

public health/community medicine specialist

occupational description

knowledge and skills list



society of public health specialists-turkey

PUBLIC HEALTH / COMMUNITY MEDICINE SPECIALIST

OCCUPATIONAL DESCRIPTION

KNOWLEDGE AND SKILLS LIST



SOCIETY OF PUBLIC HEALTH SPECIALISTS - TURKEY

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CONTENTS

PAGE

FORWARD	3
OCCUPATIONAL DESCRIPTION OF A PUBLIC HEALTH/COMMUNITY MEDICINE SPECIALIST	4
KNOWLEDGE AND SKILLS LIST	5
1. General Public Health	6
2. Health Administration	7-10
3. Epidemiology	11-19
4. Health Economy	20-21
5. Demography and Health	22-25
6. Social Sciences for Medicine	26-27
7. Health Education	28-29
8. Environmental Health	30-32
9. Public Health Laboratory	33-34
10. Community Nutrition	35
11. Infectious Diseases	36-37
12. Disasters / Accidents	38-39
13. Women's Health / Reproductive Health	40-44
14. Child Health	45-46
15. Chronic Diseases and Being Handicapped	47
16. Occupational Health	48-50

FORWARD

Despite over forty years of professional training, it is still difficult to say that public health (community medicine) speciality has been fully understood by some administrative authorities and other medical experts in Turkey. This misunderstanding, no doubt, is one of the main factors of misuse of public health specialists in this country. The field is often confused with family medicine or hygiene and thus, public health specialists are frequently appointed to outpatient departments or laboratories that they are not familiar with. This problem has also been reflected to their training and led to inappropriate educational programs in some institutes.

Public health specialists work effectively, and cherished, as researchers, consultants and managers in the western world; they hold respected posts in health related international agencies and are responsible from different types of projects in many countries. Due to this, the post-graduate programs of innumerable public health schools in these countries are attractive for the trainees. But in Turkey, because of uncertainty in the job description of experts and due to employment problems, this speciality is currently far beyond the desired effectiveness.

In order to overcome the stated problems, one important step could be to become decisive about the tasks and working areas of public 3 health specialists and to define their list of knowledge and skills. Taking this fact into consideration, the Public Health Branch of the Turkish Medical Association has documented the job description of public health specialists in 1990 and this document was discussed at several scientific meetings and other occasions since then. The Society of Public Health Specialists of Turkey, reevaluated and finalized this document through a working group in the year 2001. This publication is the end product of such a condensed work of numerous experts working in the field of public health.

We present this document to your consideration, hoping that it will terminate the unclearity of public health speciality, guide the trainers and help to overcome the employment problems of our colleagues.

Prof. Dr. Zafer Öztekin, MD

Chairman

Society of Public Health Specialists - Turkey

OCCUPATIONAL DESCRIPTION OF PUBLIC HEALTH/COMMUNITY MEDICINE SPECIALIST

The description below is made for public health specialists who are educated according to By-law of Medical Specialists.

It is based on the description approved by the participants of the Second National Public Health Congress organized by the Public Health Branch of Turkish Medical Association in 22-25 May 1990 in Istanbul. The description was reviewed and finalized by a working group in the seminar held by the Society of Public Health Specialist in 25-26 May 2001.

4 The tasks of public health / community medicine specialists are to determine the health status of the people, the existing and potential health problems, their reasons and the need of the community; to develop public health policies and strategies for solving these problems; to control and assess public health programs; to participate in the implementation of these programs; and to act as managers at all levels of health services.

In realizing these tasks, public health / community medicine specialists locate the sources of information, collect and analyze data. Regarding their managing tasks, they do planning, organization, staffing, directing, supervision, coordination, reporting and budgeting activities.

A public health / community medicine specialist involves directly in research, consultancy, health care management, provision of preventive and curative services, control of epidemics, public health education and managing public health laboratories.

KNOWLEDGE AND SKILLS LIST

1. GENERAL PUBLIC HEALTH

SUBJECT

The concept of public health

KNOWLEDGE

1. S/he knows the basic principles of the concept of public health.
2. S/he knows the job description and work areas of a public health specialist.

SKILLS

1. S/he is supposed to assess individuals together with their environment as a whole.
2. S/he is supposed to provide services not only to patients, but also to healthy persons.
3. S/he is supposed to provide health services with equity approach.
4. S/he is supposed to examine the social factors as well among the causes of diseases.
5. S/he is supposed to collaborate with other sectors in the provision of health care services.
6. S/he is supposed to give importance and priority to preventive health services.
7. S/he is supposed to give importance and priority to risk groups.
8. S/he is supposed to give priority to the most common, most killing, most disabling health problems and those causing high absenteeism.
9. S/he is supposed to give importance to and implement the provision of integrated preventive and curative health services.
10. S/he is supposed to make health services be provided as a team service.
11. S/he is supposed to plan and carry out programs in order to train people towards being responsible of their own health.
12. S/he is supposed to implement the necessary mechanisms for participation of people in health services.
13. S/he is supposed to choose and use appropriate models and technologies for the local conditions.

2. HEALTH ADMINISTRATION

SUBJECT	KNOWLEDGE	SKILLS
Planning	<ol style="list-style-type: none"> 1. S/he knows that planning is a component of administration. 2. S/he knows the advantages and difficulties of planning. 3. S/he knows the types of plans. 4. S/he knows the stages of planning. 5. S/he knows the techniques of planning. 6. S/he knows the techniques of data collection, analysis and evaluation. 7. S/he knows the importance of development plans, how they are designed and implemented. 	<ol style="list-style-type: none"> 1. S/he is supposed to determine the expectations, willings and needs of the society whom the services are provided for. 2. S/he is supposed to design and organize a planning activity. 3. S/he is supposed to determine, collect, analyse, evaluate and interpret qualitative and quantitative data regarding the subject to be planned. 4. S/he is supposed to draw the potential and intervention projections related to the planned subject. 5. S/he is supposed to rank problems according to their priorities. 6. S/he is supposed to determine realistic, measurable and accessible targets. 7. S/he is supposed to determine alternative strategies in order to reach the targets; conduct workshops for determination; ascribe the difficulties and obstacles related to alternative strategies; and to choose the best strategy. 8. S/he is supposed to use pilot studies related to the determined strategy, if necessary. S/he is supposed to measure the results of this study. 9. S/he is supposed to use PERT for detailed planning. 10. S/he is supposed to design work matrix table. 11. S/he is supposed to inform the decision makers at each stage of planning, and guide them for the decisions of next step. 12. S/he is supposed to prepare planning document. 13. S/he is supposed to organize and conduct the training program related to the implementation of the plan. 14. S/he is supposed to follow and evaluate the implementation of a plan; and to make the necessary corrections and revisions.

1. S/he knows the administrative structure of Turkey.
2. S/he knows the central and peripheral organization of the Ministry of Health.
3. S/he knows the central and peripheral organization of other organizations that provide health services.
4. S/he knows the structure, duties, and responsibilities of local administrations related to health services.
5. S/he knows the basic principles of working in public sector.
6. S/he knows the content of health services; knows preventive, curative and rehabilitation services.
7. S/he knows the main legislation related to health care.
8. S/he knows the techniques and process of preparing/writing of a legislation.
9. S/he knows the concepts of "health for all" and "primary health care".
10. S/he knows the objectives, organization and working principles of professional associations.
11. S/he knows international health organizations, their objectives and working principles.
12. S/he knows the main service models in other countries.
13. S/he knows the principles and rules of working in private sector.

2. HEALTH ADMINISTRATION

1. S/he is supposed to correctly interpret the legislations.
2. S/he is supposed to draft a law and moderate a workshop group appointed for this work.
3. S/he is supposed to write an instruction.
4. S/he is supposed to supervise the private physicians, pharmacies, hospitals and other health institutions.
5. S/he is supposed to correspond with the public institutions in the province; establish coordination with these institutions and allocate their resources towards health services.
6. S/he is supposed to conduct secretarial work of provincial and district public health committees. S/he is supposed to use these committees effectively.
7. S/he is supposed to establish "health center health committees", and make them work effectively.
8. S/he is supposed to work effectively in the boards stated in the laws regarding provincial civil services.
9. S/he is supposed to control and evaluate the health services of local governments. S/he is supposed to guide them in their efforts to work more effectively.
10. S/he is supposed to effectively use the revolving funds in health institutions in provinces and towns.



