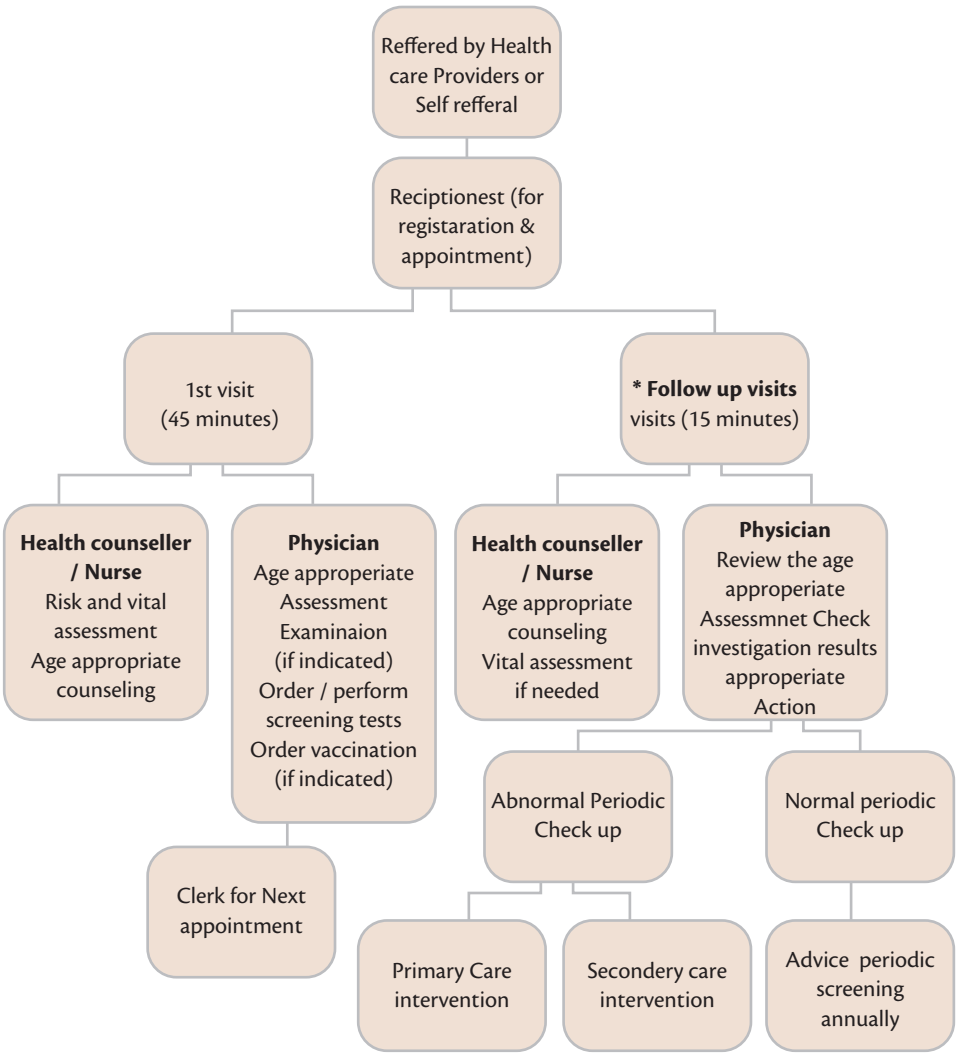
The dietician will talk with client about their eating habit and provide a critical thinking mechanism to make small changes in how and what they eat that will aid their change.

The HLC will offer classes on a seasonal basis for a range of healthy lifestyles topics, offered to the clients and their families. A complete schedule of classes will be published quarterly.

Enrolment and the process

- Clients who are overweight / obese or underweight/have an eating disorder will obtain a referral from their doctors (either primary health clinic physician or periodic screening doctor).
- All potential clients must meet a physician before entering any of the HLC.
- Referred clients should book appointment either by phone or by visiting HLC.
- At day of appointment, clients will complete needed paperwork.
- A health assessment (body composition analysis, body mass index, waist-hip ratio) are performed.
- The client will meet with the health educator and dietitian for at least two hours. The health educator explores
  behavioural and psychological factors that may influence weight management efforts. The dietitian will review the client's eating behaviours and identifies areas for improvement.
- The client and HLC team will create a personalized weight management plan, including follow-up visits.
- Follow-up appointments are scheduled until goals are reached.
- Clients may require 3 to 5 lifestyle consultations depending on their current health status, physical activity levels and eating habits, provided over a 12 week period.
- Clients may attend the centre for a follow-up consultation every 3 to 6 months thereafter.
- Provision of self-monitoring and motivational tools for independent exercise, such as exercise bands, tubing, heart-rate monitors and an exercise diary are to be provided where applicable.

Appendix (1) Screening Pathway



* Follow up visits should be within 2 weeks.

Appendix (2) Risk Assessment

Section (A): ' To be filled by the Nurse '

Lifestyle status:

☑ Physical activity:

1. Do you do any kind of physical activity which increased your heart rate or lead to sweating like: swimming or brisk walking?

☐ Yes ☐ No

If yes, how often?

☐ Daily ☐ 2-3 / week ☐ 4-5 / week

2. If yes, How long do you exercise per day?

☐ Less than 30 minutes ☐ More than 30 minutes

☑ Dietary Habit

1. Do you have your regular main meals per day:

- Breakfast meal:

☐ Yes ☐ No ☐ Sometimes

- Lunch meal:

☐ Yes ☐ No ☐ Sometimes

- Dinner meal:

☐ Yes ☐ No ☐ Sometimes

2. Do you have snacks between meals?

☐ Yes ☐ No

3. How many times per week do you have fast food or home delivery?

☐ Daily ☐ 1-3 / week ☐ 4-6 /week ☐ Never

4. How many cups of water do you drink daily?

☐ 1-2 cups/day ☐ 3 – 5 cups/day ☐ 6 or more/day ☐ I don't drink

5. How many times do you eat each of the following daily?

- Starch (bread, pasta, cereals, potato, rice, noodles): .....
- Fruit: .....
- Vegetables: .....
- Dairy products (milk, yogurt): .....

- Meat, fish, poultry, egg, cheese: .....
- Fat (margarine, butter, oil, mayonnaise, etc.): .....
- Sugar, sweet and soft drinks: .....

Smoking

1. Are you smoker?
   ☐ Yes ☐ No ☐ Only previously
   If yes to Q 1, please go to Q (2, 3, and 4)
2. Since when? .....
3. Which type are you using?
   ☐ Cigarettes ☐ Medwakh ☐ Shisha ☐ Other Tobacco
4. Specify the quantity and frequency of using? .....

