

Engineers in Health Care Sector

- Medical Imaging (e.g. X-Ray)
- Surgery (beds, light, instruments, microscoping camera)
- Simulation & Training (train people how to use those instruments)
- Artificial joints (knee replacement, hip replacement)
- Cardiac Implants (pacemaker)
- Neural Engineering (DNA restructuring, IVM, stem cells, neurology)
- Mobile Health (delivering medical facilities to people through mobile phones)
(also provide health information through mobile phones)
e.g. 99 DOT for tuberculosis (reminders for taking medicine)
- Healthcare IT
It makes things digitised, organised
(e.g. adhaar card)
software like GCGS, Health care apps.
- Regenerative Medicine
people are learning to take care of themselves
(portable BP machine, how many glasses of water you need to take)

→ Independent living

(wheelchair have sensors to detect stairs
for example)

- Diagnosis
- How much wrong is done
- Treatment
- Delivery

Earlier there was curative approach, now preventive approach is taken where role of engg. become more crucial.

→ Evaluation Process

Med sem - 25%

Grid sem - 40%

Project - 25%

Assignment - 10%

Health

The word health was derived from the old English word 'heoþlith' which means a state of being sound, and was generally used to infer a soundness of the body.

Hippocrates -

WHO defines health as:

A state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.

Saracoli (1997) defines health as a condition of well-being, free of disease or infirmity and a basic and universal human right.

Bercher (2005) defines health as a dynamic state of well-being

→ Is Health a state or an ability (Netherlands 2009)

paradigm shift (shifting focus to topic where maximum research take place)

- paradigm shifted to preventive approach rather than curative approach.

- From preventive, we move to.

- Argued for the revision of definition of health as 'static'

- Contemporary development - not only giving but also making sustainable

- Henricke van der Horst (2010) states health can be regarded as a dynamic balance b/w opportunities and limitations, shifting through life and affected by external condition.

Public Health

refers to all organised measures (whether public or private) to prevent disease, promote health, and prolong life among the population as a whole.

- Protection - from infectious disease, unhealthy environment
- Partner - means partnership with communities we are concern more about population at large
- Promote - healthy habits, makes them aware
- Prevent - prevent people from falling sick, vaccination, from communicable diseases
- provide - provide them basic amenities food, shelter, proper sanitation, proper drinking water

- Focus on entire population rather than individuals

Pillars of public Health

- Availability (resources, services)
- Accessibility (may be hindered by physical)
ii) (monetary)
↳ do people have the ability to pay for services?

- Utilization (means using services, health condition will improve)

These pillars have to be in balance for improving public health.

⇒ Health Care

The prevention, treatment and management of illness and the preservation of mental and physical well-being through the services offered by the medical and allied health professions

(doctor)

(pathologist, pharmacist, nurse, compounder etc.)

Main component - Primary Health Care (dispensary) basically means providing everyday health services that focus on patients, clients, families, and communities working with a team of health professionals.

Drug resistant - major health problem in India.

The ultimate goal of primary health care is better health for all

WHO has identified 5 key elements to achieving that goal -

- reducing exclusion and social disparities in health (universal coverage reforms)
- organizing health services around people's needs

mortality - death

morbidity - sick

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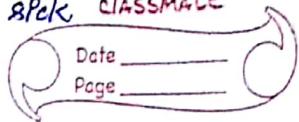
and expectations (service delivery reforms).

- integrating health into all sectors (public policy reforms).
- pursuing collaborative models of policy dialog (leadership reforms); and
- increasing stakeholder participation.

⇒ - Primary health care needs to be delivered close to the people; thus should rely on maximum use of both lay and professional health care practitioners and includes the following 8 essential components -

- i) education for the identification and prevention of prevailing health challenges
- ii) proper food supplies and nutrition; adequate supply of safe water and basic sanitation
- iii) maternal and child care. include family planning
- iv) immunization against the major infectious disease
- v) prevention and control of locally endemic diseases (preventive approach)

incidence - how many people falling sick
prevalence - how long you are sick



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v) appropriate treatment of common diseases using appropriate technology.

vi) promotion of mental, emotional and spiritual health

vii) provision of essential drugs. (curative approach)

Health Disparities

(external circumstances), (you have no control, can be removed)

Everyone do not have same health status

→ health disparities are differences in the incidence prevalence, mortality and burden of diseases and other adverse health conditions that exist among specific population groups.

- so health disparities depend on external condition we are not talking about physiological problem like curative one.

• The Health Resources and Services Administration - defines health disparities as population-specific differences in:

- presence of disease

(old ones are vulnerable to some other type of diseases as compared to young ones)

- health outcomes

- quality of health care (e.g. poor people have limited health care)

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- access to health care services (in developed countries, have proper health care insurance)

Many different populations are affected by disparities. These include:

- Racial and ethnic minorities (or caste)
- Residents of rural areas (not available, not accessible, not used)
- Women, children, the elderly (they are more vulnerable)
- Persons with disabilities
(disadvantaged people are more vulnerable to disease, injury, accidents etc.)