2. HEALTH ADMINISTRATION

Directing

1. S/he knows the duties, authorities and responsibilities of the team members and individuals in charge at various hierarchical levels including her/himself.
2. S/he knows the factors effecting the productivity of the services.
3. S/he knows "total quality management" concept and how it is applied.
4. S/he knows the financial sources of health care services.
5. S/he knows the techniques of supervision.
6. S/he knows the legislation about management and referral.

1. S/he is supposed to manage first, second and third level health institutions and public health laboratory.
2. S/he is supposed to manage health services in the provinces and districts.
3. S/he is supposed to communicate effectively with groups and individuals.
4. S/he is supposed to evaluate the productivity of the services. S/he is supposed to find out the causes of low productivity. S/he is supposed to find out and implement the precautions increasing the productivity.
5. S/he is supposed to base his/her decisions on information.
6. S/he is supposed to encourage the team members in thinking about the solutions of the problems.
7. S/he is supposed to assign team members according to their knowledge, skills, authority, and responsibilities.
8. S/he is supposed to coordinate the work of team members.
9. S/he is supposed to control the records of health institutions and find out the missing and wrong information.
10. S/he is supposed to determine the number and qualifications of the human resources needed and to select appropriate personnel.
11. S/he is supposed to use the rules for official communications correctly.
12. S/he is supposed to purchase, register and keep goods according to regulations correctly.
13. S/he is supposed to implement the mechanisms for community participation in health services correctly.

2. HEALTH ADMINISTRATION

14. S/he is supposed to activate the financial resources of the society effectively .
15. S/he is supposed to use appropriate supervision techniques in appropriate conditions.
16. S/he is supposed to ascribe the educational needs of the personnel.
17. S/he is supposed to plan and implement in service training programs.
18. S/he is supposed to refresh and update her/his own knowledge and skills regularly.
19. S/he is supposed to ascribe the necessary equipment and personnel for services.
20. S/he is supposed to purchase the necessary equipment or to provide them by other ways.
21. S/he is supposed to conduct the procedure of personnel appointment and temporary appointment in the provinces, districts, and health institutions.
22. S/he is supposed to make the budget of the services, provide resources and distribute them correctly.
23. S/he is supposed to direct a meeting properly.
24. S/he is supposed to turnover duty and authority.
25. S/he is supposed to make a disciplinary investigation. S/he is supposed to write a précis.
26. S/he is supposed to award and punish the personnel according to the rules.
27. S/he is supposed to fill in the annual performance records of civil servants.
28. S/he is supposed to implement the procedures regarding personal affairs of the employees.

3. EPIDEMIOLOGY

SUBJECT

The definition of epidemiology and the areas it is used.

Strategy in epidemiology and classification of epidemiological research

KNOWLEDGE

1. S/he knows the definition of epidemiology and its use as a methodology.
2. S/he knows the basic strategies of epidemiology.
3. S/he knows the types of epidemiological studies which are mentioned below. S/he knows how to plan these research, implement them and interpret the results.
 - a. Observational studies
 - Descriptive studies
 - Case presentations
 - Case series
 - Correlation studies
 - Ecological studies
 - Analytical studies
 - Case control studies
 - Cross-sectional research (screening)
 - Follow-up study (retrospective-prospective-cohort)
 - b. Intervention studies
 - Field trials
 - Clinical trials
 - c. Methodological research
 - Validity
 - Reliability

SKILLS

1. S/he is supposed to provide consultancy in using epidemiology in different areas of health.
2. S/he is supposed to plan and implement epidemiological research.
3. S/he is supposed to supervise epidemiological research.
4. S/he is supposed to evaluate publications, such as articles and reports.

3. EPIDEMIOLOGY

Descriptive epidemiology

1. S/he knows the definitions of demographic characteristics and how to obtain them.
2. S/he knows the person, place and time characteristics of descriptive epidemiology

1. S/he ascribes/estimates the total population in the study area, age and sex distribution of the population, total number of births, and rate of population increase.
2. S/he plans and implements institution/society-based descriptive research.
3. S/he is supposed to interpret the results of published descriptive research.
4. S/he is supposed to provide consultancy for the researchers from other disciplines on these topics.

12

The concept of "cause" and association in epidemiology.

1. S/he knows how to decide whether the correlation is causal or not.
2. S/he knows the definition of risk measurement, relative risk, (odds ratio) and how to obtain them.

1. S/he is supposed to calculate the odds and risks; to compare and interpret them.
2. S/he is supposed to decide whether the correlation is causal or not, and discuss the possible explanations if the correlation is not causal.

Analytical research

1. S/he knows what kind of studies should be planned to examine the association(s) between exposure and disease, and its causality, the advantages and disadvantages of study types.
2. S/he knows how to plan, implement and evaluate the results of case-control, cohort (prospective - or retrospective), and cross-sectional research.

1. S/he is supposed to plan, implement case-control, cohort, and cross-sectional studies; and provide consultancy to the researchers from other disciplines, who conduct this type of studies.
2. S/he is supposed to interpret and evaluate the results of published analytical research.

3. EPIDEMIOLOGY

Intervention studies

1. S/he knows the objectives, randomization, planning, analysing and interpretation of intervention studies in the clinic and in the field.

1. S/he is supposed to plan and implement clinical trials and intervention studies in the field and provide consultancy to other disciplines on this type of studies.
2. S/he is supposed to interpret and evaluate the results of published intervention studies.

Methodological studies

1. S/he knows the concepts of validity and reliability, evaluation of the advantages and limitations of different diagnostic and treatment methods.

1. S/he is supposed to plan and carry out methodological studies and provide consultancy to other disciplines on this type of studies.
2. S/he is supposed to interpret and evaluate the results of published methodological studies.

Community diagnosis and screening

1. S/he knows the subjects below:
 - a. Diagnostic and screening tests
 - Validity
 - Sensitivity
 - Specificity
 - Predictive values
 - b. Repeatability
 - Bias
 - Observer variation
 - Tool and method variation

1. S/he is supposed to conduct validity and reliability studies of diagnostic and screening tests, to plan and do screening.

3. EPIDEMIOLOGY

Data sources and recording systems

1. S/he knows the types, characteristics and use of data.
2. S/he knows the sources of epidemiological data and how to access them.
3. S/he knows the importance of collecting complete, correct information on time.
4. S/he knows the importance of updating the collected information.
5. S/he knows the importance of the complete patient records.

1. S/he is supposed to choose and implement the best data collection methods considering the advantages and disadvantages of the methods.
2. S/he is supposed to collect information using standard procedures.
3. S/he is supposed to update information at appropriate intervals.
4. S/he is supposed to record the information related to infants, children, men, and pregnant women on specific cards.
5. S/he is supposed to record the vaccinations.
6. S/he is supposed to record information using standard procedures.
7. S/he is supposed to code diseases and deaths according to the "international classification of the causes of disease and mortality".

Health indicators (Epidemiologic indicators)

1. S/he knows the definition of rate, proportion, and ratio, and the differences between them.
2. S/he knows the risk concept and the population under risk.
3. S/he knows the morbidity, mortality, fertility, and other epidemiological indicators.
4. S/he knows the differences between the crude and specific rates (according to age, sex, disease, etc.), and calculates these rates.
5. S/he knows how to calculate the prevalence, incidence and attack rate.
6. S/he can standardize the rates.

1. S/he is supposed to calculate and interpret the health indicators and provide consultancy to researchers and health administrators in this regard.
2. S/he is supposed to ascribe the health status of the population s/he serves:
 - a. Regarding mortality:
 - S/he is supposed to calculate/estimate total number of deaths.
 - S/he is supposed to calculate/estimate crude mortality rate.
 - S/he is supposed to calculate/estimate age and sex specific mortality rates.
 - S/he is supposed to calculate/estimate maternal mortality rate.
 - S/he is supposed to calculate/estimate the fatality rate of selected diseases.