Immunization Status:-

Did you receive any one of the following vaccines?

Vaccine	Yes	No	I don't know	If yes, Date of last dose	Remarks
Influenza					
Pneumococcal 13					
Pneumococcal 23					
Td					
HPV					

Hearing Screening (Those who are 60 years old and above):

* (If client is using a hearing aid, answers on the ways he / she hears without the aid).

** Please refer to (Appendix No. 6)

Total score = ☐

Depression Screening:

1. 'During the last month, have you often been bothered by feeling down, depressed or hopeless?'
   ☐ Yes ☐ No
2. 'During the last month, have you often been bothered by having little interest or pleasure in doing things?'
   ☐ Yes ☐ No

** If the answer is (Yes) to one of the above questions, proceed to PHQ-9 assessment and calculate the final scoring.

Total score = ☐

Section (B): ' To be filled by Physician '

Health status:-

☑ **Cardiovascular diseases :-**

1- Did you develop any of the following CVD (coronary artery diseases, aortic aneurysm, TIA or stroke, intermittent claudication)?
☐ Yes ☐ No ☐ I don't know if yes specify? ☐

2- Do you have hypertension?
☐ Yes ☐ No ☐ I don't know
If yes, specify the treatment type?
☐ Nil ☐ Lifestyle ☐ Tablets ☐ Others

3- Do you have diabetes?
☐ Yes ☐ No ☐ I don't know
If yes, specify the treatment type?
☐ Nil ☐ Lifestyle ☐ Tablets ☐ Insulin ☐ Others

4- Did one of your first degree relative (sisters,brothers or parents) suffer from any of the following:

I. Die from cardiovascular diseases (CAD, Aortic aneurysm,TIA or stroke) before the age of (55 male,65 female)?
☐ Yes ☐ No ☐ I don't know

II. Diabetes type II?
☐ Yes ☐ No ☐ I don't know

III. High Cholesterol?
☐ Yes ☐ No ☐ I don't know

IV. Sudden Death of Unknown Causes?
☐ Yes ☐ No ☐ I don't know

☑ Common Cancers:-

1- Have you ever been told by a health care professional that you have one of the benign tumors or cancer of breast?

☐ Yes ☐ No ☐ I don't know if yes specify? ☐

2 - Have you developed cancer of cervix?

☐ Yes ☐ No ☐ I don't know if yes specify? ☐

3- Have you developed cancer of Ovaries?

☐ Yes ☐ No ☐ I don't know if yes specify? ☐

4- Have you been exposed to radiation in general or certainly the chest?

☐ Yes ☐ No ☐ I don't know if yes specify? ☐

5- Have you suffer from HPV?

☐ Yes ☐ No ☐ I don't know ☐

6- Have you suffered from STD (AIDS, HERPES)?

☐ Yes ☐ No ☐ I don't know if yes specify? ☐

7- Have you developed cancer of colon or colon Polyposis?

☐ Yes ☐ No ☐ I don't know if yes specify? ☐

8- Have you suffer from Ulcerative Colitis?

☐ Yes ☐ No ☐ I don't know if yes specify? ☐

9- Have you developed any other type of cancers?

☐ Yes ☐ No ☐ I don't know if yes specify? ☐

10- Are one of your first degree relative have suffered from one of the above mentioned cancers (brothers, sisters, parents)?

☐ Yes ☐ No ☐ I don't know if yes specify? ☐

☑ Osteoporosis & Vitamin D Deficiency:-

1- Do you have osteoporosis?

☐ Yes ☐ No ☐ I don't know

If yes, go to Q 2 and 3

2- When it was diagnosed? (Mention year of Diagnosis) .....

3- Are you on osteoporosis treatment?

☐ Yes ☐ No

4- Do you have vitamin D deficiency?

☐ Yes ☐ No ☐ I don't know

5- Are you on vitamin D supplements?

☐ Yes ☐ No

6- Do you have anyone of the followings?

☐ Age more than 65 ☐ Vertebral compression fracture ☐ Fragility fracture after age 40

☐ Parental hip fracture ☐ Osteopenia on X-ray film

☐ Low Body weight (less than 60 Kg) or major weight loss (> 10 % of weight at age 25 years)

☐ Prolonged glucocorticoids use for more than 3 month in the prior year at a prednisolone equivalent dose of ≥ 7.5 mg daily.

☐ Current Smoking ☐ Rheumatoid arthritis ☐ Alcoholism

Use of high risk medications like: aromatase inhibitors, androgen deprivation therapy.

7- Have been diagnosed with any of the health conditions which could lead to osteoporosis as shown in Tables (1 & 2)?

Please Mention: .....

.....

☑ Gynaecological Status : (For Females only)

A. Age of Menarche? .....

B. Date of last Menstrual Period? .....

C. If Menopausal: History of Hormonal replacement therapy? .....

E. History of contraception use? .....

.....

F. Age at first pregnancy? .....

G. Parity? .....

Previous Screening Tests:

Name of Test	Done (Yes/No)	How many times (Numbers)	Date of last test	Last Test results (Normal/ Abnormal)	Action Done
CBE (Clinical Breast Examination)					
Mammogram					
Pap Smear					
Stool Occult Blood					
Colonoscopy / Sigmoidoscopy					
DEXA Scan					
Others (specify)					

Docter Name: .....

Signature: .....

Appendix (3) Screening Timeline

Services	Age Groups		
	18 - 39	40 - 59	60 & above
Risk assessment	At first visit (to be repeated if needed)		
Age appropriate counselling	Every visit		
Depression (PHQ 9) screening	Annually		
BMI & Waist circumference / WHR	Annually		
BP measurement	Annually		
Fasting blood sugar + HbA1c	Every 3 years & Annually if with risk factors	Annually from 30	
Lipid profile (TC, LDL, HDL)	Every 3 years & Annually if with risk factors		
Clinical Breast Examination (Female)		Annually from age of 30 (follow breast cancer screening standard)	
Mammogram (Female)	Every 2 years from age of 40 (follow breast cancer screening standard)		
Pap smear (Female)	Every 3 years starting from age of 25 years till 49 Every 5 years starting from age of 50 years till 65 (follow cervical cancer screening standard for eligibility and frequency)		
Immunochemical Faecal occult blood Test (iFOBT)	Every 2 years from age of (40 – 75) (follow colorectal cancer screening standard)		
BMD measurement	**Risk Assessment and DEXA scan according to risk factors		Every 3 years from age of 65 and above
Vitamin D Level	Frist visit and (periodically if indicated)		
Vision and Hearing Screening			Annually from 60 years