→ causes of health disparities

i) Poverty

For them health care is burden
extra-expenditure
losing day-wage
even in govt., they have to pay

ii) Environmental threats

Air pollution in Delhi
some are natural (mountainous, flood, tectonic)
and some are man-made (pollution, waste,)

iii

In Bhopal, Hiroshima they are suffering.

viii Inadequate access to health care

vii Individual and behavioural factors

(lifestyle, sleeping, playing)

(smoking, drinking)

vi Educational inequalities

(educated people see early date)

we know what to do, what not)

understand symptom

makes people aware, early detection,
more chances to get healthier)

viii Regional variations among states

(even within states we have disparities)

viii Place of residence

(even within rural and urban, we have
further microdisparities like slum dwellers
in urban)

viii Age and sex group of population

- Kyaoshan Bharat Chodo

↳ 42% children in India are malnourished

- Obesity

Health disparities are also due to sanitation facilities

Everybody doesn't have equal health status thus the solution to this is health equity (absence of systematic disparities in health, no one should be discriminated from achieving this potential) because people don't have equal health status of social because of external factors.

positioning

Thus we need to create opportunities, so that people aren't denied of health services on basis of caste, background etc. social factors external to the body. Health equity means creating all these opportunities. We need to go step by step.

Step 1: reduce the gap by providing opportunities irrespective of one's social status.

e.g. they are stunting (not getting proper nutrition) not because of their body but because of their social factors.

WHO : health equity - achieving highest level of health for all people. It entails focused societal efforts to address avoidable inequalities by equalizing the conditions for health for all groups, esp. for those who have experienced socioeconomic disadvantage or historical injustices
(Healthy People 2020 → goal of WHO)

e.g. Bonded labour (historical injustice)
they are uprooted from their native place and they suffer in health.

People living beside land dump and it affects their health.

→ essential elements of various definitions of health equity are-

- health inequalities are unjust, unnatural and avoidable difference in health status. (we can't deny people's right to health).
- They are beyond the control of individual meaning they are systematic problems
 - problems within the external system (e.g. caste system, people belonging to BPL, are malnourished, they haven't decided to remain poor).

e.g. If we have govt. hospital but no medicines then it is the problem of system. and not of individual.

- They are sustained over time and generations and are beyond the control of individual.

e.g. we have reservations but they are not availed properly because of the system. We have special services to give to poor, but poor are not given them wholefully.

e.g. wash campaign, they target the school student.

Equity vs. Equality

Equality: giving same opportunities to all irrespective of their needs.

Equity: giving opportunities to all on the bases of what they need.

e.g. In a country everybody has the right to vote (equality)

e.g. Canadian Health care system, everybody is provided with health insurance scheme irrespective of their background.

Equity: involves trying to understand and give people what they need to enjoy full, healthy lives.

Public Distribution System (PDS) :- Govt. provides basic amenities to people and the charges are based upon the economic conditions. It is given so that people who don't have anything can have basic amenities.

Because of corruption and lack of accountability even PDS fails.

→ Under Govt. Health Mission, had Janani Suraksha Yojna to get ₹1900, they had to spend more than ₹4000. The hospital had no medicine, they had to pay the transport and ultimately this

is a failure. Hence because of the system, the equity is not working.

→ Mid-day meals

i) to entice children to come to school.

ii) to give it to children not from so well-off families

Thus, the health status of children is deteriorating because of the kind of oil being used. The people take the grant and thus corruption.

→ Equality - Aims to ensure that everyone gets the same things in order to enjoy full, healthy lives.

e.g. the Reservation system is being misutilized. It is based on equality. There are lot of upper caste people who are staying and many lower caste who are well-off.

Equity is the means and by giving equity we want to achieve equality. Equality is the outcome.

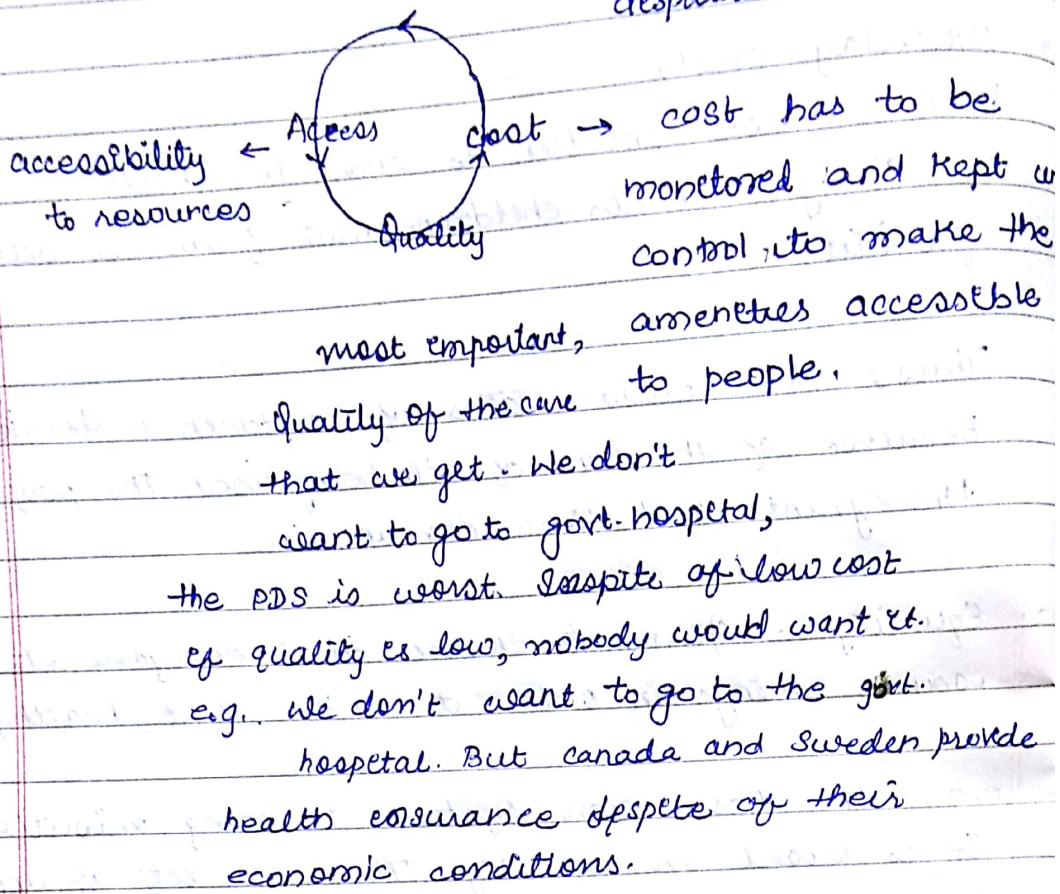
Understanding difference b/w them helps us to recognise and respond to diff. in health and well-being that are unfair, avoidable and changeable.