3. EPIDEMIOLOGY

7. S/he knows how to calculate the health indicators in the study area, and how to make use of these indicators to evaluate the current health services and or to improve the health of the community.
8. S/he knows the coding principles of diseases.
9. S/he knows the classification of the diseases.

b. Regarding fertility:

S/he is supposed to calculate/estimate crude birth rate,

S/he is supposed to calculate/estimate general fertility rate,

S/he is supposed to calculate/estimate total fertility and age specific birth rates

c. Regarding morbidity:

S/he is supposed to make epidemiological investigations for selected diseases,

S/he is supposed to follow-up chronic diseases (tbc, malaria, leprosis, etc.)

3. S/he is supposed to implement health projects.

a. Regarding ante-natal care:

S/he is supposed to calculate/estimate the 15-49 age group women

S/he is supposed to calculate/estimate the number of total births

S/he is supposed to calculate/estimate the number of pregnant

S/he is supposed to calculate/estimate the number of pregnant who receive prenatal care

S/he is supposed to calculate/estimate the number of births with the assistance of health personnel

S/he is supposed to calculate/estimate the proportion of hospital deliveries

S/he is supposed to calculate/estimate prevalence rate of contraceptive services

3. EPIDEMIOLOGY



- b. Regarding infant and child care:
S/he is supposed to calculate/estimate the percentage of low birth weight newborns.
S/he is supposed to calculate/estimate the prevalence of malnutrition
S/he is supposed to calculate/estimate immunization rates
- c. S/he is supposed to calculate/estimate the environmental health indicators
- d. Regarding clinical services:
S/he is supposed to calculate/estimate the number of applicants to primary care institutions
S/he is supposed to calculate/estimate the number of applicants to hospitals
S/he is supposed to calculate/estimate the number of hospitalized patients
S/he is supposed to calculate/estimate the referral rate
- 4. S/he is supposed to ascribe the existing, and emerging health problems in the area
- 5. S/he is supposed to determine the health priorities in the area.
- 6. S/he is supposed to design, conduct, and evaluate the regional health programs.
- 7. S/he is supposed to take an active role in the execution and evaluation of national and regional health programs.
- 8. S/he is supposed to evaluate the performance of health care team.
- 9. S/he is supposed to conduct regional or national community-based health research.

Planning and conducting scientific studies.

1. S/he knows all stages of a research planning.
2. S/he knows the research questions, and how to select the research topic.
3. S/he knows how to set hypothesis and to identify the study objectives.
4. S/he knows how to define the universe of the research and to select the sample group.
5. S/he knows the sample size and sampling methods.
6. S/he knows how to classify the variables; how to select the dependent and independent variables and the parameters.
7. S/he knows to design a questionnaire and/or information form.
8. S/he knows to plan the data analysis.
9. S/he knows to decide the way of data collection.
10. S/he knows to make the data ready to be coded, and to train the persons who make the coding.
11. S/he knows how to analyse the data.

3. EPIDEMIOLOGY



1. S/he is supposed to plan a research, to select the topic, determine the hypothesis, select the suitable universe and sample, determine the variables, design a questionnaire or information form, collect data, regulate them, decide on the best analysis method and analyse the data.
2. S/he is supposed to provide consultancy to the persons in how to make a research.

3. EPIDEMIOLOGY

Presenting data and
writing report

1. S/he knows to manage the data.
2. S/he knows the techniques of report writing.

1. S/he is supposed to make tables.
2. S/he is supposed to analyse and interpret the data in the tables.
3. S/he is supposed to draw and interpret graphs.
4. S/he is supposed to write a research, report and interpret a written report.
5. S/he can criticize and correct the written reports

Using Computer

1. S/he knows the commonly used computer programs.
2. S/he knows several software, statistical, and graphic package programs.
3. S/he knows to record and to process the collected data in computer.

1. S/he is supposed to use the most common computer software programs in other areas of public health.

3. EPIDEMIOLOGY

Specific topics in epidemiology

1. S/he knows the specific topics in epidemiology; how to study and compare the causes, rates and frequency of the diseases related with these areas.
2. S/he knows how to plan and implement the related research, and the crucial points to be considered.
3. S/he knows the epidemiology of chronic diseases, cancer, accident, environment, health administration, pharmacological and genetic diseases.

1. S/he is supposed to conduct research on specific topics in epidemiology, provide counselling and to work with the specialists in the area; to assist them in analysis and interpretation stages.
2. S/he is supposed to evaluate the reports and articles published in these areas.
3. S/he is supposed to collaborate with clinical disciplines regarding the specific areas, determine the prognosis and life expectations of the patients.

Rapid survey techniques

1. S/he knows the rapid survey techniques, including;
 - Qualitative-quantitative methods,
 - Capture-recapture method,
 - Lot quality method,
 - Rapid calculation methods for newborn mortality rate (Brass's indirect estimation, preceeding birth technique, short birth history),
 - Rapid calculation methods for maternal mortality rate.

4. HEALTH ECONOMY

SUBJECT	KNOWLEDGE	SKILLS
The definition and content of health economy	<ol style="list-style-type: none"> 1. S/he knows the relation between health, economic grow and development. 2. S/he knows the basic topics of health economy, the influential factors on health, and their meanings within the context of health economy. 3. S/he knows the reasons of cost increase in health services, and its importance from the public health point of view. 4. S/he knows the data sources in health economy. 	<ol style="list-style-type: none"> 1. Using the knowledge about health economy, s/he is supposed to plan the service, 2. S/he is supposed to ascribe the areas to decrease the cost in macro level, and to take precautions. 3. S/he is supposed to ascribe the data sources that are used in health economy studies.

20 The main characteristics of health care market

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|---|---|
| <ol style="list-style-type: none"> 1. S/he knows the concept of demand and supply, market balance, and the possible general interventions in the market. 2. S/he knows health care and full competition markets, and their characteristics. 3. S/he knows the necessities and demands of health services, the influential factors on accessing the services, and the relationship with the mediator. 4. S/he knows the characteristics of health care supplies alternative production types, the characteristics of input replacement, input market, waging rules and encouragement. 5. S/he knows the possible interventions in health care market, and the market balance. | <ol style="list-style-type: none"> 1. S/he is supposed to assess the attitudes of health care consumers and to guide administrators accordingly. 2. S/he is supposed to make plans according to the characteristics of health care consumers. 3. S/he is supposed to control the expenses by examining the demand for health care. 4. S/he is supposed to determine the supply possibilities in health sector. 5. S/he is supposed to influence the distribution of human resources and productivity of health sector by using encouragement mechanisms for health care providers. 6. Considering national resources and data on service utilization, s/he is supposed to plan and implement health services. |
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4. HEALTH ECONOMY

The types of financial sources in health services

1. S/he knows the health care systems and the principles of "equality, productivity, and equity" in health.
2. S/he knows the financial sources in health, and how influential they are in service utilization and distribution.
3. S/he knows the health systems in Turkey and in some other countries (organization, ways of service provision, financing).

1. S/he is supposed to contribute to the service planning considering the principles of "equality, productivity, and equity" in health.
2. S/he is supposed to interpret the financial situation in Turkey and in the world.
3. S/he is supposed to intervene the health care market by considering different service models and financial systems.

Assessment of health services

1. S/he knows the basic cost concepts.
2. S/he knows the necessity of assessment of health services, and collaboration with other disciplines.
3. S/he knows the content of basic assessment techniques.

1. S/he is supposed to interpret the studies by using economic assessment techniques.
2. S/he is supposed to plan and conduct a basic assessment study in health with the guidance of a specialist.