Appendix (4) Health Status Parameter Values for Intervention

No.	Heath Status Parameter	Reference threshold values for intervention		
		Low	Moderate	High
1	10 years cardiovascular risk score	< 10 %	10 – 20 %	>20 %
2	Body Mass index (BMI)	18.5 – 24.9 %	25 – 29.9 %	≥ 30
3	Waist Circumference (WC) Men	< 94 cm	94 - 102 cm	>102 cm
	Waist Circumference (WC) Women	< 80 cm	80 - 88 cm	>88 cm
4	Blood pressure	< 130/80	130/80 - < 140/90	≥ 140/90
5	Fasting Blood Sugar	< 5.6 mmol/l	5.6 – 6.9 mmol/l	≥ 7 mmol/l
6	HbA1c	< 5.7	5.7 – 6.4	≥ 6.5
7	Total Cholesterol level	< 5.2 mmol/l	5.2 – 6.19 mmol/l	≥ 6.2 mmol/l
8	HDL Level	> 1.55 mmol/l	1.03 - ≤ 1.55	< 1.03 mmol/l
9	LDL level	≥ 4.13mg/dl + 10 yrs CVR score < 10 %	≥ 3.36mg/dl + 10 yrs CVR score 10 – 20 %	≥ 2.58 + 10 yrs CVR score ≥ 20%
10	Triglyceride Level	<1.71 mmol/l	1.71 – < 2.28 mmol/l	2.28 – 5.7 mmol/l > 5.7 critically high
11	Depression score	≤ 4	5 - 14	≥ 15
12	Dexa scan score (BMD)	BMD ≥ - 1.0 SD	BMD – 1.0- <-1.0 to -2.5 SD	BMD ≤ - 2.5 SD
13	Vitamin D	≥ 30 ng/l	20 – 30 ng/l	< 20 ng/l

Appendix (5) Framingham Risk Assessment

Current Lipid Values: LDL-C: ..... TC: ..... HDL-C: ..... Apo B: .....

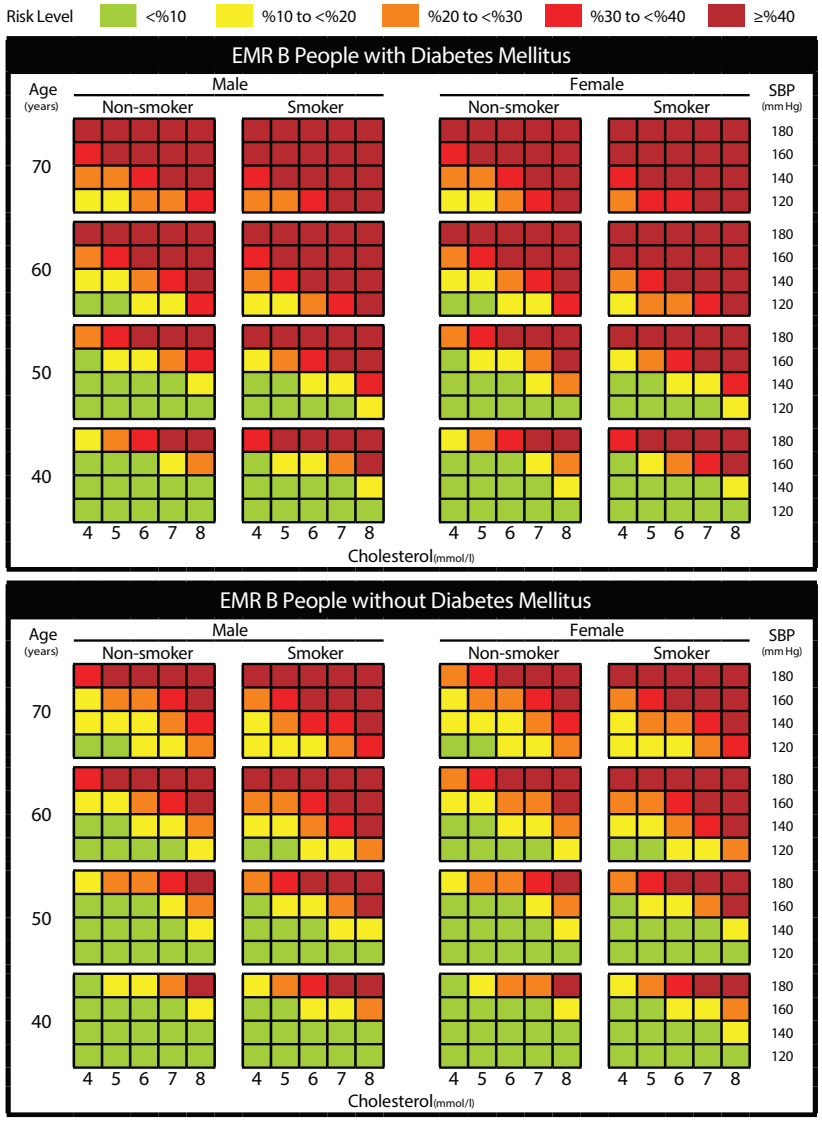
Risk Factor	Risk Points (Men)		Risk Points (Women)		Points
Age 30 - 34 years	0		0		
35-39	2		2		
40-44	5		4		
45-49	7		5		
50-54	8		7		
55-59	10		8		
60-64	11		9		
65-69	13		10		
70-74	14		11		
75+	15		12		
HDL-C Level (mmol/L)	Risk Points (Men)		Risk Points (Women)		Points
>1.6	-2		-2		
1.3-1.6	-1		-1		
1.2-1.3	0		0		
0.9-1.2	1		1		
<0.9	2		2		
Total Cholesterol Level	Risk Points (Men)		Risk Points (Women)		Points
<4.1	0		0		
4.1-5.2	1		1		
5.2-6.2	2		3		
6.2-7.2	3		4		
>7.2	4		5		
Systolic BP (mmHG)	Untreated	Treated	Untreated	Treated	Points
<120	-2	0	-3	-1	
120-129	0	2	0	2	
130-139	1	3	1	3	
140-149	2	4	2	5	
150-159	2	4	4	6	
>160	3	5	5	7	
Smoker	Risk Points (Men)		Risk Points (Women)		Points
No	0		0		
Yes	4		3		
Diabetes	Risk Points (Men)		Risk Points (Women)		Points
No	0		0		
Yes	3		4		
				Total Points	

