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TRAINING CURRICULUM

OF PREMARITAL COUNSELING CLINICAL TESTS
FOR PRIMARY HEALTH CARE IN IRAQ

DISCLAIMER

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Acronyms

B-thal	Beta-thalassemia
G6PD	Glucose 6 Phosphate Dehydrogenase
Hb	Hemoglobin
HBB	Beta Globin
HBIG	Hepatitis B Immune Globulin
HBsAg	Hepatitis B Surface Antigen
HBV	Hepatitis B Virus
HCP	Health Care Provide
HIV	Human Immunodeficiency Virus
HPLC	High Performance Liquid Chromatography
MCH	Mean Corpuscular Hemoglobin
MCV	Mean Corpuscular Volume
PC	Premarital Counseling
PEP	Post-exposure Prophylaxis
PHC	Primary Health Care
SCD	Sickle Cell Disease
STD	Sexually Transmitted Disease
TPHA	Treponema Palladium Heamagglutination
VDRL	Venereal Disease Research Laboratory

Introduction

Premarital counseling (PC) is a method of advice and guidance for those intending to marry to enhance their understanding and selection and **to improve their quality of life.**

This service depends on communication and persuasion skills to enhance the ability to choose after obtaining the information necessary and make inquiries without coercion since people who want to marry are the decision-makers.

The aim of premarital counseling is to provide baseline assessment of would-be married couples; raise their level of health; and to identify and reduce the reproductive genetic risks.

Premarital counseling started in Iraq from long period of time. It has been carried on in many specialized centers distributed throughout the country. The current plan of Ministry of Health is the incorporation of this service as a routine ongoing process at the primary health care level.

Premarital Counseling is provided in health centers as part of the primary health care preventive measures based on the protocols and guidelines laid down by the Ministry of Health. This service is provided by physicians, and supported by trained paramedics or other health care providers (HCPs).

Premarital Counseling will identify couples at high risk, by subjecting all couples intending to marry for screening by history taking, physical examination and laboratory investigations. Accordingly, advice is provided in the form of further investigation or referral to secondary level if needed, treatment advice, health education and promotion, and counseling regarding their health status.

This will be achieved by following standardized specific protocols and guidelines for the process of premarital counseling at the different Health facilities.

Part One

Trainer's Guide

This training curriculum is a guide to assist trainers in improving health care by training health professionals in the Basics of Management and Administration of Primary Health Care Centers (PHCCs).

Materials in this document are designed for training service providers who work at a variety of health facilities in Iraq, but most importantly for those involved in the management of the PHCCs. The modules can be used to train health professionals, physicians, nurses, midwives and other health workers in group training or, with adaptation, as a basis of individualized or self-directed learning.

Trainers implementing this course should be thoroughly familiar with the policies, strategies, guidelines and procedures. Because the PHCCs' functions and procedures are based on this training course along with the skills in the practices described. The trainers need to have a positive attitude about the participants and their training work.

Training may be implemented either off-site or on-site. In off-site training, a group of participants come together from several health facilities and then return home to apply what has been learned. Off-site training may be the most appropriate way to reach individuals from many small sites. On-site training refers to training held in a health facility team where the participants work. Both types of training can be very effective. When training is conducted off-site, it may be more difficult to observe actual clinical settings. On the other hand, when training takes place on-site, there may be interruptions due to participants being called away for other responsibilities.

How to Use the Manual

This manual is designed as a working instrument for trainers and facilitators. It can also be used as a planning tool for PHC and district health managers. The module schedule contains a condensed summary of the contents organized in units and is meant as a check list for the facilitator/s before and during the course. The time indicated for each unit is an average time span based on experience, and can vary according to the composition and dynamics of each respective group.

The manual is divided into two parts. The first part is an introduction to the training course giving an overview over the rationale, objectives, and target groups for the course. It includes the present section on recommendations on how to use the manual, introducing the structure, training methods and course schedule. It also contains information on how to organize a workshop / training course and concludes with some recommendations on the limitations of the document and how to deal with them.

The second part presents the actual training contents, methods, didactic materials and additional literature recommended for each content area, organized/compiled in the different modules of the program. Every training course starts with the introduction of participants and team presenting the course objectives, contents, methods and program and allowing participants to express their expectations and fears.

The course content is presented according to five broad content areas (modules), subdivided into different sessions:

Overall learning objectives: states the objectives to be achieved at the end of the module in terms of knowledge, skills and competence.

Schedule: gives an overview over the time span, methods, materials and recommended content for each session / topic and states the specific objectives of each session.

Sessions: are subdivisions/sessions of the module that follow a logical flow to develop the content of the module.

Specific objectives of the sessions: relate to the content and the expected level of competence to be achieved and can also be used as basis for the development of exam questions.

Background information for the facilitator: includes background information important for the facilitator to develop the content of the module, necessary and recommended definitions, concepts, theory and its applications.

Exercises: describe practical applications of the theory and are meant to facilitate the learning process through experiential approaches: role plays, games, etc. (see list of exercises).

Handouts: are the essential documentation for the participants about the content of the session / module stating the objectives, listing the key words, developing the concept / theory of the content, and giving recommendations for further reading.

References: additionally recommended literature, articles and books, which are related to the content of the module.

Structure of the Training Course

The training course has been planned as a five days course. However, it is also possible to shorten the course due to limited time and / or to select modules according to learning objectives and needs. As well the time can be expanded in order to deal more in depth with the content and allow for more exercises, practical, field work.

The time frame of the training course consists of six working hours per day. These hours are divided into two morning and two afternoon sessions. Each session normally has duration of 2 hours. The number of course trainers/ facilitators can range from one to two per course according to the requirements. Also, for special topics, external resource persons should be asked to lecture and work with the group in their respective areas of expertise. The trainee - facilitator ratio should be 15 to one, a ratio of 20 or 25 to one still being acceptable. The total number of participants should not exceed 25.

The course structure and training methods not only allow for the development of knowledge, skills, competence and change of attitudes of the participants. The course concept is also designed to be put into practice by participants after the training during their supervisory work or by organizing their own training courses. Therefore this manual is not only a facilitator's manual, but also a supervisor's manual.

Approaches to Training and Learning

The training course outlined in this document is based on adult learning principles, competency-based training and performance improvement. Selected elements of the strategies that guided the development of this material and should guide its implementation and use are listed below.

How people learn best

People learn best when the following conditions are met:

- Participants are motivated and not anxious, know what is expected of them and treated with respect
- Information and skills are interesting, exciting, meaningful, and build on what participants already know, encourage problem-solving and reasoning
- Experiences are organized, logical, practical, include a variety of methods, and protocols and procedures are available
- New learning experiences are relevant to work and training needs of participants, and are applied immediately
- Training involves every participant in active practice and participants share responsibility for learning
- Training is a team activity, including trainers and co-trainers, providing participants with a variety of experiences and limiting trainer's biases
- The trainer acts as a facilitator of the learning process rather than a teacher who "spoon feeds" the learner
- The role and responsibilities of the trainers/facilitators and those of the participants/learners are clearly defined with:
 - The facilitators responsible for providing the learners with the necessary opportunities to acquire the knowledge and skills necessary to perform the tasks for which they are being trained
 - The facilitators responsible for providing the learners with the necessary opportunities to be exposed to the attitudes necessary to implement the acquired skills in a systematic manner and initiate the process of internalizing these attitudes
 - The learner remains responsible for her/his learning

The transactional relationships between the learners and the facilitators are at the level of adult to adult characterized by mutual respect and support

- Trainers are knowledgeable and competent in the subject matter and skills, use a variety of training methods, pay attention to individual participants' concerns, and provide motivation through feedback and reinforcement

- Participants must be selected according to specific criteria, such as the relevance of the training content to the job expectations/tasks
- Participants must have the necessary prerequisite level to enable them to benefit from the learning experience
- Feedback is immediate and focused on behavior that the participants can control
- Assessment of learning and skills is based on objectives that the participants understand

Knowledge, skills and attitudes

This course aims to improve health care by changing health workers' knowledge, skills and attitudes.

- Knowledge includes the facts that the participants need to know to perform their jobs.

Tips on increasing **knowledge** through training

- Start with what the participants already know or have experienced
- Use a variety of educational resources, including participatory activities that require participants to use their knowledge
- Use learning aids
- Review and summarize often
- Assess knowledge to verify learning

- Skills include the specific tasks that participants need to be able to perform.

Tips on increasing **skills** through training

- *Describe the skill*
- *Provide protocols and procedures*
- *Demonstrate the skill*
- *Have participants demonstrate the skill*
- *Verify that each skill is practiced correctly*
- *Assess skill by observation using a checklist*

- Attitudes affect behaviors, such as whether learned skills are applied and interactions with clients.

Tips on changing **attitudes and behavior** through training

- *Provide information and examples*

- *Include direct experience*
- *Invite discussion of values, concerns and experience*
- *Use role plays and brainstorming*
- *Model positive attitudes*
- *Assess changes in attitude by observing behavior*

Methods

The training will use a participatory and “hands on” approach where the role of the trainers is to facilitate learning by the participants. The responsibility for learning remains with the participants.

Participants learn more and stay engaged in learning activities when they play an active role in their learning and a variety of training methods are used. The following methods are recommended in the curriculum/modules.

Selected Training Methods

Brainstorming	Individual assignments	Return demonstration
Case study	Individual exercises	Role play
Clinical session	Interview	Self-directed activities
Demonstration	Mini-lecture	Small group discussion
Discussion	Observations	Simulation
Field visits	Pairs exercises	Small group exercises
Plenary group exercises	Presentation	Summary
Group assignments	Questions and answers	Survey
	Research	Team building exercises

In each module or session

This document contains an outline of a training plan for each of the key areas of content.

Each module contains the following sections:

- Front page with a module number, module objectives, module content by session and an estimated duration for the module.
- Session plans covering the various content areas.

Each session contains the following sections:

- **Trainer Preparation:** This section lists the specific preparations that trainers should make for the session. Preparations for every session include:
 - Making sure the room is properly arranged
 - Ensuring that markers and flip chart or a writing board with chalk or markers are available
 - Reviewing the training plan
 - Reviewing steps for the methods used in the training session
 - Ensuring that the resources needed to facilitate the learning process are available including copying materials that participants need
- **Methods and Activities:** This section lists the methods and activities that are used in the module. General instructions for methods that are frequently used are included in this introductory material. Instructions for participatory activities are included in the training plan.
- **Resources:** The relevant reference materials/handouts and other resources needed are listed here.
- **Evaluation/assessment:** Evaluation methods for the knowledge or skills included are listed. Questionnaires and skills checklists are included where needed.
- **Estimated Time:** The time that each session/module will require depends upon the particular group of participants, the amount of time available and other constraints. The module gives a general time range to allow for flexible scheduling.
- **Training Plan:** This section gives the specific learning objectives or purpose of a session, the key **”must know”** content, and the appropriate training methods and activities for each objective. All modules include one or more activities that give participants structured, participatory practice with the content of the module.
- **Handouts:** When specific activities require handouts, these are included after the training plan and should be copied before the session in which they will be used.
- **Questionnaires:** Each session/module includes a questionnaire that is tied to the learning objectives and a key with the correct answers. It is not appropriate to assign a pass or fail designation to the questionnaire. Instead, use the questionnaire as a learning tool. It must be used for **formative evaluation**. If participants are not certain of the answers, they should be encouraged to use the training resources to find the correct answer. Answer key must be given to the participants after finishing the processing of the responses.
- **Skills Checklists:** Each session that includes skills objectives includes a skills assessment checklist. The checklist is used by the trainer to evaluate the participant’s skill based on observation of the specific steps included in the skill. The skills checklists are also used by each participant to assess their performance and take charge of their own learning. They can also be used by other participants for peer assessment. It is recommended that these checklists not only be used during training to assess the acquisition of skills, but also for post training evaluation and supervision.

Note: There are various possible formats for modules and sessions. Provided the necessary information is included for the trainer to use, the selection of format will depend on how comfortable the trainers are in using it.

Methods frequently used in this curriculum

Instructions for methods used frequently in this training course are included here. Activities for specific methods are included with the sessions where they are used.

Mini-lecture

Trainer makes a short (5 to 15minutes) presentation using the materials available. Mini-lectures are used to provide information and knowledge. They insure that all participants have an adequate level of information and insure standardization and uniformity of this information. Mini-lectures should be kept short and should be followed by questions and answers for clarification to enable participants to better understand the content of the session/module and clarify issues, and questions and answers for evaluation to ensure comprehension.

Questions and Answers (Q&A)

Questions and answers sessions are used to recall information or elicit participants' knowledge (in introductory sessions in order to assess training needs), for clarification (to ensure that participants understand information/content), presentation of information (to elicit information that participants may already know) and evaluation (to assess acquisition of knowledge and fill gaps in participants' knowledge).

Steps for Questions and Answers for clarification

1. Trainer asks participants if they have questions
2. If a participant has a question, trainer asks another participant to answer
3. If the participant's answer is correct and complete, trainer reinforces
4. If the participant's answer is incorrect and/or incomplete, trainer may ask questions that lead the participant to a more correct answer or ask another participant to answer
5. If the answer is still incorrect and/or incomplete after two or three trials, trainer corrects and/or completes and informs the participants where to find the information
6. If there are no questions, trainer asks questions to verify knowledge and follows the same steps (3, 4, 5)

Steps for Questions and Answers to elicit information from participant (s)

1. Trainer asks participants questions
2. If a participant's answer is correct and complete, trainer reinforces
3. If the participant's answer is incorrect and/or incomplete, trainer may ask questions that lead the participant to a more correct answer or ask another participant to answer
4. If the answer is still incorrect and/or incomplete after two or three trials, trainer corrects and/or completes and informs the participants where to find the information

Steps for Questions and Answers for evaluation

1. Trainer asks participants questions
2. If a participant's answer is correct and complete, trainer reinforces

3. If the participant's answer is incorrect and/or incomplete, trainer may ask questions that lead the participant to a more correct answer or ask another participant to answer
4. If the answer is still incorrect and/or incomplete after two or three trials, trainer corrects and/or completes and informs the participants where to find the information

Brainstorming

Brainstorming is an excellent way to find out what participants already know and gaps in their knowledge. Brainstorming brings participants experience into the classroom and lets the participants know that their experience is valuable.

Brainstorming is also a very effective way for problem solving.

A brainstorming session should always end with a summary.

Steps for brainstorming

1. Trainer asks an open-ended question
2. Participants shout out their answers or ideas:
 - Until no more ideas are generated, or at least every participant has a chance to contribute or time allocated has run out
 - No ideas are discarded criticized or analyzed, but clarifying questions can be asked
3. Trainer records ideas on newsprint or in another format where all can see them
4. Trainer leads a discussion of each of the ideas generated
5. Trainer clearly marks ideas that are agreed upon
6. Trainer summarizes or asks participants to summarize points of agreement
7. Trainer moves to the next question only after finishing discussion of previous question
8. Ideas generated in brainstorming can be used for summarizing, as input to group exercises, and to relate content to participant experience

Case study

A case study is method of training whereas data/information about a case, preferably a real one or based on one, is presented to the participants for review and analysis. It includes specific questions to be answered. Case studies are a very effective way to allow participants to practice using information to solve problem, the highest level of knowledge objective. They are also effective in providing participants opportunities to explore their attitudes and confront/compare them with other participants and trainers' attitudes. Moreover case studies allow for the identification of gaps in knowledge.