Equity is making sure what they want to achieve for making the lives of people better.

These are not genetic diseases but more of social problems.

Health Equity

↳ Absence of systematic
disparities in health.



that we get. We don't

want to go to govt-hospital,

the PDS is worst. Despite of low cost

if quality is low, nobody would want it.

e.g. we don't want to go to the govt.

hospital. But Canada and Sweden provide
health insurance despite of their
economic conditions.

→ accessible, minimal cost service of good
quality so that all systematic difference
can be done away with.

Determinants of Health

- What makes some people healthy and others
unhealthy?

- How can we create a society in which
everyone has a chance to live along

The range of personal, social, economic and environmental factors that influence health status are known as determinants of health.

Categories →

- Demographic characteristics
- Social characteristics
- Economic

→ Demographic characteristics

(scientific study of population - age, sex, how many)

population - Population size - how many people are there

distribution - Growth rates - rate at which population changes

- (i) Age structure - how many people are there in each age group.

composition - Sex structure

(i) accordingly we can determine health care policies
how much resources they need - population distribution

(ii) Whenever you design a product - you need to know audience, for whom you are making product
some medicines are female or male centred
if younger - more vaccines
middle aged - counselling

Population change

Factors affecting -

- Fertility
- Mortality
- Migration

we are not bothered by only number of these factors, but also what influences them, their cause, health implications etc.

Outcome of Migration

- have impact on source and destination
- Bihar is well known for out migration.

Samastiprakash

- Apart from monetary remuneration, they bring diseases, a large proportion of money spent in curative process. Because of certain lifestyle, communicable diseases; lack of proper diet, more stressed, don't go to hospital
- In the place of destination, they are daily wage workers. They do not have proper housing, diet, they don't go to ^{govt.} hospital, they are not eligible for facilities. Also they lose their daily wage.
- May have a positive impact on health. Many people migrate to better climatic conditioned.

⇒ Demographic Transition

It is a model that describes population change over time.

In 1929, Warren Thompson, he came up with this theory.

It represents the transition from high birth and death rate to low birth and death rates as a country develops from a pre-industrial to an industrialized economic system.

Critics on this - this is based on

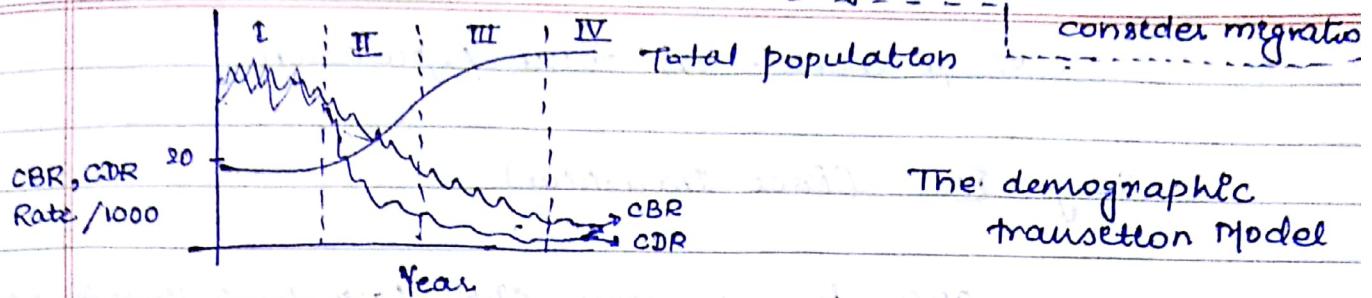
western countries rather than african, asian.

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They may have more or less stages. This model does not consider migration



Crude birth rate = approx. birth rate (CBR)

Stage I (Pre modern) - they are fluctuating, total population does not change much,

$$CBR \sim CDR$$

economic

- CBR is high -
- ① children were considered as assets
 - ② no. of children who will live, was very low - infant mortality rate was very high

CDR is high -

- ① they were not trained to deal with natural calamities, harsh weather condition

- ② starvation, didn't have techniques to store food.
- ③ Endemic diseases.

Stage II (Urbanization/Industrializing)

CBR does not decrease significantly but CDR decreases significantly, total population increase due to technical innovation, medical technologies.

Stage III (Mature Industrial)

sharp decrease in CBR -

children become liability, rearing becomes expensive
women empowerment

- child labour education laws

Started to join work force

they realized to have smaller families to give

- sharp increase in total population

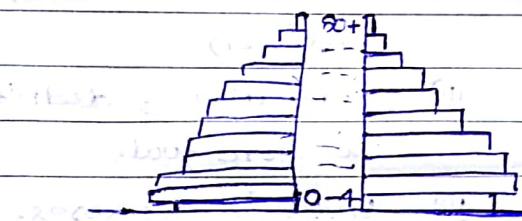
Stage IV (Post Industrial)

CBR is less than CDR (also due to lifestyle of)
total population becomes constant
e.g. Sweden, Norway

⇒ Population Pyramid

A diagrammatic representation of the age and sex of a population.