Total Risk Points	Risk Points (Men)	Risk Points (Women)
-3 or less	<1	<1
-2	1.1	<1
-1	1.4	1.0
0	1.6	1.2
1	1.9	1.5
2	2.3	1.7
3	2.8	2.0
4	3.3	2.4
5	3.9	2.8
6	4.7	3.3
7	5.6	3.9
8	6.7	4.5
9	7.9	5.3
10	9.4	6.3
11	11.2	7.3
12	13.3	8.6
13	15.6	10.0
14	18.4	11.7
15	21.6	13.7
16	25.3	15.9
17	29.4	18.51
18	>30	21.5
19	>30	24.8
20	>30	27.5
21+	>30	>30

10-Year CVD Risk: _____ %

WHO/ISH Risk prediction charts (for 14 WHO epidemiological sub-regions)

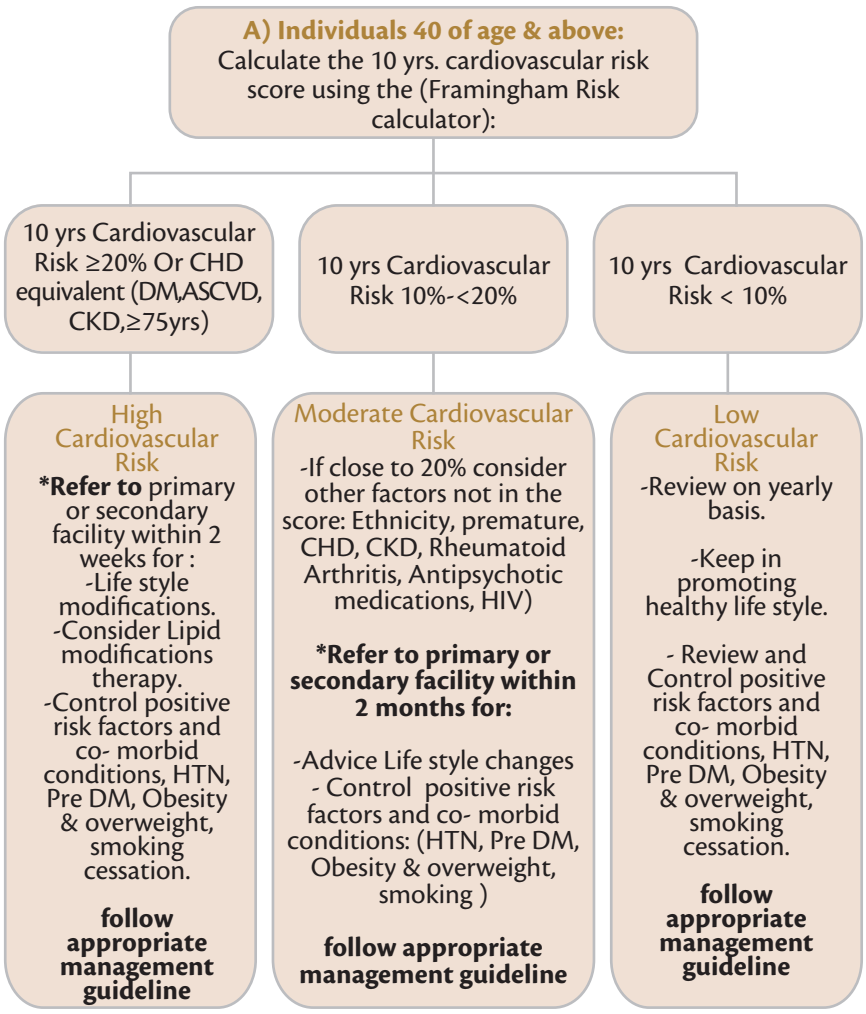
Figure 6. WHO/ISH risk prediction chart for EMR B. 10-year risk of a fatal or non-fatal cardiovascular event by gender, age, systolic blood pressure, total blood cholesterol, smoking status and presence or absence of diabetes mellitus.



This chart can only be used for countries of the WHO Region of Eastern Mediterranean, sub-region B, in settings where blood cholesterol can be measured (see Table 1).

Appendix (6)

Cardiovascular risk assessment and management flow chart



B) Individuals below 40 years of age:

Framingham risk scoring is not appropriate, consider controlling the risk factors accordingly.

CHD =coronary heart disease, ASCVD=atherosclerotic cardiovascular diseases, DM=diabetes Mellitus, CKD=Chronic kidney disease, HTN=hypertension ADOPTED FROM NICE Guidelines May 2008 (reissued March 2010)

Appendix (7) Hearing Screening in Elderly

Hearing handicap Inventory for the Elderly Screening Version (HHIE-S)

Instructions: Please check "Yes", "No" or "sometimes" in response to each of the following items. Do not skip a question if you avoid a situation because of a hearing problem.*
(If you use a hearing aid, please answer the way you hear without the aid).

No.	Item	Yes (4 pts)	Sometimes (2 pts)	No (0 pts)
E	Does a hearing problem cause you to feel embarrassed when meeting new people?			
E	Does a hearing problem cause you to feel frustrated when talking to members of your family?			
S	Do you have difficulty hearing when someone speaks in a whisper?			
E	Do you feel handicapped by a hearing problem?			
S	Does a hearing problem cause you difficulty when visiting friends, relatives or neighbors?			
S	Does a hearing problem cause you to attend religious services less often than you would like?			
E	Does a hearing Problem cause you to have arguments with family members?			
S	Does a hearing problem cause difficulty when listening to TV or radio?			
E	Do You feel that any difficulty with your hearing limits or hampers your personal or social life?			
S	Does a hearing problem cause you difficulty when in a restaurant with relatives or friends?			
SCORE= (sum of the points assigned to each of the items)				
Total Score				

E= Emotional; S= Social

Interpretation of Score:

0-8 suggests no hearing handicap
10-24 suggests mild-moderate hearing handicap
26-40 suggests significant hearing handicap

Refer for Additional hearing evaluation if score is > 10 points

**Identification of elderly people with hearing problems. ASHA,25, 37-42.

استبيان تقييم مستوى السمع لدى كبار السن

تعليمات:

يرجى وضع إشارة (√) تحت الإجابة المناسبة ردا على كل من الأسئلة التالية.