5. DEMOGRAPHY AND HEALTH

SUBJECT	KNOWLEDGE	SKILLS
The definition and content of demography	<ol style="list-style-type: none"> 1. S/he knows the definition of demography and its content 	<ol style="list-style-type: none"> 1. S/he is supposed to examine the qualitative and quantitative relationship of demography with other disciplines and cooperate with them.
Population, economic development and growth	<ol style="list-style-type: none"> 1. S/he knows the relationship between the demographic characteristics of a society and its economic level. 2. S/he knows how unproportional increase in population influence the economy of individuals and societies. 	<ol style="list-style-type: none"> 1. S/he is supposed to examine the negative effects of rapid population increase on economics and social life, and to advise solutions. 2. S/he is supposed to state the economic and social factors that influence the qualitative and quantitative changes in the population. 3. S/he is supposed to use the common parameters with demography and economics.
The place of demography in health	<ol style="list-style-type: none"> 1. S/he knows the relationship between the demographic characteristics of a society, the health level and the health care system. 	<ol style="list-style-type: none"> 1. S/he is supposed to link demographic structure with health level and health needs of the community. 2. S/he is supposed to use demography in policy making, planning and implementation stages of health programs. 3. S/he is supposed to calculate and use the common parameters of demography and health. 4. S/he is supposed to use demographic data in health services, health manpower planning and financial planning.

5. DEMOGRAPHY AND HEALTH

Structure of the population

1. S/he knows the demographical statistics used in the assessment of the health needs of a population.

1. S/he is supposed to calculate the parameters related to size, distribution, structure, and composition of the population.
2. S/he is supposed to use demographical data in health planning and assessment.
3. S/he is supposed to assure the validity and reliability of demographic data and to provide feedback.
4. S/he is supposed to make logistical and expenditure planning by using demographical data.

Fertility

1. S/he knows that births influence the quality and quantity of the population.
2. S/he knows the fertility indicators.
3. S/he knows the regulation and rights related to fertility.
4. S/he knows the indicators of gender discrimination.
5. S/he knows the factors influencing fertility.
6. S/he knows how fertility influences the health, social and economic level of the community.

1. S/he is supposed to collect continuous, the valid and reliable fertility data, to convert such data in to usable information and to feedback the data source.
2. S/he is supposed to calculate, interpret, and use the fertility parameters and the factors which affect fertility.
3. S/he is supposed to use the fertility data in service planning, implementation, and assessment.
4. S/he is supposed to plan and conduct health education programs considering fertility and factors influencing fertility.
5. Together with social scientists, s/he is supposed to conduct training programs for raising the status of women in the family and in the community.

5. DEMOGRAPHY AND HEALTH

Deaths and diseases

1. S/he knows that the quality and quantity of the population is influenced by the patterns of death and disease.
2. S/he knows the mortality and morbidity indicators.
3. S/he knows the factors affecting mortality and morbidity.
4. S/he knows how deaths affect health, social, and economic level of the population.

1. S/he is supposed to collect valid and reliable data about mortality, and morbidity; and make them functional.
2. S/he is supposed to calculate, interpret, and use the mortality and morbidity indicators.
3. S/he is supposed to use the indicators of mortality, and morbidity for planning, implementation and assessment of health services.
4. S/he is supposed to plan and conduct health education programs regarding deaths and diseases specific to age and risk groups.
5. S/he is supposed to guide the decision makers about the distribution of resources using reliable data.

Migration and urbanization

1. S/he knows that migration affects the quality and size of the population.
2. S/he knows that migration and rapid urbanization affect the health, social, and economic level of the population.

1. S/he is supposed to interpret the migration, urbanization and the underlying factors.
2. S/he is supposed to use the common indicators of the of health and migration.
3. S/he is supposed to make the migration tendencies, tendencies of living in squatter areas, rapid urbanization, and health patterns of urban population be taken into consideration in the provision of health services.
4. S/he is supposed to make logistical and health expenditure planning considering the migration rate.

6. SOCIAL SCIENCES FOR MEDICINE

SUBJECT	KNOWLEDGE	SKILLS
Sociology-Anthropology	<ol style="list-style-type: none"> 1. S/he knows the terms, subjects, and limits of sociology and anthropology. 2. S/he knows the characteristics of these disciplines related to health. 3. S/he knows how to use medical sociology, and medical anthropology in solving health problems and in public relations. 4. S/he knows the social aspects of health and disease. 5. S/he knows the research and evaluation methods of medical sociology and medical anthropology. 	<ol style="list-style-type: none"> 1. S/he is supposed to determine the importance of the social scientist in the health care team, the issues to make collaboration with them, and works in collaboration. 2. S/he is supposed to communicate with people effectively. 3. S/he is supposed to communicate effectively with small groups, and work with them. 4. S/he is supposed to guide the community to make decisions and implement them. 5. S/he is supposed to collaborate with the social scientists for joint studies and assessment. S/he is supposed to make the communities apply such results.
Social structure and health	<ol style="list-style-type: none"> 1. S/he knows the characteristics of the community s/he is working for. 2. S/he knows the differentiation of disease patterns in different societies. 3. S/he knows the different family roles and status in differentiating family structure, and the influences of this differentiation on health and diseases. 4. S/he knows the influences of marital status, sex, and age on the health and disease patterns of the individuals and the community. 	<ol style="list-style-type: none"> 1. S/he is supposed to ascribe the social and cultural factors that affect health negatively or positively. 2. S/he is supposed to ascribe the effect of the marital status, sex or age groups on the health and psychological structure, of the people and the community and develop solutions for existing problems. 3. S/he is supposed to consider the values of the community while providing health services. 4. S/he is supposed to use positively the leading ability of health personnel in guiding the community.

6. SOCIAL SCIENCES FOR MEDICINE

Social work

26

5. S/he knows the associations of religious concepts, other belief patterns and traditional practices with health and disease, and the interplay between such factors.
 6. S/he knows the formal and informal relationship between the members of the health care team.
 7. S/he knows the forms of relationship between service providers and consumers.
1. S/he knows how the people (healthy or sick), their families, and the communities help themselves and the patients.
 2. S/he knows the means of getting aid and support from the communities, social institutions, and the government for people.

1. S/he is supposed to provide aid (for people) from the communities, social institutions and the government.

7. HEALTH EDUCATION

SUBJECT	KNOWLEDGE	SKILLS
The characteristics of education	<ol style="list-style-type: none"> 1. S/he knows the importance of education (in general). 2. S/he knows the rules of adult education. 3. S/he knows the importance of health education. 	<ol style="list-style-type: none"> 1. S/he is supposed to provide education for the people and to the health personnel. 2. S/he is supposed to work in coordination and collaboration with the trainers. 3. S/he is supposed to provide educational equipment. 4. S/he is supposed to plan and conduct adult education considering the learning properties of adults. 5. S/he is supposed to create a positive atmosphere before, during and after the education. 6. S/he is supposed to conduct the education in a way that teach the trainees develop necessary skills to protect and improve their health. 7. S/he is supposed to teach people how to prevent illnesses and how to behave when they are ill. 8. S/he is supposed to train the personnel to conduct health education for individuals and groups.
Curriculum design	<ol style="list-style-type: none"> 1. S/he knows the necessity of ascribing the educational needs of the community. 2. S/he knows the importance of assessing the educational needs of the personnel for increasing their performance. 3. S/he knows the educational institutions in the country, and the importance of their functions. 4. S/he knows the role of health education in health care interventions. 	<ol style="list-style-type: none"> 1. S/he is supposed to ascribe the educational need of the community. 2. S/he is supposed to design the curriculum by the participation of the trainees. 3. S/he is supposed to choose appropriate educational methods and techniques. 4. S/he is supposed to choose appropriate educational equipment.

7. HEALTH EDUCATION

28

The administration of
health education
activities

1. S/he knows the importance of running health education programs in a planned manner.
 2. S/he is aware of the importance of the continuity in education.
 3. S/he knows that the advantage of education can be measured by the increase in productivity of the services.
1. S/he is supposed to make monthly and annual education plans, and conduct them.
 2. S/he is supposed to provide the continuity of the education.
 3. S/he is supposed to assess the productivity of educational activities and ascribe the reasons of inefficiency.
 4. S/he is supposed to organize the education based on such reasons.
5. S/he is supposed to encourage the trainees to be active in learning.
 6. S/he is supposed to make pre and post educational assessments.
 7. S/he is supposed to collaborate with the educational institutions in the country.
 8. S/he is supposed to conduct health education intervention programs.