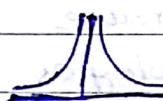
Vertical axes represent age groups (males on left, females on right)



horizontal axes indicates the numerical or distribution of each sex in each age group

It is not same in different states, countries

⇒ Rapid Growth



Broad base - max no. of people is in child region
• high fertility rate

narrower - no. of people reaching next step is less down
• life expectancy - avg. no. of years

is not very high (a person is

• migration (maybe) to live.

dependency ratio -

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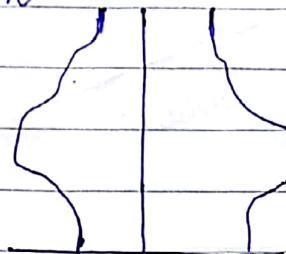
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population below 15 yrs. and above
60 yrs. who are dependent on working population

Most of the developing countries have this type of pyramid
↳ Imped growth of population
(pyramid having broader base)

ii) Slow Growth



Developed Country

(Rectangular)

(base is dwindling)

Shorter base - birth rate is controlled
fertility rate decreases

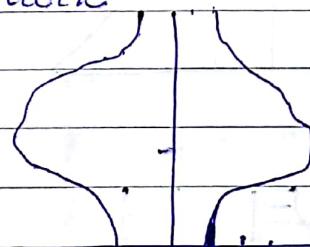
bulge in between - migration

narrower - life expectancy is high

(quite a large no. of people
in older age group)
even more for women

~~doesn't taper off~~

iii) Negative Growth



Germany, Norway
(developed)

birth rate is very low

may have inverted pyramid

they encourage immigration

life expectancy is higher

dependency rate - working population (15-60 years)

Apart from it, all population

is called dependent population

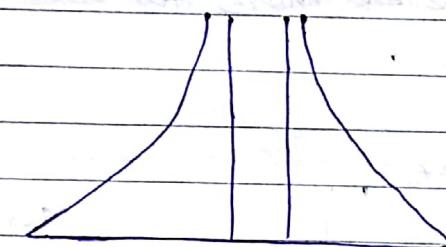
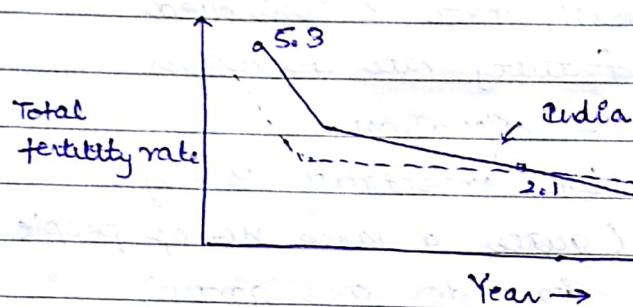
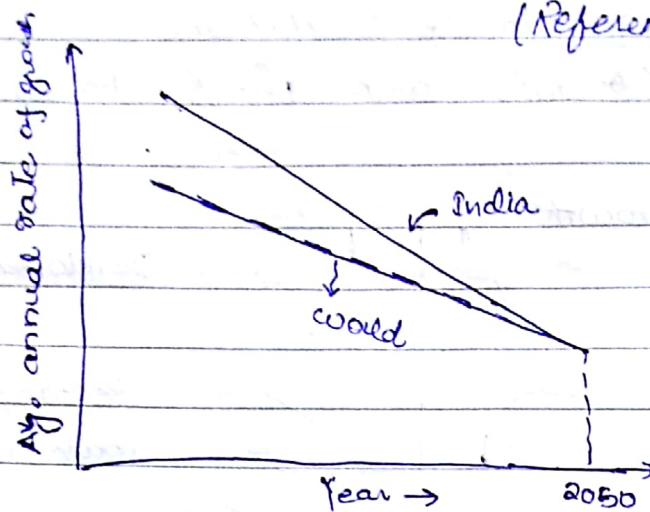
= dependent population
working population

dividend \rightarrow profit

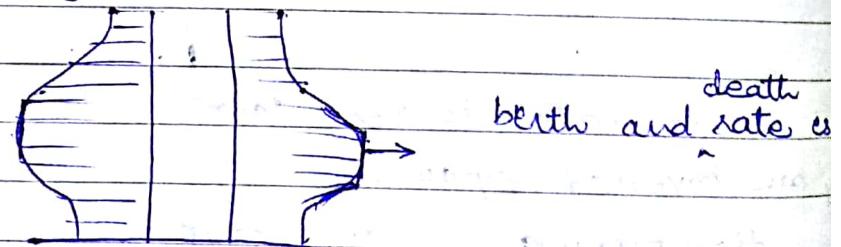
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Population Growth Rates

(Reference to India)



India in 2026



Demographic

Advantage you have due to having large working population

dividend - dependency rate is controlled

lot of work force

younger population \rightarrow healthier population

26 years is mean age group in India

→ Ashish Bose who coined the term BIMARU, said that certain treatments have to be done. They are illiterate, they are lebility. This is kind of agenda of western countries, although they are young population. We have to make them skilled, educated employment, health care facilities, etc. He also said we have different models for rural and urban areas.