Participants, individually or in small groups are asked to study the case and prepare responses to the questions. The responses are then processed. During the processing the trainer must encourage and ensure that all participants get a chance to provide inputs. Processing can be done using questions and answers and/or discussion.

The questions must be answered in an orderly manner in the sense that each question must be answered fully and the inputs summarized before moving to the next question. Answer key must be given to the participants after the processing of the case study.

Case studies can be presented in different format. They can be based on the presentation of a real patient, the files of a patient, a written description of a case, an illustration such as a photograph or slides of a case, or a video.

This method is not used in this curriculum but trainers can develop case studies based on local conditions/data as additional exercises if time permits.

Discussion

Discussion is indicated when the outcome is not predetermined in advance and is “still negotiable”. Therefore using discussion to provide “scientific” knowledge/information or a decision that has already been made and not to be changed can lead to frustration.

Discussion in plenary or in small groups is recommended to explore attitudes, values and opinions. It is also indicated to confront/compare different options of “doing things” ensuring that the “why” is covered.

During the discussion the trainer’s role is to facilitate the process, and ensure that the discussion remains “on track” and that every participant gets a chance to contribute.

When small groups do not have the same assignment/topic to discuss, each group presents their output(s) and discussion follows immediately after the presentation before moving to the next group. Time management is essential to ensure that no group gets “short changed” and has ample time for the presentation and discussion.

If all the groups have the same assignment, all groups present before discussion takes place. Only clarification questions are allowed during the presentation. Processing the output(s) must focus on the points of agreement before moving to the differences.

If time does not allow for all groups to present, one group can present and the other groups complete from their own group’s output before discussion starts.

Every discussion must be followed by a summary.

Demonstration

Demonstration is a very effective way to facilitate learning of a skill or initiation of the development of an attitude. The facilitator should use this method to show the skill(s) and/or the attitude(s) addressing more than one sense at a time. Often a demonstration can effectively replace a presentation provided the facilitator explains as s/he is doing.

A demonstration should always be followed by a Q/A for clarification session before the learners are required to do a return demonstration.

Steps for a demonstration

1. Trainer assembles resources needed for the demonstration
2. Trainer ensures that participants are ready, can hear and see
3. Trainer explains what s/he is going to do
4. Trainer instructs participants on what is expected of them (e.g. to observe closely, to take notes if appropriate, to use the skills checklist when appropriate etc.)
 - To prepare for the Q/A, and
 - Because they are required to do return demonstration(s) for practice
5. Trainer demonstrates while explaining the skill(s)/attitude necessary for each step of the procedure being demonstrated
6. Trainer conducts a Q/A for clarification at the end of the demonstration

Return demonstration

Return demonstrations provide the learners with the opportunity to practice the skills necessary to perform the procedures they are being trained on. The trainer must ensure that each learner/participant has the opportunity to practice **enough times to reach a preset minimum acceptable level of performance.**

Steps for a return demonstration

1. Trainer reminds participants of what is expected of them:
 - To practice the procedure/skills
 - To observe when others are practicing to be able to ask for clarification
 - To observe when others are practicing to be able to provide feedback and peer evaluation
2. Trainer divides participants into small groups, if more than one workstation.
(**Note:** each workstation requires at least one facilitator/trainer).
3. Participants take turns practicing the procedure/skills
4. Trainer ensures that all participants can hear and see
5. While each participant is practicing trainer can provide guidance as necessary provided it does not interfere with the process and confuse the participant
6. After each participant, trainer solicits feedback from other participants
7. After feedback from other participants, trainer reinforces what is correct and corrects and/or completes feedback
8. Each participant needs to practice more than once or until control of the skill, as time permits
9. If participant(s) need more than time permits, trainer arranges for additional practice opportunities

Simulation/simulated practice

A simulated practice is a very effective method to allow participants to practice procedures/skills in an environment that recreates as closely as possible the “real world” without the stress involved in practicing procedures/skills that they do not control yet in the field. It is recommended to have participants practice on models before they do perform the procedure/ use the skill in the work place. During a simulation the participant practices tasks that are part of her/his actual role in the workplace or that s/he will perform in the job s/he is being trained for.

Use the same steps as for a demonstration/return demonstration practice.

Role play

Role plays are a very effective method to practice procedures/skills in the training room. They are especially effective to practice procedures/skills that deal with human interactions such as health education and counseling sessions. They are also very effective when the learning objective deal with attitudes.

In a role play participants “play roles” that are not necessarily their roles in the “real world”. Often they are asked to play the role of someone they would be dealing with. In this case it is called “role reversal” or “reverse role play”. This allows the participants to explore and discover how other perceive/live the interaction.

A role play must always be processed to analyze the lessons learned.

Summary

Every time a training method allows for inputs through exchanges between the trainer(s) and the participants and between the participants themselves, it must be followed by a summary session to “tie up the loose ends” and provide the participants with clear answers. If this does not happen there is the likelihood that the participants will forget the “correct” answers.

A summary can be done by the trainer to ensure that there are “no loose ends”. If time permits, it is recommended to use the summary for evaluation. In this case the trainer can use the Q/A method.

Steps for a summary for evaluation

1. Trainer asks a participant to summarize
2. Trainers reinforces if the summary is correct/complete
3. Trainer asks another participant to correct/complete if the summary is incorrect/incomplete
4. Trainer repeats steps 2 and 3
5. Trainer corrects/completes if after 2 or 3 trials the summary is still Incorrect/incomplete.

Evaluation

Evaluation of learning and training objectives

Evaluation or assessment of learning and of training objectives allows trainers, program managers and participants to know how successful a training program has been. On-going evaluation and assessment allows trainers to identify gaps in learning and to fill those gaps. Evaluation also assists in revising learning experiences for later trainings.

Many strategies can be used to evaluate learning. Some of the most useful methods include:

- **Knowledge assessments:** Written or oral questions that require participants to recall, analyze, synthesize, organize or apply information to solve a problem. The knowledge component of a skill objective should be assessed prior to beginning skill practice in a training room or clinical session.
- **Questionnaires:** Written exercises that assist trainers and participants to identify and fill gaps in knowledge. Questionnaires can be administered as self-assessments. In some situations, it may be reasonable to have participants use course materials or to work together on questionnaires.
- **Skill checklists:** Observation of a participant performing a skill and assessment of the performance using a checklist. Simulated practice (using real items or models in a situation that is similar to actual practice) should ideally be assessed prior to beginning clinical practice with clients. Checklists should be used by the trainer and other participants to observe simulated (training room) performance and actual practice and provide feedback to help improve the performance. The checklists can also be used by the participant for self-assessment. During the training participants should be trained on how to use the checklists and encouraged to use them after the training to continue assessing their own performance and improving it.

Additional techniques for evaluation include: projects, reports, daily reflection, on-site observation, field performance, and discussion.

Each training module includes assessment of learning methods and tools:

- Questions and Answers should be used to frequently identify gaps in knowledge and fill them.
- Questionnaires are included with every module and can be used for self-assessment. To use them as self-assessment, participants fill out the questionnaire and then use any course materials to check their own answers. Trainers should work with participants filling out the questionnaires to make sure that all gaps in knowledge are filled before practicing and evaluating skills. When time permits, process responses in plenary to address any issues and fill the gaps in knowledge. At the end of this activity the answer key needs to be distributed to the participants.
- Skills Checklists are included for each of the skills that are included in this training curriculum. Participants can use the Skills Checklists as learning guides during practice sessions in training room or clinical sessions. To evaluate skills, trainers should generally observe participants three times with coaching as needed to ensure the skills are learned.

Evaluation of the participants

The evaluation of the learning by participants will be done through questions and answers, synthesis of sessions done by selected participants, self-assessment following the micro-sessions, peer assessment through feedback provided by other participants following the micro-sessions and assessment of performance by facilitators.

Each participant will practice more than once, preferably three times” the use of the curriculum to plan, organize, conduct and evaluate the training through simulated micro-sessions. A checklist will be used both by participants for self and peer assessment, and by the facilitators.

Videotaping the micro sessions or at least significant segments of the micro sessions and reviewing the taped segments after each session will enable the participants to assess their own progress in terms of acquisition of training/facilitation skills. This approach to evaluation although time consuming is very effective in helping participants assess their own performance and stabilize feedback received from their peers and from the trainers/facilitators.

Post training evaluation of the learners must be conducted within three (3) to six (6) months after the end of the training. Further post training evaluation and follow-up can be integrated into routine supervision. It is highly recommended to use the skills checklists used during the training for post training evaluation and follow-up.

Evaluation of the training

The “End of Training” evaluation can be done through a questionnaire (form 1) whereby the participants are asked to respond and express their opinions about various aspects of the workshop, such as organization, the process, the facilitation, and a general assessment.

The “End of module” evaluation can be done through a questionnaire (form 2) whereby the participants are asked to respond and express their opinions about various aspects of the module, such as the relevance of the module objective to the course ones, the relevance of the content to the objectives, the adequacy of the content, the presentation of the content, the effectiveness of the methodology, the facilitation and the sequencing of the content.

A confidence/satisfaction index can be calculated to determine how confident the learners feel that they acquired the knowledge and skills necessary to perform the tasks they have been trained for, and how committed they feel to using those skills to ensure the quality of the services they are to provide. The confidence index applies to the training objectives and acquisition of skills and knowledge and to the degree to which the participants feel that they able to apply what they have learned during the training. The satisfaction index applies to the organization and implementation of the training.

The items are labeled in the form of statements followed by a scale 5 (Strongly Agree), 4 (Agree), 2 (Disagree), and 1 (Strongly Disagree), where 5 represents the highest level of satisfaction/confidence (agreement with the statement) and 1 represents the lowest. The participants are asked to select the level that expressed their opinion best. A space for comments is provided after each statement.

The confidence and satisfaction indices are calculated by multiplying the number of respondents by the correspondent coefficient in the scale, then adding the total. The total is multiplied by 100. The product is divided by the total number of respondents to the statement multiplied by 5. 60% represents the minimal acceptable level and 80% a very satisfactory level of performance.

For example, if the total number of respondents is 19 and 7 of them selected 5 on the scale, 6 selected 4, 4 selected 2, and 2 selected 1, then the index will be $(5 \times 7) + (4 \times 6) + (2 \times 4) + (1 \times 2)$ multiplied by 100, divided by (5×19) . A 100% index would be if the total number of respondents selected 5. In this case it would be 95. In this example the index is 72.63%.

The training content and process are evaluated on a continuing basis through daily evaluations using methods such as “things liked the best” and “things liked the least” and/or “quick feedback” forms. The facilitators will use the results of this evaluation during their daily meeting to integrate the feedback and adapt the training to the participants needs.

“Where Are We?” sessions will be conducted with the participants to assess the progress in content coverage and process towards reaching the training goals and learning objectives.

Comments are analyzed and categorized. Only significant comments, those mentioned more than once and/or by more than one participant, are retained. The facilitators need to use the results of this evaluation during their daily meeting to integrate the feedback and adapt the training to the participants needs. Feedback and assessment of training experiences allows trainers and program managers to adapt training to better meet participants’ needs. Trainers can also assess their own performance in facilitating the learning experience of participants using a standardized “facilitation skills” checklist (form 4).

Form 1: END OF COURSE EVALUATION QUESTIONNAIRE

TRAINING CENTER

DATE

COURSE TITLE:

INSTRUCTIONS

This evaluation will help adapt the course to your needs and to those of future participants.

It is anonymous. Please respond freely and sincerely to each item. The items are labeled in the form of statements followed by a scale where:

- 5 = **strong** agree
- 4 = agree
- 2 = disagree
- 1 = **strongly** disagree

Please circle the number that expresses your opinion; the difference between **strongly** agree and agree, and between **strongly** disagree and disagree are a matter of intensity.

Add your comments in a specific and concise manner, in the space provided after each statement. If that is not sufficient feel free to use extra paper. If you select 2 or 1, make sure to suggest how to make the situation better, practical, and offer solutions.

N.B: Course goals objectives and duration will vary based on the type of training conducted. Adapt the form to each specific course by including in it the relevant course items.

COURSE GOALS

The Course Achieved Its Goals

1. To provide the participants with the opportunities to acquire/update the knowledge and skills necessary to:

1.1 Play an effective role as a member of the PHC Center team to improve the quality of care and services	5-4-2-1
Comments:	
1.2 Use the team approach to solve problems at the PHC center level	5-4-2-1
Comments:	
2. Provide the participants with opportunities to be exposed to and initiate the development of attitudes favorable to the systematic use of the knowledge and skills acquired in team building and problem solving to improve the quality of care and services	5-4-2-1
Comments:	

COURSE OBJECTIVES

1. The course helped me reach the stated objectives:

1.1 Apply the team approach principles to play an effective role as a member of the Model PHC Center service delivery team	5-4-2-1
Comments:	
1.2 Use the team approach to implement the problem solving cycle to solve service delivery and management problems at the PHC Center level	5-4-2-1
Comments:	
1.3 Explain the importance of being an effective team member of the Model PHC Center to improve the quality of care and services	5-4-2-1
Comments:	
1.4 Explain the importance of using the team approach to implement the problem solving cycle to solve service delivery and management problems at the Model PHC center	5-4-2-1
Comments:	

2. The course objectives are relevant to my job description / task I perform in my job 5-4-2-1

Comments:

3. There is a logical sequence to the units that facilitates learning 5-4-2-1

Comments:

ORGANIZATION AND CONDUCT OF THE COURSE

1. Time of notification was adequate to prepare for the course 5-4-2-1

Comments:

2. Information provided about the course before arriving was adequate 5-4-2-1

Comments:

3. Transportation arrangements during the course were adequate (if applicable) 5-4-2-1

Comments:

- 4.** Training site (Training Center) was adequate 5-4-2-1

Comments:

5. The educational materials (including reference material) used were adequate both in terms and quantity and quality in relation to the training objectives and content 5-4-2-1

Comments:

6. The methodology and technique used to conduct the training were effective in assisting you to reach the course objectives 5-4-2-1

Comments:

7. Clinic/ practice site, as applicable, was adequate 5-4-2-1

Comments:

8. Relationships between participants and course managers and support staff were satisfactory 5-4-2-1

Comments:

9. Relationships between participants and trainers were satisfactory and beneficial to learning 5-4-2-1

Comments:

10. Relationships between participants were satisfactory 5-4-2-1

Comments:

11. The organization of the course was adequate (Time, breaks, supplies, resource materials) 5-4-2-1

Comments:

Additional comments:

GENERAL ASSESSMENT

1. I can replicate this training in my future work 5-4-2-1

Comments:

2. I would recommend this training course to others 5-4-2-1

Why or Why Not?

3. The duration of the course (10 days) was adequate to reach all objectives and cover all necessary topics 5-4-2-1

Comments:

General comments and suggestions to improve the course (Please be specific)

Form 2: END OF MODULE EVALUATION QUESTIONNAIRE

COURSE: DATE:

MODULE NUMBER & TITLE:

INSTRUCTIONS

This evaluation is intended to solicit your opinions about the modules. Your feedback will help adapt the course to your needs and to those of future participants. It is anonymous. Please respond freely and sincerely to each item. The items are labeled in the form of statements followed by a scale where:

- 5 = **strongly** agree
- 4 = agree
- 2 = disagree
- 1 = **strongly** disagree

Please circle the number that best expresses your opinion; the differences between **strongly** agree and agree, and between **strongly** disagree and disagree are a matter of intensity.

