Module - 404

HEALTH EXTENSION ACTIVITIES



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HEALTH EXTENSION ACTIVITIES

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Lesson 1 The Concept of Health

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Aims

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On reading this lesson you will understand

- There are many concepts about health/illness. .
- Concepts are changeable i.e. they can be changed. .
- The discussion method can be used to know people's concepts.

Knowledge

You will know about

- The definition of health.
- The ideas of people.

Skill

You will learn

- How should information be collected from people? .
- How can information be used in the programmes? •

Perspective

You will understand

- Thoughts are based on previous experience.
- New experiences can mould thinking.

Introduction

This lesson will show you that people have different concepts about health or illness. They are formed by experience, time, society and so on. But they have the potential to change. We have made an effort to narrate the concepts of some people how to make efforts to understand them.

The main duties of Ayushi, the health-worker of Haripur is to encourage people for vaccination and family planning. However, people approach her mostly for treatment of illnesses. At first she faced a lot of problems. The information gained during training, brings a change in one's concepts, but these don't match the traditional beliefs of the village. It is a challenging task to carry forward the new learning in spite of the conventional ideas of the people. This requires testing of one's one's thoughts and relating them to real life.



It is unscientific to discuss a herbal medicine simply because it was not referred to during training. One should try out traditional remedies if they have proved effective in the past generations. However, it is equally

wrong to accept certain beliefs simply because of convention e.g. leprosy as a consequence of sin which has been disproved by science.

While it is easy to convert our own thoughts, it is difficult to transform social concepts. Accusing falsehood directly can lead to strange reactions What responses do you expect?

We have the alternative of first finding out the cause of a misconception like Ayushi did. She had experienced that some people asked for medicine for the smallest of illnesses while others refused to see a doctor even in case of a serious illness. Her mother pointed out that people ask for medicine only when they perceive an illness. In other words, if the problem of small pox is interpreted as the curse of a goddess, people will try to appease



her. They do not connect it with illness or treatment. This made Ayushi realise that people's perceptions need to be tested.

Ayushi called a meeting of the women of the village. These included the school teacher and the (lady) Sarpanch too. Both of them had suffered from a growth in their breasts. They had undergone treatment and surgery. Now they were leading normal lives with their

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families. Ayushi asked the women whether they considered these two individuals healthy or unhealthy. The discussion brought out their understanding of the terms in different ways.

They debated whether "wanting to stay in bed" is a sign of illness or laziness; whether looking well built meant healthy or being able to all one's work was important.

In rural Maharashtra a person is considered a patient if he is ill for about 2 weeks and if the illness is considered serious. Otherwise he is just "ill."

They considered an individual healthy if he had a good appetite, energy to work and a good night's sleep. Then the women tried to describe the symptoms a "patient" as one who fell ill often, didn't get children. Others disagreed about relating reproduction with help. Some felt it was related to past sins etc.

FRCH conducted a survey in a small village. The villagers believed that being unemployed signified disease because one cannot get a meal unless one works and without food one cannot be healthy. They have sold their agricultural land to industries and now feel that they cannot get food without a job.

This clarifies that people's ideas are affected with time, spread of scientific awareness, conflicts in life and social as well as financial problems.

The conversations of the women revealed that people who were dissatisfied in life suffered mental problems. This condition was interpreted as illness by society. Thus every social belief or practice could not be acceptable.

Here are some symptoms of health or "well-being"

Physical

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- 1. Good appetite
- 2. Energy to work
- 3. Normal sleep
- 4. Not falling ill frequently

Mental symptoms of well-being include

- 1. Feeling satisfied
- 2. Being calm

- 3. Able to concentrate on work
- 4. Not harassing others
- 5. Not tolerating injustice
- 6. Respecting others

Symptoms of Emotional well-being include

- 1. Maintaining good interrelationships
- 2. Having friends
- 3. Self-confidence
- 4. Self-respect

WHO has defined health as not just absence of disease or handicap but also presence of physical, mental and social well-being.

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Ayushi concluded the discussion about symptoms of health and illness, hinting that they would discuss the causes of illness in the following meeting.

Self Examination

- 1. Find out from people, their concepts about health
- 2. Find out people's definitions of illness and patients
- 3. What are the implications of having a son to a pregnant woman in your village.
- 4. How will you describe blind-faith? Give examples.

Exercises

Choose the correct alternatives

- 1. Why should a health worker understand people's beliefs?
 - 1. To modify misconceptions
 - 2. To make them understand one's thoughts.
 - 3. To provide health services
 - 4. To obtain people's help achieve health/to use their experiences /to utilise their knowledge.
- 2. The meaning of health is
 - 1. Not falling ill
 - 2. Not being handicapped
 - 3. Not needing medicine
 - 4. Being physically, mentally, financially and spiritually well

- 3. Physical symptoms of health are
 - 1. Not falling ill frequently
 - 2. Having appetite / good sleep

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- 3. Feeling energetic to work
- 4. All the above
- 4. The symptoms of mental health are
 - 1. Having energy to work
 - 2. Having friends
 - 3. Concentrating on work
 - 4. All the above

Answers

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Alternatives - 1-4, 2-4, 3-1, 4-2

Lesson 2 Health, Poverty and Gender Discrimination

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Aims

On reading this lesson you will understand

- Poverty and Health are closely inter-related.
- Poverty doesn't just mean not having money but is also connected to some other factors.
- · Our health can suffer even by absence of information

Knowledge

You will know about

- · Poverty and Health are related to each other.
- Gender is related to health.

Skill

You will learn

- Understanding the thought process of villagers.
- Identifying the problems of the village.

Perspective

You will understand

It is wrong to make judgements without knowing the cause.

Introduction

Ayushi started to discuss the causes of illness. She introduced the conditions leading to the death of a 2 year old girl Surekha. She had a cough and cold. Since she was a 'girl' (not a boy) her unemployed but drunkard father refused to allow spending on her treatment. Moreover, taking her to a doctor or health worker would mean losing a day's wages without certainty about getting medicines or meeting the concerned person. Thus, even though a health worker like Ayushi could have saved the daughter of a poor family, it didn't actually happen.

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Ayushi extracted the following reasons of the child's death from the women of the village:

- 1. Not getting medicines on time
- 2. Lack of organisation in government hospitals
- 3. Higher charges of private doctors.
- 4. Unavailability of transport for the patient
- 5. Bad roads
- 6. Neglect as a girl-child
- 7. A working woman's inability to spend
- 8. No power of decision-making
- 9. Lack of awareness about early stages of disease, illiteracy
- 10. Drinking and wife wife-bashing habits of penniless husbands.
- 11. Ignorance about saving.

Ayushi then added her comments about Indian conditions among children. Absence of pure drinking water causes diarrhoea among children. Some tribal children die of malnutrition simultaneously there are people who spend lakh's of RUPEES on a single party. Is such a society healthy?

While majority of the population lives in villages, rural folk do not get sufficient water, health services and jobs. However all the facilities are abundant in cities Social health is connected to developments. Next time they would discuss a well-developed area of the country.

Self Examination

- 1. Make a monthly list of the no. of patients suffering from different diseases. This will show you the likely months of prevalence of each disease
- 2. Find out the periods of high frequency of cough and cold
- 3. What will you advise these patients?
- 4. Study the map of your village to locate areas with greater requirement of services.
- 5. List the people who will be helpful in gathering the above information.

What needs to be done?

- Control of villagers over staff and medicines of the government hospitals.
- Training local villagers for primary health care
- Spread of Education
- Facilities like roads and transport in villages
- Efforts to maintain unity within the villages
- Improvement in conditions of women
- · Financial independence, spending capacity of all.

Exercises

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Choose the correct alternatives

- 1. What should we do to ensure health for all members of our society?
 - 1. Have big hospitals
 - 2. Have medical colleges everywhere
 - 3. Good education for all
 - 4. Efforts to raise social, financial, cultural levels of all
- 2. What is the cause of illness?
 - 1. Infection
 - 2. Mal nutrition
 - 3. Gender Bias
 - 4. All the above
- 3. What is necessary for village-level health?
 - 1. Staff Medicinal control by villagers in government hospitals
 - 2. Health Training for some villagers
 - 3. Efforts to improve social and financial levels of women
 - 4. All the above
- 4. Health can be achieved by
 - 1. Treatment of disease
 - 2. Prevention of illness
 - 3. Combined efforts to solve causation problems
 - 4. Free health service for all

Answers

Alternatives - 1-3, 2-4, 3-4, 1-3

Lesson 3 Health and Development

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Aims

On reading this lesson you will understand

- Explaining the scope of development.
- Efforts to determine the direction of development.
- The interrelationship of development with health

Knowledge

You will know about

- The meaning of development.
- The link between development and health.

Skill

You will learn

To know what people consider as development.

Perspective

You will understand

- Respect for health.
- · Keep in mind people of all classes while making development plans.

Introduction

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Ayushi spoke at the meeting of the women of the saving group, about a so-called "welldeveloped" area.

Renuka was a hard-working house-wife in a village. She also milked the cows and buffaloes along with house keeping. Her husband delivered it to the customer while she worked in the fields. She returned home to cook for the family even when tired.

Some people came to the village to acquire land for the big new industry. The villagers were tempted by the high price offered. When worried about their occupation as farmers, they were assured of jobs in the factory. The farm-workers were worried about themselves but women like Renuka thought it was not for them to "think". Since they didn't have a male-child, her husband thought they didn't need to "preserve" their farms. She didn't interfere with his decision to sell the fertile land.

All the agricultural land in the village was sold for "development". A big factory was constructed in its place and a sparking colony in the near by area. Educated city-dwellers came to live there. It was complete with security, trees and all signs of development. On the contrary, the original village was reduced to poverty. The man and young boys made merry with the cash-price received. But hardly anyone got jobs. The women like Renuka were forced to work as maids in the nearby new colony. The factory waste contaminated the river. Construction workers from other states built temporary shelters which soon developed into a slum area full of plastic bags, stagnant water and devoid of facilities even for the children.

Except for a handful of villagers no one else benefited by the coming of the factory. Remaining land became barren. There was no money to feed the families, so animal breeding was out of question. They had no facility in any ration shop. The factory had spread smoke all around. The senior citizen were dying of pollution. The girls had to married off while yet at school. The story is not imaginary. Renuka father-in-law actually developed chronic cough due to smoke. Her mother-in-law lost her eye-sight and later she too lost her life.

The following points need to be considered

Social

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1. Evaluation of social regulations, ethics and creation of new regulations.

2. Follow social rules beneficial to all.

3. Understand and try to change discrimination based on sex, financial, caste differences.

Political

- 1. Regular meetings of Gramsabha.
- 2. Having many organisations in the village.
- 3. Participation of women and backward tribes.

Economic

- 1. Be sufficiently able to fulfil basic needs.
- 2. Have security for future.
- 3. Availability of employment for all villagers.
- 4. Refuse to go to any limit for excess of wealth
- 5. Reducing Alcoholism
- 6. Abolish malnutrition
- 7. Ban female infanticide
- 8. Support for ill-treated women victims.
- 9. Eradication of corruption.

Cultural

- 1. Respect women, elders and children.
- 2. Respect health.

Environment

- 1. Potable water for all.
- 2. Sewage facilities in every village.
- 3. Social afforestation in villages.
- 4. 33% rural areas to be under forestation.
- 5. Proper pastures and grazing areas.

Think about the following points -

Self-examination

- 1. Why do you think Renuka's mother-in-law died?
- 2. What will you describe as development?
- 3. What according to you is or should be the role/responsibility in such examples?

- 4. How should development be clarified?
- 5. What should be the responsibility of the factory?
- 6. Which movement stressed the rehabilitation of the displaced recently in India?

Exercises

Fill in the blanks

(Smoke form the factory, Political Development)

- 1. Renuka's father-in-law died due to ____
- 2. Holding the Gramsabha regularly is a part of _____

Match the following

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- 1. Social development
- 2. Economic development
- 3. Environmental development
- 4. Political development
- 5. Cultural development

- 1. Respect for elders
- 2. Participation of women in Politics

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- 3. Eradication caste discrimination
- 4. Availability of Employment for all
- 5. Potable drinking water for all

Describe in your words your interpretation of development

Answers

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Blanks - 1-1, 2-2 Match - 1-3, 2-4, 3-5, 4-2, 5-1

Lesson 4 People and Concepts about Health

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Aims

On reading this lesson you will understand

- What may be the causes behind the reasons for illness.
- Which measures do people take for different diseases.
- People belief's about health are related not just with illness but also with all the problems in their lives

Knowledge

You will know about

- People's concepts about well-being are not linked to illness alone.
- People have/use different remedies for each disease.

Skill

You will learn

- To know about people's concepts.
- To understand the factors leading to peoples illness.

Perspective

You will understand

Why there are so many reasons for people's ill-health.

Introduction

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Ayushi had to discuss the causative factors of people's ill-health. She asked the women to explain how they tackled a patient. Some of them resorted to prayers and magic when they related the illness to family problems. They tried rituals and pilgrimages. Only if they didn't see any improvement they went to the doctors after buying home-remedies and traditional medicines.

This is what they gathered from their conversation -

- 1. The traditional medicines for some diseases are correct.
- 2. Just as we believe in allopathy though it has no cure for certain diseases, there is no harm in believing in God.
- 3. It is easier to understand the behaviour of people if we understand the concept behind their life-style.
- 4. Superstition for some may be culture for others.
- 5. When we expect people to change, we have to provide the related facilities e.g. sufficient water to practice cleanliness.
- 6. Since the concept of well-being goes beyond the disease to all aspects of life, treatments will also be different for the diseases.

This lesson teaches us that people have knowledge (They are not ignorant). Diseases like cough and cold can be cured by themselves. Yet doctors prescribe medicines. Just as we don't consider this unscientific we cannot criticize villagers. They have used conventional remedies successfully.

So you should ask people about their traditional medicines. Find out their beliefs about each disease and when they prefer to consult a doctor.

Summary

The concept of health keeps getting modified with social and economic changes. You must gather information about it so that you can know which aspects about their ideas need to be changed.

- There are different angles to health and disease.
- Health is related to financial, social and cultural aspects.
- Concepts can be modified.

Self-examination

- 1. Explain how this chapter has modified your beliefs.
- 2. List the beliefs of 5 women from your village.
- Explain the factors which obstructed your discussion with the women and how you overcome the difficulties.

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- 4. What further information do you need in this connection?
- 5. List the home-remedies discussed with people.

Exercises

- Concept of health keeps changing with these alternations
 Social 2. Economic 3. Cultural 4. All the above
- 2. A health worker should discuss the beliefs of the people in order to
 - 1. Understand their health-related superstitions.
 - 2. Change the misconceptions
 - 3. To achieve good health when combined with their experience
 - 4. All the above.

3. The health-worker should be aware of folk-medicines

- 1. Since some diseases are linked to blind-faith.
- 2. Some diseases get cured with home-remedies.
- 3. Treatments may have some problems.
- 4. All the above.
- 4. Take care of the following when enlightening people about health
 - 1. Their concepts/tradition.
 - 2. The political/social/geographic conditions of the area
 - 3. Conventional/home-remedies

4. All the above

Answers

Alternate - 1-4, 2-3, 3-2, 4-4

Lesson 5 Disease

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On reading this lesson you will understand

- Which diseases are infectious and which non-infectious
- How epidemics spread.
- On which factors does health depend

Knowledge

You will know about

• The role of a health-worker

Skill

You will learn

Understand the difference between infections and other diseases.

Perspective

You will understand

Know superstitions among people and try to remove them.

Introduction

Diseases - Illness means malfunction in the normal systems of the body. There are 2 types of illnesses -

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1. Non-Infectious 2. Infectious

Non-Infectious diseases are as follows

- 1. Changes caused in the body with age e.g. 'Vaat' (Gas).
- 2. Deficiency -related e.g. diet deficient in vitamin A leads to night-blindness, anaemia etc.
- 3. Abnormality since birth e.g. cleft lip.
- 4. Caused by external factors e.g. -allergy.
- 5. Mental Imbalance.
- 6. Unnatural growth of tissues e.g. tumour, cancer.

Infectious Diseases

They may be caused by germs, they can spread from a patient to another person.

Epidemics

When the some kind of illness spreads at the same time among many people in an area, it is called an epidemic.

Nature has a lot of organisms and germs. While we can see many like plants, birds there are microbes which are so small that they can't be seen by the naked eye. These microscopic organisms are viewed through the microscope. They occur everywhere - in air, water, trees, our bodies and even grow on food.