8. ENVIRONMENTAL HEALTH

SUBJECT	KNOWLEDGE	SKILLS
The importance of environmental health	<ol style="list-style-type: none"> 1. S/he knows the environmental health, related issues and their importance on health. 2. S/he knows the importance of protecting the environment. 	<ol style="list-style-type: none"> 1. S/he is supposed to explain the importance of environmental health and protecting the environment to the people from different social classes.
Physical environment	<ol style="list-style-type: none"> 1. S/he knows the importance of drinking and hotable water on health, and the problems caused by polluted water. 2. S/he knows the characteristics of water springs, drinkable water, and the substances that pollute water. 3. S/he knows the problems related to the waste water, and the characteristics of industrial and domestic waste water. 4. S/he knows the importance of food hygiene regarding nutrition and food-born diseases. 5. S/he knows the importance of food control. 6. S/he knows the importance of the health of food producers and sellers for food hygiene. 7. S/he knows the importance of the food to be hygienic starting at the moment they are produced. 8. S/he knows the importance of healthy human shelters and houses; the conditions of healthy shelters. 	<ol style="list-style-type: none"> 1. S/he is supposed to participate the treatment process of spring water from spring to the end point. 2. S/he is supposed to make the physical check of the water, get samples for chemical and bacterial examination, and evaluate their results. 3. S/he is supposed to provide water sanitation, and advise methods for mass sanitation. 4. S/he is supposed to determine the chloroid level. (can use comparator) 5. S/he is supposed to disinfect waste water. 6. S/he is supposed to take place in preventing the contamination of food with microorganisms, heavy metals, parasites, and parasite eggs starting from production untill consumption. 7. S/he is supposed to take necessary precautions for food storage. 8. S/he is supposed to make the physical, chemical, and bacterial examinations be done on the food samples s/he got. S/he is supposed to interpret the results and take precautions. 9. S/he is supposed to managed the food industry workers or food producers to be periodically checked, and to enable the patients and carrier be treated.

8. ENVIROMENTAL HEALTH

9. S/he knows the in-door air quality, and how important it is.
10. S/he knows the importance and ways of human excreta disposal.
11. S/he knows the types of solid waste and their negative effects on human health.
12. S/he knows the importance of vector control.
13. S/he knows the negative effects of air pollution on human health.
14. S/he knows the negative effects of ionizing radiation on human health.
15. S/he knows the types and characteristics of non-ionizing radiation, and its negative effects on human health.
16. S/he knows the negative effects of noise on human health.
17. S/he knows the environment-born diseases (multi-chemical sensitivities, mycotoxicosis, etc.).
18. S/he knows the climate changes and its possible effects.
19. S/he knows the tasks and responsibilities of the institutions related to environmental health.
20. S/he knows the legislation regarding environmental health.
10. S/he is supposed to work in collaboration with the veterinarian, agricultural officers, and with other professionals for food sanitation.
11. S/he is supposed to take measures for improving housing conditions for preventing disease contamination and meeting the physiological and psychological needs of the household.
12. S/he is supposed to take measures for in-door air pollution.
13. S/he is supposed to take part for preventing underground and ground water pollution by human feces. S/he is supposed to guide solid waste disposal in both urban and rural areas.
14. S/he is supposed to take place in the process of waste disposal such as, dumping, composting, burning. S/he is supposed to apply the legal precautions for radioactive waste disposal.
15. S/he is supposed to take the necessary precautions against breeding of vectors.
16. S/he is supposed to take measures for preventing food from contamination.
17. S/he is supposed to take measures against vectors in houses, control vector-breeding places and to apply insecticides.

8. ENVIROMENTAL HEALTH

18. S/he is supposed to collaborate with authorised institutions to prevent air pollution.
19. S/he is supposed to educate people and individuals for preventing the negative effects of air pollution.
20. S/he is supposed to take part in preventive and curative activities of risk groups for air pollution.
21. S/he is supposed to take necessary precautions for the medical and industrial equipment that cause radiation.
22. S/he is supposed to collaborate with the authorities for taking necessary precautions against radiation.
23. S/he is supposed to collaborate with the authorities to reduce the effects of non-ionizing radiation.
24. S/he is supposed to take part in the training programs for individuals and the people about preventing the effects of non-ionizing radiation.
25. S/he is supposed to collaborate with the authorities against noise.
26. S/he is supposed to contribute to the studies preparing scenarios about climate changes.
27. S/he is supposed to collaborate with the organizations and institutions related to environmental health within his/her responsibilities.

9. PUBLIC HEALTH LABORATORY

SUBJECT

Laboratory usage

KNOWLEDGE

1. S/he knows the importance of the laboratory in primary health care.
2. S/he knows the place and importance of the laboratory in diagnosis and treatment.
3. S/he knows the laboratory services needed for different health services.
4. S/he knows the standards of laboratory equipment and manpower.
5. S/he has sufficient theoretical knowledge about biochemical, bacteriological, and other analysis made at primary health care level.
6. S/he knows the laboratory analysis specific to air pollution and how to evaluate them.
7. S/he knows, the basic laboratory equipment and material.
8. S/he knows the tasks, authorities, and responsibilities of laboratory personnel air pollution.
9. S/he knows the organic and inorganic harmful material.

SKILLS

1. S/he is supposed to make the routine blood analysis and evaluate them.
2. S/he is supposed to make the routine urine analysis and evaluate them.
3. S/he is supposed to make microscopic bacteria and parasite analysis.
4. S/he is supposed to make the routine feces analysis, to diagnose parasites and parasite eggs.
5. S/he is supposed to get samples from throat, stool, urine and other bodily liquids for microbiological tests; and to evaluate the results.
6. S/he is supposed to make laboratory tests with automatic machineries and evaluate them.
7. S/he is supposed to get water samples for bacteriological, physical, and chemical analysis, send to the laboratory, and evaluate the results.
8. S/he is supposed to get food samples, keep them, send them to the laboratory, and evaluate the results.
9. S/he is supposed to get sterile samples from organic and inorganic material keep them, send them to the laboratory, and evaluate the results.
10. S/he is supposed to get the necessary material for forensic examinations, send them to the laboratory, and interpret the results.
11. S/he is supposed to apply and to evaluate pregnancy tests.
12. S/he is supposed to train and supervise the laboratory personnel.

10. COMMUNITY NUTRITION

SUBJECT	KNOWLEDGE	SKILLS
Basic food groups	<ol style="list-style-type: none"> 1. S/he knows the basic food groups and nutrients and their importance. 2. S/he knows the relation of nutrition and health. 	<ol style="list-style-type: none"> 1. S/he is supposed to organize training programs on adequate and balanced nutrition. 2. S/he is supposed to guide people for adequate and balanced nutrition.
The epidemiology of nutrition	<ol style="list-style-type: none"> 1. S/he knows the nutritional problems in the community and in the risk groups. 2. S/he knows the negative effects of inadequate and imbalanced nutrition on growth, development and health. 3. S/he is aware of the importance of safe nutrition. 4. S/he knows the types of food poisoning and how to prevent it. 	<ol style="list-style-type: none"> 1. S/he is supposed to plan and implement research in which anthropometric measurements and clinical symptoms are ascribed in order to reveal the nutritional problems of the community. 2. S/he is supposed to work in collaboration mainly with the dieticians and other authorities in order to solve to the problems. 3. S/he is supposed to advise the babies, children, women and men, pregnant women, breast-feeding mothers, the persons who need special nutrition and to educate them in collaboration with dietician. 4. S/he is supposed to recognize the clinical symptoms of inadequate and imbalanced nutrition in risk groups 5. S/he is supposed to apply the nutritional principles in prevention and treatment of chronic diseases. 6. S/he is supposed to educate the community and the health personnel about safe food from production until consumption in collaboration with the the dietician and other authorities. 7. S/he is supposed to take part in preventing and controlling programs for major and region-specific food poisonings.