Add your comments in a specific and concise manner in the space provided after each statement. If that space is not sufficient feel to use extra paper. If you select 2 or 1, make sure to write specific comments on how to improve the module.

EVALUATION ITEMS

1. The module objectives are relevant to the course objectives Comments:	5- 4- 2- 1
2. The content / topics covered in the unit are relevant to the objectives Comments:	5- 4- 2- 1

<p>3. The content / topics were adequate to help me achieve the objectives</p> <p>Comments:</p>	5- 4- 2- 1
<p>4. The content / topics were clear and well-presented</p> <p>Comments:</p>	5- 4- 2- 1
<p>5. The training methods and activities were effective in facilitating learning</p> <p>Comments:</p>	5- 4- 2- 1
<p>6. The training methods and activities were conducted adequately to facilitate learning</p> <p>Comments:</p>	5- 4- 2- 1
<p>7. These are important topics that will enable me to better perform my job</p> <p>Comments: (specify these points)</p>	5- 4- 2- 1

<p>8. There is a logical sequence to the sessions and topics that facilitates learning</p> <p>Comments:</p>	<p>5-4- 2- 1</p>
<p>9. There are certain topics that need further clarification</p> <p>Comments: (specify these points)</p>	<p>5- 4- 2- 1</p>
<p>10. The training materials and resources provided were adequate</p> <p>Comments:</p>	<p>5- 4- 2- 1</p>
<p>11. Training materials and resources were provided on time to facilitate learning</p> <p>Comments:</p>	<p>5- 4- 2- 1</p>
<p>1. The training materials and resources used were adequate to facilitate my learning</p> <p>Comments:</p>	<p>5-4-2-1</p>
<p>14. The training site was adequate</p>	<p>5- 4- 2- 1</p>

Comments:	
5. The clinic/ practice site was adequate (if applicable) Comments:	5- 4- 2- 1

General comments (if any not covered):

Form 3: QUICK FEEDBACK FORM

TRAINING COURSE: DATE:

LOCATION:

MODULE NUMBER AND TITLE:

SESSION NUMBER AND TITLE:

INSTRUCTIONS

This evaluation is anonymous. Please respond freely and sincerely to each item. The items are labeled in the form of statements followed by a scale where:

5 = **strongly** agree

4 = agree

2 = disagree

1 = **strongly** disagree

Please circle the description that expresses your opinion best; the difference between strongly agree and agree, and between strongly disagree and disagree are a matter of intensity.

Add your comments in a specific and concise manner, if you have any, in the space provided after each statement. If that space is not sufficient feel free to use extra paper. If you selected 2 or 1 please make sure to give comments (e.g. why? Solutions?)

1. The session objectives are relevant to the tasks in the job description

5- 4- 2- 1

COMMENTS

2. The methods/learning activities were adapted to the objectives 5- 4- 2- 1

COMMENTS

3. The materials provided were adequate to cover all of the content 5- 4- 2- 1

COMMENTS

4. The time allocated to the session was adequate to cover all the topics 5- 4- 2- 1

COMMENTS

5. The facilitation (conduct of the session) helped reach the session objectives 5- 4- 2- 1

COMMENTS

6. The content of the training was clearly presented 5- 4- 2- 1

COMMENTS

7. The materials/resources were used in a way that helped me learn 5- 4- 2- 1

COMMENTS

8. There are points of content that need further clarifications
(Specify what specific content areas)

Other comments:

Form 4: TRAINING SKILLS CHECKLIST

This checklist is used with the relevant curriculum to give feedback on the trainer's performance.

The checklist contains a list of items to be observed:

- If they are observed a check mark (✓) is entered in the column observed under **adequate** or **inadequate** depending on the performance.
- Comments are entered in the appropriate column to clarify/specify what is observed or not observed.
- Is not observed a check mark (✓) and comments are entered in the appropriate columns.

The finding and comments are analyzed and discussed with the trainers supervised. Any immediate corrective action(s) taken and further action(s) needed must be entered in the spaces provided.

The trainers supervised must be given an opportunity to comment and the comments must be entered in the appropriate space. The form must be dated and signed by the trainer and the supervisor. It is then filed in the trainer's file for future follow-up and reference.

Legend: A = Adequate NA = NOT adequate NO = NOT observed

Items	Observed		NO	Comments
	A	NA		
1. <u>Planning of the session</u> <ul style="list-style-type: none"> • Relevant sessions plan selected from curriculum • Organization conduct and evaluation of training in conformity with curriculum (based on observation during the session) 				
2. <u>Organizing the session</u> <ul style="list-style-type: none"> • Arrive before beginning of session • Ensure that all training resources are in place • Ensure that equipment is in working condition • Ensure that training site is set up in accordance with the requirements of the training objective (s) and methodology • Prepared/rehearsed for the training (based on observation of mastery in conducting activities and using 				

Items	Observed		NO	Comments
	A	NA		
resources during training)				
Items	Observed		NO	Comments
	A	NA		
<p>3. <u>Conducting the session</u></p> <p>3.1 <u>Introduction</u></p> <ul style="list-style-type: none"> • Introduce oneself <ul style="list-style-type: none"> - Name - Job - Experience relevant to topic • Introduce/let team members introduce themselves • Module: <ul style="list-style-type: none"> - Introduce topic - Present objective - Clarify topic and objectives - List sessions - Establish linkage with job/task • Session <ul style="list-style-type: none"> - Introduce topic - Present objectives - Clarify topics and objectives - Establish linkage with module - Establish linkage with preceding session(s) - Explain methodology • Present evaluation methodology • State estimated duration <p>3.2 <u>Facilitation skills</u></p> <p>➤ <u>Clarifying</u></p> <ul style="list-style-type: none"> • Make sure participants are ready before starting on any content item • Make sure participants can hear: <ul style="list-style-type: none"> - Trainer - Other participants • Make sure participants can see: <ul style="list-style-type: none"> - Writing - Illustrations/ educational aids - Trainer - Each other 				

Items	Observed		NO	Comments
	A	NA		
<ul style="list-style-type: none"> • Make sure s/he look at participants • Make sure s/he can hear participants • Use appropriate educational material • Summarize after each content topic item before moving to next topic • Use examples relevant to objectives, content, and participants learning 				
Items	Observed		NO	Comments
	A	NA		
<p>➤ <u>Ensuring Active Participation</u></p> <ul style="list-style-type: none"> • Ask participants questions • Allow participants to ask questions • Allow participants to question/discuss/make contributions • Ensure that all participants contribute • Provide participants with opportunities to practice • Adapt to participants' learning capability (speed, learning activities, use of educational material) • Encourage participants through: <ul style="list-style-type: none"> - Listening - Letting participants complete their interventions - Not being judgmental - Maintaining cordial relationships with participants <p>➤ <u>Mastering Training</u></p> <ul style="list-style-type: none"> • Conduct the learning activities as per session plan • Use the training resources/ materials as per plan • Cover content adequately (relevant, clear, concise, complete, concrete, credible, consistent and correct) • Follow curriculum for learning/training activities • Use content as per curriculum <p>1. <u>Evaluating learning/training process</u></p>				

Items	Observed		NO	Comments
	A	NA		
<ul style="list-style-type: none"> • Check that participants understand • Check that participants learn skills • Provide supportive feedback by: <ul style="list-style-type: none"> - Reinforcing the positive learning - Correcting any errors - Correcting any incomplete learning • Listen to participants comment about one's performance (without making it personal) • Adapt one's performance based on feedback from participants • Allow participants to answer questions asked by the group 				

Additional comments or observations

Analysis of findings

Action (s) taken

Further action (s) needed

Trainer's comments

Date:

Trainer's name & signature

Supervisor's name & signature

SYLLABUS/PROGRAM

GOALS:

1. To provide the participants with opportunities to acquire, or/and improve the knowledge and skills necessary to;
 - To reduce the incidence of common haemoglobinopathies in Iraq, e.g. thalassemia and sickle cell anemia.
 - To reduce other hereditary disorders by identifying problems followed by counseling
 - Early detection and treatment of some sexually transmitted diseases
 - To provide immunizations as required.
2. To provide the participants with opportunities to begin improving the attitudes needed to the systemic and systematic use of acquire knowledge and skills to improve the Counseling regarding high-risk behaviors, including those related to HIV, Hepatitis B, and other infectious diseases.
3. To provide the participants with opportunities to acquire, or/and improve the knowledge necessary to;
 - To promote awareness regarding reproductive health, family planning, and healthy lifestyles
 - To provide couples with medical, social, and psychological support

LEARNING OBJECTIVES

At the end of the training the participants will be able to:

- identify the common haemoglobinopathies in Iraq and how to reduce the incidence of it
- To reduce hereditary disorders by identifying problems followed by counseling use the “. Counseling” regarding high-risk behaviors, including those related to HIV, Hepatitis B, and other infectious diseases
- diagnosis of sexually transmitted diseases for early detection and treatment
- raise and promote the awareness regarding reproductive health, family planning, and healthy lifestyles.
- provide the couples with; medical- social, and psychological supports
- Explain the importance of immunization and how can be used as required

CONTENT/TOPICS

The following content/topics will be covered:

- ✓ Plan of action in premarital counseling premarital guidelines for most common heamoglobinopathies in Iraq.
- ✓ Premarital guidelines for sexually transmitted diseases premarital counseling risk assessment form Performance Checklist Preconception counseling.

Appropriate age for marriage of women Consanguineous marriages (endogamy)

METHODOLOGY

The training will use a participatory and “hands on” approach where the role of the trainers will be to facilitate learning by the participants. The responsibility for learning remains with the participants.

To ensure that this happens, a variety of training methods will be used:

- Individual assignments (e.g. reading assignments)
- Small-group work and Q/A in plenary
- Small-group work and Q/A in plenary for clarification
- Q/A in plenary for discussion
- Brainstorming
- Mini lectures
- Exercises
- Demonstration and Re-demonstration
- Simulation
- On job training

To assist the participants in going through the learning process, the following reference materials were provided:

- Proposed syllabus
- Handouts on Basics of ToT
- Handouts on Premarital Counseling Clinical Services

All the reference documents will be read by the participants as an individual assignment, clarified in plenary session and small group discussions, and used to prepare, conduct, and evaluate the practical sessions.

SCHEDULE

1- For the training course

The daily schedule will include 5 days, 6 hours each- of training room structured activities and half a day of field activities/ on job training. Starting and ending times, and specific daily schedules will be discussed and finalized with the participants.

Evening Assignments include continuation of individual reading and preparation.

EVALUATION

1. Evaluation of the training

The “**end of training**” evaluation will be done through a questionnaire whereby the participants are asked to respond and express their opinions about various aspects of the workshop, such as organization, the process, the facilitation, and a general assessment.

The confidence index applies to the training objectives and acquisition of skills and knowledge and to the degree to which the participants feel that they are able to apply what they have learned during the training. **The satisfaction index** applies to the organization and implementation of the training.

“**Where Are we?**” sessions will be conducted with the participants to assess the progress in content coverage and process towards reaching the training goals and learning objectives.

2. Evaluation of the participants

The evaluation of the learning by participants will be done through questions and answers, summaries of sessions done by selected participants, self-assessment following the practice sessions, peer assessment through feedback provided by other participants following the practice sessions and assessment of performance by facilitators.

Each participant will practice the various skills, preferably more than once.

Limitations of this manual

Although the authors have put substantial effort in making the manual simple and practical, we are well aware that for those limited to only reading the text, exercises, and explanations, it will be rather difficult to conduct the course without previously having experienced the training development process. We have therefore tried to give special attention to the description of the procedure of every module. This is done in order to give in this part of the modules practical hints, examples and a detailed guideline for their development. Experienced trainers and facilitators will find it much easier to use the manual, than those having their first training experience.

It is often thought that participatory teaching and learning methods are more relaxing for the trainers when participants themselves are expected to develop the contents in small working groups. This is definitely not the case. A lecture is a continuous presentation, given in a predetermined time span and participants are not expected to interrupt the presenter. Participants listen and may be only required to put forward questions in the end. The lecturer does not need more than technical competence on the topic and some presentation skills.

Participatory training and learning methods are much more open and flexible. Often they present a challenge to the facilitators by raising new topics, which may not adhere to the readily retrievable knowledge of the facilitator:

- In terms of the necessary continuous monitoring of the learning process to keep participants on track while allowing some space for related topics important to the participants;
- In terms of analytical and systematic competence to be able to summarize important learning results or to guide participants themselves to summarize their learning;
- In terms of monitoring group dynamics and intervening in conflict situations.

Organizers of the training course should be aware of these training style differences and might decide on a more traditional course setting if the above mentioned competences are not well developed in the trainers' team. It is recommended to consider these reflections in the planning of the workshop/training course.

Part Two

Training Modules

Module 1: The Premarital Counseling Pathway

Module Objectives:

By the end of this module the participants will be able to:

1. Apply the pathway of premarital counseling

Session 1: Demonstrate the premarital counseling pathway

Evaluation/ Assessment

Questions and answers, participants' summaries, trainer's evaluation

Estimated Training Time

3 hours

Session 1.1: the Premarital Counseling pathway

Specific objectives of the session

At the end of the session the participants will be able to:

- 1- Demonstrate the premarital counseling pathway

Trainer preparation

- Review the reading material and the session plan.
- Prepare the presentation as appropriate and as recommended in the method column of the session plan, or write the information on a flipchart or board where all participants can see it.
- Prepare copies of the reference materials/handouts and exercises.
- Arrange the training room.

Methods and activities

Exercises, questions and answers, discussion in plenary

Resources

- Reference material/handouts: features of the team, ways of operating successful teams, the role of the manager in a team, the difference between groups and teams, The process of team development, and characteristics of effective teams.
- Other: newsprint on easel, markers, masking tape, LCD projector

Evaluation/assessment

Questions and answers, trainer's observation and participant's summaries

Trainer

Experienced with management of primary health care in Iraq

Estimated training time

3 hour

Session Plan

Objective	Contents	Methods\ Activities
<p>1.1.1 First Visit (to the paramedics /HCP) (1h)</p>	<ol style="list-style-type: none"> 1. Basic data and address on the PC Risk Assessment Form is filled in 2. The degree of consanguinity between the couple must be identified. 3. HCP should take family history as per the PC Risk Assessment Form 4. When applicable, 5. Request blood sample from both partners 6. The female partner should be given a dose of tetanus toxoid 7. Premarital educational booklet will be given to each client 8. Each partner should sign the premarital counseling 9. The phone number 10. Each client should be given an appointment for counseling before they leave 	<p>Discussion</p> <p>Exercise (On job training)</p> <p>Q&A</p>
<p>1.1.2. The Second Visit (to the Physician) (1.5 h)</p>	<ol style="list-style-type: none"> 1. When possible, the initial interview with each partner 2. Review the Premarital Counseling Risk Assessment Form 3. Take the clinical history 4. Perform physical examination 	<p>Discussion</p> <p>Exercise (On job training)</p>

Objective	Contents	Methods\ Activities
<p>1.1.3 Documentation (30 mints)</p>	<p>5. Review lab reports</p> <p>7. Assess the condition of each partner</p> <p>8. Do counseling for each partner separately</p> <p>9. Final counseling should be offered in the presence of both partners.</p> <p>10. Issue the certificate on PC Risk Assessment Form.</p> <p>11. In case of abnormal findings or results, special actions and interventions should be undertaken (box 2 and 3).</p> <p>In order to avoid the loss of lab tests and make benefit from them in the future, it is advised to undertake the following:</p> <ul style="list-style-type: none"> ➤ A copy from the Risk Assessment Forms will be kept in a Box File till the couple opens a family folder in a health center, and ➤ personal card; or even a copy of Risk Assessment Forum, is given to each client with his/her laboratory results 	<p>Q&A</p> <p>Discussion</p> <p>Exercise</p> <p>Q&A</p>

Session 1.1 Premarital Counseling Pathway

- Every couple who want to get married should be subjected to Premarital Counseling.
- Premarital Counseling is provided by physicians with the help of trained paramedic or other health care provider.
- Couples are referred to health center within the catchment area (one of the health centers they belong to) for getting the service of premarital counseling.
- Appointments are arranged by the relevant clerk or health care provider
- Usually Premarital Counseling is completed in 2-3 visits in normal situation.