They are of 4 types -1. Virus 2. Bacteria 3. Saprophytes 4. Parasites

Germs may be harmful or beneficial. Some of them prepare vitamins is our bodybacteria convert milk to curds.

Germs cause illness like colds, coughs, TB and malaria. Even if they are all around, people with good resistance don't get the disease because their W.B.C. can destroy them. But weaker people lose to them falling prey to diseases and sometimes even to death.

We can prevent the spread of diseases by a careful diet, cleanliness around us and vaccination.

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How do diseases spread?

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- 1. By contact with contaminated food etc. as in typhoid
- 2. Direct contact with the belongings/bed-clothes or touching a patient e.g. cough, cold, TB.
- 3. Entry of parasites in our body- e.g. mosquito-bite may cause malaria.
- 4. Bites by animals e.g. Rabies from infected dogs

The following chart shows that factors affecting health with information of them in the form of a tree.



Banyan Tree of Diseases

The Banyan Tree of Diseases shows that (good and bad) depends on social factors as follows -

1. Life style

A good income, nutritive diet, a house to protect from cold/heat/rain, facilities for education, public sanitation, sewage arrangement for flowing water, provision of latrines, timely and suitable treatment together with some rest and mental health contribute to good health.

2. Drinking water

Insufficient water supplies prevents cleanliness, low levels of ground water are caused by water flowing away or too much use by cash-crops. Impure water causes, diseases like Polio, gastro, jaundice, typhoid less water means lack of bodily cleanliness causing skin diseases.



Tree of Health

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3. Flowing water

Water around the house may contain germs that cause skin diseases. It also breeds mosquitoes causing malaria. The garbage mixes with it and pollutes the atmosphere. It creates bad odour and flies carry the infections into the house. Thus the surroundings should be kept clean and soak-pits should be used.

ALL HOUSE

4. Latrine

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Often rural population or slum dwellers pass stools in the open due to lack of toilet facilities. This causes many diseases to spread.

5. Health Services

We all must have information about how and where treatment for illness can be obtained.

6. Health Worker Scheme

This was started in 1977, keeping villages in mind. A local villagers is trained about health and simple treatments. The Government provides the medicines. Such bare-foot doctors are common in China.

Our rights regarding health

- 1. Health service is given treating a patient as a human-being.
- 2. There should be no discrimination based on financial state while treating a patient.
- 3. The patient must be informed about the disease and the treatment.
- 4. The patient must have the facility to complain if these rules are not being followed, so that he can get justice.
- 5. The most important thing is that everyone must get health related services (not just treatment).

Health for by 2000

The poor countries like India, Pakistan and Bangla Desh suffer from bad health. In 1977 a world meeting was held to discuss how the people can be free of some diseases. These were the main points-

- 1. Provide primary health care to all.
- 2. Reduce malnutrition by providing a sufficient quantity of good food.
- 3. Arrange to provide clean drinking water to all.
- All children be immunised against 6 diseases diphtheria, whooping cough, tetanus, polio, TB, measles.

The government had accepted the above objectives for the year 2000.

But what is the reality today?

We must remember that we have some responsibilities to reach the goal.

Exercises

- 1. Falling ill means
 - 1. Body becomes weak
 - 2. Getting infected
 - 3. Getting Fever
 - 4. Disorder of normal functioning of body system

2. An epidemic is

- 1. Spreading of disease
- 2. Many simultaneous patients
- 3. Many people get the same disease
- 4. The same disease afflicts many people together in one area.
- 3. Itching or rash due to allergy is a disease that is
 - 1. Infectious
 - 2. Non-infectious
 - 3. Epidemic
 - 4. Viral infection
- 4. A barefoot doctor in the Health Care Scheme is
 - 1. A doctor serving in a village.
 - 2. A government doctor in a village.
 - 3. A doctor moving bare-foot in a village.
 - 4. A health worker from the village, working with the people.
- 5. Our health-related rights include
 - 1. Getting good food/water
 - 2. Getting government health services
 - 3. Providing treatment and preventive health services to all.
 - 4. Immunisation of children.

Fill in the blanks

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(Environmental cleanliness) (Health for all by 2000) (Microscope) (Resistance of the body) (B) (1977)

_____·

1. _____ can save from infection by germs.

2. The Health Care scheme was made in _____

3. The World meeting of 1977 decided to aim for _____

4. _____ is a preventive measure for spread of diseases.

5. A _____ is used to observe microbes.

Match the pairs

- 1. Contaminated Food
- 2. Cancer
- 3. Mal nutrition

2. Microscope
 3. Mosquito

1. Non-Infectious Disease

- 4. Malaria
- 5. Germs

Cause of disease
 Typhoid

Answers

Alternatives - 1-4, 2-3, 3-2, 4-4, 5-3 Blanks - 1-4, 2-5, 3-2, 4-1, 5-3 Correct Pairs - 1-5, 2-1, 3-4, 4-3, 5-2

Lesson 6

The Philosophy of Different Treatment Systems

Aims

On reading this lesson you will understand

The principles underlying treatment systems

Knowledge

You will know about

The fundamentals of each system ('pathy') of treatment.

Skill

You will learn

- Respect all treatment methods.
- The 'pathy' (method) is a medium, not objective, if it cures a patient, it is suitable for him.
- Respect for and cautious use of tradition.

Introduction

Treating a patient and caring for him is natural to all human beings, whichever place or time-period.

The nomadic man used natural things for treatment. As man progressed agriculturally, he began to use particular plants for particular complaints.

Even animals consume a particular, grass when they suffer from motions. But man has moved away from such natural inspiration.

Naturopathy

This is based on the belief that the body is the source of disease. So the same elements should be used to cure it. Since illness considered a slow-process, the treatment is also slow.

Therefore the 5 elements air, water, sky, earth and fire are used with the help of yoga, diet and isolated treatments.

Ayurveda

This also believes organisms consist of the basic 5 elements. There has been detailed analysis of diet and conduct related to the 3 doshas - kafa, vaat, and pitta. They have to be balanced by using elements opposing them.

Some people have all the three doshas in the same quantities while others have one of them in excess. The 'Prakirtidosh' or 'Tridosh' can be recognised as follows -

1. Vaatdosh - Excess of this keeps a person slim and active but has a variable appetite. Such a person doesn't gain weight and keeps falling ill. Vaat dosh makes a person prone to constipation prefer warmth and suffers in the cold. His skin is dry and stiff. His veins are clearly visible.

2. Pitta dosh - Symptoms of excess of 'pitta' are – intolerant to heat, softer skin, good appetite hot-tempered, good excretory system.

3. Kafa dosh - Those with kafa dosh are quiet, low poor appetite but good stamina, sleep well and love exercise.

Some people have two 'doshas' together

Homeopathy

It was developed by Dr. Hanneman about 200 years ago. He felt quinine was not suitable for malarial and tried it on himself when he was normal. He found it produces the same symptoms as the disease even with changed quantities. Thus he concluded that substances having the same properties can be used for treatment. Thus homeopathic medicine, consist of different materials.

Allopathy

In this method diseases may be divided into infectious and non-infectious.

Non-infectious diseases may be caused by disorder in some part of the body like-heart attack, cataract, cancer etc.

They may be caused by external factor e.g. - poison due to snake bite, cough due to smoking or ulcer caused by excessive drinking.

Diseases of deficiency like malnutrition leading to anaemia etc.

Problems since birth like birth marks or mental epileptic fit or conclusion, deformity. Some diseases may be mental. Some things are harmful like anxiety, superstition or uncontrolled phobia. Infectious diseases spread when attacked by germs.

Reiki, Acupressure and acupuncture

They are based on the faith in flow of energy in the body. When obstructed, it causes disease and has to be stimulated.

Self Examination

Which systems of treatment are available in your village?

Why do people go to witch doctors?

What do self-curing diseases indicate?

Write the symptoms when the patients should be sent to the primary health centre or allopathic doctor.

Exercises

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- 1. According to Naturopathy for good health are must
 - 1. Be a vegetarian
 - 2. Follow suitable timings for diet and conduct
 - 3. Practice Yoga/pranayama
 - 4. Use exercise/yoga/fasting/simple diet/water therapy.
- 2. Ayurveda is the science of
 - 1. Human disease
 - 2. Veda

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- 3. Man's living and disease.
- 4. Diet and conduct
- 3. Infectious Disease means
 - 1. Person to person
 - 2. Many people at time
 - 3. Disease among adults
 - 4. Children's frequent illness
- 4. Non-infectious diseases are -
 - 1. One Patient shows infection
 - 2. Not contagions
 - 3. Similar symptoms among many patients
 - 4. One person has symptoms of many diseases
- 5. These medicines don't benefit non-infectious diseases
 - 1. Anti bacterial
 - 2. Anti viral
 - 3. Anti parasitic
 - 4. Homeopathic
- 6. The main thing in Reiki, acupressure, acupuncture
 - 1. Stimulating flow of energy
 - 2. Focussing of flow of energy
 - 3. Balancing the energy flowing
 - 4. Controlling the energy flowing

 Reiki, Acupressure, Acupunc Obstruction in flow of energy Increase of flow of energy Obstruction in flow of elect Obstruction in fluids of tise 	ture believe disease is caused by rgy ctric impulses sues
Fill in the blanks (Homeopathy), (Man's body is the s (Dr. Hanneman) (Kafa, Vaat, Pitta	source of disease), (Earth, Fire, water, wind, sky), (Natural) a)
 Naturopathy believes that Treatment and caring for patients Ayurveda believes that our books The imbalance of tridosh The imbalance of tridosh Different substances having simple according to 	ents is a human inspiration. dy consists of Panchamahabhootas causes disease in humans. pathy. milar properties can be used as medicine for treatment
Match the pairs	
 Cleft lip Uncontrolled phobia Non infectious disease 'Vaat Dosh' 'Kafa Dosh' Reduce excretory problems Answers	 Mental Disease Non-infectious disease Clearly, visible, "Neela" (veins) Bacteria 'Pitta-Dosh' Poor Eater/Fond of physical exercise
Alternatives 1-4, 2-3, 3-1, 4-2 , 5-1 Blanks - 1-2, 2-4, 3-3, 4-6, 5-5, 6- Pairs - 1-2, 2-1, 3-4, 4-3, 5-6, 6-5	, 6-2, 7-1 1

Lesson 7 The Role of Health Worker

Aims

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On reading this lesson you will understand

- It is necessary to imbibe the mind-set, life-style and psychology of the villagers in order to work as a Health Worker in a village.
- How to help others while continuing our own work.
- Realise the meaning of culture.

Knowledge

You will know about

The role of a health worker.

Skill

You will learn

Working in coordination with people.

Perspective

You will understand

The implication of 'culture'.

Introduction

A new health worker called Madhuri came to Sunderpur. She had heard that Ayushi worked in her neighbouring village and decided to consult her to decide how to start working. Actually Ayushi had to complete her records the same day, but decided to share her experiences with Madhuri as she worked.

She narrated some incidents to the new health worker. A health worker called Mahadu was once bitten by a snake. Ayushi had rushed to give him the anti snake venom-injection (ASV). But instead he preferred to the treated by a traditional healer in the temple. He recovered in a couple of days. Ayushi pointed out that it meant he was bitten by a non-poisonous snake otherwise he would have died without ASV Injection. He reasoned that hardly anyone ever died of snake-bite in that region, in spite of several people being bitten. He attributed this to merit and sin. He felt he was bitten because his wife had worked during menstruation (against convention) but was saved because he wasn't a sinner.



Madhuri criticized the man for his ignorance. But Ayushi reminded her not to dismiss his knowledge gained by his experience as a farmer. Statistically he knew people there didn't die of snake-bite but being illiterate his reasoning was not scientific. But this didn't mean he was not intelligent. He could draw conclusions but he could not reject convention. This concern for culture was preserved by Ayushi and whenever she gave the ASV injection to a villager, she urged him to visit the temple. This endeared her to the villagers and they agreed to take her treatment while they continued their cultural practices.

In the olden days people attributed all illnesses to sins and curses. They took patients to temples or places of worship. Often they felt better. Modern medical science also tell us that some diseases get cured without treatment, like viral infections. So there is no harm in such patients visiting the temple.

Madhuri was apprehensive about whether the villagers would ever change. Ayushi reminded her that she herself was literate, worked and dressed differently from her own mother. Thus generations were always changing, only change is a slow process. Some rebels always oppose what is wrong in tradition e.g. Savitri Phule and Mahatma Phule. Though education

was denied to women by convention, they decided to start it. No doubt they had to struggle a lot. Contact with British culture helped them in this respect. Now educating women is acceptable to society.

Thus neither should we consider tradition as totally infallible, nor should we reject it as a whole. We keep learning through experience. Ayushi summarised some of the customs favourable to our lives as follows -

- Cleaning the teeth early morning is a standard practice. Use of neem is beneficial to us.
- Bathing before visiting the temple is important for cleanliness.
- · Joint families give support to all members, thus they rarely suffer mental illness.
- · Also senior citizens and children are cared for.

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- People giving traditional medicines do not charge money because they consider it a sacred duty.
- Every festival has a recommended diet which is beneficial for health e.g. Sesame and jaggery provide warmth in winter.

Madhuri wondered how the above facts would concern her own work. Ayushi clarified that she could mention these practices to the village women. She could include them while encouraging them to talk about their health problems. This would bring the health worker closer to the people. Involving them in trying out treatments would become easier if she showed that she accepted the above conventions. Ayushi cited the example of how once she once requested a witch doctor to help her when people refused to discontinue defecating near the drinking water in spite of repeated efforts. The man spoke to the villagers and they agreed. Thus she had used his authority to bring about a change from wrong practices. This helped to prevent Gastroenteritis during the rains.

Finally she mentioned how she had learnt not get cross with the villagers. Once she discovered that a little boy had night blindness. She scolded his mother for not bringing him for treatment. The rustic woman retorted that she did not consider it an illness at all, moreover she had no time to meet her. Ayushi realised that they first need to he made aware about good and bad health. Only then could they be treated for perceived ailments. Thus Madhuri realised the importance of getting to know what the people around her thought, what they didn't know, and how they lived. This would help a health worker to identify problems, familiarising them at the same time. Soon they would accept her suggestions.

Self Examination

1. Explain how the chapter has changed your perspective.

- 2. Collect information about superstitions related to different diseases in your area.
- 3. What would you do in case of an epidemic? Whose help will you take?
- 4. What will you do to prevent contamination of water in your place?
- 5. Discuss with people what they think about health.

Exercises

- 1. A health worker in a village should
 - 1. Move about in the village.
 - 2. Give information to people
 - 3. Only tell people what you think
 - 4. Understand people and work in coordination with them
- 2. People take long to change because
 - 1. People have blind faith
 - 2. There is pride about forefathers.
 - 3. People are stubborn
 - 4. Cultural practices have a deep impact upon people.
- 3. If you wish to change superstitions related to disease,
 - 1. Provide scientific information to people
 - 2. Pressurise people
 - 3. Understand their experiences and give them time to accept changes
 - 4. Educate people

Fill in the blanks

(Malnutrition) (A)

1. Deficiency of vitamin _____ causes night blindness

2. _____ may cause swelling on the bodies of children

Answers

Alternatives 1-2, 2-4, 3-3 Blanks - 1-2, 2-1

Lesson 8 Anaemia

33

Aims

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On reading this lesson you will understand

- Getting information about the illness called Anaemia.
- Knowing the causes, symptoms and treatment of Anaemia. .
- Knowing the different methods of testing the constituents of blood.
- Find out the age-wise amounts of constituents in normal as well as anaemic conditions.

This chapter will develop your knowledge, skills and perspective as follows -

Knowledge

You will know about

- What anaemia is .
- Which substances are necessary to develop constituents of blood and
- Know the symptoms of anaemia thoseuy can be recognised

Skills

You will learn

- Testing blood contents
- How anaemic patients are treated

Perspective

You will understand

- What is the root cause of this disease on such a large scale in our country.
- How anaemia can be overcome through diet

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Anaemia can be defined as a reduction is the oxygen carrying capacity of blood. Since it is very common in India, people get so used to it that the condition is not perceived as a disease. This occurs more among women, particularly rural, but even children below 5 years and 20% men suffer from anaemia. It is aggravated by poverty.