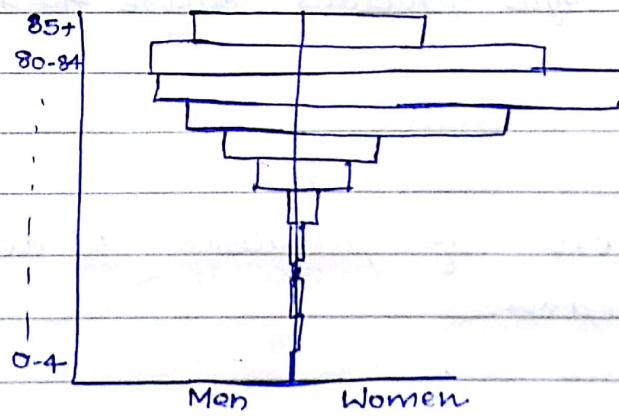
We have to make them aware about increasing birth rate rather than imposing restrictions.

So, Ashish focused on the quality of population instead of being happy of having large young population.

Resource Allocation -(education, health care) can be done by analyzing the pyramid.

→ Special case of pyramid (Retirement Community)

: Sun City, 1990



It is the place where people shift after retirement more old-age home, special care facilities. we don't need vaccination, reproductive policies

Implications for health status

- India contributes to a fifth of the world's share of diseases
- National Commission on Macroeconomics and Health (2005) has classified health conditions as:

i) Communicable disease

- malaria, flu, TB, AIDS

ii) Maternal and child health conditions

- polio, pregnancy problems

iii) Non-communicable diseases

- obesity, cancer, diabetes

- life style practices cause these diseases

iv) Accidents & Injuries

→ Age distribution of prevalence is different for different diseases.

→ Asthma and Tuberculosis

→ Jaundice and malaria

→ Reproductive health - age specific

→ HIV/AIDS - can transmit from parents to child

→ Cardiovascular diseases - (earlier 40+, but now) age specific

By all this, we want to reduce health disparities.

⇒ Social determinants of Health

Otawa charter in 1984

↳ Social determinants of health are the conditions in which people are born, grow up, live, work and age and the systems put in place to deal with illness.

They are not constant, they keep changing

What keeps on changing - type of culture, socialisation, food, where you live.

These circumstances are in turn shaped by a wider set of forces: economics, social policies and politics at global, national and local levels.

• Various Factors:-

↳ Place and Health

↳ geographical
Space where you

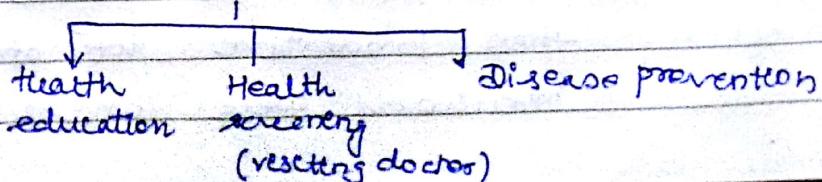
live, work, socialise; but it has larger connotation :-

• Place of residence - urban area, streets, material by which your house is made, living arrangement even whether the house

• educational status - they are more aware, can take care, know Do's/DON'T's;

• Quality of education - what are you learning, (formal & informal education)

Health promotion

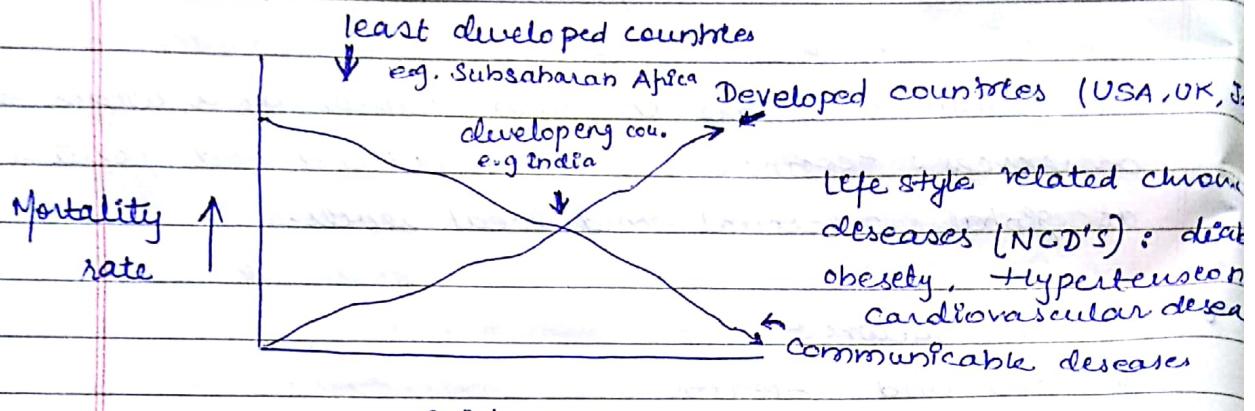


Health Education : Need of the hour

↳ Importance of health care
in education and vice versa

Epidemiological Transition

A theory stating that the prevailing forms of illness changed from the infectious to degenerative types as the demographic transition occurred.



By superimposing epidemiographic and demographic model - nearly same

- the way population changes, the nature of diseases changes in the same way
- India would be in 3rd stage of demographic transition
- Now we have a lot of control on infectious diseases but lifestyle disease has increased.

Relationship:

- main focus was curative earlier, then preventive, lot of technological inventions were done

Paradigm Shift

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- but at advanced stage, we ~~can~~ have cured, prevented but the "sustainable" become problem
- Now we focused on promotion of health, so that we can sustain our health that we have.

⇒ Era of Health Promotion

health desparity - caused differences in status of health due to systematic problem.

- a major concern in public health
- Ottawa Charter in 1986 pioneered Health Promotion

Enable people to deal with their health issues and to overcome the existing health disparities

Amalgamation of advances in knowledge, increasing concerns about human rights & tackling emerging threats to health.