11. INFECTIOUS DISEASES

SUBJECT	KNOWLEDGE	SKILLS
The status of infectious diseases in the community	<ol style="list-style-type: none"> 1. S/he knows the dimensions of the infectious diseases in the world and in Turkey. 2. S/he knows the surveillance system of infectious diseases. 3. S/he knows the assessment indicators of infectious diseases. 4. S/he knows the research methods for assessing infectious diseases and related factors. 5. S/he knows the epidemiology of infectious diseases. 	<ol style="list-style-type: none"> 1. S/he is supposed to make surveillance for the infectious diseases. 2. S/he is supposed to determine the dimensions of the infectious diseases by using available the data. 3. S/he is supposed to evaluate the current status of the disease. 4. Based on the evaluation, s/he is supposed to identify the insufficient interventions. 5. S/he is supposed to conduct epidemiological researches on the status and reasons of the infectious diseases. 6. S/he is supposed to determine the screening criteria for infectious diseases.
34 Infections disease control programs	<ol style="list-style-type: none"> 1. S/he knows the disease control programs in the world. 2. S/he knows the prevention and treatment methods of diseases. 3. S/he knows the existing intervention possibilities (improvement of health, primary, secondary, and tertiary prevention). 4. S/he knows how to identify the contacted persons. 5. S/he knows how to apply vaccines and serum. 6. S/he knows from where, how much and how to get microbiological samples, and how to send those to the laboratory. 7. S/he knows the easy, cheap, and effective diagnostic and treatment methods of the infectious diseases. 8. S/he knows the legislation about infectious diseases. 	<ol style="list-style-type: none"> 1. S/he is supposed to rank the diseases by priorities. 2. S/he is supposed to determine the high risky groups and risky behaviors. 3. S/he is supposed to determine the current situation and major interventions for the control program. S/he is supposed to determine the aim and objectives, timetable, observation and control methods, evaluation criteria of the program. S/he is supposed to assess the outcome of the implementation. 4. S/he is supposed to apply the specific primary prevention methods to the community. 5. S/he is supposed to get samples from the appropriate persons, and places, and evaluate the laboratory results. 6. S/he is supposed to apply the easy, cheap, and effective diagnostic and treatment methods for the patients. 7. S/he is supposed to apply observation, quarantine, and isolation procedures for the infected people, whenever appropriate.

11. INFECTIOUS DISEASES

Infectious disease epidemics

1. S/he knows how the infectious disease epidemics are seen and spread.
2. S/he knows the contamination characteristics of the infectious diseases.
3. S/he knows the determination and examination methods of epidemics.
4. S/he knows the prevention and control methods specific to the disease during epidemics.

8. S/he is supposed to take the precautions related to the environment; s/he is supposed to follow-up the air, soil, water, and food pollution, and the animals and vectors that are the sources of disease.
9. S/he is supposed to make the implementations mentioned in the legislation about the infectious diseases.
10. S/he is supposed to determine the functions of collaborative institutions and organizations. S/he is supposed to guide these institutions and organizations, and find out the social gains of such collaborations.

1. S/he is supposed to identify a possible epidemics.
2. S/he is supposed to determine the epidemics, evaluate the cases according to location, time and personal characteristics. S/he is supposed to make hypothesis due to the descriptive epidemiological characteristics of the epidemics; is supposed to use the best epidemiological method to test such hypotheses, and write the report of an epidemics.
3. S/he is supposed to prevent the spread of the epidemics, and take necessary precautions to prevent deaths and disability of the infected persons. S/he is supposed to take precautions to protect the sensitive people and risk groups according to the way of transmission.
4. S/he is supposed to take precautions to prevent the repetition of a similar epidemics.

Immunization

1. S/he knows how to organize an immunization program according to the needs of the community.
2. S/he knows the principles and methods of immunization.
3. S/he knows the national immunization program.
4. S/he knows the vaccines applied before and after contact with an infectious agent.
5. S/he knows how to immunize the risk groups and the adults.
6. S/he knows the vaccinations not included in the routine vaccination programs.

11. INFECTIOUS DISEASES

1. S/he is supposed to carry out the national immunization program.
2. S/he is supposed to calculate the target group, and vaccination rates in routine vaccination programs.
3. S/he is supposed to calculate the amount of vaccines needed.
4. S/he is supposed to set up and manage the cold chain.
5. S/he is supposed to evaluate the vaccine and immunoglobulin implementations for effective immunization.
6. S/he is supposed to make the correct decisions in the control of the infectious diseases and epidemics.
7. S/he is supposed to organise vaccination campaigns when necessary.

12. DISASTERS/ACCIDENTS

SUBJECT	KNOWLEDGE	SKILLS
The health problems arised during disasters	<ol style="list-style-type: none"> 1. S/he knows the definitions and classifications of disasters. 2. S/he knows the epidemiological methods used in disasters. 3. S/he knows the effects of disasters on health. 4. S/he knows the evaluation methods of the nutrition status in disasters. 5. S/he knows the effects of disasters on infectious diseases. S/he knows the infectious diseases that spread during different types of disasters. S/he knows the precautions, interventions and control strategies for infectious diseases. 6. S/he knows how to approach the environmental health problems in disasters. 7. S/he knows the principles and methods of providing safe water, nutrition, healthy housing and waste disposal during disasters. 8. S/he knows how to approach towards the psychological health problems during disasters. 9. S/he knows the rules of medical ethics in disasters. 	<ol style="list-style-type: none"> 1. S/he is supposed to collect data, make epidemiological research and use rapid evaluation techniques in disasters. 2. S/he is supposed to evaluate the nutritional conditions (problems/needs) in disasters. 3. S/he is supposed to conduct nutrition program in disasters. 4. S/he is supposed to implement the intervention and control strategies related to the infectious diseases during disasters. 5. S/he is supposed to determine the infectious diseases that should be given priority during disasters. 6. S/he is supposed to determine which diseases spread more during disasters. 7. S/he is supposed to take precautions to limit the spread of infectious diseases, and for the diseases that are expected to spread more during disasters. 8. S/he is supposed to take precautions for the environmental factors, animals and vectors during disasters. 9. S/he is supposed to implement the methods of providing safe water, nutrition, healthy housing and waste disposal during disaster.

12. DISASTERS/ACCIDENTS

The principles of disaster management

38

1. S/he knows the principles of disaster management.
 2. S/he knows the principles of planning for disasters.
 3. S/he knows the principles of triage, the rescuing capacity, referral capacity, the methods of coordination, communication and command in disasters.
 4. S/he knows the principles of risk management in community.
 5. S/he knows the emergency and disaster services in the world.
 6. S/he knows the national and international organizations, and the legislation regarding disasters.
 7. S/he knows the precautions for the common disasters in Turkey (earthquake, flood, etc.).
 8. S/he knows the principles of relations with the media in disasters.
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10. S/he is supposed to encourage the usage of energy sources that do not cause environmental pollution during disasters.
 11. S/he is supposed to determine the risk groups in terms of psychological health during disasters, and conduct the psychological health programs after disasters.
 12. S/he is supposed to do her/his best to apply the medical ethics rules during disasters.
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1. S/he is supposed to plan the activities of institutions before and after the disasters occur.
 2. S/he is supposed to organize the staff in disasters, can select, train, and coordinate their work effectively.
 3. S/he is supposed to organize and apply the surveillance system for disasters.
 4. S/he is supposed to provide resources (manpower, financial, equipment, building, time) and utilise them in an effective way.
 5. S/he is supposed to make plans before the emergency events occur.
 6. S/he is supposed to make risk analysis, is supposed to apply the principles of community risk management.
 7. S/he is supposed to communicate with the media in disaster, and to inform the community.

12. DISASTERS/ACCIDENTS

Human made disasters

1. S/he knows the reasons of the disasters caused by humans; knows their effects and importance and precautions.
2. S/he knows the health problems of migrant and displaced people.
3. S/he knows the health conditions to be provided in camps.