Blood contains two kind of cells 1. Red blood cells (RBC) 2. White blood cells (WBC) RBC contain haemoglobin which gives its own red colour to blood. The RBC are created in bone marrow and remain in the blood for about 3 months after which they are destroyed in the spleen. There protein, iron etc are separated from them to make new RBC. While unwanted material is given out through urine, making it yellow. This colour is noticed during jaundice.

In anaemic condition, total amount of haemoglobin is reduced. In one kind of anaemia it is reduced in all the cells while in the other kind, the no. of RBC is reduced.

Age	For Normal Health	In Anaemic Condition
6 months - 6 years	About 11	Less than 11
6 years - 14 years	About 12	Less than 12
Above 15 (male)	14 to 16.5	Less than 13
Above 15 (female)	11 to 14.5	Less than 12
Pregnant women	11 to 13	Less than 11

Blood components in 100 ml gram

Causes of Anaemia

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a. Deficiency of Substances needed to produce blood - Iron, protein and vitamin B are all necessary for production of blood. If the diet doesn't provide any of these sufficiently, there is reduction in the blood count. Malnutrition is the main cause of anaemia.

Iron - It occurs in green vegetables, whole grains, meat (especially liver). Using iron utensils while cooking also provides a lot of iron. If we take care of these two factors, you get sufficient iron except when there is constant bleeding as in menstruation or due to hookworms. Repeated deliveries may deplete iron. Thus children and women are more likely to become anaemic. Women especially during pregnancy require greater quantities of iron. Men need 30 mg while women need 60 to 100 mg. Though this is not difficult, in reality very little of the consumed iron can be obtained by the body. Thus to get 1 or 2 mg you need to consume 30 to 60 mg.
Protein

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Sugar.

We need proteins to produce new cells, (like soil/time for bricks in a building), also RBC. In its absence, a person is undernourished and shows swelling.

Vitamin B

Folic Acid is the main constituent in vitamin B and occurs in green leaves.

Low count of blood cells

Every ml of blood contains 50 lakh RBC. If their production is slow while destruction continues speedily (as in case of bleeding) the no. of cells gets reduced. Long-term infections like TB or typhoid can also cause anaemia due to greater obstruction of blood cells. Cancer can also create this condition. Untreated malaria is another disease cause anaemia. Thus the cause of anaemia has to be diagnosed before treatment.

Symptoms and diagnosis

A sudden reduction of RBC can show symptoms of great fatigue as in malaria (or other infectious diseases) and bleeding. But a slight and slow development of anaemia goes unnoticed. Actually iron should be given with even slight sensations of tiredness. But often women come for testing only when they start feeling breathless or become pale, by which time the count is below 8. Thus symptoms can be seen in case of acute anaemia-continuous bacterial infectious, absence of red colour around eyes and nails, lifeless tongue, sense of pounding in the chest etc.

Blood test

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A blood sample is collected from the finger or vein in one of the many different ways -

- A particular type of blotting paper is used on which the drop of blood is compared with a given red shade. This only shows absence/presence of anaemia and not the
- A drop of blood is put in a blue saturated solution. It settles down if normal. If it floats, there is anaemia.
- A drop of blood is mixed with HCI of a fixed strength. The shade obtained is compared with a given colour. This is considered a reliable test.

Treatment

It is important to take preventive measures among women and children. The ferrous pills have been distributed for many years for this purpose. However, they must be urged to consume them and be informed about health.

The treatment depends on the amount of haemoglobin. If it is only 2 or 3 gm, the patient needs to be a given fresh blood. If not possible, they should be given inferon or jectofur injection under obstruction because it may cause a reaction. For others, doses of 100 gm, iron can be given orally everyday. 33.3 mg is sufficient as a preventive measure. It takes 6 to 8 weeks to normalise the blood count. However, pressure of other diseases should also be checked. A proper diet must be recommended, along with use of iron utensils. In case of non vegetarians too, a mere one kg of meat for a family of 5 to 6 per week is not enough.

Information about iron tablets

The government distributes 60 mg iron with folic acid from the vitamin B group be taken for 3 months. Children are to be given liquid form by weight-5 ml per kilo as a prevention. For anaemia the dosage is to be doubled. It causes dark stools and may cause burning or constipation. It may be taken on an empty stomach but people may not find it suitable.

Some details about anaemia

- 1. 40% women and 20% men have anaemia
- 2. Women need 3 times more iron than men. Breastfed children also need it.
- 3. Anaemia has a range of cause from chronic dysentery to malnutrition.
- 4. Always remember that anaemia may be the cause behind fatigue, body-ache and related symptoms like feeling unenthusiastic etc.
- 5. Anaemia has to be found out because patients rarely complain about it.
- 6. Anaemia lowers body resistance, increasing the risk of bacterial infections thereby.
- 7. Preventive iron tablets must be taken for at least 3 months.
- 8. Iron injections may cause reactions.
- 9. Jaggery, green vegetables and iron utensils provide sufficient iron.
- 10. The government has a programme for anaemia which is cheap and easy.

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Self Examination

1. Which diet is recommended to correct the deficiency of iron, vitamin B and protein.

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- Why do more women suffer from anaemia? 2.
- 3. Why should pregnant women prevent anaemia?
- 4. Is there any way to eradicate anaemia from rural areas?

Exercises

Fill in the blanks

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Real of

(Bone Marrow), (14-16.5 gm), (less blood) (120 days), (red), (iron, protein, vitamin B), (Anaemia), (11-14.5 gm), (Iron 60 gm/folic acid), (6-8 weeks)

- 1. Anaemia means _____.
- 2. Haemoglobin is _____ in colour.
- 3. RBC are produced in the _____.
- 4. RBC exist for about ____
- 5. The amount of haemoglobin among men is ____
- 6. Women have _____ of haemoglobin.
- 7. You need ______ for production of blood.
- 8. The primary indications of ______ are pale, lifeless skin, fatigue and panting.
- 9. The blood becomes normal after taking iron orally for ______ weeks.
- 10. The iron tablets given through the government programme include ______ and ____

Choose the correct alternatives

- 1. Colourlessness around eyes and nails as well as a light flabby tongue in a person suffering fatigue are the symptoms of -
 - 1. Anaemia
 - 2. Malnutrition
 - 3. Jaundice
 - 4. All the above
- 2. The causes of Anaemia can be
 - 1. Long-term bacterial infection
 - 2. Cancer
 - 3. Worms
 - 4. All the above

- 3. The treatment for anaemia depends upon _____
 - 1. The amount of haemoglobin
 - 2. Amount of blood
 - 3. WBC count
 - 4. Diet

4. If there is only 2 to 3 gm of haemoglobin

- 1. Fresh blood should be given
- 2. Iron injection is given
- 3. More iron is given through diet
- 4. All the above

5. Anaemia occurs among _____ women

- 1. 40%
- 2. 20%
- 3. 30%
- 4. 50%
- 6. To prevent Anaemia
 - 1. Take iron tablets
 - 2. Give blood
 - 3. Take an iron injection
 - 4. Use iron-rich food and iron utensils

Match the pairs

- 1. Ferrous
- 2. Vitamin B
- 3. 'Saholi' method
- 4. Pregnant women
- Iron tablets
 Haemoglobin test
- 4. 12 gm haemoglobin

1. Folic Acid

- 5. People from 6-14 years
- 12 gin nachogiobhi
 14 10 gin haansaalabi
- 5. 11-13 gm haemoglobin

Answers

Blanks -	1-3, 2-5, 3-1, 4-4, 5-2, 6-8, 7-6, 8-7, 9-10, 10-9
Alternatives -	1-1, 2-4, 3-1, 4-1, 5-2, 6-1, 7-4
Pairs -	1-2, 2-1, 3-3 4-5, 5-4.

Lesson 9 Blood and Anaemia

39

Aims

On reading this lesson you will understand

- Understanding structure of blood.
- Realising the functions of blood components.

Knowledge

You will know about

- The parts of blood
- The causes of Anaemia

Skills

- How to diagnose anaemia
- The main causes of Anaemia

Blood

It consists of 2 parts (a) Blood cells (b) Plasma

Their components are -

a. Blood cells - Red blood corpuscles b. White blood corpuscles c. platelets or thrombocytes b. Plasma

- 1. 90-92% water
- 2. 8-10% solids namely
 - i. Proteins albumen, globulin, fibrinogen 70%
 - ii. Metals like sodium, calcium, potassium, magnesium, phosphorous 0.9%
 - iii. Protein less Urea, uric acid, jothin, hypojothin, other nitrogenous compounds and 'vasa?' cholesterol, glucose, phosfolipid
- 3. Breath Oxygen and carbon dioxide
- 4. Internal fluids antigen, enzyme

Blood Cells

The capacity of blood cells to carry oxygen from the lungs to the arteries depends on the haemoglobin. 1 c.c. of blood contains 45 lakh blood cells among women and 50 lakh among men. Their number increases while doing exercises, climbing, during hot weather or dehydration.

There cells collect in the spleen. When there is less air pressure as at heights they go into the blood. One-eleventh of our weight is blood. A 70 kg man has about 6 litres of blood.

The haemoglobin blood group is a combination of haem and globin. Perfayrin can combine with any mineral. In blood it combined with haem and gives iron.

Haemoglobin (protein) consists of haem which is iron + blood. Only when haem combines with iron can it get oxygenated which is red. As it distributes oxygen and absorbs CO_2 it gets deoxygenated (bluish-black)

Blood is produced in the bone marrow of skill bones, back-bone and long bones. Its 4 stages are megaloblast, erythroblast, normoblast and reticulocyte. Where there is less air, there is stimulation to produce more blood cells. When their term expires they are destroyed and an equal quantity is created. It is normal to have 15% haemoglobin and reduced quantity suggests anaemia and is observed by the lack of redness. These symptoms can be tested to know the exact quantity.

In case of less haemoglobin, sufficient oxygen is not obtained when exerting even slightly and a person has to breathe strongly to fulfil the need. Besides iron content in haemoglobin,

reduction in the stock of iron in the body can show sub-clinical symptoms like lack of appetite, cracked corners of lips, stiffness of limbs at night and difficulty in swallowing. There are 5 reasons for deficiency of haemoglobin in blood. The most important is less iron, or less of colour porphyrin less haem. During blood test, the reduction in size of blood cell can be seen-microcytic, and hypo chromic anaemia can be observed where the reduced haemoglobin can be noticed so protein must accompanyo iron in the diet. Deficiency of vitamins, specially 'C' and 'B' complex can also lead to anaemia. This happens when anti anaemic factors are reduced in the liver. This illness can be cured by giving vitamins. The factors contributing to the anaemic conditions are wrong diet, harmful medicines, pollution, urinary disorders which damage the marrow in turn affecting production of new cells (or destroying them). This condition can also reduce haemoglobin. So can menstruation, bleeding due to ulcers or accidents etc.

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There are 4 blood groups - O, A, B, AB, 85% people have RH factor (Rhesus) and only 15% don't, giving 2 sub-group - RH+ve and RH-ve.

White Blood Cell

There are 6,000 to 10,000 WBC or leucocytes in 1cc of blood. They are of 2 kinds. Agronulocytes and granulocytes

- a. Agranulocytes the cytoplasm doesn't contain granules nor parts in the nucleus. These may be small or big, lymphocytes or monocytes.
- b. Granulocytes The cytoplasm contains granules and nucleus sections. They are of 3 kinds eosinophil basophil and neutrophils.

WBC combat bacteria. They may change their shapes or locations to attack them even outside the blood vessels. If a swelling around a wound is observed through the microscope, 15 to 20 bacteria can be seem in a single WBC. The no. of WBC can also be found out by the blood test. During fever they may rise above 8,000 though there is no external symptom. If they start multiplying excessively in their primary stage itself, it can be fatal leucomia or cancer. Some painkillers like analgin can lead to destruction of WBC causing agranulocytosis. During pneumonia or typhoid WBC get reduced causing a condition called leucopania.

Platelets

Their protoplasm is Glanular 1 cc of blood contains 2 lakh 50 thousand platelets. They control blood flow after injury by clothing.

Self Assessment

- 1. Note how important it is to know the structure of blood.
- 2. Think about treatment for anaemia by finding out its causes.

Exercises

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- 1. Haemoglobin consists of
 - 1. Iron Protein
 - 2. Iron Plasma
 - 3. Iron Platelet
 - 4. Iron Fat.
- 2. What is the life of a blood cell?
 - 1. 100
 - 2. 110
 - 3. 150
 - 4. 125 (Days)
- 3. The meaning of leukaemia is
 - 1. Increased strength of blood cells
 - 2. Growth in 1st-stage of WBC.
 - 3. Decreased count of WBC.
 - 4. Rise in frequency of WBC
- 4. Agranulocytosis means
 - 1. Destruction of WBC
 - 2. Growth of WBC
 - 3. Creation of WBC
 - 4. Reduction of WBC
- 5. Leucopoenia is the condition of
 - 1. No production of WBC
 - 2. Growth of WBC
 - 3. Destruction of WBC
 - 4. Reduction of WBC

Fill in the blanks

- 1. Blood cells, plasma, 2. 5,6 litres, 3. Haemoglobin, 4. Haemoglobin, 5. Blood cells
 - 1. _____ and _____ constitute blood.
 - 2. Carrying O_2 from lungs to arteries is the function of ______
 - 3. The capacity to carry O2 depends on _____
 - 4. Blood is red due to
 - 5. The body contains _____ blood.

Match the pairs

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- 1. Pure blood
- 2. Impure blood
- 3. WBC
- 4. RBC
- 5. Platelets
- 6. Lekopania

- 1. CO₂
- 2. Oxygenated blood
- 3. Haemoglobin
- 4. Protection against infection

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- 5. Reduced WBC
- 6. Control of bleeding

Answers

Alternatives - 1-1, 2-2, 3-2, 4-1, 5-4

Blanks - 1-1, 2-5, 3-3, 4-4, 5-2

Pairs - 1-2, 2-1 3-4, 4-3 5-6, 6-5

Nutrition

44

Aims

On reading this lesson you will understand

Knowing about balanced diet .

Knowledge

You will know about

- The dietary constituents obtained from food.
- Understanding the function of constituents .
- Knowing the changes caused by deficiency of constituents. •

Skills

You will learn

- To identify the symptoms and indications of deficiencies .
- Food

Perspective

You will understand

- Balanced diet doesn't imply expensive food. .
- All the food constituents are necessary for health. •

There are 5 different constituents of food

1. Carbohydrates 2. Protein 3. Fat 4. Vitamin and Minerals 5. Water

Deficiency of the constituents causes these changes - weakness, mental strain, lack of development among children, weight loss, skin changes.

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Carbohydrates

They give instant energy to work but need other constituents to store it. They occur in grains (like rice, wheat, ragi, corn, potatoes, sugar (also honey and jaggery), milk and fruits.

Proteins (Body building food)

They help growth, strong muscles and development of brain. They are found in high quantities in fish, eggs, soya-beans, milk and its products. On a smaller scale they also occur in green vegetables and 'dal' (split-peas)

Fats

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Our body stores energy in the form of fat which is used when necessary. It is obtained from butter and cooking oil or, a higher scale but also from groundnuts, soyabean, coconut and milk in medium amounts.

Vitamin and Minerals (Protective Food)

They help the smooth functioning of the body and for healthy blood, bones and teeth.

Types of Vitamins

Vitamin A - necessary for healthy eyes. May cause night-blindness in case of deficiency. Sources - yellow fruits and vegetables like papaya, carrot, cod liver oil.

Vitamin B - This group is necessary for various functions of the body. Deficiency causes 1. inflammation of mouth, 2. Dermatitis 3. Indigestion 4. Weakness 5. Aching limbs.

Vitamin C - Present in sour fruit like guava, citrus group, tomatoes, green leafy vegetables, maximum in 'Amla' Deficiency causes scurvy, blue patches on skin with bleeding below the skin.

Vitamin D - Obtained from sunlight. Necessary for strong bones and teeth.

Vitamin E - For healthy skin.

Vitamin K - For blood clotting

The main minerals needed are magnesium, calcium, iron and phosphorus, lodine, zinc and cholire are required in small quantities.

A balanced diet contains all the necessary constituents of food in the right proportion i.e., carbohydrates 60-65%, Protein 15-25%, Fat 10 to 15%. In other words, our food should contain more of grains like rice, wheat, bajra, along with suitable quantities of dal vegetables, fruit and oil.