1.1.1 The First Visit (to the Paramedics/HCP)

1. Basic data and address on the PC Risk Assessment Form is filled in, either by the HCP or the client.
2. The degree of consanguinity between the couple must be identified.
3. HCP should take family history as per the PC Risk Assessment Form
4. When applicable, check the weight and height and calculate the body mass index (BMI).
5. Request blood sample from both partners for required lab investigations and record the results when coming back.
6. The female partner should be given a dose of tetanus toxoid, after checking history of tetanus vaccination, and the field concerning this action on the Premarital Counseling Form is labeled.
7. Premarital educational booklet will be given to each client. The booklet includes information on the following:

The concept and aim of Premarital Counseling

Common haemoglobinopathies in Iraq

Sexually transmitted diseases (STI)

Healthy life-style

Concept of family planning and methods of contraception

Breast self-examination, the maneuver and frequency

8. Each partner should sign the premarital counseling consent.
9. The phone number and any possible way for contact with the partners should be requested.
10. Each client should be given an appointment for counseling before they leave.

Preparation for the next visit

1. Before the next appointment (to the doctor), the Health Care Provider has to review the contents of Premarital Counseling Form, i.e. Family history and Lab reports; if any doubt should discuss it with the physician.
2. If any abnormal result, such as positive Hepatitis B virus, Syphilis etc., a separate appointment for each partner should be arranged.

1.1.2 The Second Visit (to the Physician)

1. When possible, the initial interview with each partner should be held individually and separately
2. Review the Premarital Counseling Risk Assessment Form,
3. Take the clinical history, concentrate on the following:
 - A. Medical/Surgical/Psychological History
 - a. Significant systemic illness such as: Hypertension, Diabetes mellitus, Heart problems, Epilepsy etc.
 - b. Previous surgical history
 - c. History of mental illness
 - d. History of sexually transmitted diseases (STI) such as: syphilis, gonorrhea, hepatitis B, genital warts and ulcer, and urethral/vaginal discharge.
 - e. History of blood transfusion (date, frequency, place etc.)
 - f. History of current medications and allergy to certain drugs
 - g. Family history of hereditary diseases or genetic problems
Sickle cell, thalassemia, hemophilia, G6PD deficiency, or frequent blood transfusion
Congenital anomalies in the family
Mental retardation
Family history of hypertension, diabetes, etc.
 - h. If previously married, history of baby with congenital abnormality.
 - B. Habits and Risk behavior such as:
Smoking, Alcohol consumption, substance abuse
 - C. Others, such as:
Tattooing and multiple ear piercing

Practiced some religious ceremonies involving sharp objects and bloodletting (Hejamah)

4. Perform physical examination, concentrate on:

A. General Physical Examination:

General look of patient and signs of anemia, jaundice and cyanosis

B. Systematic physical examination

Neck for thyroid, Chest, CVS and Abdomen

C. Vital signs

Blood pressure and pulse

5. Review lab reports, referring accordingly to:

Premarital Guidelines for Most Common Hemoglobinopathies in Iraq

Premarital Guidelines for Sexually Transmitted Diseases

7. Assess the condition of each partner

8. When applicable and needed, do counseling for each partner separately at first.

9. Final counseling should be offered in the presence of both partners.

10. Issue the certificate on PC Risk Assessment Form.

11. In case of abnormal findings or results, special actions and interventions should be undertaken (box 2 and 3).

1.1.3 Documentation

In order to avoid the loss of lab tests and make benefit from them in the future, it is advised to undertake the following:

A copy from the Risk Assessment Forms will be kept in a Box File till the couple opens a family folder in a health center, and then it will be transferred to their HC and kept in their Family Folder.

personal card; or even a copy of Risk Assessment Form, is given to each client with his/her laboratory results

Box 2: Premarital Counseling in Special Consultations

Partner with abnormal finding/s or result/s, which needs further assessment, evaluation, management and counseling will be offered treatment locally or referred to secondary care.

Extra appointment/s can be arranged if necessary.

Couples found to have a risk of an affected offspring will be referred for genetic counseling at the secondary care.

Both partners should be advised to share data by themselves.

If they agree, an appointment is booked for counseling both partners together.

In the cases required referral to secondary care, issue the Premarital Counseling Certificate based on a written feedback from the secondary care.

When there is a documented reproductive genetic risks from this marriage, it is advised that the doctor to write “from medical aspect, this marriage may lead to the following disease in the next generation:”

The partner of person with sexually transmitted disease should be notified with registration of actions and outcomes.

Module 2: Premarital Guidelines for Most Common Hemoglobinopathies in Iraq

Module Objectives:

By the end of this module the participants will be able to:

1. To reduce the incidence of common haemoglobinopathies in Iraq, e.g. thalassemia and sickle cell anemia.

Session 1: Types and Composition of Adult Hemoglobin/ Basic types of hemoglobinopathy

Session 2: Beta- thalassemia/ genetic issues, clinical picture, symptoms of untreated patients, laboratory diagnosis

Session 3: Beta- thalassemia/ treatment, prevention strategies

Session 4: Beta- thalassemia/, premarital screening for thalassemia, protocol of B- Thalassemia counseling

Session 5: Sickle Cell Disorder/ genetic issues, clinical picture, symptoms of untreated patients, laboratory diagnosis

Session 6: Sickle Cell Disorder/ treatment, prevention strategies

Session 7: Sickle Cell Disorder/ Premarital Screening and counseling for sickle cell disorder

Evaluation/ Assessment

Questions and answers, participants' summaries, trainer's evaluation

Estimated Training Time

6 hours

Session 2.1: Types and Composition of Adult Hemoglobin/ Basic types of hemoglobinopathy

Specific objectives of the session

At the end of the session the participants:

- Explain the types and composition of adult hemoglobin.
- Define the basic types of hemoglobinopathy

Trainer preparation

- Review the reading material and the session plan.
- Prepare the presentation as appropriate and as recommended in the method column of the session plan, or write the information on a flipchart or board where all participants can see it.
- Prepare copies of the reference materials/handouts and exercises.
- Arrange the training room.

Methods and activities

Questions and answers, discussion in plenary

Resources

- Reference material/handouts: features of the team, ways of operating successful teams, the role of the manager in a team, the difference between groups and teams, The process of team development, and characteristics of effective teams.
- Other: newsprint on easel, markers, masking tape, LCD projector

Evaluation/assessment

Questions and answers, trainer's observation and participant's summaries

Trainer

Experienced with management of primary health care in Iraq

Estimated training time

30 mints

Premarital Guidelines for Most Common Hemoglobinopathies in Iraq

2.1.1 Explain the Types and Composition of Adult Hemoglobin

Overview

With approximately 7% of the worldwide population being carriers, hemoglobinopathies are the most common monogenic diseases and one of the world's major health problems. They were originally found mainly in the Mediterranean area and large parts of Asia and Africa. International migration has spread them from those areas all over the world. In many parts of world today, hemoglobin (Hb) defects are classified as endemic diseases.

Iraq is one of the countries which are endemic with different types of hemoglobinopathies. There are several epidemiological studies on their frequency. The prevalence of gene carriers is high giving a figure of millions among the entire population. The total number of patients diagnosed with these diseases in the MoH laboratories during the last years is tens of thousands. Thus, detection and advice about these disease becomes the corner stone element in Premarital Counseling in order reduce the burden of this problem.

Types and Composition of Adult Hemoglobin

Normal hemoglobin (Hb) in adults is composed of the following:

1. Hb A: this is composed of two alpha and two beta chains, it constitute 95% of total hemoglobin.
2. Hb A2: this is composed of two alpha and two delta chains, it constitute 3% of total hemoglobin.
3. Hb F (fetal): this is composed of two alpha and two gamma chains, it constitute 2% of total hemoglobin

2.1.2 Basic types of hemoglobinopathy

The umbrella term "hemoglobinopathy" includes all genetic hemoglobin disorders. These are divided into two main groups. Both are caused by mutations and/or deletions in the α - or β -globin genes of hemoglobin.

- **Thalassemia syndromes:** These are autosomal recessive conditions resulting from the decreased or absent synthesis of globin chains. Alpha and beta thalassemia are the result of deficient or absent synthesis of α and β chains, respectively. Hemoglobin structure in these cases is normal.
- **Abnormal hemoglobins (structural hemoglobin variants):** This group of autosomal dominant inherited hemoglobin disorders is caused by structural defects in hemoglobin synthesis resulting from an altered amino acid sequence in the α - or β - chains.

The most common types of hemoglobinopathies enrolled in Iraqi Premarital Counseling are discussed below

Session 2.2 Beta-thalassemia

Specific objectives of the session

- At the end of the session the participants will be able to:
- Define B-thalassemia
- Explain the genetic issue of B- thalassemia
- Describe the clinical pictures of B- thalassemia.
- Numerate the symptoms of untreated patients .
- Explain the Laboratory Diagnosis of Thalassemia

Trainer preparation

- Review the reading material and the session plan.
- Prepare the presentation as appropriate and as recommended in the method column of the session plan, or write the information on a flipchart or board where all participants can see it.
- Prepare copies of the reference materials/handouts and exercises.
- Arrange the training room.

Methods and activities

- Mini- lecture, questions and answers, discussion in plenary, summary

Resources

- Reference material/handouts: features of the team, ways of operating successful teams, the role of the manager in a team, the difference between groups and teams, The process of team development, and characteristics of effective teams.
- Other: newsprint on easel, markers, masking tape, LCD projector

Evaluation/assessment

Questions and answers, trainer's observation and participant's summaries

Trainer

Experienced with management of primary health care in Iraq

Estimated training time

70 mints

Objective	Content	Methods/ Activities
2.2.4 Numerate the symptoms of untreated patients (10 min.)	Untreated, patients often have the following symptoms: <ul style="list-style-type: none"> ➤ Pale or jaundiced appearance ➤ Fatigue ➤ Abnormal growth ➤ Pathologic fractures of long bones. ➤ Heart failure ➤ Enlarged spleen ➤ Frequent ulcers 	Q&A
2.2.5 Explain the Laboratory diagnosis (15 Min.)	<ul style="list-style-type: none"> ➤ MCV and MCH decreased ➤ Mild to severe anemia ➤ Peripheral blood smear shows abnormal RBC ➤ Serum iron and ferritin are usually increased ➤ May have increased bilirubin 	Mini-lecture

Session 2.2: Beta-thalassemia

2.2.1 Define B-thalassemia

Beta thalassemia (β -thal) syndromes are the result of insufficient (β^+) or absent (β^0) production of β -globin chains. Their molecular causes are β -globin gene mutations.

B-thalassemia is prevalent in populations in the Mediterranean, Middle East (including Iraq), Transcaucasia, Central Asia, Indian subcontinent, and Far East. It is also common in populations of African heritage. Hematological changes become manifest from between the ages of three months and six months onwards.

2.2.2 Genetic issues

- Risk of being born with thalassemia and the severity of disease is dependent on the genetic composition of parents.
- The gene for β -thalassemia is autosomal recessive. However, a person with even one of these genes (heterozygous, carrier state) will have some hemoglobin changes, although these changes are often minor.
- The transmission of defective gene and risk of being affected are outlined as:
 - One parent with thalassemia minor (heterozygous) and the other is normal – 50% chance of each child having thalassemia minor and 50% to be normal.
 - Both parents with thalassemia minor (heterozygous) – 25% chance of each child having thalassemia major (homozygous), and 50% chance of each child also having thalassemia minor and only 25% chance that the child will not have some form of thalassemia.

2.2.3 Describe the clinical picture of B-thalassemia

- Thalassemia Minor (heterozygous – carrier state)
 - Patient is a silent carrier of the thalassemia gene and there are no clinical symptoms.
 - Patients may have mild anemia, mild microcytosis that does not interfere with normal daily function.
 - However, mild anemia may become worse during times of physiologic stress – pregnancy, co-existing iron deficiency, chronic illness, old age.
- Thalassemia Major (homozygous)
 - These patients are the most symptomatic and ill.
 - Signs and symptoms in untreated children usually appear in early childhood, such as:
 - Severe anemia – microcytic, hypochromic.
 - Increased erythropoiesis (RBC production), which causes an expansion in bone marrow tissue.
 - Thinning of bones caused by increased bone marrow production, with osteoporosis and osteomalacia – especially seen in face and skull.
 - Splenomegaly caused by increased hemolysis and destruction of abnormal RBC.
 - Increase iron absorption which can lead to iron overload in tissues.

2.2.4 Numerate the symptoms of untreated patients

- Pale or jaundiced appearance due to anemia and hemolysis.
- Fatigue and lack of energy.
- Abnormal growth patterns and delayed puberty

- Pathologic fractures of long bones.
- Heart failure due to anemia and iron deposition in heart muscle.
- Enlarged spleen, leading to cirrhosis of the liver.
- Frequent ulcers on the legs and gall bladder disease.

Note: There is certain type of thalassemia called thalassemia intermedia in which the clinical severity of the disease is somewhere between the mild symptoms of the β thalassemia trait and the severe manifestations of β thalassemia major.

Thalassemia intermedia is inherited and may result from a wide variety of genotypes. Certain homozygous β thalassemia alleles have produced this condition. Additionally several forms of combined heterozygous thalassemia can also result in a clinical course consistent with thalassemia intermedia.

2.2.5 Explain Laboratory Diagnosis of Thalassemia

- MCV and MCH decreased – RBC indices are decreased, even in thalassemia minor – This is the first screening evidence of possible thalassemia (or other form of anemia).
- Mild to severe anemia (depending on severity of thalassemia):
 - HbA2 increased to $>3.5\%$
 - HbF increased, sometimes to $>90\%$
- Peripheral blood smear shows abnormal RBC – microcytic, tear-drop shapes, and target cells.
- Serum iron and ferritin are usually increased.
- May have increased bilirubin, and abnormal liver function studies.

Session 2.3 Beta-thalassemia

Specific objectives of the session

At the end of the session the participants will be able to:

- Identify the treatment options for B- thalassemia
- Explain the prevention strategies

Trainer preparation

- Review the reading material and the session plan.
- Prepare the presentation as appropriate and as recommended in the method column of the session plan, or write the information on a flipchart or board where all participants can see it.
- Prepare copies of the reference materials/handouts and exercises.
- Arrange the training room.