1. S/he is supposed to plan the work of related institutions before and after a disaster occurs.
2. S/he is supposed to select and train who will work in disaster, is supposed to manage and coordinate the activities during disaster.
3. S/he is supposed to organize and apply the surveillance system for disasters.
4. S/he is supposed to provide resources (manpower, financial, equipment, building, time) and utilise them in an effective way.
5. S/he is supposed to find solutions to health problems of migrants and displaced people.
6. S/he is supposed to arrange the health conditions for the camps.

Accidents and injuries

1. S/he knows the differences between accident, injury, and disaster.
2. S/he knows the reasons and effects of accidents on people.

1. S/he is supposed to take part in the activities of finding out the causes of accidents and traumas and to develop strategies for solving them.

13. WOMEN'S HEALTH/REPRODUCTIVE HEALTH

SUBJECT	KNOWLEDGE	SKILLS
The status of women	<ol style="list-style-type: none"> 1. S/he knows what should be done to raise and empower women's status, and the importance of health services specific to women. 2. As a consequence of holistic approach, s/he knows that the status of women and psycho-social influences affecting their health. 3. S/he knows that violence against women is a health issue. 4. S/he knows the parameters of women's health status. 5. S/he knows the effect of working life on women's health. 	<ol style="list-style-type: none"> 1. S/he is supposed to educate the decision makers, health staff and the community on social and cultural empowerment of women. 2. S/he is supposed to find out and, evaluate, women's status and health, and use the results in services. 3. S/he is supposed to educate the decision makers, health staff and the community on violence against women.
Women's health/Reproductive health (WH/RH)	<ol style="list-style-type: none"> 1. S/he knows the potential and existing problems of women in their life periods and the importance of RH. 2. S/he knows the service models of WH/RH. 3. S/he knows the importance of WH/RH services in the primary health care services. 4. S/he knows the importance of safe motherhood approach and the interventions in the safe motherhood service package. 5. S/he knows the concept of unwanted pregnancies and their medical consequences. 6. S/he knows the importance of abortion, on the health of mothers, family and community. 7. S/he knows the legislation about abortion. 	<ol style="list-style-type: none"> 1. S/he is supposed to consider the factors affecting women's health while providing services. 2. S/he is supposed to provide WH/RH services at all life stages of women (adolescent, fertility, menopause/post-menopause) and is supposed to assess the provided services. 3. S/he is supposed to evaluate the knowledge and skills of the staff who provide ante-natal care. S/he is supposed to train them. 4. S/he is supposed to make sure that the deliveries take place in health institutions or at least with the assistance of a health staff. 5. S/he is supposed to encourage breast feeding.

13. WOMEN'S HEALTH/REPRODUCTIVE HEALTH

8. S/he knows the importance of early diagnosis for women's health.
9. S/he knows what the risk approach means.
10. S/he knows the epidemiology of sexually transmitted infections (STI), and the approaches related to them.
11. S/he knows the epidemiology of infertility.
12. S/he knows the importance of the organization of WH/RH training in the improvement of the level of women's health.
13. S/he knows the importance of the WH/RH counselling services.
6. S/he is supposed to organize training on the medico-social and epidemiological characteristics of abortions.
7. S/he is supposed to organize the provision of early diagnosis activities (breast examination, servical cultivation, servical smear, etc.) for women periodically.
8. S/he is supposed to ascribe the risk groups. S/he is supposed to reorganize the periodical visits and early diagnosis services according to the type of risks.
9. S/he is supposed to know and implement preventive and diagnostic methods and treatment techniques for STIs.
10. S/he is supposed to train midwives, nurses, and physicians about WH/RH; and to make them train others.
11. S/he is supposed to provide appropriate counselling services specific to the individual.

41

Controlling of over fertility

1. S/he knows the negative effect of overfertility on women's health.
2. S/he knows the importance of counselling services in family planning.
3. S/he knows the methods and characteristics of family planning (indication/contraindication).
4. S/he knows the methods of infection prevention in family planning services.
5. S/he knows the importance of community-based studies about fertility regulation.
6. S/he knows the importance of service research about fertility regulation.
7. S/he knows the importance of family planning for the socio-economic structure.
1. S/he is supposed to organize training on the risks of over fertility, and make the preventive measures be applied.
2. S/he is supposed to organize training to families about family planning.
3. S/he is supposed to provide advisory services about family planning to women and men. S/he is supposed to encourage them to use family planning services.
4. S/he is supposed to place intra uterine device (IUD).
5. S/he is supposed to apply the methods of infection prevention in family planning services.
6. S/he is supposed to plan and do epidemiological research on the need for family planning and service research on family planning.

13. WOMEN'S HEALTH/REPRODUCTIVE HEALTH

42

The administration of women's health/reproductive health (including family planning FP)

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| <ol style="list-style-type: none"> 8. S/he knows the importance of data recording, reporting and feedback in family planning services. 9. S/he knows the importance of psycho-social factors effecting fertility. | <ol style="list-style-type: none"> 7. S/he is supposed to manage recording, reporting and feedback services in family planning. 8. S/he is supposed to train the public to reduce the negative effect of over fertility on women, family and the community. |
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| <ol style="list-style-type: none"> 1. S/he knows the importance of planning and evaluation in the provision of WH/RH services. 2. S/he knows the service model and the equipment necessary to provide WH/RH services within the context of primary health care. 3. S/he knows the quality and quantity of the human resources needed for services, and the importance of in-service training. 4. S/he knows the importance of intersectoral and interdisciplinary collaboration in provision of WH/RH services. 5. S/he knows how to design action plans and protocols in parallel with the international standards for WH/RH services. | <ol style="list-style-type: none"> 1. S/he is supposed to plan and evaluate the provision of WH/RH services. 2. S/he is supposed to organize the services within the context of primary health care. 3. S/he is supposed to plan and conduct in-service training. 4. S/he is supposed to collaborate with other sectors and disciplines the provision of WH/RH services. 5. S/he is supposed to design action plans and protocols regarding WH/RH services specific to the local conditions in parallel with the international standards. |
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14. CHILD HEALTH

SUBJECT	KNOWLEDGE	SKILLS
The importance of child health	<ol style="list-style-type: none"> 1. S/he knows the importance of child in the family and in the community. 2. S/he knows the indicators of child health. 3. S/he knows the factors affecting child health. 4. S/he knows the major causes of child health morbidity and mortality. 5. S/he knows the child health service model and the on-going programs. 	<ol style="list-style-type: none"> 1. S/he is supposed to support the social studies for improvement of the value of child in family. 2. S/he is supposed to calculate and interpret infant and child health indicators. 3. S/he is supposed to develop suggestions to reduce child health morbidity and mortality rates and make them be applied. 4. S/he is supposed to enhance the necessary infrastructure for the best provision of child health services. 5. S/he is supposed to collaborate with several sectors such as education, agriculture, media, local governments, and non-governmental organizations.
Childhood problems	<ol style="list-style-type: none"> 1. S/he knows the childhood periods and major health problems of each group. 2. S/he knows the healthy relationship between the mother and baby. 3. S/he knows the importance of child monitoring, and how it is applied. 4. S/he knows the importance of nutrition during childhood. 5. S/he knows the underlying social factors of diseases. 6. S/he knows the early diagnosis of common diseases, and their management. 7. S/he knows the reasons of accidents and injuries, and how to prevent them. 	<ol style="list-style-type: none"> 1. S/he is supposed to put the management principles of childhood health problems into practice. 2. S/he is supposed to realize the periodical follow-ups of children in 0-6 age group. 3. S/he is supposed to make the early diagnosis of health problems, and routine vaccinations through growth monitoring programs. 4. S/he is supposed to provide the mothers with the knowledge of breast feeding and breast care; the nutrition techniques for the babies, and make them apply these. 5. S/he is supposed to provide the applications of prevention, early diagnosis and treatment of the common diseases. 6. S/he is supposed to make other health staff, families and the community take the preventive measures for accidents and injuries.