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Exercise

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Choose the correct alternatives

- 1. Balanced diet implies _____
 - 1. Protein rich diet
 - 2. Good and nutritive
 - 3. All constituents in right proportions
 - 4. All the above

Fill in the blanks

1. A, 2. K, 3. carbohydrate, 4. vitamin, minerals

- 1. Night blindness is caused by deficiency of vitamin _____
- 2. Vitamin _____ is needed for clotting
- 3. _____ is called Energy Giving Food Constituent
- 4. _____ and _____ are called Protective Foods.

Match the pairs

1. Protein

1. Scurvy

3. Ragi/Rice

- 2. Carbohydrates
- 3. Vitamin B
- 4. Vitamin C
- 5. Fat

4. Dermatitis

2. Energy storing

5. Development of Muscles and Brain

Answers

Alternative 1-3

Blanks - 1-1, 2-2, 3-3, 4-4

Match - 1-5, 2-3, 3-4, 4-1, 5-2

Lesson 10 Malnutrition: Social Aspect

Aims

On reading this lesson you will understand

- Get details about the cycle of undernourishment.
- Find out the proportions of food constituents for women of different age groups.

Knowledge

You will know about

Causes of Malnutrition specially in case of women.

Skills

You will learn

Make women realise the seriousness about malnutrition by making them aware.

Perspective

You will understand

• How our conventions are responsible for malnutrition of women.

How our political and economic activities have adversely affected women's health.

Food is a valuable necessity for human beings 40% of our population is below the poverty line. The adverse effects of undernourishment are common in areas of deprivation of even one meal a day. It is greater in case of women who are discriminated against while feeding, right since birth.

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The girl-child is top-fed early. Less of mother's milk implies receiving less of resistance power. Also girls and women have to often eat the left-overs when the 'males' have finished their meal. Yet, they have to contribute to house-keeping, fetching water, baby -sitting. Absence of sufficient food and play hinders their proper growth and development. They are prone to obstructed labour.

Pregnant women are prevented from some essential nutrients by superstitions e.g. milk may fasten a foetus to the uterus, that papaya or jack-fruit may cause abortion etc. Further, giving birth to a girl often leads to criticism. Once again she is expected to go through pregnancy deliveries take their toll on her health.

Another harmful convention is fasting for almost 75 days a year for some reason or the other. Widows are even deprived of certain foods.



The political and economic policies too have far-reaching harmful effects on women's health. A liberated economy has made food costlier making women its victim. Additionally, preference for cash crops reduces shortage of food grains. This will deprive women of nutritive diets.

AGE WISE THE RIGHT PROPORTION OF FOOD INGREDIENTS FOR WOMEN

AGE IN YRS.	WEIGHT KG	READY GMS PROTEIN	VITAMIN A UG	CALCIUM MG	IRON MG
11 to 18	46	46	800	1200	18
19 to 22	55	44	800	800	18
23 to 50	55	44	800	800	18
50 to 55	44	800	800	10	- "
Pregnant	-	30	+ 200	+ 400	-
Nursing	-	20	+ 400	+ 400	-

(Ref: Corin Robinson - Nutrition and Diet Therapy)



Why should men have meals before?

A person requires about 2200 calories energy. Though we have sufficient grains in the country, the distribution is not uniform. The rich can buy greater quantities while the poor cannot even buy the bare minimum 40% population gets only about 1,750 calories. Since the women eat last - only 1,450 calories are left for them.

(Source : State of India's Health Voluntary Association of India, 1992)

Self Examination

- 1. Understand the undernourishment cycle well.
- 2. Think about solutions to break this circle.
- 3. do you think women have the capacity to change age-old traditions?

Exercise

- 1. The cause of malnutrition among women is
 - 1. Deficiency of diet
 - 2. Excessive Exertion
 - 3. Poverty

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4. Discriminatory customs

2. How should women break the malnutrition cycle?

- 1. Pregnant women should be given a nutritive diet
- 2. Women and girls should be given a nutritive diet.
- 3. Improvement of women's status socially, financially, politically
- 4. Women should have meals before men.
- 3. What is the effect of undernourishment during the growing age of girls?
 - 1. Malnutrition
 - 2. Possibility obstructed labour
 - 3. Lack of physical development
 - 4. Infectious Diseases
- 4. What is the cause of malnutrition?
 - 1. Unequal distribution and liberalised economy
 - 2. Deficiency of constituents of food
 - 3. Rising prices of grains
 - 4. Shortage of Grain produce
- 5. What affects women's health adversely ?
 - 1. Accepting liberal economic policy by government
 - 2. Growth of tendency to plant cash crops.
 - 3. Reducing cash crops
 - 4. All the above.

Answers

Alternatives - 1-2, 2-3, 3-2, 4-1, 5-1

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Care, Nutrition and Women's Health

Aims

On reading this lesson you will understand

- The causes of dietary deficiencies in women.
- The effects of malnutrition
- Why it is necessary for women to remain health.

Knowledge

You will know about

- The reason for ill-health of women.
- Which diseases are caused by lack of care and nutrition.

Skills

You will learn

How malnutrition has become a part of women's living.

Perspective

You will understand

How necessary it is for women to realise that nutrition is one's right.

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A nutritive diet is required for good health. Most diseases in the world are caused by malnutrition combined with infections. Not only is insufficient intake of calories responsible but also deficiency of fine nutrients like Iodine, Vitamin A, and Iron. A protein rich diet is expensive and the poor, who are used to a poor diet, don't consider themselves undernourished as they do spend their earning on food.

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Anaemia related to deficiency of Iron affects women in their growth- 88% of pregnant women in India, 40% in Africa, China and South America and only 15% in Western countries suffer from this. Deficiency of iodine prevents development of the brain and is the greatest cause of mental retardation but this can be controlled. It also is the cause of cretinism and defects of birth.



Measles and Diarrhoea are aggravated by deficiency of Vitamin A along with the night blindness. So are reproductive infections which lead to pelvic swelling, and chronic backache and finally even infertility which may result in rejection by families. More girls than boys suffer this deficiency.

The above diseases form only 3.4% of total illnesses. Other deficiencies include insufficient calcium obstructing bone development, resulting in osteoporosis in old age. 45 crore women and 40 crore men are underdeveloped due to malnutrition.

There are 3 causes of anaemia and malnutrition. The first is the presence of parasites in the intestines. They destroy appetite but can be controlled by treatment. The second is malaria to which undernourished people prone. The third is ignorance which prevents women from consuming sufficient quantities of nutritive food. This is particularly true of Vitamin A which can be obtained without spending much as such vegetables are easy to grow. Misconceptions also contribute to discrimination against women's nutrition. Several Asian and African communities believe (wrongly) that a nutritive diet in the first 3 months of pregnancy gets transferred to the umbilical cord, not the foetus. According to them nutrition given in the next trimester may make the baby so heavy that labour will be difficult. Thus the expecting mother is deprived of sufficient food. Comparatively she is better of in her parental home, where physical exertion is reduced as she is allowed to rest with the support of her parents and siblings. An under developed woman gives birth with a smaller cervix, often causes infant mortality.

Poverty discourages the poor from consuming leafy vegetables. Therefore they need to be subsidised, in order to prevent malnutrition. Women need to be made aware of essential nutrients so that they can make changes in their life-style. If they can improve their nutrition, they will be healthier, in turn their families and this will enable improving their financial condition. A healthy girl becomes a healthy women. She can have a beneficial effect on the health of the whole family since senior women control important decisions, in society. Thus girls and women needed to be educated about health. Mere aid from foreign organisations or non Government Organisations (NGOs) is only for emergencies and has short-term returns.

Exercises

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Fill in the blanks

1. Vitamin A, 2. Worms, 3. Malaria, Ignorance, 4. South East Asia, 5. Iodine, 6. Calcium 7. Reproductive, Cervix)

- 1. The main cause of blindness in children is _____
- Vitamin A deficiency in women may cause infection in _____ and swelling in the _____.

3. Osteoporosis is caused by lack of sufficient _____.

- 4. _____, ____ and _____ are the causes of malnutrition and Anaemia.
- 5. Deficiency of _____ causes cretinism and mental retardation

Correct Alternatives

- 1. Adverse effects of malnutrition of women's health can be reduced by -
 - 1. Giving nutritive diet
 - 2. Giving iron tablets
 - 3. Educating women about rights and financial improvement
 - 4. All the above
- 2. The poor and the women suffer malnutrition because of
 - 1. Deficient diet
 - 2. Lack of education
 - 3. Weak financial condition
 - 4. All the above

Answers

Blanks - 1-1, 2-6, 3-5, 4-2, 5-4, 6-3

Alternatives - 1-3, 2-4

Pregnancy

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Aims

On reading this lesson you will understand

- Find out about the complete diet of the pregnant women .
- Know the signs of danger during pregnancy. .
- Know the complaints and their treatment during pregnancy.
- Know the amounts of Iron and Calcium required by Pregnant women.
- Gather other useful suggestions for pregnant women.

Knowledge

You will know about

- The need for a sufficient diet among pregnant women.
- The nature of the balanced diet for pregnant women.

Skiils

You will learn

- The signs of danger during pregnancy. .
- What is the treatment for typical complaints during pregnancy. .
- The amounts of iron and calcium to be given to pregnant women. •

Perspective

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You will understand

- How necessary it is to educate a pregnant woman about a balance diet.
- How necessary it is for pregnant woman to be treated properly by their families. .
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Diet

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The following requirements should be fulfilled by the diet of a pregnant woman.

- a. Sufficient for the nutrition of the growing foetus.
- b. Suitable to maintain the health of the mother.
- c. Enough to provide energy for bodily capacities and labour
- d. Suitable to prepare for breast-feeding.

A pregnant woman needs calories in the following proportions

Protein	80	ame	v 1	_	200	- · ·
Fat	00	gins	X 4	-	320	calories
i al	90	gms	x 9	=	810	calories
Carbohydrates	320	gms	x 4	=	1280	calories

This amount can be obtained from the balanced diet given below -

	Amount per day
 Grains (white, rice, jowar, corn) Dal Green leafy vegetables Other vegetables Roots or tubers Fruits (seasonal) Milk 	350 gm (3 bowls) 60 gm (450 mg or meat) 125 gm (1 bunch) 75 gm (1 bowl) 50 gm (3/4 bowl) 30 gm (1 fruit)
8. Fat/Oil 9. Sugar 10. Meat/fish 11. Egg	325 gm (3 cups) (2 cups for non-veg) 30 gm (3 table spoon) 35 gm for meat eaters 40 gms (8 teaspoons) 30 gms (optional)

Signs of Danger during Pregnancy

The women must be sent to a big hospital in case of these -

- a. Vaginal bleeding
- b. Swelling on the limbs
- c. Past abdominal pains
- d. Acute giddiness

There may be other small complaints which, though not critical, do cause stress and

suffering to the pregnant women, as follows -

Morning Sickness

May occur during 4th to 14th weeks in the mornings, due to internal changes or glucose digestion.

Treatment

Avoid fried/spicy food. Drink a cup of milk with sugar before going to bed.

Burning Sensation in the chest

May occur due entry of gastric juices into the food pipe. The head should be kept on a higher pillow while sleeping. Rest same as above.

Itching of abdominal skin

Should be followed by light massage using calonune lotion.

Safe mother hood can be achieved by a 4-fold approach a balanced nutritive diet, avoiding over exertion, regular check-up and no medicine to be taken without recommendation by the doctor.

How much iron and calcium should be given during pregnancy

Pregnant and nursing mothers need increased amounts or iron and calcium which can be fulfilled by an increased nutritive balanced diet. But ordinary expecting mothers from poor sections need to be given oral supplements of both for the blood and bones of the growing foetus. It is a government practise to give 100 ferrous tablets during pregnancy and upto 6 months later. But this amount should be doubled during the last trimester of pregnancy and 6 months after delivery. Here are the scientific details about the need of iron element in 280 days.

For the blood of the baby	400 mg	
For the development	150 mg	
For the mother increasing blood		
and bleeding during delivery	200 mg	
Mother's daily need of 1 mg	280 mg	
Total	1030 mg	-

Normally men need 1 mg per day to compensate for iron lost through sweat and urine. Women need double during menstruation, but since this is absent during pregnancy, 1 mg is sufficient per day.

Iron needed to treat Anaemia

Most Indian women are deficient in Haemoglobin. Due to absence of sufficient iron in the diet, this persists during menstruation leading to anaemia 60% women have less than 10 mg of iron.

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This has to be fulfilled by the formula = Deficiency of Haemoglobin (per 100 mg) x weight (about 50 kg) x 3 = $4 \times 50 \times 3 = 600$ mg.

In other words, 150 mg iron is necessary to raise haemoglobin by 1 gm. Similarly, more iron is needed to substitute the depletion of iron in the liver which is used up during deficiency. This can be found out as follows -

Total Requirement of iron

Re +	equirement during pregnancy Requirement to increase Haemoglobin	1030 mg
+	Requirement to restore the stock of Iron	500 mg
		2130 mg

As seen above, the body gets just about 1 mg through diet per day i.e. 280 mg in the entire period. The difference i.e. 1850 mg needs to be given through tablets. One ferrous tablet of 200 mg contains 60 mg iron or which 10 % is absorbed among normal people, but 15% capacity during anaemia. Thus 9 mg will be absorbed per tablet. To achieve 1850 mg, the need is 1850 = 205 gm of iron through tablets. Therefore 180 tablets are necessary. The wholesale price is only 5 paise per tablet. So the increased cost will be high. Also giving more tablets to the women doesn't need extra activity.

The aim should be to reach more pregnant women. To start with, the women may be given only 1/2 a tablet per day to minimise side effects like constipation and inflammation. Once the intestines get used to the tablets, the dose can be increased.

The haemoglobin increases after one week of starting iron tablets. But till then, other problems of deficiency get corrected i.e. appetite is increased, body-ache and fatigue gets reduced and there is a feeling of freshness. The health workers have found that this beneficial experience of pregnant women along with their health education given to them makes them take the iron tablets in spite of some problems. If taken on an empty stomach, absorption in better.

Giving of tablets to other women

Besides pregnant women, other anaemic women should also be given the tablets. If they show decreased symptoms of anaemia within 15 days, continue the tablets for 3 months. There should be no calculations about saving the expenses because this tablets are very cheap and useful. The traditional male-biased view of giving care to a woman only so that she may not die during delivery must be replaced by a practical view of keeping women healthy throughout their lives.

Other suggestions

Money should not be wasted on fashionable tonics and attractive liquids and capsules because they cannot be more effective.

If a women with very low haemoglobin visits the doctor in the last stage of pregnancy, an iron must not be recommended. It is too painful, requires a special technique and may cause allergic reactions, even a dark patch. An injection cannot increase the rate of producing new RBC.

Only women who cannot bear oral tablets, nor get enough iron through a good diet and iron utensils may be given an injection (Use of iron utensils and including lemon/tamarind with dal and leafy vegetables, increased steadily can cure anaemia)

Self examination

- 1. How will you collect information about the balanced diet required during pregnancy to rural women?
- 2. How will you explain the requirement of iron and calcium tablets to them?

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Exercises

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Fill in the blanks

1. 2, 2. 280, 3. 1030, 4. 2130, 5. one, 6. hundred

- 1. Generally pregnancy includes ______ days.
- 2. An anaemic pregnant woman needs _____ mg iron.
- 3. A pregnant woman requires _____ mg iron.
- 4. In the government mother-child-care programme, ______ tablets of ferrous are given to a pregnant woman.

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5. A woman needs _____ mg iron during menstruation.

6. Haemoglobin takes ______ week to increase after an injection.

Choose the correct alternatives

- 1. Giving an anaemic pregnant woman vitamins and iron during delivery shows
 - 1. The attitude of care forwards pregnant women
 - 2. Efforts for a safe delivery
 - 3. Male chauvinistic society.
 - 4. Avoiding maternal mortality during delivery.

2. The following formula can give safe motherhood

- 1. Balanced Nutritive Diet
- 2. Avoiding excessive exertion
- 3. Use of medicine as recommended by doctors
- 4. Regular launch
- 5. All the above

Answers

Blanks - 1-2, 2-4, 3-3, 4-6, 5-1, 6-5 Alternatives - 1-3, 2-5

13. Table of (2 pages) Percentage of vitamins in food ?

To be translated

Page - 1

Percentage of vitamins Page - 2



Introduction

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Aims

On reading this lesson you will understand

- Which three factors lead to disease.
- What is the role of the health worker in Epidemiology?