× إذا كنت تستخدم جهاز السمع، الرجاء الإجابة على كيفية السمع بدون استخدام جهاز السمع

	السؤال	نعم (4 نقاط)	أحيانا (2 من النقاط)	لا (0 من النقاط)
	هل مشكلة السمع تسبب لك الشعور حرج عند مقابلة أشخاص جدد ؟			
	هل مشكلة السمع تسبب لك الشعور بالإحباط عند التحدث إلى أفراد عائلتك ؟			
	هل تواجه صعوبة فى السمع عندما يتحدث لك شخص بالهمس ؟			
	هل مشكلة السمع تسبب لك الشعور بالحرج عند التحدث مع أفراد عائلتك ؟			
	هل تشعر بالإعاقة بسبب مشكلة السمع؟			
	هل تسبب لك مشكلة السمع صعوبة عند زيارة الأصدقاء و الاقارب و الجيران؟			
	هل أثرت مشكلة السمع على حضورك للمناسبات الدينية؟			
	هل سببت لك مشكلة السمع خلافات مع أفراد الأسرة؟			
	هل مشكلة السمع تسبب لك صعوبة عند سماع الراديو أو التليفزيون؟			
	هل تشعر أن مشكلة السمع تؤثر على حياتك الشخصية و الإجتماعية ؟			
	هل مشكلة السمع تسبب لك صعوبة عند تواجدك مع الأصدقاء و الأقارب لتناول الطعام خارج المنزل؟			
	الدرجة الكلية = (مجموع النقاط المخصصة لكل بند من البنود)			
	الناتج النهائي			

تحليل النتائج:

8-0 : لا يوجد إعاقة سمعية.

24-10 : إعاقة سمعية بسيطة إلى متوسطة.

40-26 : إعاقة سمعية شديدة .

× إذا كانت النتيجة هي أكثر من 10 نقاط.. يجب تحويل الحالة .

**Identification of elderly people with hearing problems. ASHA,25, 37-42.

Appendix (8) Patient Health Questionnaire (PHQ-9)

Over the last 2 weeks, how often have you been bothered by any of the following problems? (use ✓ " to indicate your answer)

No.		Not at All	Several Days	More than half the days	Nearly every day
1	Little interest or pleasure in doing things	0	1	2	3
2	Feeling down, depressed, or hopeless	0	1	2	3
3	Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4	Feeling tired or having little energy	0	1	2	3
5	Poor appetite or overeating	0	1	2	3
6	Feeling bad about yourself...or that you are a failure or have let yourself or your family down	0	1	2	3
7	Trouble concentrating on things. such as reading the newspaper or wathing television	0	1	2	3
8	Moving or speaking so slowly that other people could have noticed. or the opposite - being so figety orrestless that you have been moving around a lot more than usual	0	1	2	3
9	Thoughts that you would be better off dead, or of hurting yourself.	0	1	2	3
		Add columns		+	+
	(Healthcare professional: For interpretation of TOTAL, please refer to accompanying scoring card).	**TOTAL**			
10	If you checked off any problems, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?	Not difficult at all _____ Somewhat difficult _____ Very difficult _____ Extremely difficult _____			

PHQ-9 Patient Depression Questionnaire

For initial diagnosis:

1. Patient completes PHQ-9 Quick Depression Assessment.
2. If there are at least 4 ✓ s in the shaded section (including Questions #1 and #2), consider a depressive disorder.
   Add score to determine severity.
   Consider Major Depressive Disorder
- If there are at least 5 ✓ s in the shaded section (one of which corresponds to Question #1 or #2)
  Consider Other Depressive Disorder
- if there are 2-4 ✓ s in the shaded section (one of which corresponds to Question #1 or #2)
  Note: Since the questionnaire relies on patient self-report, all responses should be verified by the clinician, and a
  definitive diagnosis is made on clinical grounds taking into account how well the patient understood the question-naire, as well as other relevant information from the patient.
  Diagnoses of Major Depressive Disorder or Other Depressive Disorder also require impairment of social, occupational, or other important areas of functioning (Question #10) and ruling out normal bereavement, a history of a Manic Episode (Bipolar Disorder), and a physical disorder, medication, or other drug as the biological cause of the depressive symptoms.

To monitor severity over time for newly diagnosed patients or patients in current treatment for depression:

1. Patients may complete questionnaires at baseline and at regular intervals (eg, every 2 weeks) at home and bring
   them in at their next appointment for scoring or they may complete the question naire during each scheduled appointment.
2. Add up ✓ s by column. For every ✓: Several days = 1 More than half the days = 2 Nearly every day = 3
3. Add together column scores to get a TOTAL score.
4. Refer to the accompanying PHQ-9 Scoring Box to interpret the TOTAL score.
5. Results may be included in patient files to assist you in setting up a treatment goal, determining degree of response, as well as guiding treatment intervention.

Scoring: add up all checked boxes on PHQ-9
For every ✓ Not at all = 0; Several days = 1;
More than half the days = 2; Nearly every day = 3

Interpretation of Total Score

Total Score	Depression Severity
1 - 4	Minimal depression
5 - 9	Mild depression
10 - 14	Moderate depression
15 - 19	Moderately severe depression
20 - 27	Severe depression

Appendix (9): (from The National Immunization Guidelines)

As the UAE grows in economic prosperity and in providing quality care, there shall be greater stress on the two aspects of good quality health care. One is provision of appropriate, evidence-based care for acute illnesses, and the second is an increasing emphasis on preventive care. Vaccine preventable communicable illnesses are an important pillar in the overall wellbeing of the entire social structure.

Adult vaccination is one of the most important tools for reducing morbidity and mortality not just in the elderly, but in other members of the society by increasing herd immunity, reducing severe clinical outcomes and helping in eradication of a disease.

The WHO Global Immunization Vision and Strategy (GIVS) has been designed in response to the challenges of a rapidly changing and globally interdependent world. One of the goals is more people protected against more diseases. This goal can only be fulfilled by expanding the reach of immunization to populations beyond infancy to include adolescents as well as adults

8.1. Recommended adults immunization

Td/ Tdap Vaccine

For the adult who did not vaccinated previously a primary course of 3 dose series of tetanus and diphtheria containing vaccines; usually Td, at 0, 1 and 6-12 month. For incompletely vaccinated (i.e., less than 3 doses) adults, administer remaining doses. Td booster dose is required every 10 years For adults who have not received a dose of Tdap previously, one dose of Td should be replaced by Tdap.

Varicella

Adults lacking immunity to varicella recommended toreceive two doses of Varicella vaccine, 4 weeks apart, unless contraindicated. Herpes zoster vaccine (not licensed in UAE): Single dose of herpes zoster vaccine (a live attenuated vaccine) is indicated for all adults over 60 years of age. Dose should be given regardless of prior episode of Zoster.

Rubella

All women of child bearing age should have documentation of rubella immunity status. If not immune, only 1 dose of rubella containing vaccine should be given and counseling should be provided regarding congenital rubella syndrome. If already pregnant, vaccination should be provided at the completion of pregnancy before hospital discharge.

Measles and Mumps

2 doses of MMR are recommended if there is no documented evidence of immunity or a history of clinical disease.

Seasonal Influenza Vaccine

One dose is recommended annually for adults.