Methods and activities

Discussion in plenary, brain storming, summery

Resources

- Reference material/handouts: features of the team, ways of operating successful teams, the role of the manager in a team, the difference between groups and teams, The process of team development, and characteristics of effective teams.
- Other: newsprint on easel, markers, masking tape, LCD projector

Evaluation/assessment

Questions and answers, trainer's observation and participant's summaries

Trainer

Experienced with management of primary health care in Iraq

Estimated training time

45 mints

Session plan

Objective	Content	Methods/ Activities
<p>2.3.1 Identify the treatment options for B- thalassemia</p> <p>(25 Min.)</p>	<p>I. For Thalassemia Minor:</p> <ul style="list-style-type: none"> • Usually no treatment required. • May need occasional transfusion during times of physiologic stress. • Supplementation with folic acid often recommended. <p>II. For Thalassemia Major:</p> <ul style="list-style-type: none"> • Most patients require periodic transfusion to maintain adequate functioning hemoglobin and suppress increased erythropoiesis. • With transfusions and maintenance of Hb. Level at 10-11 mg/dl. complications such as hypersplenism, fractures, infections, and orthopedic complications are less common. • Periodic transfusions lead to further iron overload, and need for iron chelation therapy with deferoxamine. • Should supplement with folic acid because of increased erythropoiesis (production of RBC). • Radical treatments include bone marrow transplantation, or experimental gene therapy. • Early management of complications. 	<p>Brain storming</p>
<p>2.3.2 Explain the prevention strategies</p> <p>(20Min.)</p>	<ul style="list-style-type: none"> ▪ The only prevention of thalassemia major is to prevent passing down the genes to a child. ▪ Primary strategy in Middle East is counseling of couple when both male and female found to be heterozygous thalassemia carriers. ▪ In some countries, prenatal diagnosis can be made on fetus of two thalassemia carriers (small sample of fetal blood, or genetic analysis) to determine if fetus is affected. 	<p>Discussion</p> <p>Summary</p>

Session 2.3: Beta-thalassemia

2.3.1 Identify the treatment option for B- thalassmia

I. For Thalassemia Minor:

- Usually no treatment required.
- May need occasional transfusion during times of physiologic stress.
- Supplementation with folic acid often recommended.

II. For Thalassemia Major:

- Most patients require periodic transfusion to maintain adequate functioning hemoglobin and suppress increased erythropoiesis.
- With transfusions and maintenance of Hb. Level at 10-11 mg/dl. complications such as hypersplenism, fractures, infections, and orthopedic complications are less common.
- Periodic transfusions lead to further iron overload, and need for iron chelation therapy with deferoxamine.
- Should supplement with folic acid because of increased erythropoiesis (production of RBC).
- Radical treatments include bone marrow transplantation, or experimental gene therapy.

Early management of complications

2.3.1 Explain the prevention strategies

- The only prevention of thalassemia major is to prevent passing down the genes to a child.
- Primary strategy in Middle East is counseling of couple when both male and female found to be heterozygous thalassemia carriers.
- In some countries, prenatal diagnosis can be made on fetus of two thalassemia carriers (small sample of fetal blood, or genetic analysis) to determine if fetus is affected.

Session 2.4 Beta-thalassemia

Specific objectives of the session

At the end of the session the participants will be able to:

- Explain the premarital screening for thalassemia
- Explain the result of screening and confirmatory test
- Identify the protocol of B- thalassemia

Trainer preparation

- Review the reading material and the session plan.
- Prepare the presentation as appropriate and as recommended in the method column of the session plan, or write the information on a flipchart or board where all participants can see it.
- Prepare copies of the reference materials/handouts and exercises.
- Arrange the training room.

Methods and activities

Discussion in plenary, brain storming, summery

Resources

- Reference material/handouts: features of the team, ways of operating successful teams, the role of the manager in a team, the difference between groups and teams, The process of team development, and characteristics of effective teams.
- Other: newsprint on easel, markers, masking tape, LCD projector

Evaluation/assessment

Questions and answers, trainer's observation and participant's summaries

Trainer

Experienced with management of primary health care in Iraq

Estimated training time

45 mints

Session plan

Objective	Content	Methods/ Activities
<p>2.4.1 Explain the premarital screening for thalassemia</p> <p>(15 Min.)</p>	<ul style="list-style-type: none"> • All couples to be married will need certificate of probable thalassemia status. • Both man and woman should be screened • If both RBC indices for one member of couple are normal • If at least one of RBC indices on BOTH members of couple has abnormal low value, • Other findings, such as blood smear findings 	<p>Q&A</p>
<p>2.4.2 Explain the result of screening and confirmatory test</p> <p>(25Min.)</p>	<ul style="list-style-type: none"> ➤ A. For Screening Test: <ul style="list-style-type: none"> ➤ If screening test negative – reassure patient and provide appropriate signed statement. ➤ If screening test positive – give further counseling: <ul style="list-style-type: none"> ➤ Explain need for further testing ➤ Arrange for hemoglobin electrophoresis/HPLC test. ➤ Answer patient questions about testing and thalassemia B. For Confirmatory Tests: <ul style="list-style-type: none"> ➤ If hemoglobin electrophoresis test/HPLC positive for thalassemia carrier state (Hb.A2 > 3.5% and/or Hb.F increased) – refer patient to specialized 	<p>Discussion</p> <p>Summary</p>

Objective	Content	Methods/ Activities
<p>2.4.2 Identify the protocol of B-thalassemia</p> <p>(15mins)</p>	<p>Thalassemia Counselor for further counseling.</p> <ul style="list-style-type: none"> ➤ If hemoglobin electrophoresis tests normal, continue testing to determine cause of microcytosis and/or hypochromia. <p>Figure 1: Premarital Counseling Protocol for β-Thalassemia</p>	<p>Presentation</p>

Session 2.4: Beta-thalassemia

2.4.1 Explain the premarital screening for thalassemia

- All couples to be married will need certificate of probable thalassemia status.
- Both man and woman should be screened; although only one can be kkscreened, and if positive, then request screening of second.
- Screening test – RBC cell size and hemoglobin concentration (MCV and MCH) – should be greater than 80 and 27, respectively
- If both RBC indices for one member of couple are normal (even if second member has abnormal low results), certificate can be given.
- If at least one of RBC indices on BOTH members of couple has abnormal low value, BOTH patients referred for hemoglobin electrophoresis (or HPLC) as definitive test.
- Other findings, such as blood smear findings, Hb level, iron or ferritin levels...etc, can provide additional information, but not as accurate as hemoglobin electrophoresis.

2.4.2 Explain of Results of Screening and Confirmatory Tests

A. For Screening Test:

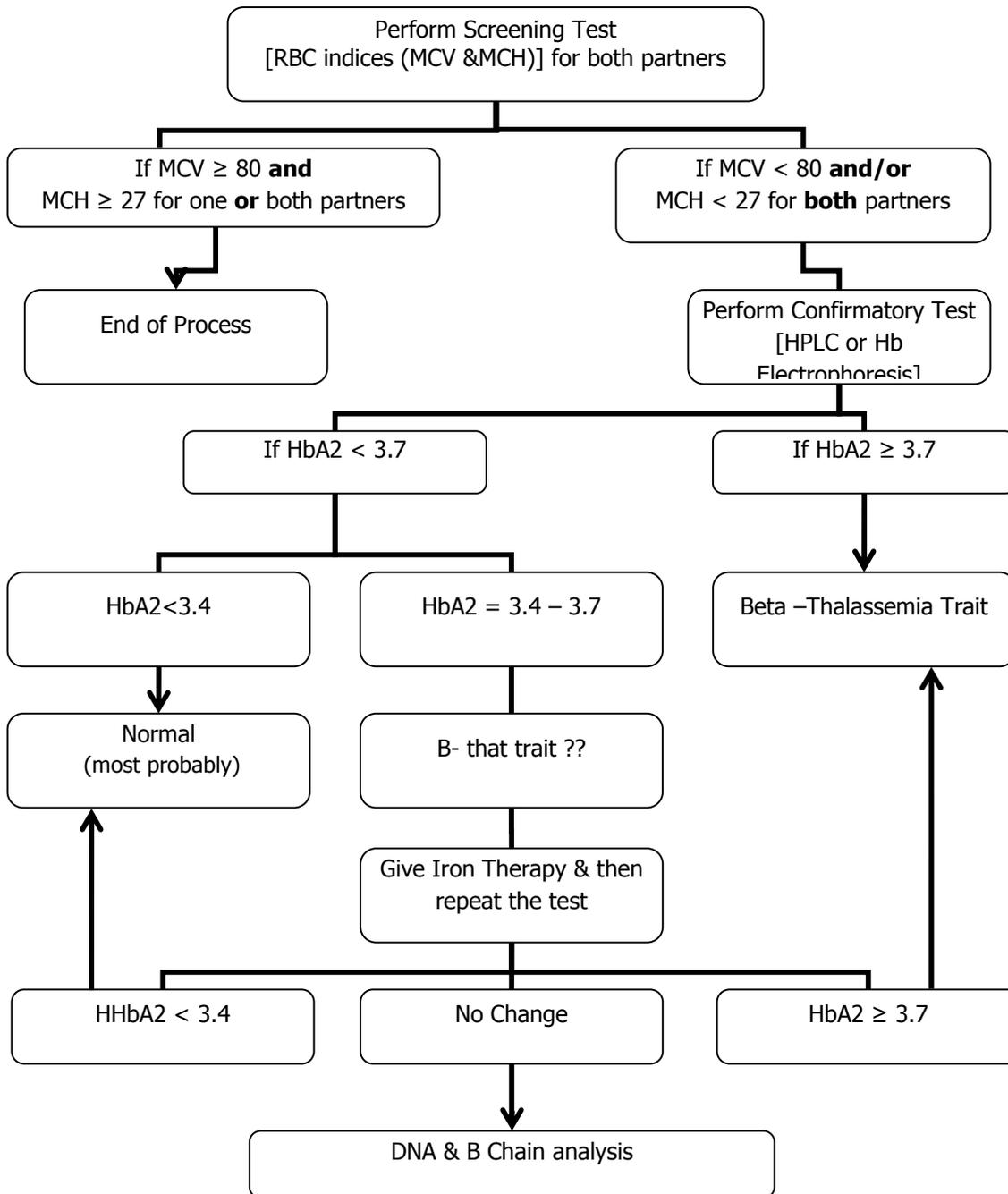
- If screening test negative – reassure patient and provide appropriate signed statement.
- If screening test positive – give further counseling:
 - Explain need for further testing – hemoglobin electrophoresis or HPLC and possibly iron testing – as specific test to determine cause of abnormal results and thalassemia status.
 - Arrange for hemoglobin electrophoresis/HPLC test.
 - Answer patient questions about testing and thalassemia.

B. For Confirmatory Tests:

- If hemoglobin electrophoresis test/HPLC positive for thalassemia carrier state (Hb.A2 > 3.5% and/or Hb.F increased) – refer patient to specialized Thalassemia Counselor for further counseling.
- If hemoglobin electrophoresis tests normal, continue testing to determine cause of microcytosis and/or hypochromia.
 - Most common cause is iron deficiency anemia, so request serum iron and ferritin, and total iron binding capacity (TIBC) levels.
 - If iron deficiency confirmed by low iron and ferritin level or high TIBC, treat with iron supplement and follow-up.
 - If iron deficiency not confirmed (iron tests normal), patient may have a silent thalassemia trait or other problem, and should be referred to appropriate specialist.

NOTE: Alpha thalassemia occurs more frequently in South-East Asia and is not screened routinely during premarital counseling.

2.4.3 Identify the protocol of B-thalassemia



Session 2.5 Sickle Cell Disorder

Specific objectives of the session

At the end of the session the participants will be able to:

- Define Sickle cell disorder
- Explain the genetic issue of Sickle cell disorder
- Describe the clinical pictures of Sickle cell disorder
- Numerate the symptoms of untreated patients .
- Explain the Laboratory Diagnosis of Thalassemia

Trainer preparation

- Review the reading material and the session plan.
- Prepare the presentation as appropriate and as recommended in the method column of the session plan, or write the information on a flipchart or board where all participants can see it.
- Prepare copies of the reference materials/handouts and exercises.
- Arrange the training room.

Methods and activities

Mini- lecture, questions and answers, discussion in plenary, summary

Resources

- Reference material/handouts: features of the team, ways of operating successful teams, the role of the manager in a team, the difference between groups and teams, The process of team development, and characteristics of effective teams.
- Other: newsprint on easel, markers, masking tape, LCD projector

Evaluation/assessment

Questions and answers, trainer's observation and participant's summaries

Trainer

Experienced with management of primary health care in Iraq

Estimated training time

70 mints

Objective	Content	Methods/ Activities
(15 Min.)	<p>(carriers) are generally asymptomatic</p> <ul style="list-style-type: none"> • The main causes of death are infection ➤ The severity of disease manifestations varies from severe to minimal ➤ Sickle cell disease (homozygous – disease state) ➤ Most individuals with sickle cell disease are healthy at birth and become symptomatic later on 	
<p>2.5.4 Numerate the Symptoms of untreated patients</p> <p>(10 min.)</p>	<ul style="list-style-type: none"> • Vaso-occlusive events result in tissue ischemia leading to acute and chronic pain as well as organ damage that can affect any organ in the body • Dactylitis • In children the spleen can become engorged with blood cells in a “splenic sequestration crisis.” • Chronic hemolysis results in varying degrees of anemia, jaundice, cholelithiasis, and delayed growth and sexual maturation 	Q&A
<p>2.5.5 Explain the Laboratory diagnosis</p> <p>(15 Min.)</p>	<ul style="list-style-type: none"> ➤ The presence of significant quantities of Hb S by high-performance liquid chromatography (HPLC), ➤ The lack of a normal β-globin gene on Molecular Genetic Testing. ➤ Peripheral blood smear shows Sickle cells ➤ MCV and HbA2 may be normal or reduced depending on specific genotype of disorder. 	Mini-lecture

Session 2.5: Sickle Cell Disorder

2.5.1 Define Sickle cell disorder

The term “sickle-cell disorder” includes all manifestations of abnormal hemoglobin S levels (proportion of HbS >50%). These include spectrum ranging from homozygous sickle-cell disease (HbSS) through mixed heterozygous hemoglobinopathies (HbS/β-thalassemia, HbSC disease, and other combinations) to purely heterozygous sickle cell trait (HbSA).

Sickle cell disease is most common in people living in or originating from sub-Saharan Africa. The disorder also affects people of Mediterranean, Caribbean, Middle-Eastern (including Iraq), and Asian origin.

2.5.2 Explain the genetic issue of Sickle cell Disorder

- Sickle cell disease is inherited in an autosomal recessive manner.
- If both parents are carriers of beta-globin (HBB) mutation, each offspring has at conception a 25% chance of being affected with the disease, a 50% chance of being an asymptomatic carrier, and a 25% chance of being unaffected and not a carrier.
- If one parent is homozygous and the other parent is heterozygous for an HBB mutation, each offspring has a 50% chance of being affected and a 50% chance of being an asymptomatic carrier.
- If both parents are homozygous, all offspring will be affected.

2.5.3 Describe the clinical picture of sickle cell disorder

- Sickle cell trait (heterozygous – carrier state)
 - These individuals do not express symptoms of sickle cell disease
 - Individuals normally do not have anemia, except in the cases of mixed heterozygous hemoglobinopathies (e.g. HbS/β-thalassemia, HbSC disease, and other combinations).
 - Although, Heterozygotes (carriers) are generally asymptomatic, but they may develop complications under extremes of physical exertion, dehydration, and/or altitude.
- Sickle cell disease (homozygous – disease state)
 - Most individuals with sickle cell disease are healthy at birth and become symptomatic later on, after fetal hemoglobin (Hb F) levels decrease and hemoglobin S (Hb S) levels increase.
 - The severity of disease manifestations varies from severe to minimal, even in individuals with the same HBB mutation status.
 - The main causes of death are infection, acute chest syndrome, pulmonary artery hypertension, and cerebrovascular events.