Knowledge

You will know about

- What is the science of P. H.?
- What are the features of disease?

Skill

You will learn

- Make a list of functions on priority basis.
- Comparison

Perspective

You will understand

- The duty of a health worker is not only to treat diseases but also prevent them and maintain public health.
- The health worker's role is of great importance in preventing disease.

This chapter will tell you about P. H. In this module you will read about solving the problems faced by health workers while working at the village level.

Ayushi is a health worker in Haripur. Like other villages, here too, people excrete near the river bank due to absence of a latrine. The village drinking water is drawn from a well close to the river. Naturally it gets contaminated by the open faces during rains.

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One day Ayushi received 10 to 12 patients of diarrhoea in the morning itself. She almost ran out of her stock of medicines. She asked them to take oral rehydration. But when more patients came, she sent them back. She decided to get her new stock from the primary health centre after the rain stopped. In the meanwhile, two children lost their lives.

This tragic news reached the P.H.C. The whole team came to Haripur and scolded Ayushi.



Explain what was Ayushi's mistake according to you

It is the responsibility of the health worker to maintain public health.

Why do we need health?

We need health to become financially independent and to play our social role well.

Most health workers spend all their time and energy on treating diseases. They forget their duty to take steps that ensure prevention of disease. To do this, a health worker must _____, skills and information.

The first requirement is to know the circumstances of public health in the village and the effect of the health worker's work on it.

The techniques of public health have the following uses for a health worker -

- To find out the problems.
- To know the cause of the problem.
- To know where the problem lies.
- To identify possible measures /treatment.
- To know which task should get priority.
- To make plans
- To evaluate the measures taken and judge them.

The definition of Public Health is the study of incidents/situation related to the population of a given region, their scope and causes as well as using this information to control health related problems.

To put it simply what are the diseases, their scope, causes and how to prevent them.

The following are some answers given when asked about Ayushi's mistake.

- 1. Ayushi didn't think about the safety of the drinking water of the village.
- 2. She didn't inform the people about the public hazard resulting from the habit of defecating in the open near the source of water.
- 3. She didn't inform the P. H. C. that there were many complaints of diarrhoea and vomiting which was the possibility of an epidemic.

Compare your thoughts with the above reasons. It is a skill to compare and learn.

Apart from hereditary diseases, there are 3 conditions one needs to know about disease-

 The patient (affecting factor) - age, sex, financial and social conditions, life-style, heredity, mental state, resistance etc.

2. The cause of disease (internal factors) - germs, chemical, substances, physical matter.

3. Environment (inclusive factors) - geographical condition, political state, cleanliness, poverty.



The Environment influences both-the aggrieved persons as well as causative factors, creating an imbalance.

In the above example the affected persons were the patients of the village (though others had also used the same water), the germs from the faces were the cause when mixed with the drinking water and the environment was unhealthy enough to allow the waste products to mix with drinking water supply of the village.

This technique is not used just for infectious diseases. Look at a different example.

Ramlal is a government clerk. He loves spicy and non-vegetarian food which he needs at every meal. He smokes about 15 cigarettes per day for the last 15 years. He has been suffering from heart trouble for some years.

Ramlal is the patient, fatty food and cigarettes are the causes and the environment consists of a relaxed life-style.

This technique can be used to analyse different problems in the village for e.g. - a drunkard husband beating his wife is the cause, the women the subject, or the environment is both alcohol and a patriarchal society.

In a huge country like India, you hear about disparate situations - people die of undernourishment in destitute areas while there is a bumper crop in the country. In this case-

Subject	: The dead victims
Cause	: Unequal distribution system
Circumstances	: Politics and consumerism / luxurious life-style.

The cause alone is not responsible for ill-health. In Ayushi's village some people didn't fall ill. Out of the patients, the children died but the adults recovered. This is because every person's resistance is different.

Also environment plays an important role. Had there been a latrine, the epidemic would not have spread in the village.

What can a health worker do to prevent epidemics

During the Epidemic	Care to prevent and measures to treat

Decide the priority of the listed tasks.

During the epidemic, the health worker should

- 1. Treat the patient
- 2. Inform people that drinking water should be boiled.
- 3. Explain about O.R.S.
- 4. Warn people about serious symptoms.
- 5. Inform the P.H.C.
- 6. Collect a sample of the water.
- 7. Put T.C.L. powder in the water.
- 8. Keep a record of the patient.

Realise that rising no. of patients suggest an epidemic

Preventive Measures

- 1. Treat patients if any.
- 2. Take care of public health and encourage people to take measures.
- 3. Put T.C.L. regularly in the water.
- 4. Inform people about home remedies for purifying water.
- 5. Instruct people about soak-pits.
- 6. Inform people about hazards if contamination of drinking water.
- 7. Inform people about cleanliness of hands- washing with soap after toilet and before meals.

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- 8. Give the information in the Gram Sabha.
- 9. Inform the P.H.C. about contamination of water.
- 10. Analyser the cases of different patients.
- 11. Estimate the proportion of disease seasonally
- 12. Bring an extra stock of medicines during rains.

Visit the PHC and gather information about the epidemics in the last 5 years. Report it with the following points.

- What was the problem?
- What was its scope?
- Where was the problem?
- When did it happen?

Find out what measures were taken by the P.H.C.

Reflect about the following points -

- · What was done to scale down the problem and what effect did it have?
- What was done to prevent such occurrences in future?
- Discuss the type of resources needed to prevent the problems
- What sort of difficulties were faced while solving the problem and how were they sorted out?

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Summary

The study of public health shows us how to go to the root of various social, financial, political and cultural reasons of disease and help in giving suitable solutions wherever possible.

Self Examination

- 1. Write the three conditions leading to illness.
- 2. Define Epidemiology.
- 3. Write how Epidemiology will help you.
- 4. Find out the subject, cause and circumstance in the following examples.
 - · Plantation of paddy is on. Many people have got malaria
 - Seven year old Raju goes to school. He had cough and cold. Later his school friend Shankar also get the same illness.
- 5. Compare your list of Ayushi's task with the given one. Point out any new idea/ view.
- 6. Compare Ayushi's mistakes as listed by you with what is given.

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7. Describe an epidemic in your P.H.C.. Write what the staff did for it.

Your responsibility as a health worker is this

- 1. Find out the main causes of disease in your village.
- 2. Find out the causes which can be controlled collectively.
- 3. Think about the measures for control.

Exercises

- 1. A health worker should be aware of public health.
 - 1. To treat disease.
 - 2. To give health services.
 - 3. To evaluate causes and health services.
 - 4. To raise the level of public health and treatment of disease.

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2. The science of public health means -

- 1. Study of disease
- 2. Study of causes of disease
- 3. Study of scale/cause/prevention/control of disease
- 4. The study of disease and health.

3. We need health

- 1. To avoid falling ill
- 2. To be financially independent and discharge social role well
- 3. To have good personal health
- 4. All the above.
- 4. The study of public health will result in
 - 1. Discovering the causes of disease
 - 2. Identifying the disease
 - 3. Knowing which treatment is to be given
 - 4. Help for prevention

Fill in the blanks

1. Raju, 2. Virus, 3. Getting drenched, 4. Subject, 5. Epidemic

- 1. ______, cause and surroundings are the conditions of disease.
- 2. More patients than usual visiting the health worker is a sign of _____.
- Seven year old Raju caught a cold by getting drenched in the rain. In this case_______ is the subject, _______ the cause and _______ is the environment.

Answers

Alternatives 1-4, 2-3, 3-2, 4-4

Blanks - 1-2, 2-3, 3-1
Lesson 2 Description

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Aims

On reading this lesson you will understand

- How should available information be analysed.
- To know how records are to be maintained.
- Understand the time for sending notification and ask for help.

Knowledge

You will know about

- The meaning of epidemic
- The importance of information.

Skill

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You will learn

- To keep records properly
- How and whom to send information.

Perspective

You will understand

- Maintaining records is an instrument of learning and helpful for planning solutions. It is not used for fault-finding or spying on health workers.
- The role of the health worker is a key factor in prevention of disease among people.

Introduction

If Ayushi had got records of Haripur, she would have expected the greater no. of patients from past experience and she could have solved the problem. When should a disease be declared an epidemic?

When there are more than expected no. of patients suffering, from the same disease in a given geographical area in a given period, it is an epidemic.

It is necessary to understand how population is inter related with disease e.g. -

	Rampur	Haripur
Population	100	1000
Patients	3	30
Per cent	$\frac{3}{100}$ x 100 = 3%	$\frac{30}{1000}$ x 100 = 3%

The scope is the same in both villages. Thus the no. of patients is related to the total population of the place in comparison.

Ayushi's village has 3 wells of which one belongs to the Dalit section of 200 people. 10 of these suffered from diarrhoea and vomiting.

What is the percentage of Dalit patients?

Your answer should be 5%.

We can compare percentages in 3 ways.

1. Percentage 2. Ratio 3. Proportion

The formula is the same



x and y are two being compared x is divided by y. 10^{n} is a constant and may have the value 1, 10, 1000, 100, 000 etc.

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() () $10^{\circ} = 1$ $10^{1} = 10$ $10^{2} = 10 \times 10 = 100$ $10^{3} = 10 \times 10 \times 10 = 1,000$ $10^{4} = 10 \times 10 \times 10 \times 10 = 10,000$ $10^{5} = 10 \times 10 \times 10 \times 10 \times 10 = 10,000$

Ratio

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ALC: NO

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We use our sense of ratio to estimate the proportion of different things in one day to day activities. Like we use more potatoes when we cook for more people, accordingly increasing the quantity of green chillies, onions. Mathematically expressed as potatoes: Onions, Potatoes: Green chillies.

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If we use 1 onion per 6 potatoes, how many onions are needed for 24 potatoes? 6 potatoes : 1 onion 24 potatoes?

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 $----- = 4, \quad 4 \times 1 = 4$ Ans. 4 onions

Similarly if 4 potatoes : 2 green chillies 24 potatoes ?

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------ = 4, 4 x 2 = 8 green chillies

This example of calculating ratio helps us to make estimates on different scales. Generally Ayushi gets 30 patients for fever. This month she had 15 for respiratory diseases. What is their ratio ?

30: 15 1:? 15 1 $= \frac{15}{30} x 1 = \frac{1}{2}$

Thus there were half the no. of patients with respiratory diseases as compared to those of fever. Since the population strength keeps changing, such calculations help us to get a clear idea for comparison e.g. figures for Sunderpur.

Year Fever		Respiratory disorder	Total Patients		
1996	30	15	45		
1997	28	14	42		
1998	32	16	48		
1999	30	45	75		
2000	30	60	90		

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How will you analyse this example?

From 1996 to 1998, patients with respiratory disorders were half of patients with fever. But in 1999 they rose to 1.5 times that of fever patients. Then in 2000 the patients for respiratory disorders doubled those of fever.

The health worker and the doctor discussed this increase in respiratory disorder with the villages. They found out that chemical pesticides had resulted in this spurt of patients. In ratio x and y are two different measures. On a given day, Ayushi had 45 patients of which 30 were women and 15 men. What is the comparison?

30 Ratio = ----- x = 2 15

Thus the no. of women patients was double that of men.

The ratios of patients keep changing with time.

Proportion : Two friends started a business. Sunita invested Rs. 5,000 and Rekha Rs. 10,000. They had a profit of Rs. 1200 that year. How should it be divided? Total amount invested = 10,000 + 5,000 = 15,000

		5000	1		1200		
Sunita's share	=		=	·		= 400	(profit)
		15000	3		3		
			Share				

This technique can be used to find out the proportion of medicines required according to the no. of patients. If half of the total patients are for fever, 1/2 the quantity of medicines ordered for fever should also be half.

Rate

This is calculated like percentage, only adding 'Time' to it. e.g. - calculate the rate for Ramu

V	1		EA. 21		
Year	Wheat Sold	Cultivation Cost (In Rs.)	Amount Received	Profit	Rate
1996	100	600	800	200	$\frac{200}{600} \times 100 = \frac{1}{3} = 33.33\%$
1997	100	700	900	200	$\frac{200}{700} \times \frac{100}{7} = 28.5\%$
1998	100	730	975	225	$\frac{225}{750} \times 100 = 30 = 30\%$
1999	100	800	1025	225	$\frac{225}{800} \times 100 = \frac{225}{8} = 28\%$
2000	100	850	1100	250	$\frac{250}{850} \times 100 = \frac{25}{85} = 29.4\%$

In the above example, numerically Ramu got more money in the fifth year but when we calculate the rate, we find that the greatest profit was in the first year.

The birth rate	of	India	is	rising	every	year	but	some	people	say	it is	steady.	Let u	IS
survey the figures.														

Year	Population	Birth	Percentage	Birth Rate
1996	10,000			
1997	10,200	200	200 x 100 = 10,200	2%
1998	10,404	204	204 × 100 = 10,404	2%
1999	10,606	208	208 x 100 = 10,606	2%
2000	10,808	212	212 x 100 = 10,808	2%

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The above table clarifies that the no. of births is rising but the rate of births is steady. The time period is required to calculate the rate (Note that this example is imaginary and the death figures have not been considered)

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If we get the figures of child mortality, we can evaluate our preventive measures for it. Thus it is necessary to maintain, record. Every year we can make a comparative judgement.

Even you find it difficult to calculate the examples given in this chapter it doesn't matter. The statistical records are maintained at the block level. But you must understand how to use the calculated figures to draw conclusions. Here are some formulae to understand the scope of a disease.

1. Incidence (Rate of illness)

New patients of a disease during a given period

No. of patients likely to get the disease.

2. Prevalence Rate (Rate of Actual Patients)

Patients afflicted with a disease (new and old)

= ----- x 100 Population

3. Death Rate

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=

No. of deaths in a year

= ----- x 1000 Population the middlé of the year

4. Rate of child mortality

Death of children less than 1 year of age in the year

------ x 1000

No. of births in that year

5. Maternal Mortality Rate

No. of deaths of expecting mothers within 42 days of delivery

----- x 1,00,000

No. of children born that year and living

6. Birth Rate

=

Children born in a year and alive

— x 1000

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The population at the middle of the year

Required numbers can be obtained only if the figures have been entered properly. This recorded information needs to be analysed from time to time to draw conclusions which explain the expected figures. These should interpreted in the light of 'average'. When you a ask a health worker the no. of daily patients and he replies "some day 10, sometimes 2 to 4 and at times none at all", this cannot give you any idea. So you need the average.

Date	Patients	Date	Patients	Date	Patients
1	3	11	0	21	2
2	0	12	0	22	2
3	0	13	4	23	0
4	2	14	2	24	1
5	2	15	1	25	0
6	1	16	3	26	0
7	3	17	0	27	1
8	0	18	0	28	3
9	1	19	0	29	2
10	2	20	1	30	1
	14	+	11	+	12

Look at the figures for one month here -

Totally, 37 patients were recorded in April since there are 30 days in the month, the average can be calculated as follows -

37 patients in 30 days ... for 1 day - 37 x 1 ------ = 1.2 30

That means 1 or 2 patients per day. The table shows that some days there were none. So the minimum no. is '0' while the maximum is '4'. If a health worker registers more than the maximum no. some day, it is a hint that she must enquire about the problem.

The health worker knows which disease is common in a given season e.g. - cough and cold during winter but fever during summer. Some diseases occur in particular age groups. e.g. measles among children but heart trouble after 40 years of age.

The following information must be noted -

Patient's name and address	Age	Date of Treatment	Symptoms

This can be obtained from the patient but how will the disease be diagnosed?

WHO has prepared a key in which you can check the symptoms to match your entry. Possible diseases are listed in front of groups of symptoms. Refer to page 170 of Lay reporting of Health Information, 1978 WHO, Geneva Publication.

This key will also give you estimated figures. Although numbers at your village level care very small compared to the figures used to calculate rates, you need the skill to calculate rates. You should also be able to

- 1. Know how to keep records, who to send them and when.
- 2. Know what is to be done in case of change in proportion of disease.
- 3. If you find any symptoms / group of signs difficult or new, know whom to send the report and when. (Also in case of epidemic)

Every month, the following descriptions must be sent to ANM -

Births, deaths, patients, diseases, list of children for immunization, pregnant women, under-nourished children, beneficiaries of family planning, report of tested sample of water. Two copies must be made. The signature must be taken at the sub-centre, with date.

Refer to page ----- for the maintenance of record. After every 10 years, the record should be handed over to the primary health centre or destroyed. Ask the PHC or the Gram Panchayat to buy new register or prepare one with the help of the local school teacher who will understand the need and supply extra sheets of paper to use.