8.2. Vaccines for adultswith risk factors

All adults should be evaluated for medical conditions that place them in the high risk groups and their immunization status should be assessed and updated. Table 14 represents the recommended vaccines for adults at high risk

Table 14: Recommended vaccinations in high risk groups

Vaccine	Indication	Schedule
Haemophilus influenzae type b (Hib)	• The high risk group which include the following if they have not previously received » Hib vaccine: » sickle cell disease » leukemia » HIV infection » who have had a splenectomy	Single dose if they have not previously received Hib vaccine.
Hepatitis A	• Patients with Chronic liver disease • Persons who receive clotting factor concentrates • Outbreak control • Contacts of a case include : » A person living in the same household as the index case or regularly sharing food or toilet facilities with the index case during the infectious period. This would include extended family members who frequently visit the household and child minders and their families. » A person who has regularly eaten food prepared by the index case during the infectious period, or who ate food prepared by the index case on a single occasion during the infectious period if there is concern about the hygiene practices of the index case or if the case had diarrhea at the time of food preparation. » Sexual contacts	Two Doses 6-12 months apart The post exposure efficacy of hepatitis A vaccine is based on its use within 14 days of first symptom onset in the index case.
Hepatitis B	• IV Drug user • Household contacts of Hepatitis B cases/chronic carries • Post exposure immunoprophylaxis • Patients with chronic liver disease • Person beginning hemodialysis • Diabetes Mellitus type 1 and 2 up to age of 59 Years • Contacts of a case include: » Household members » Sexual contacts » Medical staff exposed to oral or respiratory secretions	Three doses at, 0, 1,6 months

Vaccine	Indication	Schedule
Measles, mumps, rubella (MMR)	• Premarital Program in case of unavailability of Rubella vaccine • Contacts of a case are defined as people who have: » Direct face to face contact for a period (not defined) with a case-patient who is symptomatic » Shared confined space in close proximity for a prolonged period of time, such as > 1hour, with asymptomatic case-patient or » Direct contact with respiratory, oral, or nasal secretions from a symptomatic case-patient	Two doses, 4 weeks apart
Meningococcal ACWY135	• Hajj and Umrah pilgrims • Travelers to countries in meningitis belt • Asplenia (including elective splenectomy and persistent complement component deficiencies) • Microbiologists who are routinely exposed to isolates of N. meningitidis. • Close contacts	• Meningococcal conjugate vaccine quadrivalent is preferred for adults with any of the preceding indications who are 55 years old and younger; meningococcal polysaccharide vaccine is preferred for adults 56 years and older • Single dose every 3 years for meningococ-cal poly saccharide quadrivalent • Administer 2 doses of meningococ cal conjugate vaccine quadrivalent at least • 2 months apart to adults with functional asplenia or persistent complement deficiencies. • Administer a single dose of meningococ-cal vaccine to microbiol ogists routinely exposed to isolates of Neisseria meningitid is, and persons who travel to countries in which meningococcal disease is hyper endemic or epidemic. • Revaccination with meningococcal conjugate every 5 years is recommended for adults previously vaccinated with quadrivalent conjugate or polysaccharide who remain at increased risk for infection.

Vaccine	Indication	Schedule
Seasonal Influenza (Flu)	• Hajj and Umrah pilgrims • All Adults ≥ 65years • < 65 years Adults at high risk which include the following : » immunocompromising conditions » Diabetes » Chronic cardiovascular disease (except hypertension) » Chronic lung disease(including Asthma) » Chronic alcoholism » Asplenia (including elective splenectomy and persistent complement component deficiencies) » Chronic liver disease » Kidney failure ,end stage renal disease, recipients of hemodialysis » chronic alcoholism, smoking	Single dose every year, using annual recommended vaccine formulation
Pneumococcal conjugate 13 Valent	• Adults ≥19 years with the following medical conditions if they have not previously received PCV vaccine: immunocompromising conditions » Cerebrospinal fluid (CSF) leaks » Cochlear implant(s) » Sickle cell disease and other hemaglobinopathies » Functional or anatomic asplenia » Congenital or acquired immunodeficiencies » HIV infection » Chronic renal failure » Nephrotic syndrome » Leukemia » Hodgkin disease » Generalized malignancy » Long-term immunosuppressive therapy » Solid organ transplant » Multiple myeloma	• Adults ≥19 years of age who have not received any pneumococcal vaccine, should get a dose of PCV13 first and should also continue to receive the recommended doses of PPSV23. • Adults≥19 years of age who have previously received one or more doses of PPSV23, should also receive a dose of PCV13 and should continue to receive the remaining recommended doses of PPSV23.

Vaccine	Indication	Schedule
Pneumococcal polysaccharide2 3 Valent	• All Adults ≥ 65years without a history of Pneumo-coccal polysaccharide 23 Valent vaccination • Adults < 65 years at high risk which include the following : » immunocompromising conditions » Diabetes » Chronic Cardiovascular disease (except hypertension) » Sickle cell anemia » Cochlear implants » Chronic lung disease include asthma » Asplenia (including elective splenectomy and persistent complement component deficiencies) » Chronic liver disease » Kidney failure ,end stage renal disease, recipients of hemodialysis » chronic alcoholism, smoking	Single dose for persons vaccinated at or after age 65 years The second dose required 5 years after the first dose for persons received vaccine <65 years of age for any indication
Rabies	• Persons with rabies-prone animal bite • Persons in high-risk occupational groups, such as veterinarians and their staff, animal handlers, rabies researchers, and certain laboratory workers • Travelers to high risk area (traveler who likely to get in contact with domestic animals particularly dogs and other rabies vectors)	• Pre-exposure: 3 doses at 0, 7, and 28 days, with periodic booster at 1 and 5 years. • Post-exposure: Previously unvacci nated people should receive 5 doses at 0, 3, 7, and 14 and 28 days, category III if not previously vaccinated needs HRIG in addition to the vaccine on 0 day, for specific conditions use 4 doses schedule 2-1-1 (refer to 7.13). • Previously vaccinated people should receive two doses at 0 and 3 days **For details refer to 7.13**