14. CHILD HEALTH

School health services

1. S/he knows the importance of school health, its content, and its relationship with community health.
2. S/he knows the major health problems, their prevention, early diagnosis, and treatment at school age.
3. S/he knows the importance of the control of infectious diseases, and control of epidemics.
4. S/he knows the importance of nutrition, its problems, and their of prevention, early diagnosis, and treatment.
5. S/he knows the importance of educating the teachers, students and other school staff about preventive and promotive health care, and knows the impact of such practices on health of the community.

1. S/he is supposed to explain the importance of school health to the institutions of health and education, local governments, and non-governmental organizations.
2. S/he is supposed to plan and implement school health services.
3. S/he is supposed to plan the nutrition program at school by the assistance of a specialist or by her/himself.
4. S/he is supposed to diagnose and treat the nutrition problems at school age in their early stages.
5. S/he is supposed to assist the staff at school to reach and apply knowledge about preventive and curative care.
6. S/he is supposed to develop training programs on health for the students in collaboration with the school administration.

Health problems of adolescents.

1. S/he knows the adolescence, its characteristics, and importance.
2. S/he knows the main causes of morbidity and mortality (reproductive health problems, drug addiction, accidents, psychological health, etc) in adolescence.
3. S/he knows the factors affecting adolescent health.
4. S/he knows the adolescent health service model.
5. S/he knows the importance of the intersectoral collaboration in adolescent health services.

1. S/he is supposed to develop and apply measures in order to decrease morbidity and mortality (sexual intercourse at early age and its consequences (pregnancy, STIs), drug addiction, psychological problems, nutrition problems) in adolescence.
2. S/he is supposed to collaborate with other sectors such as education, agriculture, media, local governments, and non-governmental organizations in provision of adolescence health services.

15. CHRONICAL DISEASES AND BEING HANDICAPPED

SUBJECT

Chronic diseases
and being handicapped

KNOWLEDGE

1. S/he knows the definitions of adult age and chronic diseases.
2. S/he knows the major chronic diseases.
3. S/he knows the importance of chronic diseases for personal health.
4. S/he knows the importance of chronic diseases on community health, and for the country.
5. S/he knows the person, place, and time characteristics of chronic diseases.
6. S/he knows the main approaches related to the etiological examination of chronic diseases.
7. S/he knows the treatment principles of chronic diseases.
8. S/he knows the primary, secondary, and tertiary preventions for chronic diseases.
9. S/he knows the economic dimension of chronic diseases.
10. S/he knows the concept of "handicapped"
11. S/he knows the legislation related to the handicapped people.
12. S/he knows the concept of home care.

SKILLS

1. S/he is supposed to train the non-physicians and the community about chronic diseases.
2. S/he is supposed to conduct studies about morbidity rates of the chronic diseases.
3. S/he is supposed to make causative studies for chronic diseases.
4. S/he is supposed to train the community about the primary prevention of the chronic diseases (healthy nutrition, physical exercise, smoke-free life).
5. S/he is supposed to conduct diagnostic and follow-up programs for chronic diseases in the community.
6. S/he is supposed to prepare programs specific to rehabilitation services.

16. OCCUPATIONAL HEALTH

SUBJECT	KNOWLEDGE	SKILLS
The concept of occupational health	<ol style="list-style-type: none"> 1. S/he knows the definition of occupational health 2. S/he knows the content of occupational health 3. S/he knows the historical development of occupational health. 4. S/he knows the place of occupational health issues in public health practice. 5. S/he knows the modern principles of occupational health. 	<ol style="list-style-type: none"> 1. S/he is supposed to discuss the issues of occupational health. 2. S/he is supposed to develop suggestions in the direction of modern principles of occupational health. 3. S/he is supposed to conduct harmonious and productive studies with the companies. 4. S/he is supposed to apply the modern principles of occupational health in the health unit of workplace. 5. S/he is supposed to provide advisory services by the modern principles of occupational health. 6. S/he is supposed to consider the relationship between work and health in service provision.
Principles of occupational health	<ol style="list-style-type: none"> 1. S/he knows the application principles of occupational health. 2. S/he knows the preventive health services at workplace. 	<ol style="list-style-type: none"> 1. S/he is supposed to practise the preventive health care principles at the health unit of workplace. 2. S/he is supposed to advise the principles of occupational health in providing counselling services.
Occupational risk groups	<ol style="list-style-type: none"> 1. S/he knows the risk groups in work environment 2. S/he knows the characteristics of risk groups 3. S/he knows the measures that should be taken for risk groups. 	<ol style="list-style-type: none"> 1. S/he is supposed to develop suggestions for risk groups. 2. S/he is supposed to develop project/policies for risk groups. 3. S/he is supposed to develop programs for risk groups in the health unit of workplace.

16. OCCUPATIONAL HEALTH

Environmental factors in the workplace

1. S/he knows the environmental factors in the workplace.
2. S/he knows the health effects of environmental factors in the workplace.
3. S/he knows the preventive measures against the negative effects of environment in the workplace.

1. S/he is supposed to consider the relationship between the environmental factors at workplace and level the of workers' health.
2. S/he is supposed to make descriptive studies at workplace (observation and measurements).
3. S/he is supposed to get support from related organizations.
4. S/he is supposed to advise the preventive methods against environmental factors at workplace.

Occupational diseases

1. S/he knows the definition of occupational diseases.
2. S/he knows the types of occupational diseases.
3. S/he knows the prevalence of occupational diseases.
4. S/he knows the diagnosis, treatment and preventive principles of occupational diseases.

1. S/he is supposed to diagnose occupational diseases.
2. S/he is supposed to suggest and implement preventive measures for occupational diseases.

Occupational accidents

1. S/he knows the definition of occupational accidents.
2. S/he knows the prevalence of occupational accidents.
3. S/he knows the preventive measures from occupational accidents.

1. S/he is supposed to develop suggestions and implement preventive measures from occupational accidents.

Occupational physicians and their tasks

1. S/he knows the tasks of occupational physician.
2. S/he knows the authority of occupational physician.
3. S/he knows the responsibilities of occupational physician.
4. S/he knows the activities of health unit at workplace.
5. S/he knows the duties of health unit team at workplace.

1. S/he is supposed to make the pre-employment, and periodical examinations of employees.
2. S/he is supposed to provide health training at workplace.
3. S/he is supposed to organize a health unit at workplace.
4. S/he is supposed to keep, analyse and interpret the records of the health unit at workplace.
5. S/he is supposed to apply preventive and safety measures at workplace.
6. S/he is supposed to supervise health unit personnel at workplace.
7. S/he is supposed to realize a team work at the health unit.
8. S/he is supposed to plan, apply, and evaluate the activities of health unit at workplace.

16. OCCUPATIONAL HEALTH

Occupational health
legislation

1. S/he knows the occupational legislation.
2. S/he knows how to supervise a workplace.
3. S/he knows the legal basis of occupational physicians.

1. S/he is supposed to develop suggestions in the direction of the regulations.
2. S/he is supposed to implement the regulations.
3. S/he is supposed to develop suggestions to develop/change the regulations.

Related institutions and
organizations

1. S/he knows the related national and international institutions and organizations.
2. S/he knows the parties (workers, employer state) of occupational health.

1. S/he is supposed to collaborate with the related institutions and organizations.
2. S/he is supposed to make research in collaboration with the related institutions and organizations.
3. S/he is supposed to advise the involved parties.
4. S/he is supposed to develop methods to establish coordination and collaboration between the companies.

Sources of information

1. S/he knows the related national and international resources.
2. S/he knows the related national and international academic institutions.

1. S/he is supposed to access to the sources.
2. S/he is supposed to investigate the sources.
3. S/he is supposed to interpret the data.
4. S/he is supposed to use the sources in parallel to the realities of the country.

Research methods in
occupational health

1. S/he knows the research methods

1. S/he is supposed to plan research.
2. S/he is supposed to implement activities research.
3. S/he is supposed to evaluate research.
4. S/he is supposed to present a research.