Summary

The records should reflect the truth. Don't avoid recording the death of a child, even if it is sad. Also, write the actual no. of children immunized, even though the no. may be less. The records help to understand likely problems, not to find out your mistakes.

Even if you make a mistake, you should help to set it right. The aim is solving the problems of the village. This can be done if you respect yourself for being faithful to yourself.

Self-Examination

1. 1. J. A. A. A.

Find out the average biscuits eaten by each child

Ramu	-	4
Shyam	-	5
Neela	-	2
Radha	-	3
Bunty	-	10
Surekha	_	5

- 2 a. Ayushi received 5 patients of diarrhoea, 15 for fever 25 with cough and 50 having other diseases. Calculate the rates for diarrhoea, fever and cough.
 - b. Find out the proportion of cough, fever and diarrhoea
 - c. Calculate the ratio of cough and fever.

Your responsibility as a health worker is

- 1. Maintain records and collected information in proper way.
- 2. Send them to right person at the given time.

Exercises

- 1. Epidemic means
 - 1. Some people falling ill with the same disease.
 - 2. Different diseases for many people during one period.
 - 3. Many people falling ill with the same disease.
 - 4. Getting more patients for one disease than expected figures of a given population in a given geographical area.

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- 2. A health worker must keep records so that
 - 1. To complete his/her work
 - 2. To complete the health register properly
 - 3. To make health services useful for evaluation
 - 4. All the above.

Fill in the blanks

- Deaths in one year Average population in the middle of the year.
- 2. Getting new patients of a particular disease in a given period No. of pecple likely to get the disease.
- 3. Total no. of births in a year, still alive. The population in the middle of the year
- 4. (Analysis)
- 5. 1
- 1. The formula for disease is _____
- 2. The formula for death rate is _____
- 3. The formula for birth rate is _____
- 4. ______ should be done of recorded information.
- 5. If health worker had 48 patients in April, the average is _____

Answers

Alternatives 1-4, 2-3,

Blanks 1-2, 2, 1, 3-3, 4-5, 5-5

3. Observation and Classification

81

Aims

On reading this lesson you will understand

- The importance of observation.
- The significance of analysis.
- Which questions should be asked before asking questions.

Knowledge

You will know about

- The meaning and significance of P.H.
- The importance of P.H. at the village level.
- The role of a rural health worker with reference to P.H.

Skill

You will learn

- Analysing
- Observation
- Drawing maps

Perspective

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You will understand

- Environment is an important aspect of disease.
- Discussing with villages will generate greater solutions and cooperation.
- Any one can imbibe new information and knowledge.

Introduction

We think that seniors should direct our work. But those affected by the work can best hint at the direction of work. For e.g. - if Kerala has a lower than normal birth rate, local people should be consulted to find out the problem. Only than can the direction of work be decided.

Health workers in villages have to work on their own. They shape their services according to what is acceptable to villagers. In such isolated working conditions, knowledge of the science of P.H. is useful. Ayushi had heard about it. Now a voluntary organization had called her to attend a training programme it. She was as apprehensive about its connection with her work as the other participants.

In the workshop they were first given the definition of the science of Public Health and then the 3 conditions leading to it namely subject, cause and environment.

Many types we are not affected by disease only due to hereditary or the effect of environment. The health

worker tries to identify the disease that afflicts his/her village most, studying time period the section of the village with greater effect. If possible causes are considered, they can be tested in a laboratory e.g. - the knowledge that germs spread diarrhoea can be identified by a pathologist. But at the village level, what is more urgent is the purification of water and prevention of future contamination.

Dr. John Snow, the father of the science of P.H. had declared before the microscope that cholera spreads due to water. He had prevented further spread of the epidemic by disabling the use of the hand-pump of a particular well which was the centre of a group of people suffering most from the disease.

His science can be used by health workers to analyse the area around them. When are services least available to the people? How can it be corrected? Ayushi listened to examples of how to use the science.





In a place called Parinche near Pune, there were many patients with diarrhoea. The health worker explained to people that defecating near the river contaminated nearby wells during rains. She suggested that the well wall be made better to prevent this. The Gram Panchayat at didn't bother, but the youth club got the well-repaired, soon the no. of patients decreased. The P.H.C. was informed, which helped in treating the patients. Thus the health worker was able to prevent a large no. of people from disease. Thus it is not necessary that only serious diseases need to be tackled, but the scope of a disease is equally important. After this incident, the health worker got the water regularly checked. She discussed its results with villagers and they could take measures whenever necessary.

A health worker in a tribal area noticed that the skirts of the women were very stiff in some areas. When asked about it, they revealed that they suffered from white discharge. She discussed the problem with the doctor and they were treated successfully. This shows the important role that a health worker can play for the betterment of the health of the people.

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A Rajasthani health worker found that lack of cleanliness during menstruation can create health problems. Due to shortage of water, the women were using pouches of sand to soak the bleeding. This caused breaking of the skin leading to infection. Though she couldn't immediately solve their problem. She could identify the cause. Then there is the case of particular mid-wife, whose deliveries always led to problems. She was advised retraining and her skill was improved.

A health worker called Sashikala Tai would run a play group for villagers' children through which she tried to raise their health awareness. The group included the children of some migrant workers. She noticed they were under nourished and had spots in their eyes. She arranged for them it get Vitamin A doses through the A.N.M. She also asked the other children to get half a bhakari and some vegetable to feed them.

Why didn't s she order the food from one family?

To give children a sense of social responsibility and to get a variety of vegetables and therefore complete nutrition. Getting just half a bhakari was not a burden and could be continued. She also held a meeting of the migrant people in which a doctor of the P.H.C. checked the children and gave information about their nutrition and care.

The discussion with the people revealed that they were underpaid by the supervisor. The health worker herself enquired at the Jehsildar's office and got information about the correct rates for them.

How did she achieve this? By introspection -

Where is the illness? Who is most affected by it? What are the likely causes? The wish for treatment of malnutrition led her to long-term solutions through analysis of the situation.

During the training Ayushi also learnt useful techniques to analyse the truth

1. Map

The settlement, road, river, canals, drinking water sources like wells, hand pumps, soak pits, latrines, marshes, bunds and residence of health staff should all be shown in the map. This will help a health worker like Ayushi as below -

- In locating incidents affecting health and possible causes
- Knowing where to get emergency medical and
- Figuring out silent epidemics for prevention and treatment

2. Information about population

If this is classified into lists of infants, children under 5, women in the productive age etc. sensitive groups can be identified easily and indicate possible periods of help.

3. Information about the village -

Details of financial conditions, available resources and different schemes can be used given on page 54 to

- Ensure that help reaches the Backward people
- And diagnose the problems and treat them correctly.

4. Diary

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If unusual happenings are recorded along with difficulties and problems faced, the health workers can help her to diagnose causes of diseases and help solve problems.

5. Graphs of Time and Diseases

A weekly list of both normal illnesses and important diseases help in calculations. This helps in inter relating the time period (month) with disease which can answer why diseases occur at particular periods and how they get cured.

6. Family Card

The information in this is helpful to identify families that need greater help. As explained on page ----, every family's financial condition can be known through it.

Thus health workers like Ayushi learnt the following during the workshop on Public Health

- Observation is necessary.
- It is necessary to understand the interrelation of affecting factors with diseases. (e.g. contamination of drinking water)
- Conclusions can be drawn.
- Others help may be necessary for better understanding .
- Find a solution for the problem and take measures.
- See whether the measures taken are suitable.



Self Examination

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- 1. How is a health worker benefited by studying Public Health?
- 2. Observe your village and find out the problems.
- 3. Do the villagers use traditional medicine for any disease? Why?
- 4. If suraj and his wife are farm labourers with undernourished little children, what should the health worker do?

Your responsibility as a health worker is

- 1. Observe your village and find out the problems.
- 2. Analyse the problem regularly.
- 3. Find out after analysis whether any change has taken place in the problem.

Exercises

- 1. Observations leads to
 - 1. Know what the problem is
 - 2. Know the cause of the problem
 - 3. Know possible solutions
 - 4. All the above
- 2. A health worker makes map at his region for
 - 1. Getting geographical information about the area of work
 - 2. Getting information about facilities available there
 - 3. To keep a record
 - 4. To take measures against emergencies or events affecting health
 - 5. All the above.
- 3. The health worker is benefited by details about population
 - 1. To understand the strength of the population
 - 2. The no. of men and women
 - 3. To locate affected groups for easier help
 - 4. All the above.
- 4. The health worker must write a diary
 - 1. To understand experiences / problems
 - 2. To find out details and methods of did
 - 3. To keep records
 - 4. All the above
- 5. What should the health worker do while working?
 - 1. Have information about the population
 - 2. Make a map at the village
 - 3. Write his diary
 - 4. Provide services in coordination with the villagers for improvement

Fill in the blanks

1. Circumstances that bring the subject and causes together, 2. one in whose body the disease grows, 3. those who have the capacity to created illness, 4. the list of diseases and scope, 5. Public Health

1. The cause means ______ in the disease conditions.

2. The subject of disease means ______

3. Environment as a factor constituting disease means _____

4. The study of ______ is useful to evaluate the methods of Health Services and improve them.

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- 5. The graph of time and disease gives information about
- 6. The health worker should observe the following
 - 1. Symptoms of disease
 - 2. Serious symptoms
 - 3. Scope of the disease
 - 4. Unknown symptoms
 - 5. All the above

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- 7. What should the health worker, do after the problem is solved
 - 1. Collect more information
 - 2. Give the information to the people
 - 3. Plan about the disease the following year

Answers

Alternatives 1-1, 2-4, 3-3, 4-2, 5-4, 6-5, 7-4

Blanks 1-3, 2-2, 3-1, 4-5, 5-4

4. Analysis

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Aims

On reading this lesson you will understand

- Which kinds of information is to be collected and classified.
- · How a graph is made.
- Which six questions should be asked to find out solution to any problem.

Knowledge

You will know about

- Which people are more needy?
- The importance of classification and its method.
- The method of analysis.

Skill

You will learn

- Making a graph
- Making a map
- Writing a diary
- Classifying information
- Analysing

Perspective

You will understand

- It is our duty to help the needy.
- Questioning oneself leads to self-improvement
- Education should be used in day to day living.
- Analysis helps us to upgrade our own work.

Introduction

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In this chapter you will find that Ayushi uses the information receiving during training and the skills taught in her day-to-day work. When we practice our learning we never forget it. She met the Anganwadi worker and the ANM when she returned. She used information available with them to make Family Cards (Ref. Page ----). This revealed the figures about different age-groups etc. to her. She divided them according to sex too.

	Age	Female	Male	Total		
				Total		Percentage
	0-1 year	10	10	20	20 x 100 = 1000	2
	1-4 years	10	30	30	30 x 100 = 1000	3
	5-14 years	70	40	110	110 x 100 = 1000	11
	15-44 years	290	240	530	530 x 100 = 1000	53
4	5-64 years	100	130	230	230 x 100 = 1000	23
а	bove 65	70	40	80	80 x 100 = 1000	8
		550	490	1000		100

She found out the figures for each caste and classified them according to their financial status.

Type of family	Upper caste	Backward caste	Scheduled Casto/Tribe
Poor	2%	30%	68%
Medium	20%	60%	30%
Rich	78%	10% _:	2%

This table made her realise that

- 1. Upper castes have more land and have less of poor.
- 2. The observation of poor homes revealed malnutrition
- 3. It identified the needy groups.

(This table can also be obtained from a Gram Sevak) Then she made a map with the help of the school-children and made copies of it.

The poor homes were shown in red, green for homes with young children and pink indicated pregnant women. This would show who needed more attention.

She made separate forms for children and expecting mothers to maintain records of regular tests (See page ---- and -----). She marked the dates fro TB vaccination and visits of pregnant women on the calendar. The days of giving TB medicines were also indicated.

Information about the village

With the help of the Gramsevak, she collected the details about land, crops, government schemes for different groups etc.

Report of Illness

Ayushi noted the list of ordinary symptoms in a register against each month, by applying the WHO Key (Ref page ------).

E.g.	January	February	March	-	December
1. Cough/cold	3	2	1		4
2. Watery Motions	2	1	1	1.000	6
 3. Shivering and Fever	1	0	1		3

This information started her advance estimates about what is likely to happen about diseases in different months. Epidemics will now be handled with preparedness and even prevented.

Diary

She begin making such entries -

16/12/2000

Ramuchacha had guests. One of those children and fever a running nose. Gave him paracetamol

20-12-2000

The child has developed a rash. May be chicken pox.

Gave information to neighbouring families. Sent message to PHC. This diary proved useful in identifying causes of disease.

After some days Ayushi began passing the details of the disease, no. of patients, its causes and treatment etc. to the village. Then she started displaying the information in black on the walls near the Panchayat. Consequently, the villagers started participating in precautionary measures. They felt greater respect towards her. Any visiting government servants would also come to get information from her.

Ayushi too started getting satisfaction and pleasure from her activities. She attributed her success to the following 6 friends -

- What is it? (the problem)
- When is it? (the problem)
- Why is it? (the problem)
- To whom is it (the problem
- Where is it? (the problem)
- Which measures (are needed to solve the problem)

In this way, the study of Epidemiology will be helpful to all of us.

(Picture 1)

Ayushi recorded the numbers every month. But as they accumulated, they became difficult to interpret. So she learnt to draw graphs from the school teacher. One look at a graph conveys the implication.

1. Line graph -

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To show the period of illness she drew a horizontal line on a graph-paper 'X'. Then she drew a vertical line 'Y', dividing it into parts writing the 10 times table upward from O as seen in picture 1.

From the record she marked a point against each month (written on X-axis) at the height of the number. In another graph, she marked the types of disease for each month which showed her which diseases spread more in which month.





2. Bar graph

She showed the age-group of X-axis. Dividing the population, she reflected the matching no. of people for each group on Y axis.

3. Pie chart

This was used to show the scope of diseases. She counted the no. of diseases. Then she counted the no. of people affected by each



disease. Then she calculated the percentage for each as follows.

1. No. of patients with fever

Total No. of patients

2. No. of patients with inflamed respiratory tract

Total No. of patients

3. No. of patients with diarrhoea

Total no. of patients

4. Patients with pain

Total No. of Patients

5. Other Patients

Total Patients

 $x 100 = 3 / 100 \times 100 = 3\%$

 $x 100 = 25 / 100 \times 100 = 25\%$

 $x 100 = 15 / 100 \times 100 = 15\%$

 $x 100 = 40 / 100 \times 100 = 40\%$

 $x 100 = 17 / 100 \times 100 = 17\%$

To make a pie-chart, the percentage has to be transformed into circle showing angles - e.g.

3% = 10.8° 100

Then she converted the other numbers

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She drew a circle with a compass, and divided according to the percentages, drawing lines from the centre. Each part was coloured differently and the name of the disease was written.

A look at the chart shows clearly which disease has spread more.



Summary

You need information to find out what the problem is. It should be classified to find out the causes. They should be compared and solutions must be planned often numbers have to be converted into graphs to facilitate understanding.

Self - Examination

- 1. How many patients did you have per disease last month? Calculate the percent age.
- 2. Draw a map of your village and locate the most needed services.
- 3. Get the figures of the following from the PHC of your area child mortality, maternal mortality. Explain possible causes and send a plan of solutions.
- 4. List the people to contact in order to gather information about problems.
- 5. 70 children per 1000 children born alive die in our country. Arrange the figures of states in order, showing the first five better states.

	Child Mortality R	ate in India - 71	
Andhra Pradesh	63	Assam	76
Bihar	71	Gujarat	62
Harayana	68	Himachal Pradesh	63
Karnataka	53	Kerala	12
Madhya Pradesh	94	Maharashtra	47
Orissa	96	Rajasthan	85
Tamil Nadu	53	Punjab	51
Uttar Pradesh	85	West Bengal	55

6. Look at the pie chart below and identify the people who use health service more.



Your responsibility as a health worker

- 1. Use different methods to carry the information to the people e.g. graph, numbers etc.
- 2. Show the analysis regularly to the people.