Vaccine	Indication	Schedule
Rubella	• Unvaccinated postpartum mothers • Premarital screening program for unvaccinated female applicant or with rubella IgG levels less than 15 IU/mL • Contacts of a case which are defined as people who have: » Direct face to face contact with a symptomatic patient » Shared confined space in close proximity for a prolonged period of time, such as > 1hour, with a symptomatic patient or » Direct contact with respiratory, oral, or » Direct contact with respiratory, oral, or nasal secretions from a symptomatic patient	Single dose for persons vaccinated at or after age 65 years The second dose required 5 years after the first dose for persons received vaccine <65 years of age for any indication
Tetanus Toxoid (TT)	• Post tetanus-prone wound	Single dose as booster
Typhoid	• Contacts of a case include:rubella IgG levels less than 15 IU/mL » Household members » Sexual contacts	Single dose every 2 years
Varicella	• Contacts of a case which are defined as people who have: » Direct face to face contact with a symptomatic patient » Shared confined space in close proximity for a prolonged period of time, such as > 1hour, with a symptomatic patient or » Direct contact with respiratory, oral, or nasal secretions from a symptomatic patient	Two doses, 4-8 weeks apart Provide Varicella vaccine within three days , maximum is five days after exposure to chickenpox case
Yellow Fever	• Travelers to countries in the Yellow Fever endemic zone	Single dose every 10 years

8.3. Healthcare Professionals Vaccination Recommendation

Healthcare providers are at risk for exposure to (and possible transmission of) vaccine preventable diseases, as result of their contact with patients or infective material from patients. The risk can be minimized by vaccination. Table (15) summarize the recommended vaccination for the healthcare providers

Vaccine	Recommendation
Hepatitis B	• Give three dose series (0, 1, 6 months) by intramuscular injection. • Obtain anti-HBs serologic testing 1–2 months after the third dose.
Influenza	• Give One dose of inactivated influenza vaccine annually By intramuscular injection
Measles, mumps, rubella (MMR)	• Give two doses of MMR to healthcare professionals without serologic evidence of immunity or prior vaccination, 4 weeks apart by subcutaneous injection.
Varicella	• For healthcare professionals who have no serologic proof of immunity, prior vaccination, or history of varicella disease; give 2 doses of varicella vaccine, 4 weeks apart by subcutaneous injection.
Tetanus, Diphtheria , Pertussis (Tdap)	• Give a one-time dose of Tdap to healthcare professionals who have not received Tdap previously by intramuscular injection. • Give Td boosters every 10 years thereafter.
Meningococcal	• Give one dose to microbiologists who are routinely exposed to isolates of N. meningitidis. • Give Meningococcal Conjugate ACYW-135 by intramuscular injection for adults who are 55 years old and younger and Polysaccharide Meningococcal ACYW135 by subcutaneous injection for adults 56 years and older.

8.4. Immunizations in Pregnancy

Maternal immunization protects both the mother and fetus from the morbidity of certain infections. It can also provide the infant passive protection against infections acquired after birth. Ideally, immunizations are given prior to conception, but administration during pregnancy is subjected to doctor advice as per indicated situation.

Benefits of vaccinating pregnant women usually outweigh potential risks when the likelihood of disease exposure is high, when infection would pose a risk to the mother or fetus, and when the vaccine is unlikely to cause harm. Generally, live-virus vaccines are contraindicated for pregnant women because of the theoretical risk of transmission of the vaccine virus to the fetus. If a livevirus vaccine is inadvertently given to a pregnant woman, or if a woman becomes pregnant within 4 weeks after vaccination, she should be counseled about the potential effects on the fetus.

But vaccination is not ordinarily an indication to terminate the pregnancy.

Whether live or inactivated vaccines are used, vaccination of pregnant women should be considered on the basis of risks versus benefits – i.e., the risk of the vaccination versus the benefits of protection in a particular circumstance. The following table may be used as a general guide.

Table 16: General Recommendation for Immunization in Pregnancy

Vaccine	Recommendation for use in Pregnant Women	Comments (For more information visit http://www.cdc.gov/vaccines/pubs/preg-guide.htm)
BCG	Contraindicated	**BCG vaccination should not be given during pregnancy.** Even though no harmful effects of BCG vaccination on the fetus have been observed, further studies are needed to prove its safety
Hepatitis A	Recommended if otherwise indicated	Hepatitis A is an inactivated vaccine, and similar to hepatitis B vaccines, is recommended if another high risk condition or other indication is present
Hepatitis B	Recommended in some circumstances.	Pregnancy is not a contraindication to vaccination. Pregnant women who are identified as being at risk for HBV infection during pregnancy (e.g., having more than one sex partner during the previous 6 months, been evaluated or treated for an STD, recent or current injection drug use, or having had an HBsAg-positive sex partner) should be vaccinated.
Human Papilloma virus (HPV)	Not recommended.	If a woman is found to be pregnant after initiating the vaccination series, the remainder of the 3-dose series should be delayed until completion of pregnancy. Pregnancy testing is not needed before vaccination. If a vaccine dose has been administered during pregnancy, no intervention is needed. Patients and health-care providers should report any exposure to HPV during pregnancy.
Influenza (Inactivated)	Recommended.	Routine influenza vaccination is recommended for pregnant (in any trimester) during influenza season,
MCV4	May be used if otherwise indicated.	Women of childbearing age who become aware that they were pregnant at the time of vaccination should contact their health-care provider

Vaccine	Recommendation for use in Pregnant Women	Comments (For more information visit http://www.cdc.gov/vaccines/pubs/preg-guide.htm)
MPSV4	May be used if otherwise indicated.	Studies of vaccination with MPSV4 during pregnancy have not documented adverse effects among either pregnant women or newborns. On the basis of these data, **pregnancy should not preclude vaccination with MPSV4, if indicated.**
MMR	Contraindicated.	Measles-mumps-rubella (MMR) vaccine and its component vaccines should not be administered to women known to be pregnant. Because a risk to the fetus from administration of these live virus vaccines cannot be excluded for theoretical reasons, women should be counseled to avoid becoming pregnant for 28 days after vaccination with measles or mumps vaccines or MMR or other rubella-containing vaccines
Polio	May be used if needed.	If a pregnant woman is at increased risk for infection and requires immediate protection against polio, IPV can be administered in accordance with the recommended schedules for adults
PPSV23	Inadequate data for specific recommendation.	**The safety of pneumococcal polysaccharide vaccine during the first trimester of pregnancy has not been evaluated,** although no adverse consequences have been reported among newborns whose mothers were inadvertently vaccinated during pregnancy.
Rabies	May be used if otherwise indicated.	Because of the potential consequences of inadequately managed rabies exposure, pregnancy is not considered a contraindication to postexposure prophylaxis. Certain studies have indicated no increased incidence of abortion, premature births, or fetal abnormalities associated with rabies vaccination. If the risk of exposure to rabies is substantial, pre-exposure prophylaxis also might be indicated during pregnancy. Rabies exposure or the diagnosis of rabies in the mother should not be regarded as reasons to terminate the pregnancy
Tdap	Recommended.	
Td	Should be used if otherwise indicated.	