Aims at building capacity of individuals by inculcating skills and confidence among them through health education.

If health is an ability, then education is tool.

⇒ Health Education

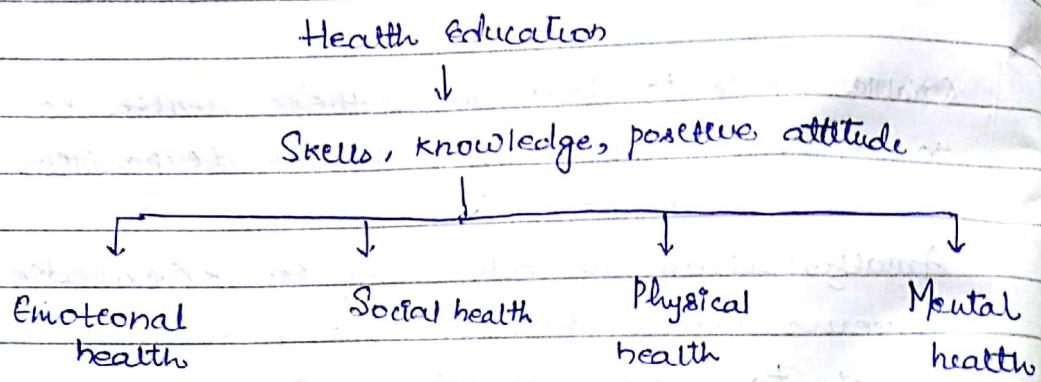
- Education is one of the most important contributors to health.
- Education provides information, knowledge & wisdom to people.

- The purpose of health education is to positively influence health behaviour of individuals & communities as well as living & working conditions that influence their health.

Swach Bharat
↑

- Health education is often visible and tangible as it often includes educational programs, and skill building group or individual activities.

→ Why should we care about health education



Some diseases have caused social stigma. People suffering from them are considered as untouchables

→ Health literacy to Health Consciousness

- Main component of health education is Health literacy,
- "... personal characteristics and social resources needed to individuals and communities to access, understand, appraise and use information and

services to make decisions about health." (WHO 2015)

- Relevance of critical literacy

Critical literacy means are you capable to (make sense, understand) or critically analyze something said or written. Do you know something is ~~better~~ good for you? You make them capable of taking decisions. Can you utilize your tool/education?

- Paula Freire's concept of "critical consciousness"
- Amartya Sen's framework of health capabilities

→ Health Education in India

- Inception of Health education in India can be stressed back to 1956 establishment of CHIEB
- Various organisations at state and central levels
- Infrastructure attempts failed to bring desired results
- Tools used were ineffective
 - Example, newspapers, posters and pamphlets used, for an audience which was largely illiterate
- "Motivational manipulation" (said by scholars)
 - ↳ first only try to motivate people but all in vain. nothing was done properly.

Lopsided paradigm (faulty)

- too service users' perspective is neglected.

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- Training of Health personnel at various stages
- Developing curriculum for the same.
- Service providers' perspectives given prominence
- Lopsided paradigm of health promotion as service users' perspectives neglected.
2 ways:
 - NGOs employ different interventions measures for positive change (but they are not sustainable as funding stop en between)
 - Information about the availability of available health care services.

→ Social determinants of health

• Ethnic Composition

- people belonging to different ethnicities
- especially, migration
- health status depends on ethnicity due to their different lifestyles

In US, first nationed people have different literacy rate, awareness, their accessibility...

- So, it helps to decide the health status
- Also perception of health and unhealth depends on ethnicity

• Linguistic composition

- If there is no proper mode of communication the whole process of getting services can-

- some problems can be explained only in mother tongue
- there is a communication gap b/w health provider and health seeker.
- You feel excluded; stressed; results in emotional illhealth.
- can act as facilitator in case of making aware.

• Religion

- plays a very important role in determining health status
- influences the perception of health & illness and what type of health care services they ^{are} provided
- some diseases are better determined by religion like mumps Malonky
- Where science stops, religion starts - said by anthrop.
- church didn't allow using contraceptive measures
- people go to different provider like vaidya, church --
- they do certain scientific exercises in the name of religion. (chhath, fasting, aarti)
- It become easy to make them follow those scientific practices in the name of religion.

• Caste

↳ unique feature in Indian Society

earlier it depends to on their labor work

(Brahmins, Kshatriya, Vaishya, Shudras)

↓ ↓ ↓ ↓
 to educate to protect business man do all kind
 of social activities

- Due to caste affiliation, there is change in educational, economic activities
- Often they refused to provide services on the basis of caste, lower caste women are ill treated, misbehaved, they also have to wait in PHC and upper caste ~~are~~ are given preferences.

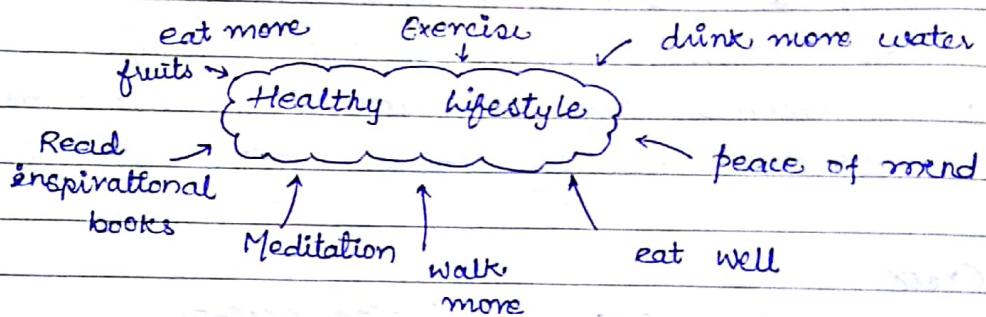
• Culture

↳ custom, ideas, social behaviour, lifestyle practices
 process of socialisation, eating style, health practices

- some cultured people, ~~eat~~ eat raw meat, fish, veg
 they are prone to intestinal diseases

poor health

- In some culture, alcohol consumption is ~~no~~ ritual they are also prone to specific health problems drug abuse e.g. Western people. (in colder climate also equatorial people will have more adverse effect.)
- fast food also cause harm, packaged food too much microwaved food is also not good.