2.5.4 Numerate the symptoms of untreated patients

- Vaso-occlusive events result in tissue ischemia leading to acute and chronic pain as well as organ damage that can affect any organ in the body, including the bones, lungs, liver, kidneys, brain, eyes, and joints.

- Dactylitis (pain and/or swelling of the hands or feet) in infants and young children is often the earliest manifestation of sickle cell disease.
- In children the spleen can become engorged with blood cells in a “splenic sequestration crisis.” The spleen is also particularly subject to infarction and the majority of individuals with SCD are functionally asplenic in early childhood, increasing their risk for certain types of bacterial infections.
- Chronic hemolysis results in varying degrees of anemia, jaundice, cholelithiasis, and delayed growth and sexual maturation. Individuals with the highest rates of hemolysis are predisposed to pulmonary artery hypertension, priapism, and leg ulcers but are relatively protected from vaso-occlusive pain.

2.5.5 Explain the Laboratory Diagnosis of Thalassemia

- The presence of significant quantities of Hb S by high-performance liquid chromatography (HPLC), isoelectric focusing, or (less commonly) cellulose acetate or citrate agar electrophoresis
- The lack of a normal β -globin gene on Molecular Genetic Testing.
- Peripheral blood smear shows Sickle cells, nucleated red blood cells, and target cells may be seen.
- MCV and HbA2 may be normal or reduced depending on specific genotype of disorder.

Session 2.6 Sickle Cell Disorder

Specific objectives of the session

At the end of the session the participants will be able to:

- Identify the treatment options for Sickle cell disorder
- Explain the prevention strategies

Trainer preparation

- Review the reading material and the session plan.
- Prepare the presentation as appropriate and as recommended in the method column of the session plan, or write the information on a flipchart or board where all participants can see it.
- Prepare copies of the reference materials/handouts and exercises.
- Arrange the training room.

Methods and activities

Discussion in plenary, brain storming, summery

Resources

- Reference material/handouts: features of the team, ways of operating successful teams, the role of the manager in a team, the difference between groups and teams, The process of team development, and characteristics of effective teams.
- Other: newsprint on easel, markers, masking tape, LCD projector

Evaluation/assessment

Questions and answers, trainer's observation and participant's summaries

Trainer

Experienced with management of primary health care in Iraq

Estimated training time

45 mints

Session plan

Objective	Content	Methods/ Activities
<p>2.6.1 Identify the treatment options for sickle cell disorder</p> <p>(25 Min.)</p>	<p>I. For Sickle Cell Trait:</p> <ul style="list-style-type: none"> • People with sickle cell trait can live full lives and enjoy most of the activities that other people do. • There are things that those people can do to stay as healthy as possible <p>II. For Sickle Disease:</p> <ul style="list-style-type: none"> ➤ The mainstay is good hydration and avoidance of climate extremes, extreme fatigue, and activities leading to inflammation. ➤ Hydroxyurea can decrease the frequency ➤ Chronic red blood cell transfusion is indicated in children ➤ Aggressive education on the management of fevers ➤ Early management of complications ➤ Periodic monitoring investigation and follow-up examination 	<p>Brain storming</p>
	<ul style="list-style-type: none"> • As for thalassemia, the only way for prevention of sickle cell disease is to prevent passing down the genes to a child. <ul style="list-style-type: none"> • In some countries, Pre-implantation genetic diagnosis (PGD) may be available for families in which the disease-causing mutations have been identified. • It is appropriate to provide counseling of couple when both male and female found to be heterozygous sickle cell carriers 	<p>Discussion</p> <p>Summary</p>

Session 2.6: Sickle Cell Disorder

2.6.1 Identify the treatment option of sickle cell disorder

I. For Sickle Cell Trait:

- People with sickle cell trait can live full lives and enjoy most of the activities that other people do.
- There are things that those people can do to stay as healthy as possible. Below are a few examples:
 - Get regular checkups. Regular health checkups with a primary care doctor can help prevent some serious problems.
 - Prevent infections. Common illnesses, like the flu, can quickly become dangerous for a child with sickle cell disease. The best defense is to take simple steps to help prevent infections.
 - Learn healthy habits. People with sickle cell trait should drink 8 to 10 glasses of water every day and eat healthy food. They also should try not to get too hot, too cold, or too tired.

II. For Sickle Disease:

- The mainstay is good hydration and avoidance of climate extremes, extreme fatigue, and activities leading to inflammation.
- Hydroxyurea can decrease the frequency and severity of vaso-occlusive processes, reduce transfusion needs, and increase life span.
- Chronic red blood cell transfusion is indicated in children with either a history of or risk factors for stroke and other specific complications, such as pulmonary hypertension and chronic renal failure.
- Aggressive education on the management of fevers; prophylactic antibiotics, including penicillin in children; up-to-date immunizations; and iron chelation therapy for those with iron overload.
- Early management of complications.
- Periodic monitoring investigation and follow-up examination

2.6.1 Explain the prevention strategy

- As for thalassemia, the only way for prevention of sickle cell disease is to prevent passing down the genes to a child.
- It is appropriate to provide counseling of couple when both male and female found to be heterozygous sickle cell carriers.
- In some countries, Pre-implantation genetic diagnosis (PGD) may be available for families in which the disease-causing mutations have been identified.

Session 2.7 Sickle Cell Disorder

Specific objectives of the session

At the end of the session the participants will be able to:

- Explain the premarital screening for sickle cell disorder
- Identify the indication for sickle cell testing in Premarital Counseling

Trainer preparation

- Review the reading material and the session plan.
- Prepare the presentation as appropriate and as recommended in the method column of the session plan, or write the information on a flipchart or board where all participants can see it.
- Prepare copies of the reference materials/handouts and exercises.
- Arrange the training room.

Methods and activities

Discussion in plenary, brain storming, summery

Resources

- Reference material/handouts: features of the team, ways of operating successful teams, the role of the manager in a team, the difference between groups and teams, The process of team development, and characteristics of effective teams.
- Other: newsprint on easel, markers, masking tape, LCD projector

Evaluation/assessment

Questions and answers, trainer's observation and participant's summaries

Trainer

Experienced with management of primary health care in Iraq

Estimated training time

45 mints

Session 2.7: Sickle Cell Disorder

2.7.1 Identify the treatment option of sickle cell disorder

I. For Sickle Cell Trait:

Routine screening for sickle cell disorder is not currently available in Iraq. However, this action can be offered to couple if any member of them is at high risk of being carrier (Table 4).

Those partners should be referred to health facility where appropriate investigations and counseling for sickle cell disorder are available.

Carrier detection for HBB mutations involving abnormal hemoglobin (e.g. sickling disorder) is most commonly accomplished by HPLC or hemoglobin electrophoresis.

2.7.2 Identify the indication for sickle cell testing in premarital counseling

Box 4: Indications for Sickle Cell Testing in Premarital Counseling

1. Positive family history of sickle cell disorder
2. Suggestive personal history of having sickling trait:
 - a. Recurrent urinary tract infections in women or gross hematuria of unclear etiology
 - b. History of splenic infarction at high altitude, with exercise, or with hypoxia
 - c. History of glaucoma or recurrent hyphema following a first episode of hyphema
 - d. History of exercise related life – threatening complications or exertional heat illness (e.g. exertional rhabdomyolysis, heat stroke, or renal failure)
3. The other partner is already known to have sickling disorder, whether trait or disease.

Note: It must be kept in mind that non-sickle β -globin disorders (e.g., β -thalassemia) can interact with the SCD-causing mutation leading to clinically significant disease.

For example, if one parent has sickle cell trait and the other has β -thalassemia trait, it would be correct to state that, although one parent is not a sickle cell carrier, there is still a 25% chance that each pregnancy would have a significant hemoglobinopathy.

Therefore, partners of individuals who are known to carry sickle cell trait should be offered a thalassemia screening panel that includes hemoglobin electrophoresis or HPLC to screen for carrier status for sickle cell trait and other β -globin disorders.

Note: Premarital screening for other variants of structural hemoglobin abnormality (e.g. HbC, and HbE) is not performed routinely during premarital counseling.

Module 3: Premarital Guidelines for Sexually Transmitted Diseases

Module Objectives:

At the end of this module the participants will be able to:

- Define the term of Sexually transmitted disease
- Identify Hepatitis B disease
- Explain of result of HBsAg test
- Knowledge the counseling steps and fellow up of Hepatitis B
- Identify Syphilis disease
- Numerate the stages of Syphilis
- Explain the premarital screening for Syphilis
- Identify the treatment and follow- up of Syphilis
- Identify the counseling steps and the protocol of Syphilis
- Identify Acquired Immunodeficiency Syndrome

Session 1: Hepatitis B

Session 2: Syphilis and Acquired Immunodeficiency Syndrome

Evaluation/ Assessment

Questions and answers, participants' summaries, trainer's evaluation

Estimated Training Time

4.5 hours

Session 3.1: Hepatitis B disease

Specific objectives of the session

At the end of the session the participants will be able to:

- Define the term of Sexually transmitted disease
- Identify Hepatitis B disease
- Explain of result of HBsAg test
- Knowledge the counseling steps and fellow up of Hepatitis B

Trainer preparation

- Review the reading material and the session plan.
- Prepare the presentation as appropriate and as recommended in the method column of the session plan, or write the information on a flipchart or board where all participants can see it.
- Prepare copies of the reference materials/handouts and exercises.
- Arrange the training room.

Methods and activities

Exercises, questions and answers, discussion in plenary, brain storming and simulation.

Resources

- Reference material/handouts: features of the team, ways of operating successful teams, the role of the manager in a team, the difference between groups and teams, The process of team development, and characteristics of effective teams.
- Other: newsprint on easel, markers, masking tape, LCD projector

Evaluation/assessment

Questions and answers, trainer's observation and participant's summaries

Trainer

Experienced with management of primary health care in Iraq

Estimated training time

2h

Session Plan

Objective	Content	Methods/ Activities
3.1.1 Define the term of sexually transmitted disease. (15 min.)	Premarital Counseling visits represent a good opportunity for detection and treatment of sexually transmitted diseases, as well as prevention of their transmission to the partner. It provides also the time for giving the advices and instructions of their risks, modes of transmission, and ways of avoidance and protection from them	Mini- lecture
3.1.2 Identify Hepatitis B disease (15min.)	Hepatitis B is caused by infection with the hepatitis B virus (HBV). The incubation period from the time of exposure to onset of symptoms is 6 weeks to 6 months. HBV is more infectious and relatively more stable in the environment than other blood borne pathogens like HCV and HIV	Mini lectures
3.1.3 Explain the result of HBsAg (20min.)	<ul style="list-style-type: none"> • If Negative HBsAg- Reassure the partner and give the appropriate counseling on STDs • If Positive HBsAg <ul style="list-style-type: none"> ➤ Refer to secondary care ➤ Before referral, do counseling regarding: <ul style="list-style-type: none"> ○ Relieve anxiety ○ Risk: HBV infection can be self-limited or chronic. Risk for chronic infection is inversely related to age at acquisition ○ Prevention: Two products have been approved for hepatitis B prevention: hepatitis B immune globulin (HBIG) and hepatitis B vaccine. <p>HBIG provides temporary</p> <p>Hepatitis B vaccine provides</p>	Discussion
<ul style="list-style-type: none"> • 3.1.4 Knowledge the counseling steps and fellow up of Hepatitis B • (30 mints) 	<ul style="list-style-type: none"> ➤ Counseling: <ul style="list-style-type: none"> • Partner notification is mandatory. • Vaccination is advised for the partner (three doses at 0 - 1 - 6 months). • Do (Anti HBsAb) within 1-4 weeks from the third dose to check immunity <ul style="list-style-type: none"> ➤ Follow- up: 	Q&A

	<p>The following investigations should be requested for the patient every 6 months:</p> <ol style="list-style-type: none">1. Hepatitis B profile (HBsAg, Anti HBe(IgM), HBeAg, AntiHBeAb)2. Liver function test (LFT), prothrombin time(PT), and complete blood count (CBC).3. Liver Ultrasound	<ul style="list-style-type: none">• Summary
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Session 3.1.1: Define the term of Sexually transmitted disease

Premarital Counseling visits represent a good opportunity for detection and treatment of sexually transmitted diseases ,as well as prevention of their transmission to the partner. It provides also the time for giving the advices and instructions of their risks, modes of transmission, and ways of avoidance and protection from them

Session 3.1.2: Identify Hepatitis B disease

Hepatitis B is caused by infection with the hepatitis B virus (HBV). The incubation period from the time of exposure to onset of symptoms is 6 weeks to 6 months. HBV is more infectious and relatively more stable in the environment than other blood borne pathogens like HCV and HIV.

Viral hepatitis is endemic in Iraq. The prevalence of HBsAg is 2-3% in the normal population. Both couples should do HBsAg as a routine giving that positive test will pick up 99%of cases, in addition to being also cheap and easy test

Session 3.1.3: Explain the result of HBsAg

- If Negative HBsAg- Reassure the partner and give the appropriate counseling on STDs
- If Positive HBsAg
 - Refer to secondary care
 - Before referral, do counseling regarding:
 - Relieve anxiety
 - Risk: HBV infection can be self-limited or chronic. Risk for chronic infection is inversely related to age at acquisition. In adults, only approximately half of newly acquired HBV infections are symptomatic, and approximately 1% of reported cases result in acute liver failure and death. Among persons with chronic HBV infection, the risk for premature death from cirrhosis or hepatocellular carcinoma (HCC) is 15%–25%.
 - Prevention: Two products have been approved for hepatitis B prevention: hepatitis B immune globulin (HBIG) and hepatitis B vaccine.
 - ✓ HBIG provides temporary (i.e. 3–6 months) protection from HBV infection and is typically used as PEP (post-exposure prophylaxis) either as an adjunct to hepatitis B vaccination in previously unvaccinated persons or alone in persons who have not responded to vaccination.
 - ✓ Hepatitis B vaccine provides protection from HBV infection when used for both pre-exposure vaccination and PEP.

Session 3.1.4: knowledge the counseling steps and fellow up of Hepatitis B

Counseling:

- Partner notification is mandatory.
- Vaccination is advised for the partner (three doses at 0 - 1 - 6 months).

- Do (Anti HBsAb) within 1-4 weeks from the third dose to check immunity
 - ✓ If (Anti HBsAb) test is Positive (Immune) - Give a booster dose every 5 years
 - ✓ If (Anti HBsAb) test is Negative (Non-immune) - Refer to secondary care

Follow-up:

The following investigations should be requested for the patient every 6 months:

1. Hepatitis B profile (HBsAg, Anti HBc(IgM), HBeAg, AntiHBeAb)
2. Liver function test (LFT), prothrombin time(PT), and complete blood count (CBC).
3. Liver Ultrasound

The result of these investigations will determine the patient status:

- If found Carrier
(Anti HBeAb positive, HBeAg negative with normal LFT and Ultrasound)
 - Counseling
 - Repeat check up every 6 months
 - Family screening
- If found Active
(HBeAg positive, elevated LFT or abnormal liver ultrasound)
 - Refer to secondary care

Session 3.2: Syphilis and Acquired Immunodeficiency Syndrome

Specific objectives of the session

At the end of the session the participants will be able to:

- Identify Syphilis disease
- Numerate the stages of Syphilis
- Explain the premarital screening for Syphilis
- Identify follow- up of Syphilis
- Identify the counseling steps and the protocol of Syphilis
- Identify Acquired Immunodeficiency Syndrome

Trainer preparation

- Review the reading material and the session plan.
- Prepare the presentation as appropriate and as recommended in the method column of the session plan, or write the information on a flipchart or board where all participants can see it.
- Prepare copies of the reference materials/handouts and exercises.
- Arrange the training room.