Vaccine	Recommendation for use in Pregnant Women	Comments (For more information visit http://www.cdc.gov/vaccines/pubs/preg-guide.htm)
Typhoid	Inadequate data for specific recommendation	No data have been reported on the use of any of the typhoid vaccines among pregnant women
Varicella	Contraindicated.	Because the effects of the varicella virus on the fetus are unknown, pregnant women should not be vaccinated. Non-pregnant women who are vaccinated should avoid becoming pregnant for 1 month after each injection. For persons without evidence of immunity, having a pregnant household member is not a contraindication for vaccination.
Yellow Fever	May be used if benefit outweighs risk.	Pregnancy is a precaution for YF vaccine administration, compared with most other live vaccines, which are contraindicated in pregnancy. If travel is unavoidable, and the risks for YFVexposure are felt to outweigh the vaccination risks, a pregnant woman should be vaccinated. If the risks for vaccination are felt to outweigh the risks for YFV exposure, pregnant women should be issued a medical waiver to fulfill health regulations. Although no specific data are available, a woman should wait 4 weeks after receiving YF vaccine before conceiving.

8.5. Vaccines for travelers

International travel may be done for business, study, or vacation. Travelers are exposed to a large number of parasitic, bacterial and viral diseases. Travel advice regarding immunization varies with the exact location of visit, duration of stay and activities involved in any given trip, along with the patient's health status. Updated information can be easily obtained from WHO also the CDC website, wwwnc.cdc.gov/travel/content and World Health Organization
http://www.who.int/ith/chapters/en/index.html

8.5.1. Required vaccines

Meningococcal vaccine

Immunization against meningococcal disease is required when traveling to Saudi Arabia for Hajj and Umrah and the meningococcal belt in Africa and South American continent.

Yellow fever vaccine
Immunization against yellow fever is required when traveling to areas of Sub-Saharan Africa and South America where
it is endemic.

8.5.2. Recommended vaccines

Hepatitis A
Hepatitis A immunization is recommended for all travelers to susceptible countries. Hepatitis A vaccination should be considered for individuals aged ≥1 year who are travelling to countries or areas with moderate to high risk of infection. Those at high risk of acquiring the disease should be strongly encouraged to be vaccinated regardless of where they travel. People born and raised in developing countries, and those born before 1945 in industrialized countries, have usually been HAV-infected in childhood and are likely to be immune. For such individuals, it may be cost-effective to test for antibodies to hepatitis A virus (anti-HAV) so that unnecessary vaccination can be avoided

Hepatitis B
Complete the Hepatitis B series for children as per childhood immunization schedule before travel Hepatitis B vaccination is recommended for travelers anticipating prolonged stay in an endemic country, any international travel in the medical field, and when occupations or activities where contact with blood or body secretions is likely.

Rabies
Travelling to countries or areas at risk where contact with rabid animals is likely in outdoor activities e.g. game reserves,
even if the duration of travel is short. Pre-exposure vaccination is advisable for travelers visiting countries or areas at risk, where they provide an easy target for rabid animals. Pre-exposure vaccination is also recommended for individuals travelling to isolated areas or to areas where immediate access to appropriate medical care is limited or to countries or
areas where modern rabies vaccines are in short supply and locally available rabies vaccines might be unsafe and/or ineffective.

Typhoid
Typhoid immunization is recommended for travelers to destinations where the risk of typhoid fever is high, especially
individuals staying in endemic areas for >1 month and/or in locations where antibiotic resistant strains of S. typhi are
prevalent.

Special Vaccines
In special circumstances, other vaccines may be needed including Japanese Encephalitis, Lyme disease vaccine, anthrax, small pox etc. These are beyond the scope of this document.

Appendix (10) Key performance indicators (KPI) for the periodic Health Screening Service

Input KPIs	Process KPIs	Quality KPIs	Output KPIs
1. Precentage of health centers providing the periodic health screening service	1. Precentage of individuals who attended the 2nd visit from total registered individuals	1. Client satisfaction	1. Percentage of referred individuals to lifestyle or diet clinic from total number with abnormal BMI
2. Precentage of individuals received the service from target population	2. Precentage of blood tests result received within 1 week from the total blood tests orders	2. Percentage of individuals received the service within the targeted waiting time (20 minutes)	2. Percentage of referred individuals to lifestyle or diet clinic from total number with abnormal BMI
3. Total number of individuals received the service yearly	3. Precentage of non blood tests received within 2 weeks out of non blood orders.		3. Percentage of screened individuals with overweight
4. Precentage of trained physician	4. Precentage of mammogram appoint-ment given within the targeted time (2 wk)		4. Percentage of screened individuals with overweight
5. Precentage of trained nurses			4. Percentage of screened individuals with abnormal WC
			5. Percentage of screened individuals with high blood pressure (>=140/90)
			6. Percentage of screened individuals with IFG
			7. Percentage of screened individuals Diabetes
			8. Percentage of screened individuals with vitamin-D deficiency
			9. Percentage of screened individuals with depression

References:

1. U.S. Preventive Services Task Force (USPSTF). Screening for Osteoporosis: U.S. Preventive Services Task Force recommendation statement. Ann Intern Med. 2011 March 1; 154(2): 356 -364.
2. National Osteoporosis Foundation, Clinician`s guide to preventive and treatment of osteoporosis; 2014.
3. Papaioannou A et al. Clinical practice guidelines for the diagnosis and management of osteoporosis in Canada. CMAJ 2010 http://www.cmaj.ca/cgi/doi/10.1503/cmaj.100771.
4. Clinical practice guidelines on hypertension in PHC –MOH 2012
5. National diabetes guidelines UAE-MOH 2009.
6. HAAD Standard for Weqaya Follow Up for further diagnosis, management and treatment of Cardiovascular Disease Risk Factors/version 1.1 Oct.2012
7. The Guide to Clinical Preventive Services/ Recommendations of the U.S. Preventive Services Task Force 2014.
8. Lipid modification- NICE- Quick reference guide - Cardiovascular risk assessment and the modification of Blood lipids for the primary and secondary prevention of cardiovascular disease/ Issue date: May 2008 (reissued March 2010)
9. National Cholesterol Education Program ATP III Guidelines At-A-Glance - Quick Desk Reference
10. Obesity/ NICE - Quick reference guide 2 - Guidance on the prevention, identification, assessment and management of overweight and obesity in adults And children/ Issue date: December 2006
11. Guidance for lipid and CVD risk scoring NICE clinical guidelines 67 May 20018
12. PHQ-9 Scores and Proposed Treatment Actions/ From Kroenke K, Spitzer RL, Psychiatric Annals 2002; 32:509521-