• Gender

↳ social differentiation of man and women.
 man, woman, transgender, LGBT

Socially women are weak gender

↳ Nutrition - nutritional deficiency among women
 more than 90% suffer from anaemia

- ii) Health care - last priority in health seeking behaviour.
- iii) Decision making Power

Transgender

↳ basic sanitation is denied, no separate toilet

"Gender are certain tasks, that we do without questioning."
said by Judith Butler

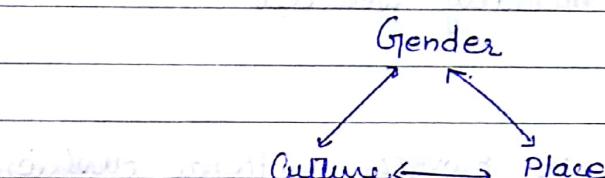
This dependency hinders empowerment which means we make our own decision and more importantly the decision gets executed.

Gender roles are different across the country.

Culture decides gender norms. They are interrelated

Is culture uniform? - No

- it changes from one place to other



Some problems are confined to certain place, maybe those problems are due to dietary practices which comes from culture.

- Exposure to crime, violence, and social disorder.

- physical, emotionally stressed

- Public Safety

- mental peace; gets exposed to important things

- Standard of living

- Impact on life choices

- low-class
middle class
high-class

- Transportation options

- Positive - ambulance facilities

- increases your accessibility to health services,
provides a lot of mental peace

- Negative - Pollution

- it is not safer to use public transport,
toilets in local trains.

- can't meet with an accident
also mentally stressed

- Social support

- means it provides emotional cushion

- includes family support, friend support

- In joint family system - Support is more,

- It provides emotional stability, social security

all the social

determinants Economic

can be stability

clubbed into

these 5

categories.

Neighbourhood (Place)
and

Built environment

SDOH

Health &
Health Care

Social &
Community context
(gender culture)

Education

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→ Economic Determinant of Health:-

how the economic status affects the health
income is the most imp. factor of health.

→ persistent correlation b/w low income and poor health

→ the financially worst-off experience the highest rates of illness and death

→ This applies when diff. measures of health are considered:-

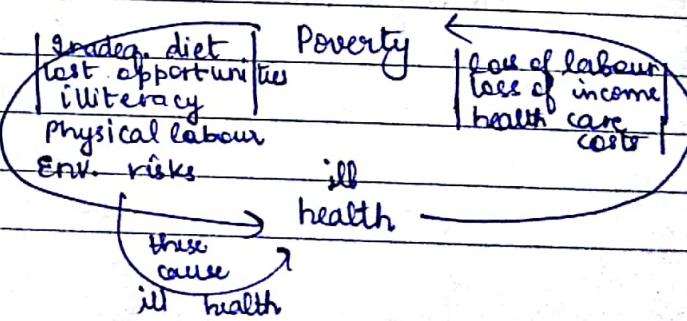
- death rates
- disease rates

people living on streets die or of extremes of climates and are more prone to accidents.

- health service use : affected by the kind of health services available
- hospital admissions, and
- self-rated health

→ Poverty becomes very prominent under econ. det.

long been recognised as an imp. det. of ill health



- Manufacturing
due to nature
in:
- Service Sector Activities :-
- back problems. Even doctors have to work in night shifts. lifestyle related hazards. more people engaged in tertiary activities and less of them engaged in primary activities as the degree of development increases.
- Activities :- Machine - related diseases.
of the job they are employed

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Env. Risks :- no proper housing, no proper class participation
coz of Poverty, they are more prone to ill health conditions and again have to spend which that, they is a vicious cycle.

→ Main reason for poverty : unequal income distribution. Poverty is an economic class hailing from income distribution.

- greater income inequality is associated with inc mortality.
- the main factor determining adequate income is participation in paid employment (what determines, that how much you will earn is the type of profession). Employment enhances your social status too. It enhances opportunities for regular activities that help improve your health. Unemployment is detrimental to mental and physical health.
- Employment is an imp. determinant of health. No profession is devoid of health hazards.

- Occupational Health :- deals with all aspects of the health of the workers and has several determinants, including risk factors at the workplace leading to :-
 - cancers
 - accidents (eg: construction workers may get amputated)
 - respiratory diseases
 - hearing loss
 - circulatory diseases
 - stress related disorders

→ communicable diseases and others
** Occupational health refers to the identification and control of the risks arising from physical, chemical and other workplace hazards in order to establish and maintain a safe and healthy working environment.

These may include:

- chemical agents and solvents
- heavy metals eg: Pb, Hg
- physical agents like loud noise and vibrations and
- physical hazards such as electricity and dangerous machinery.

→ affected by what type of employment you are in but also which sector you are more employed in.

formal: fixed working hrs.

informal: no-fixed " hrs.