Methods and activities

Exercises, questions and answers, discussion in plenary, brain storming and simulation

Resources

- Reference material/handouts: features of the team, ways of operating successful teams, the role of the manager in a team, the difference between groups and teams, The process of team development, and characteristics of effective teams.
- Other: newsprint on easel, markers, masking tape, LCD projector

Evaluation/assessment

Questions and answers, trainer's observation and participant's summaries

Estimated training time

2.5 hours

Session plan

Objective	Contents	Methods \ Activities
<p>3.2.1 Identify Syphilis disease (15 min.)</p>	<p>Syphilis is a systemic disease caused by <i>Treponema pallidum</i>. On the basis of clinical findings, the disease has been divided into a series of overlapping stages, which are used to help guide treatment and follow-up.</p>	<p>Mini lecture</p>
<p>3.2.2 Numerate the stages of Syphilis (15 min.)</p>	<ol style="list-style-type: none"> 1. Primary stage: there is ulcer or chancre at the infection site. 2. Secondary stage: its manifestations include, but are not limited to, skin rash, mucocutaneous lesions, and lymphadenopathy. 3. The latent stage: this begins when primary and secondary symptoms disappear. Latent syphilis acquired within the preceding year is referred to as early latent syphilis; other cases of latent syphilis are late latent syphilis. 4. Tertiary stage: symptoms include difficulty coordinating muscle movements, paralysis, numbness, gradual blindness, and 	<p>Q&A</p>

Objective	Contents	Methods \ Activities
	<p>dementia. The disease damages the internal organs, including the brain, nerves, eyes, heart, blood vessels, liver, bones, and joints. This damage can result in death.</p>	
<p>3.2.3 Explain the premarital screening for Syphilis (30 min.)</p>	<ul style="list-style-type: none"> • Do Venereal Disease Research Laboratory (VDRL) test: <ul style="list-style-type: none"> ➤ If the test is negative then the partner most likely to not have the disease ➤ If Positive (Reactive) refer to secondary care level to do TPHA • TPHA (Treponema pallidum heamagglutination test) <ul style="list-style-type: none"> ➤ Used to confirm the diagnosis of syphilis in patients with positive (reactive) VDRL ➤ Usually remain positive for life ➤ False positive results may occur in 1-2%, e.g. systemic lupus erythematosus and Lyme disease. <ul style="list-style-type: none"> • If TPHA is negative then the partner most likely to not have the disease • If TPHA is positive, then 	<p>Discussion</p>

Objective	Contents	Methods \ Activities
	manage accordingly	
3.2.4 Identify the follow- up of Syphilis (15 min.)	<p>immediate referral to a hospital if:</p> <ul style="list-style-type: none"> • Repeat clinical examination and serology • Decline in VDRL titer of > four-folds indicates cure • VDRL titer should become at least 4 times lower within 6 months after treatment of primary • Patients with clinical manifestations that persist 	Mini lecture
3.2.5 Identify the counseling steps and the protocol of Syphilis (20 mins)	<p>All patients with syphilis should be counseled for partner notification, health education</p> <ul style="list-style-type: none"> • For patients with primary syphilis, Sexual partners within the past 3 months should be notified as the incubation period is up to 90 days. • Partner notification may have to extend to 2 years for patients in 	Brain Storming

Objective	Contents	Methods \ Activities
	<p style="text-align: center;">secondary syphilis with clinical relapse in early latent syphilis.</p> <ul style="list-style-type: none"> • 40-60% of contactable sexual <p>Epidemiological treatment for asymptomatic contacts of early syphilis should be considered</p> <ul style="list-style-type: none"> • Serological tests for syphilis should be performed at the first visit and repeated at 6 weeks and 3 months 	
<p>3.2.6 Identify Acquired Immunodeficiency Syndrome</p> <p>(20min.)</p>	<p>Those who are diagnosed to be HIV positive should be referred to the HIV focal point which will be responsible for the rest of the actions</p>	<p>Q&A</p>

Session 3.2

3.2.1 Identify Syphilis disease

Syphilis is a systemic disease caused by *Treponema pallidum*. On the basis of clinical findings, the disease has been divided into a series of overlapping stages, which are used to help guide treatment and follow-up.

3.2.2 Numerate the stages of syphilis

1. Primary stage: there is ulcer or chancre at the infection site.
2. Secondary stage: its manifestations include, but are not limited to, skin rash, mucocutaneous lesions, and lymphadenopathy.
3. The latent stage: this begins when primary and secondary symptoms disappear. Latent syphilis acquired within the preceding year is referred to as early latent syphilis; other cases of latent syphilis are late latent syphilis.
4. Tertiary stage: symptoms include difficulty coordinating muscle movements, paralysis, numbness, gradual blindness, and dementia. The disease damages the internal organs, including the brain, nerves, eyes, heart, blood vessels, liver, bones, and joints. This damage can result in death.

3.2.3 Explain the premarital screening for syphilis

- Do Venereal Disease Research Laboratory (VDRL) test:
 - If the test is negative then the partner most likely to not have the disease
 - If Positive (Reactive) to do TPHA

Box 5: Causes of False VDRL Test Results

- I. False Negative VDRL, decreased sensitivity in 1/3 of patients in early primary and during late syphilis (i.e. VDRL may be non-reactive), so the physician should be alert to these situations
- II. False Positive VDRL (usually titer < 1:8 [1:2-1:8]), causes include:
 1. Autoimmune disease
 2. Connective tissue disease
 3. Concomitant viral infection
 4. Pregnancy
 5. Elderly

6. IV drug abuse
7. Recent immunization
8. Dermatological diseases
9. Febrile illness
10. Multiple blood transfusion

- TPHA (Treponema pallidum hemagglutination test)
 - Used to confirm the diagnosis of syphilis in patients with positive (reactive) VDRL
 - Usually remain positive for life
 - False positive results may occur in 1-2%, e.g. systemic lupus erythematosus and Lyme disease.
 - If TPHA is negative then the partner most likely to not have the disease
 - If TPHA is positive, then manage accordingly

3.2.4 Identify the follow-up of syphilis

Follow-up

- Repeat clinical examination and serology (VDRL quantitative titer) after 1, 3, 6, 12 and 24 months to assess treatment efficacy and compliance.
- Decline in VDRL titer of > four-folds indicates cure (i.e., compared with the maximum or baseline titer at the time of treatment)
- VDRL titer should become at least 4 times lower within 6 months after treatment of primary or secondary syphilis, and within 12 to 24 months after treatment of latent or late infection.
- Patients with clinical manifestations that persist or recur or have a sustained four-fold increase in VDRL test titer probably failed treatment or were reinfected

3.2.5 Identify the counseling steps and the protocol of syphilis

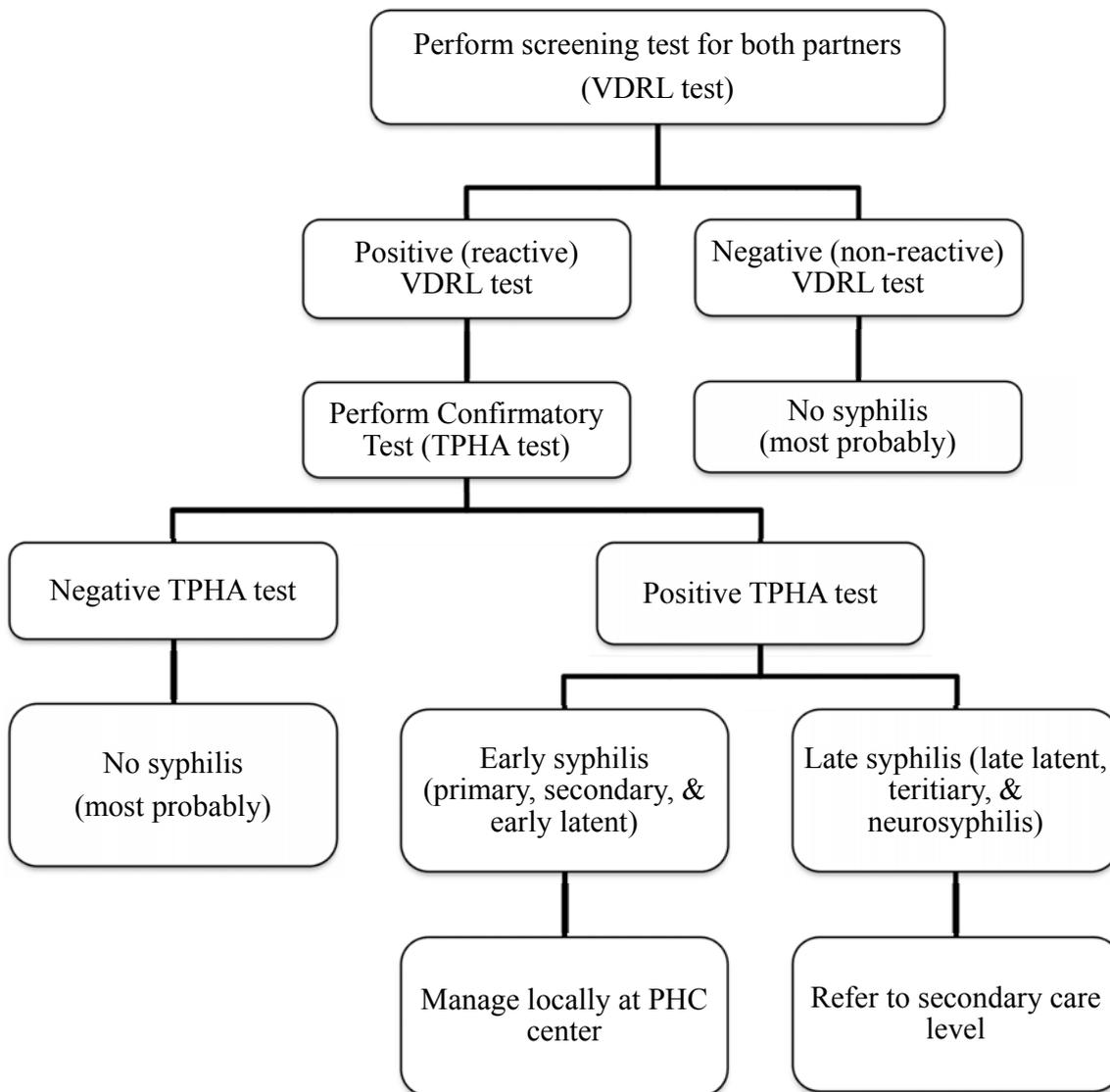
Counseling

- All patients with syphilis should be counseled for partner notification, health education, and confirmation of any past treatment history.
- For patients with primary syphilis, Sexual partners within the past 3 months should be notified as the incubation period is up to 90 days.
- Partner notification may have to extend to 2 years for patients in secondary syphilis with clinical relapse in early latent syphilis.
- 40-60% of contactable sexual partners of patients with early syphilis also have the infection. Vertical transmission during pregnancy can occur at any time of pregnancy and with all stages of syphilis
- Epidemiological treatment for asymptomatic contacts of early syphilis should be considered unless partners are able to attend regularly for exclusion for syphilis.

- Serological tests for syphilis should be performed at the first visit and repeated at 6 weeks and 3 months.

3.2.6 Identify Acquired Immunodeficiency Syndrome

- Those who are diagnosed to be HIV positive should be referred to the appropriate secondary care level.
 - HIV section in MoH will be called in order to coordinate with the following:
 - The partner with positive blood test to arrange special appointment
 - Physician concerned with special consultation to determine the patient willing to marry and sharing data
 - Primary health care doctor to send Premarital Counseling Form and go ahead with the notification and counseling of second partner.
-



Premarital Counseling Protocol for Syphilis

Module 4: Plan of Action in Premarital Counseling

Module Objectives

By the end of this module the participants will be able to:

1. Use the “Premarital Counseling Risk Assessment” Form
2. Apply the Performance Checklist

Session 1: The Premarital Counseling Risk Assessment Form

Session 2: Performance checklist

Evaluation/ Assessment

Questions and answers, participants’ summaries, trainer’s evaluation

Estimated Training Time

8 hour

Session 4.1: the Premarital Counseling Risk Assessment Form

Specific objectives of the session

At the end of the session the participants will be able to:

1. Use the premarital counseling risk assessment form

Trainer preparation

- Review the reading material and the session plan.
- Prepare the presentation as appropriate and as recommended in the method column of the session plan, or write the information on a flipchart or board where all participants can see it.
- Prepare copies of the reference materials/handouts and exercises.
- Arrange the training room.

Methods and activities

Exercises, questions and answers, discussion in plenary

Resources

- Reference material/handouts: features of the team, ways of operating successful teams, the role of the manager in a team, the difference between groups and teams, The process of team development, and characteristics of effective teams.
- Other: newsprint on easel, markers, masking tape, LCD projector

Evaluation/assessment

Questions and answers, trainer's observation and participant's summaries

Trainer

Experienced with management of primary health care in Iraq

Estimated training time

2:30 hour

Session Plan

Objective	Contents	Methods\ Activities
4.1.1 Use the premarital counseling assessment form (2:30 h)	The assessment form in premarital examination should include the following: 1. Administrative information 2. Socio-demographic data 3. Family history 4. Laboratory investigations 5. Procedures: 6. Signatures of couple	Discussion Exercise (On job training) Q&A

Session 4.1 Premarital Counseling Risk Assessment Form

1. The assessment form in premarital examination (Annex 1) should include the following:
2. 1. Administrative information: name of health institution, sequential number of form, number of certificate and its date of issue.
3. 2. Socio-demographic data: name, age, and occupation, of partners; in addition to the degree of consanguinity between them.
4. 3. Family history: inherited blood diseases (thalassemia, sickle cell anemia, and hemophilia), mental disability, and congenital physical handicap. Any important notes should be recorded.
5. 4. Laboratory investigations: blood grouping and Rh factor, RBC indices (MCV and MCH), VDRL, HBsAg, and tests for HIV and tuberculosis.
6. 5. Procedures: the female partner should be given a dose of tetanus toxoid after checking her immunization status. The field concerning this action is labeled.
7. 6. Signatures of couple, names and signature of examining doctor and director, and stamp of health institution.