Exercises

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- 1. What does analysis achieve?
 - 1. Education

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- 2. Help in solutions
- 3. Help in self-improvement
- 4. All the above
- 2. Analysis about the village will lead to
 - 1. Easier helping of the needy
 - 2. Knowing the causes of disease
 - 3. Simplified, planning of work.
 - 4. All the above
- 3. The information should be
 - 1. Classified
 - 2. Analysed
 - 3. Used to draw conclusions
 - 4. All the above

Fill in the blanks

1. Pie chart, 2. Calculating the percentage of illness, 3. Age Group and Population, 4.Line

- 1. A ______ graph should be made to draw a graph of disease and Time.
- 2. A bar graph is used to show _
- 3. A _____ graph is drawn to show the scope/scale of disease.

4. _____ is necessary while drawing a pie-chart.

Answers

Alternatives 1-4, 2-1, 3-4 Blanks - 1-4, 2-3, 3-1, 4-2

5. Conclusions and Planning

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Aims

On reading this lesson you will understand

- The procedure of drawing conclusions.
- The technique of planning.

Knowledge

You will know about

- Drawing conclusions from statistical numbers.
- Perfecting one's work.

Skill

You will learn

- Planning
- Collecting funds at the village level.

Perspective

You will understand

- Planned work is easier to do.
- Maintaining health and preventing disease is an important and respectable duty.
- Work cannot be evaluated in terms of money.

Introduction

Some statistics have been given at the beginning of this chapter to know how to find out the problem

Child Mortality

India has a high mortality rate of children less than 1 year of age. There are 71 deaths per 1000 successful births. The main cause is preventive births or underweight children getting respiratory infections due to feeling cold.

If the following members show that 20% people are dying of cough, some measures have to be taken.

Some Facts

Main causes of death in India

1.	Old age	-	24.7%
2.	Cough	-	20.3%
3.	Diseases of circulatory system	-	10.1%
4.	Causes of particular diseases among children	-	9.8%
5.	Fever	-	7.9%
6.	Accident and Injury		6.5%
7.	Digestive Disorders	-	6.5%
8.	Nervous System Illness	-	4.6%
9.	Conception and Delivery	-	0.8%
10.	Diseases of other systems	-	8.8%

(Source Registrar General of India 1990-1992)

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Of the given figures, some are at the national level while some are from smaller sections of population. These will give you an idea of the picture of disease in the population.

Children below 5 get cough/cold 4 to 5 times a year and loose motions 3 to 5 times.

1. There are average 20 TB patients per 1000 people.

- 2. 2 or 3 out of 1000 people have leprosy
- 3. 50% women in India suffer from Anaemia

- 4. Among 100 people, at least 6 people are ill at any given time i.e. per 100 people, 60 would be ill (Rate of illness 6%)
- 5. The experience in Gadchiroli shows that 92 out of 100 women suffer from some reproductive/gynaecological illness.

	Respiratory Disor	der Pain	Fever	Injury	Motion	Others	Total
January February March April May June July August September October	14 12 12 9 14 22 12 14 19 14	20 19 43 23 41 40 47 40 41 45	22 23 34 17 27 14 17 22 9 10	13 9 8 4 8 11 8 11 8 11 8	14 6 24 24 18 8 18 18 16 15 16	17 24 16 13 19 14 16 8 5	100 93 137 90 127 109 118 111 97
November December	30 24	37	17 14	12 13	10 11 15	9	116

6. Here are the results of a study by FRCH.

The rate of illness in 3 to 4% when a population of about 5,000 was surveyed.

These figures will help you in the beginning. Consider how you will make plans according to the population of your village.

- 1. Make a list of your responsibilities which have to be completed once every month like vaccination, sending reports, meeting the ANM or members of Health Committee, Gram Panchayat, talking to the women's group etc.
- 2. To make a list of duties for the week Like taking TB patients and new-born babies for check-up, checking patients twice a week, giving information to school children, awareness programme about a topic for villagers etc.
- 3. Daily activities like observing people, environment, giving medicines, testing the water etc.

It is important to maintain yearly records of information about the village, population details etc. This helps in planning. Divide a sheet into 12 parts, writing tasks for each month.

January	February	March	April
Give information abou diseases of respirator system, measles, leprosy Drawing a map. Organizing a programme for women.	t Give details about TB	Information about population and village.	Consolidate and analyse previous year's details. Send to PHC & Gram Panchayat. Give information about Jaundice, purification of water and Heat stroke.
May	June	July	August
organise a programme of school children, cleaning wells. Give information about cleanliness of water and ORS	Awareness programme about ORS. Prevention and Treatment of Malaria.	Same as June	Programme for women, information about influenza, chicken pox, home remedies for cough, cold.
September	October	November	Decomber
Awareness programme about women's problems like white discharge / menstruation and suffering caused by it	Women's programme Information about Nutrition, Panchayat Raj, Gram Panchayat and Health to Villagers	Discussion with traditional healers of the village. Give details about loose motions.	Organising a programme for school children. Present a report about the health of the village in the previous year

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You can use the above example made by Ayushi for her village to plan according to like conditions/situation in your village. You can made a monthly plan too.



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Adapt the following chart for one month to plan to suit your village.

1. List last months 2 3. Meeting for women births. deaths and record patients of (Carbon copies) Send copy to ANM send water sample to laboratory for test. 4 5. Observe cleanliness of 6. Awareness about one topic village talk to villagers 7 8. Warn about vaccination. 9 Inform pregnant women about clinic visit. Visit TB patients and new-born babies 10. Help in the clinic of 11 12. Give information to school ANM children awareness regarding health messages. 13 14. Visit TB patients and new-15 born babies (below 1 month) 16. Participate in the 17. Organise women's 18 а PHC meeting meeting 19. Give information to 20 21. Advise with people villagers using different special problems mediums like street-play. 22. Visit TB patients and 23 24. Awareness among new born babies. villages through black-board display. 25. Give information in 26. Programme with children 27. Arrange a meeting with school. Conduct a study Cleaning the village with them. women in health for children. 28 29. Participate in PHC meeting 30/31. Call PHC doctor for visit to village (may check first pregnancy) Planning for next month Prepare Records

Just as you plan for a month, you should also plan for each day. This includes - writing the diary, giving medicines, test of water etc.

January

Even if you don't have statistical figures you may note thus -

- 2 children of Dashrath undernourished
- Soak-pit required near Sunderakaki's house.
- Need to check measurement of TCS by Ramuchacha
- Sita chachi's cough persisting. Must be sent to doctor.

Don't forget to add your difficulties. This will help you to prioritise your task. Write your experiences.

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Some problems take longer to solve. You may meet others and discuss them e.g. people should get a shelter to stay in.

The health worker goes beyond these difficulties to ask herself whether all are getting food, potable water. If not, why? How should our leaders be guided for this? etc.

Since there are a lot of tasks, keep a day free in your plan to complete your own work. Though your responsibility is tremendous, you will get the satisfaction of living for others too. Ask the Pachayat whether they can pay you. As people develop faith in you, they will also offer you grains etc. You may collect some funds -

- 1. For treatment of patients
- 2. For health related programmes for children and women.

Though you will not paid for every task, you will earn the love and respect of the villagers.

Summary

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Facts are closely related to planning because they tell you what needs to be done. Planning shows you when and how to do the work. Thus your can offer service of good quality.

Self Examination

- Plan for the year, name the obstacles.
- Send monthly plans, write the difficulties.
- · Write a diary of a week, not the problems
- Make a list of the problems in your village.

Your responsibility as a health worker in this

- 1. Find out the problems of the village on analysis and write them on the basis of priority.
- 2. Make plans to solve the problems.
- 3. Regularly evaluate the effect of your solution. If necessary, make change.

Exercises

Give correct alternatives

- 1. A health worker needs planning
 - 1. To complete the work
 - 2. To give priority to some tasks
 - 3. To make a list of tasks
 - 4. To get a direction

Fill in the blanks

1. Conclusion/Planning, 2.Facts and Planning

- 1. A health worker can give quality service with _____ and _____.
- 2. _____ and _____ help to solve village problems

Answers Alternatives 1-2 Blanks - 1-2, 2-1

6 Planning

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Aims

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On reading this lesson you will understand

You will be able to give the words and concepts used by the Foundation.

Knowledge

You will know about

The meaning of words related to the Research of the Foundation.

Skill

You will learn

Application of the principles of the Foundation.

Perspective

You will understand

• We should the enthusiastic/eager about new information because getting the latest knowledge enhances one's self-respect and self-confidence.

Introduction

There is a possibility of your becoming a part of the schedule of some organisation during your work. For any scheme you require familiarity with the following terms -

Survey - A process of collecting particular information.

Sample - Since gathering details about the entire population is both costly and time consuming a small representative part of the population is surveyed. This is called 'sample'.

Questionnaire

A group of questions prepared to get detailed information about some problem.

Interview

Asking a person a particular set of questions (related to the objective) face to face.

· Focused group discussion

Discussing a particular subject with a group of 8 to 10 people. When you are working in a project, you will find that it is descriptive or analytic or experimental .

Descriptive

When the features are given in details i.e. Describing a population at length in order to find out problem / cause or solution

Analytic

To break up the causes, getting to the bottom.

Experimental

When new medicines or techniques are used to make observations, analysis and draw conclusions.

Summary

One should always keep in touch with the latest information, without hesitating to ask when one doesn't know. One should be confident that one can keep learning.
Self Examination

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Ask a doctor / worker of the P.H.C. about a project with which they were associated. Collect all the information about the project and write a description of it.

Your responsibility as a health worker is this -

- 1. To make efforts to gain new knowledge
- 2. It is necessary to develop one's knowledge and skills regularly because techniques and information related to health are progressing day by day.

Now you know

What are the main principles and policies of Epidemiology?

1. The following factors are necessary for a disease to grow (a). Subject (b) Cause (c) Environment

Environment doesn't just mean the natural surroundings but also the social and financial atmosphere which affects the possibility of disease. The disease can be controlled even if one of these can be regulated.

- 2. The information gathering must be done honestly.
- 3. The facts should be classified and analysed after they are collected. (e.g. age-wise, according to economic level, sex-wise, time etc.)
- 4. Conclusions should be drawn from the analysed facts by asking 6 questions about 1. the meaning of the problem 2. the person afflicted 3. the time (month/period) of the problem 4. the location / area of occurrence 5. the cause of the problem. 6. the possible solution to it.
- 5. This science is comparative. It considers the conditions before and after measures are taken against each other. The comparison may be between two are more villages, states or even countries.

How should records be kept

There are many descriptions with a health worker. A copy of the information about the village and its map should be put up on the wall of the Gram Panchayat. One copy be kept in one's own bag, and another sent to the ANM. The remaining copy should be stored in a trunk.

All copies to be made in pencil so that change can lie easily included when necessary. Maps to be made on tracing paper since they can be copied easily.

Make different registers for details about families like -

- Record of patients
- Record of mothers
- Baby/children cards
- Record of deaths

Each register should be wrapped in a plastic bag to prevent humidity and rodents. Place some neem leaves in the box to keep out insects. Individual records should be made in ink since they will not change, but family information may be written in pencil.

Exercises

Fill in the blanks

1. Interview, 2. Survey, 3. Collecting information about a small representation of the population

- 1. The process of collecting particular information is called ______.
- 2. A sample means _____
- Asking a person questions related to an objectives face to face is called an _____

Match the pairs

- 1. Descriptive
- 2. Analytic

No.

- 3. Experimental
- 4. Focussed group discussion
- 1. Analysing different causes
- 2. Describe in detail
- 3. Focussed group discussion
- 4. Experimental

Choose the correct alternatives

- 1. A health worker must add to his knowledge
 - 1. To increase information
 - 2. For planning
 - 3. For self development
 - 4. Health related techniques are improving day be day

Answers

Blanks - 1-2, 2-3, 3-1 Pairs - 1-2, 2-1, 3-4, 4-3 Alternatives - 1-4

Appendix

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Points to be noted before drawing a map

• Decide the direction by observing the sun-rise for the east with west opposite it. When you face the east, the south will be your right and North to you left

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- Make a key to list the signs used in the map.
- Start the map from the bus stand of the village. In its absence, start from the main temple.
- Show the sign of this stand/temple first, then indicating the main roads starting from there and then show even the smaller roads.
- After the road, draw the rivers and canals flowing through the village.
- Show the social organisations and other temples of the village.
- When all the roads and canals are shown, the village will be divided into smaller parts.
- Mark wells, tube wells, common taps, water-tank and pipe lines in the map (The layout of the pipeline will be available with the Gram Panchayat. Count the houses between the smaller parts and indicate the numbers exactly as they are, on the map).
- Show flowing waste-water

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- Show stagnant dirty water.
- Show the location of the garbage dump.
- Indicate the latrine of the village.
- Indicate the places used by the villagers for defecation
- Show the locations of the soak-pits.
- Show the public land (common property) of the village.
- Indicate the homes and centres of health workers.
- Show the agricultural land.





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Informa	tion about village	114
Name of village		
Name of sub-centre :	Distance from your village :	
PHC :	Distance from your village :	
Date of commencement of baseline	;	
Date of closing of base line	:	
Total no. of houses :		
Population (Age and Sex wise)		
No. Age-Group	Women Men	Total
-	Unmarried Married	
 Less than 1 year of age 1-4 years 		
3. 5-8 years		
4. 9-14 years		
5. 15-44 years		×
6. 45-64 years		
7. 65 and above		
Practising Private Doctors / Oza etc. :		
Practising Private Doctors / Oza etc. : No. Name	Method of Treatment	Address
Practising Private Doctors / Oza etc. : No. Name 1.	Method of Treatment	Address
Practising Private Doctors / Oza etc. : No. Name 1. 2.	Method of Treatment	Address
Practising Private Doctors / Oza etc. : No. Name 1. 2. 3.	Method of Treatment	Address

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No.	Name	Midwife	Trained / Untrained	Address

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Groups working in the village (e.g. women's Forum, Saving Group, Youth club, Cooperative Society etc.)

No.	Nan	ne of Group			Ad	dress
1.				÷		
2.						
Facilities av	ailable in the	village :		r.		
	Aanganwad Baalwadi		Primary Middle S	School		Panchayat Office
	Sub centre		Post Off	ïce		
Bus Service	:	Frequency :				
Environmen	t					
 Total Total Total Lake 	no. of wells no. of hand- s	pumps				
 Wate Total Total Total Kitche Gutte Canal Marsh 	r tanks no. of taps Dry Pits en garden rs (with Stagi I (Temporary)	nant water)		- - - - - - - - - - - - - - - - - - -		
fectious Dis	eases					
pial no. of p	atients	ТВ				
*		Leprosy Others (Give	Names)			
				r,		Signature

his record should be made every year. The map too should be attached to it every year.

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Family Card

Name of Main Member	Relation with Main Member	Age	Sex	Education	Occupation	l
	· 2+					
ал. 1						
Type of Home			2		, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	

Tap/Well/Tanker/Hand-pump

Tap/Well/Tanker/Hand-pump

Tap/Well/Tanker/Hand-pump

(Temporary Permanent)

Source of Drinking water (According to Season)

Water Purification

Jan. - March

April - June

July-September

October-September Tap/Well/Tanker/Hand-pump

Latrine

Animal Housing

Yes/No

Yes/No

...