Annex 1
Premarital Counseling Risk Assessment Form

جمهورية العراق
وزارة الصحة

رقم التسلسل

اسم المؤسسة الصحية
العدد:
التاريخ: 20 / /

استمارة فحص المقبلين على الزواج

صورة الزوج

صورة الزوجة

الأسم:
العمر:
المهنة:
العنوان:
درجة القرابة بين الزوجين:

ثانية
ثالثة ابعد لا توجد قرابة

التاريخ الصحي للعائلة:
أمراض الدم الوراثية:
الثلاسيميا
فقر الدم المنجلي
الهيوفيليا
العوق الذهني
العوق البيني الولادي

الملاحظات

نعم لا

نعم لا

الفحوصات المختبرية:
B-group & RH
VDRL
HIV
MCV
MCH
HBS Ag
TB

الاجراءات: تعطى الزوجة جرعة من لقاح توكسيد الكزاز ويؤشر الحقل الخاص به

توقيع الزوج

توقيع الزوجة

اسم وتوقيع الطبيب الفاحص

اسم وتوقيع مدير المؤسسة

ختم المؤسسة الصحية

ملاحظة: لا يجوز تسليم الاستمارة الا عند حضور الزوجين وبطرف معلق ومختوم بختم المؤسسة الصحية

Session 4.2: Performance Checklist

Specific objectives of the session

At the end of the session the participants will be able to:

- 1> Apply the performance checklist

Trainer preparation

- Review the reading material and the session plan.
- Prepare the presentation as appropriate and as recommended in the method column of the session plan, or write the information on a flipchart or board where all participants can see it.
- Prepare copies of the reference materials/handouts and exercises.
- Arrange the training room.

Methods and activities

Exercises, questions and answers, discussion in plenary

Resources

- Reference material/handouts: features of the team, ways of operating successful teams, the role of the manager in a team, the difference between groups and teams, The process of team development, and characteristics of effective teams.
- Other: newsprint on easel, markers, masking tape, LCD projector

Evaluation/assessment

Questions and answers, trainer's observation and participant's summaries

Trainer

Experienced with management of primary health care in Iraq

Estimated training time

2:30 hour

Session 4.2 Performance checklist

Performance Checklist

I. Preparations for Premarital Counseling (PC)			
Task	Achieved		Comments
	Yes	No	
1. Trained physician on PC			
2. Trained paramedic on PC			
3. Specific place for PC			
4. Specific record for PC			
II. First Visit (to Paramedic/Health Worker)			
Task	Achieved		Comments
	Yes	No	
1. Welcome the couple			
2. Explain your plan of action			
3. Determine the degree of consanguinity between the couple			
4. Obtain the family history for both partners			
5. Draw blood sample from both partners for requested lab investigations			
6. Giving dose of tetanus toxoid to female partner			
7. Arrange next appointment for counseling			
8. Take phone numbers of couple			

III. Preparations between the Visits			
Task	Achieved		Comments
	Yes	No	
1. The paramedic reviews the family history of couple			
2. The paramedic reviews the results of laboratory investigations of couple			
3. The Paramedic discuss abnormal finding with the physician			
4. Rearrange separate appointment for each partner in case of abnormal findings			
IV. Second Visit (to the Physician)			
Task	Achieved		Comments
	Yes	No	
1. Welcome the couple			
2. Explain your plan of action			
3. Review the PC risk assessment form			
4. Take the medical history of each partner			
5. Perform the physical examination for each partner			
6. Assess the condition of each partner			
7. Make the required counseling			

Module 5: Preconception counseling

Module Objectives:

At the end of this module the participants will be able to:

- Promote awareness of Patients attended the public clinic

Session 1: Health Education, nutrition counseling, Drugs and Special Habits

Testing for Rh and Blood Group, Rubella Vaccination, Birth Planning

Evaluation/ Assessment

Questions and answers, participants' summaries, trainer's evaluation

Estimated Training Time

85 mints

Session 5.1: Preconception counseling

Specific objectives of the session

At the end of the session the participants:

1. Raise health education
2. Explain the nutrition counseling
3. Identify the Drugs and Special Habits
4. Explain the "Testing for Rh and Blood Grou"
5. Knowledge the Rubella Vaccination
6. Aware of "Birth Planning"

Trainer preparation

- Review the reading material and the session plan.
- Prepare the presentation as appropriate and as recommended in the method column of the session plan, or write the information on a flipchart or board where all participants can see it.
- Prepare copies of the reference materials/handouts and exercises.
- Arrange the training room.

Methods and activities

Exercises, questions and answers, discussion in plenary, brain storming and simulation.

Resources

- Reference material/handouts: features of the team, ways of operating successful teams, the role of the manager in a team, the difference between groups and teams, The process of team development, and characteristics of effective teams.
- Other: newsprint on easel, markers, masking tape, LCD projector

Evaluation/assessment

Questions and answers, trainer's observation and participant's summaries

Trainer

Experienced with management of primary health care in Iraq

Estimated training time

(85 mints)

Session plan

Objectives	Contents	Methodology\ Activities
5.1.1 Raise health education (15min.)	<p>Preconception care and counseling should be provided to all women of childbearing age before and in-between pregnancies</p> <p>Health education should be given to all women concerning the need for antenatal care, the need to avoid the use of drugs (particularly in early pregnancy), and the importance of tracking her menstrual cycle</p>	Mini lecture
5.1.2 Explain the nutrition counseling (10min.)	<ul style="list-style-type: none"> • Iron and Calcium • Folic Acid • Vitamin A 	Q&A
5.1.3 Identify the Drugs and Special Habits (15min.)	<p>Preconception counseling offers an opportunity for health education of women</p> <p>Smoking & Alcohol</p> <p>Many women understand the risk of substance exposure during pregnancy,</p>	Question and answers
5.1.4 Explain the “Testing for Rh and Blood Group” (20 min.)	Rh-factor and blood group typing should be done for all women awaiting the first pregnancy	Discussion
5.1.5 Knowledge the Rubella Vaccination (15 mints)	Congenital rubella syndrome can be prevented by preconception screening and	Mini lecture

Objectives	Contents	Methodology\ Activities
6.1.6 Aware of “Birth Planning” (10min.)	vaccination. With the availability of modern effective methods for family planning, <ul style="list-style-type: none"> • While an adolescent girl will be advised to postpone the first pregnancy 	Q&A

5.1 Preconception counseling

Preconception care and counseling should be provided to all women of childbearing age before and in-between pregnancies. Premarital visits represent a good opportunity for offering these services to improve maternal and neonatal outcome.

General Components of Preconception Counseling:

1. Health Education:

Health education should be given to all women concerning the need for antenatal care, the need to avoid the use of drugs (particularly in early pregnancy), and the importance of tracking her menstrual cycle.

2. Nutritional Counseling:

- Iron and Calcium: A particular need during pregnancy is to replenish the iron and calcium stores, either through good dietary habits or supplementation.
- Folic Acid: An adequate amount of folic acid is also essential. There is evidence that peri-conception intake of folic acid reduces the risk of congenital neural tube defects. No benefit is gained if the use starts after the first six weeks of pregnancy. A daily supplementation of 0.4 mg/day has been recommended for all women capable of becoming pregnant.
- Vitamin A: An excess intake of vitamin A from supplementary sources is to be avoided and stopped because of a possible link to a higher incidence of congenital anomalies.

3. Drugs and Special Habits:

- Preconception counseling offers an opportunity for health education of women to quit the use of certain drugs shown to be unsafe for conception.
- Smoking & Alcohol: Tobacco is now the leading preventable cause of low birth weight in many countries. Also, alcohol is well known to be a teratogen.
- Many women understand the risk of substance exposure during pregnancy, but they are generally unaware of the importance of avoiding exposure in the critical early weeks of pregnancy.

4. Testing for Rh and Blood Group:

Rh-factor and blood group typing should be done for all women awaiting the first pregnancy. If Rh negative, husband should also be tested. When the husband is also Rh negative, no risk is expected for incoming babies. However, if the husband is Rh positive then special interventions should be undertaken to avoid Rh disease of the newborn. The woman should be informed of the need to have an injection of Rh immune globulin (Anti-D) during the second trimester; after abortion, amniocentesis, or abdominal injury during pregnancy; and within few days from birth of Rh-positive baby.

5. Rubella Vaccination:

Congenital rubella syndrome can be prevented by preconception screening and vaccination. Vaccination should be done at least three months before pregnancy. A woman with no history of vaccination and no contraindications to vaccination can be vaccinated without prior serologic testing.

6. Birth Planning:

- With the availability of modern effective methods for family planning, women can plan their birth to the optimal time from a health and social point of view. Births that are too early, too close, too late, and too numerous are better avoided.
- While an adolescent girl will be advised to postpone the first pregnancy, a woman over the age of 35 will be advised against postponing a pregnancy, since her chances of conception and successful outcome will, decrease with age

Module 6: Appropriate age for marriage of women and consanguineous marriage (Endogamy)

Module Objectives:

At the end of this module the participants will be able to:

- Identify the appropriate age for marriage of women
- Explain the consanguineous marriage (Endogamy)

Session 1: appropriate age for marriage of women, consanguineous marriage (Endogamy)

Evaluation/ Assessment

Questions and answers, participants' summaries, trainer's evaluation

Estimated Training Time

85 mints

Session 6.1: Appropriate Age for marriage of women and consanguineous marriage (Endogamy)

Specific objectives of the session

At the end of the session the participants:

- Identify the appropriate age for marriage of women
- Explain the consanguineous marriage (Endogamy)

Trainer preparation

- Review the reading material and the session plan.
- Prepare the presentation as appropriate and as recommended in the method column of the session plan, or write the information on a flipchart or board where all participants can see it.
- Prepare copies of the reference materials/handouts and exercises.
- Arrange the training room.

Methods and activities

Exercises, questions and answers, discussion in plenary, brain storming and simulation

Resources

- Reference material/handouts: features of the team, ways of operating successful teams, the role of the manager in a team, the difference between groups and teams, The process of team development, and characteristics of effective teams.
- Other: newsprint on easel, markers, masking tape, LCD projector

Evaluation/assessment

Questions and answers, trainer's observation and participant's summaries

Trainer

Experienced with management of primary health care in Iraq

Estimated training time

(60 mints)

Session plan

Objectives	Contents	Methodology \ Activities
6.1.1 Identify the appropriate age for marriage of women (15min.)	Most studies have revealed that conception before the age of 18 years carries risks for both the mother and fetus. The marriage means subjecting the woman to the probability of being pregnant	Mini lecture
6.1.2 Explain the consanguineous marriage (Endogamy) (15min.)	Consanguineous marriages increase the probability of having children affected with hereditary diseases. The child carries the genetic traits of his/her parents whether desirable or not, e.g. vulnerability for certain hereditary diseases	Q&A

6.1.1 Appropriate Age for Marriage of Women

Most studies have revealed that conception before the age of 18 years carries risks for both the mother and fetus. The marriage means subjecting the woman to the probability of being pregnant. This requires full maturation of the skeleton and reproductive system in order to protect the wife and her expected baby from many health problems, e.g. obstructed labor, premature delivery, spontaneous abortion, or pregnancy toxemia. The bones of pelvis in the young woman are not completely ossified which make them more prone to osteomalacia and deformities with increase in the likelihood of dystocia in the subsequent pregnancies.

In the other side, late marriage and conception beyond the age of forty can increase the probability of having children with chromosomal abnormalities, e.g. trisomy 21 and trisomy 13, 18, X and Y. The risk of the birth of child with Down syndrome is 1:1250 at age of 25 years, while it is 1 in 50 at age of 43 years. Additionally, the risk of all tiresome increases from 1:476 at age 25 years to 1:33 at 43 years

6.1.2 Consanguineous Marriages (Endogamy)

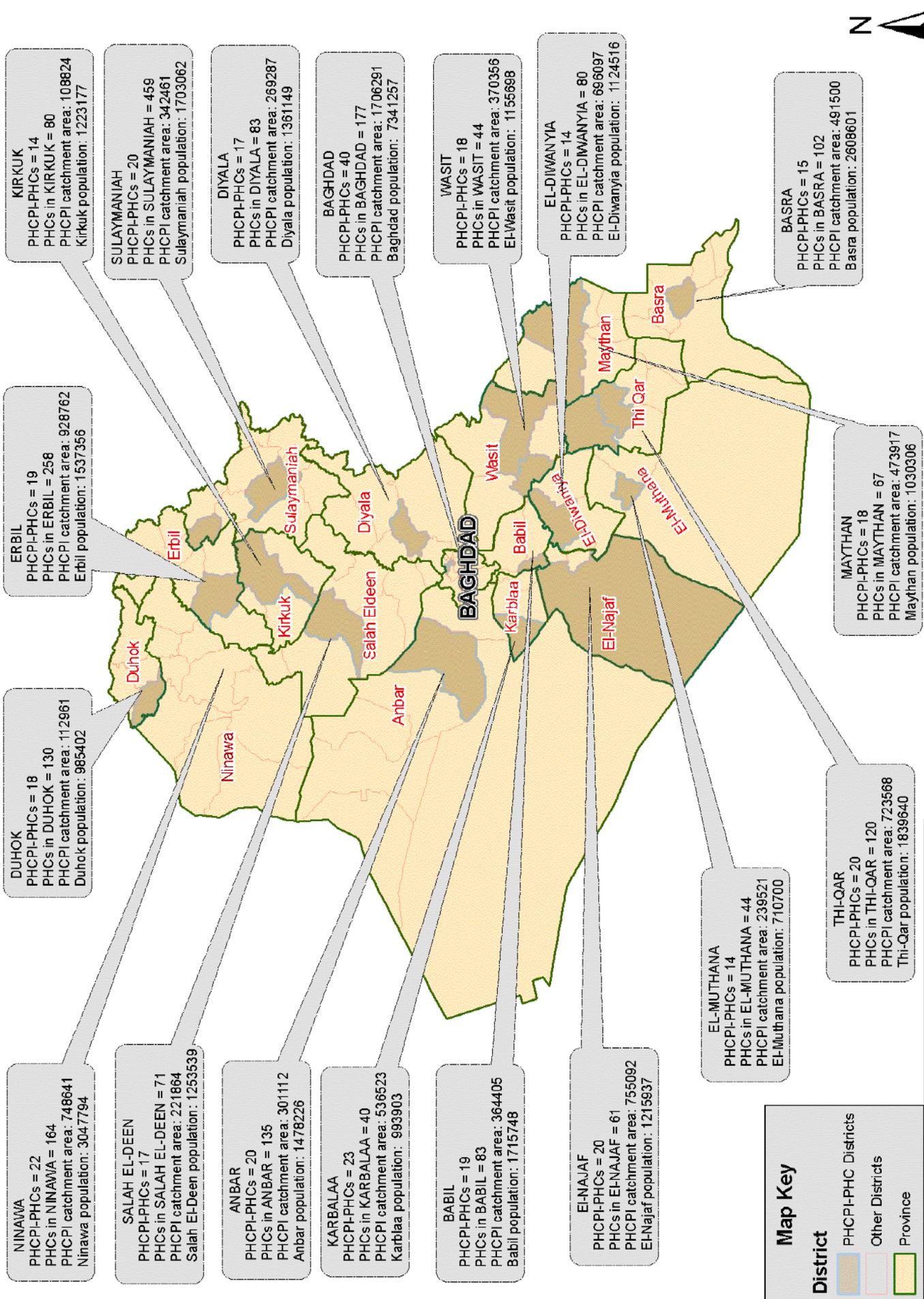
Consanguineous marriages increase the probability of having children affected with hereditary diseases. The child carries the genetic traits of his/her parents whether desirable or not, e.g. vulnerability for certain hereditary diseases. The probability for having such diseases increases as the degree of consanguinity increases between parents, e.g. between sons of uncles, aunts, aunts or uncles.

The laws of probability indicate that every pregnancy may end with the birth of unhealthy infant. The figure is 2% in the case of marriage between foreigners and elevated to 4% in consanguineous marriages, i.e. doubled. Thus, it is important to take the family history for both partners, especially in the case of consanguineous marriage, and giving the appropriate counseling accordingly.

References

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PHCPI-PHCs population mapped to IRAQ population



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