House/Grampanchayat

Within/without

Internal/external

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Information about Domestic Animals

Animals Number		Animals	Number
Goats		Chicken	
Cows		Oxen/Bullock	
Buffaloes		Sheep	

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Fuel used (per week)

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Firewood/Gobar gas/kerosene

Financ	ial condition :	Lower class:	Middle class:	Higher class:
How m	any members of your	family have migrated	for work?	
Any oth	er occupation?	Yes / No		
Landed	Property			
	Irrigated land Non-Irrigated land			
Birth Sr. No.:	Date of birth	Sex :	Male	e / Feamle
Death				÷
Sr. No.:	Name		Date	

				27	118
		Record	of Patient		
Paper No				House No	
Date of onse	et of Illness				
Village/ Wadi					
Name of Tai_		ä			
Name of Pati	ent			Occupation_	
Age	1. Less than 7 da	ys	2. 7 to 27	days	
	3. 28 days to 1 ye	ear	4. 1 year to	4 years	
	5. 5-14 years		6 15 to 44	vears	
	7 45 to 64 years		8 65 and a	hove	
			0. 05 anu a	DUVE	*
Addition :	1. Tobacco		2. Cigarette		3. Gutka
Amount					
Sex 1 Fem	nale 1 Ma	arried 2 Ltr	married	3 Widow	4 Separated
2. Male	e 1. Ma	arried 2. Ur	married	3. Widower	4. Separated
					i. copulatou
ndications					
Expenses (Fo	r Medicines from Ta	ai) Rs	·		· ·
Analysis by Tai					
analysis by ta					
Which kind of	medicine did the p	patient demand	1?		
	1. Allopathy	2. Homeopat	hy	3. Ayurvedic	
reatment :					
dvice :					
cured		In how many	/ davs		
not cured		Cured for so	me time		
lormal check-	up	* Not known			
	r	* Could not	be contacted		
		* Others			

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I. General Information	Card for Mothers	E
1. Card No		
3. Name	2. Date of registration	
5. Age	4. House No	
ll. History of Conception and Deliv	Venz	
1. Menstruation	, cry	
2. Total conceptions	Regular Irregular	
3. Total Deliveries		
4. Abortion / Miscarriage		
5. Total living children		
6. Complications during previous deliver	Female Male	
Details of problem		
7. Date of last delivery		
Used family planning douis		
Which are	Yes No	
Did you have any serious in		
Yes No		

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		120
I.	Present Conception	
	1. Date of Last Menstrual Period	
	2. Probable date of delivery	
	3. Do have any problem at present Yes	No Which
	4. Check-up (normal)	
	Eyes Normal Light	Yellow Date
	Oral Health Throat	Swelling on legs
	Height Blood Pressure	Urine Albumin
2	Weight Haemoglobin	
1	Tetanus Toxide - Date	
1	ron and Folic Acid Total Tablets and date)	1. Tablet Date
		2. Tablet Date
		3. Tablet Date
/	Advice for delivery in the PHC Yes	No
I	f yes give reasons/indications	
[Date	

Check-up of belly

Date	Height of Literas	0			
	rieigni or oterus	Condition of Foetus	Heart Beats	Complications	Advice
		·			
				-	

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Advice	Diet	Serious indications	Rest
0 - 3 months		Vaginal bleeding/vomiting	
4 - 6 months		Bleeding, stomach-ache vaginal bleeding with head-ache, difficulty to see, swelling	
6 - 9 months		Movement of foetus, excessively, stomach-ache, green vaginal flow with head-ache, difficult to see, swelling	

Delivery

1. Date	Time	Name of Mid-wife
2. Delivery What were the indica	Normal tions of complication?	Complicated
	2	
3. Place of birth	Home	PHC
	Hospital	
4. Sent patient to PHC/Ho	ospital during delivery	
Date] Time	

:

Reasons ____

Post Delivery Care (Two Visits)

	Date	Date		Date	Date
Normal Check-up Eyes Blood pressure Haemoglobin Height of uterus			Temperature Pulse Breasts		

Reasons _____

Advice

Rest Care of breasts Nutrition Information about Family Planning To abstain from intercourse for 42 days.

Information about the baby
Date of birth
Weight
Sex

Child Card No.	
Dead / Alive	
Colour	
Heart Beat	
Breathing	
Movement	

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Information about the child : Fill 6 years of age

Name of village			Hous
Name	*		
Mother's name	-		
Father's name			
Date of Birth			
Weight at birth			
Height at hidh			
Time of birth			- 55
Waist			
Immunization			
mmunization	Date		
 BCG DPT I DPT III DPT Booster Any other (Name) Measles Report of Visit After 3 days in the 1st Week Condition of card The child is drinking milk 		Polio I Polio II Polio III Polio Booste	r
_	2-28 days		
Every week			
Drinks milk			
Any problem			

1 month - 1 year : At least once a month

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Card	No.	

123

House No. _____

Date

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	Sr. No.	Check-up	
	1	General Health	Date
	2	Weight	
	3	Height	
	4.	Nutrition : Breast feeding, Bottled feeding, other diet	
	5.	Development : Holding the hand, Lifting the head, sitting up, crawling, standing, walking	
			1
	Illness	:	Date
	Indicat	ions :	Code No
	Treatm	ient :	Code No.
		Instructions for filling up Ca	ards
Т	he card o	f every child born in the village must be filled	4
M	/hile giving	a code no., write the serial numbers of the c	hildren born in that your and then
th	e year e.ç	g. 1. 2001 2. 2001 etc.	indicit both in that year and ther
E١	ven if the	child was not treated by you, write the indica	tions after onguing about illeges
At	tach extra	paper if needed, to describe illness	anons after enquiry about illness.
Gi	ve a code	no. according to the key of illnesses	
e c			

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	ensisten inte			125
R	ecord of Death			2 4 1
			Card No.	
1. Name of village	2. Tehsil	3. District		
4. House No				
5. Name of deceased				
6. Age				
7. Sex				
8. Name of Mother/father/wife/husband		<u>.</u>		
9. Death	Date			
*	Day	Month	Year	
10. Place of death home/	/public place/PHC/Hosp	oital		
11. Complaints or symptoms at the time	of death	_ Code No	-	
12. Any illness before death ?	Name / Indications o	f disease		
13. Name of informer				
Relationship with deceased				
14. Signature of health worker and name	Date			
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List of Groups of Symptoms for common people

Code No.	Main symptom / other indications	Possible	
	01 Fever with rash on the skin/boo	dy blagnosis	1
10	Fever, Reddish rash on the body Measles which disappears after some days	Measles	10
11	Fever, watery rash or drying edges	Chicken Pox	11
13	Fever, skin and eyes yellow white stools, pain in the joints	Infectious Jaundice	13
19	Fever with rash but symptoms different from above		19

No.	e Main symptom / other indications	Possible	
	02 Fever and nonious	Diagnosis	
20	Eever inchility /		2
20	in muscles	Encephylitis	20
21	Fever, inability to move Acute based		
	in joints	Dengue	21
22	High Fever, Immobility, Glandular nais		
	swelling	Plague	22
23	Fever and paralysis	Dell	
24	Four	10110	23
24	skin, rash	Meningitis	24
29	Fever with other symptoms and in an		
	nervous disorder		29

No.	Main symptom / other indications	Possible Diagnosis	
30	03 Other types of Fever		3
50	High fever, rising and falling temperature, normalising and increasing again with fever and too weak to move	Malaria	30
31	External symptoms lab, test, malarial parasites I found in blood	Malaria	31
38	Fever with other symptoms		
39	Fever with symptoms diff		38
	afferent from above		39

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Code No.	Main symptom / other indications	Possible Diagnosis	
	04 Patches on the skin		4
40	Patches on skin with non sensation	Leprosy	40
43	Knots like a rope and swelling in limbs	Filariasis	43
44	Dryness of skin, mouth and eyes, depression on the head	Dehydration	44
45	Paleness of outer and inner lining of skin, eyes, mouth, fatigue, weakness	Anaemia	45
46	Yellow skin, yellowness of eyes (in the white part)	Jaundice	46
47	Swelling on skin, redness, pain, boils (At the point of an earlier injection on operation)		47
48	Wounds on private parts with higher edges, no pain, history of intercourse	Syphilis	48
49	Patches on skin, boils or redness which cannot be interpreted	-	49

Code No.	Main symptom / other indications	Possible Diagnosis	
	05 Diarrhoea and Vomiting		5
50	Watery motions, vomiting, total dryness	Cholera	50
51	Diarrhoea and vomiting with stomach-ache	Food poisoning	51
52	Diarrhoea with mucous, vomiting, fever	Bacilutic Dysentery	52
59	Diarrhoea and vomiting which is different from above descriptions and cannot be understood.		59

Code No.	Main symptom / other indications Possible Diagnosis		
	06 Other types of Motion		6
60	Diarrhoea, stomach-ache mucous and bleeding with motions	Amoebic Dysentery	60
61	Diarrhoea, stomach-ache, fever	Infectious Diarrhoea	61.
62	Diarrhoea incomprehensible		62

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Code No.	Main symptom / other indications Possible Diagnosis		
	07 Other problems of the stomach		7
70	Stomach-ache, stiffening of stomach	Acute Abdomen	70
71	Stomach-ache, vomiting	Indigestion	71
72	Swollen stomach	Tumour Ascitis	72
73	Pain in the rectum, bleeding with stools	Piles	73
74	Worms excreted with faeces or with vomiting	Worm infestation	74
Code No.	Main symptom / other indications	Possible Diagnosis	
	08 Cough		8
80	Chronic cough (more than 3 months, weight loss bleeding with phlegm, mild fever)	Possibly TB	80
31	Above symptoms with pathological report of TB	ТВ	81
82	Excessive cough, fever, chest-pain, breathing Pneumonia problem		82
83	Excessive cough, muscular pain, headache, running nose, throat ache	Influenza	83
84	Excessive cough, fever, bark-like sound of cough	Whooping cough	84
85	Excessive cough and fever	Acute bronchitis	85
86	Excessive cough and fever		86
Code No.	Main symptom / other indications Possible Diagnosis		
	09 Upper respiratory tract infections		9
90	Unnatural condition in the nose and throat, mucous, Common cold cough and fever		90
91	Pharyngitis, fever, difficulty in swallowing Sore throat		91
92	Sore throat, feeling of layer on throat, mild fever	Diphtheria	92
ode	Main symptom / other indications	Possible	- <u></u>

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Code No.	Main symptom / other indications	Possible Diagnosis	
	010 Difficulty in breathing		10
100	Difficult breathing, panting, chest-pain, swelling on legs/feet	Heart Disease	100
101	Difficult breathing, breathlessness, cough	Asthma, Emphecema, Chronic Bronchitis	101

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Code No.	Main symptom / other indications	Possible	Τ
	11 Urinary and Reproductive Territor	Diagnosis	
110	Urine sugar excessive here	ems	11
	sensation of urine	Diabetes	110
111	Blood through urine		
112	Burning during uringtion for	Systostosomiosis	111
113	Burning sensation and	Urinary infection	112
	among men	Gonorrhoea	113
114	No urine		
115	No urine, heaviness in laws	Renal shut down	114
116	Greater vaginal flow fever pain in the	Urinary obstruction	115
117	Menstruation problems	Genital Infection	116
	problems	Menstruation	117
		Disorders	
Code	Main symptom / other india		

No.	s i suit suit indications	Possible	
4	12 Eve Problems	Diagnosis	
120	Opaque spots in the eves		12
121	Swelling, pain, redness and flow the	Eye Opacitis	120
122	Loss of vision	Eye Infection	121
123	Lack of night vision	Blindness	122
1,2	5 M HOIOTT	Deficiency of	123
124	Improper vision	Vitamin A	0
125	Other Eye problems		124
			125

			125
Code No.	Main symptom / other indications Possible		
	13 Problems of the state	Diagnosis	
130	Inflammation of tongue (13
131	Tooth-ache	Inflamed mouth	130
132	Bleeding mouth/nose	Tooth-ache	131
133	Other mouth problems		132
134	Swelling in throat moving white		133
	painless wallowing,	Goiter	134
135	Pain or flow of ear		
136	Hard of hearing	Ear Infection	135
			136

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Code	Main symptom / other indications		
No.	y appendix other indications	Possible	
		Diagnosis	
4.40	14 Spinal Problems		14
140	Hydrophobia, history of animal bite, seizure	Rabies	140
141	Locked jaw, erratic muscular movement history of	Tetanus	140
	injury or delivery	retarius	141
142	Paralysis and unconsciousness	Strake	
143	Sharp head-ache giddiness	Stroke	142
144	Unnatural / hallugingters hall		143
145	Example in the literation of t	Mental disorder	144
145	social ability	Alcohol Abuse	145
146	Use of medicine for addiction, weakening of all	Drug abuse	146
	abilities	0	
147	Fit attack and unconsciousness	Enilonsy	147
148	Paralysis and unusual symptome		147
149			148
	ause not understood		149

Code	Main symptom / other indications Possible		
No.	Diagnosis		
	15 Maternity Problems		15
150	Natural conception		150
151	Complicated symptom during conception like	Complicated	151
152	Missouriage (Ale U		
152	Abortion Abortion		152
153	Natural Delivery		153
154	Problems during delivery like intestinal bleeding, swelling of legs, grean pain, prolonged period	Complicated child birth	154
-	causing fatigue, early bursting of - Reproductive Tract injury		
155	Symptoms of infection within 6 weeks of deliver, fever wound in reproductive tract?	Complicated Purperium	155

Code	Main symptom / other indications Possible		
No.	7	Diagnosis	
	16 Problems of new-born infants	5	16
160	Natural birth, alive		160
161	Still-birth	Still birth	161
162	Injury due to delivery / technique	Birth injury	162
163	Weight loss of baby, under weight, premature	Immaturity	163
164	Abnormal body/limbs or their function	Congenital Anomaly	164
163 164	Weight loss of baby, under weight, premature Abnormal body/limbs or their function	Immaturity Congenital Anomaly	

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Code No.	Main symptom / other indications	Possible	
	17 Common Problems	Diagnosis	17
170	Weakness, weight loss, anaemia, swelling, history of irregular diet	Malnourishment	170
171	Discoloured hair, no other symptom	Kwashiorkor	171
172	Faster slow pulse, weakness, pale face, immobility	Shock	172
173	Weakness, fatigue, no other symptom		173
174	Weight loss with no other symptom	-	174
175	Pain and swelling in muscles or bones	Arthritis Rheumatism	175
176	Pain unlisted above		176
178	Weakening of physical, mental ability due to old age (above 65 only)	Senility	178
Code No.	Main symptom / other indications	Possible	
	18 Serious Injury (Beyond mere Dressir		18
180	Bone injury	Fracture	180
181	Displacement of joint	loint Dislocation	18.1
182	Cutting off of part of limbs / body	Traumatic	182
183	Torn part of body (which can be rejoined)	-	183
184	Collection of blood near injury	Haematoma	184
185	Injury caused by part of body being crushed under some heavy object	Crushing injury	185
186	Entry of some object into the body through a part/pore	Foreign body	186
187	Burning	Burns	187
188	Poisoning (Except by food)	Poisonina	188
189	Other serious injuries	-	189
Code	Main symptom / other indications	Possible	1 10
No.		Diagnosis	· · ·
	19 Normal Injury	Diagnosis	19
190	Scratches	aceration	100
191	Injury by sharp object		190
192	Black and blue appearance of burt area	Bruiso	102
193	Muscle injury	Sprain	192.
194	Cramped muscle	Strain	104
195	Internal clotting	Contusion	104
196	Scratched organ	Abrasion	196
197	Any other injury		197
Code No.	Main symptom / other indications	Possible	
	20 Disease and Cause of death untold	Diagnosis	20
200 0	Cause outside the list		20
201	Sudden death where cause is unclear		120
202 1	John and the set of death		201
102	and a cause of dealing		202

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Code	Main symptom / other indicati		91
No.	of the symptom rother indications	Possible	1
		Diagnosis	
	E-1 External Causes of Injury		E-1
E10	Bite / Sting		
E11	Unknown burning		E10
E12	Sudden drowning		E11
E13	Fall		E12
F14			E13
	other then food)		F14
E15	Injury due to vehicle		
E16	Any other accident		E15
E17	Suicide, self-infected wound		E16
E18	Murder, effort to kill		E17
F19			E18
2.10	or reported violence (to self or other)		F19

Code No.	Main symptom / other indications	Possible	
	Health Service	Diagnosis	
S10	Outpatient - External Treatment		
S 11	Injection Immunisation		S10
S 12	Oral Medicino	-	S 11
S 13	Bandage		S 12
<u>C 14</u>	Danuage		S 13
5 14	Normal delivery		S 14
S 15	Other normal technique		0 14
S 16	Mother-child care		0 10
S 17	Counselling for family planning		S 16
S 18	Counselling		S 17
S 10	Other unlisted and		S 18
0 10	Other utilisted services		S 19

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Meanings

Diagnosis	To decide the nature of the illness after studying the symptoms and signs
Communicable Diseases	Diseases spreading from person to person
Agent	Substance affecting physical, chemical or biological factor
Host	The animal or plant inside which germs / organisms can grow
Environment	The surrounding area which affects an organism
Epidemic	Many people getting the same diseases simultaneously
Endemic	A disease recurring in a given geographical area, more than in other areas
Resistance	The energy to resist disease
/accine	Bodies that catalyse the body to produce antibodies to prevent certain diseases
nflammation	A chain of reactions from tissues caused by physical, chemical or infectious effects.
nmunology	The study of the mechanism of resistance by a body.
sease	Not having a normal health
ommunity Health	The condition of the health of a whole group of people which depends on various factors like social, financial, political, environmental etc.
alth Promotion	To make improvements in conditions of health, to maintain health to prevent disease.

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