Employment and working conditions in the formal or informal economy embrace other imp. determinants:-

- working hrs
- salary
- workplace policies concerning maternity leave, health promotion etc.
- protection provisions etc.

• Primary Activities : people who are farming, mining, ragpicking. Eg: infections, snake bites, extremes of weather conditions, accidents, heat wave
↳ they are of environmental risks.

→ Health Care System - The complete networks of agencies, facilities, and all providers of health care in a specified geographic area.

It is a approach by how health care services are made available to people.

→ Health Service - Any service (i.e. not limited to medical or clinical services) (curative → preventive → health promotion) aimed at contributing to improved health or to the diagnosis, treatment and rehabilitation of sick people.

The elements of a health care system embrace the following -

(1) personal health care services for individuals and families (hospital, office, home)

(2) the public health services needed to maintain a healthy environment

control of proper drinking water, regulation of drugs, safety precautions, proper food, sanitation etc. Swachh Bharat Abhiyan

(3) teaching and research activities.

related to

eg. prevention, detection and treatment

how available resources can be made accessible.

how we can improve patient safety.

how we innovate useful techniques

So, it can be used to for curative, preventive and health promotion.

(4) third party (health insurance) coverage of system services.

In the health care system, all services are not equally affordable. ~~At~~ yes

In Canada, health insurance is for everybody.

It actually provides the choices of services you can opt for.

* Healthcare is now the world's largest industry -
itself a value and cost three times greater than the banking sector."

(Earlier it was banking sector).

Technology ensure health promotion.

- ⇒ Health care System can be divided into 6 layers:-
- > Primary Care
 - first point of entry of a patient ; basic treatment
 - detection, diagnosis
 - cough & cold, fever
 - PHC
- > Secondary or acute care
 - entry can be by referral or emergency.
 - accident or heart attack
 - Specialised hospital
 - acute or chronic
- > Tertiary Care
 - Increased level of sophisticated, more specialised

- services are provided by highly professional
- chemotherapy
- entry can be by referral only.

> Respite Care

- it is provided by institution or agency
- might need long term care
- major clinical things has been done, now they need certain treatments at home

> Restorative Care

- Rehab centre - depressed, high intake of drug.
- your body regain its previous capability by regularising their routine life before they actually come back to real life

> Continuing Care

- not always professionals, but by family
- for old people, differently abled
- they need continuous treatment

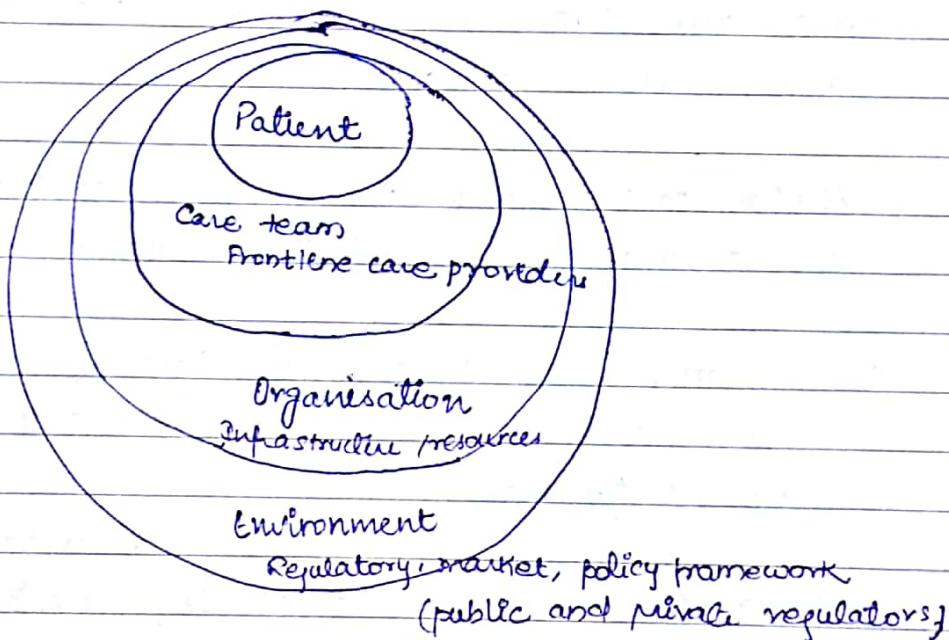
→ In 2001, Leslie E' Shortell, they tried to explain that

health care is nested into 4 levels -

- (1) The individual patient
- (2) the care team, which includes professionals care providers (e.g. clinician, pharmacist, and others), the patient and family members.

(3) the organisation (e.g. hospital, clinic, nursing home etc.) that supports the development and work of care teams by providing infrastructure and complementary resources.

(4) the political and economic environment (e.g. regulatory, financial, payment regimes, and markets) the conditions under which organisation, care teams, individuals patients and individual care providers operate.



25 marks - Project

Preparation & Presentation (5+10)

Write up → 500-1000 words (10)

19th feb - Name of group members

9-11 April → class presentation of projects

20th April → Submission

proj@elt.p.ac.in

→ Patient

↳ he has at the receiving end
health care system is patient-centered health
care system

Role of patient -

- wants much more than the curative approach
- Now patient as "customers" rather than receiving
- Role of patients has changed

→ Margaret Stacey -

she says that now health service is "for people"
rather than "for" people

→ Health care system is now a service sector so it tries to fulfil the demands of 'patient'

e.g. gym, yoga therapy, oil therapy, mud therapy.
people have become more conscious about
different types of nutrition.

→ patient is anyone who wants mental, physical and social well-being,

→ Patient is the most important part of health care system

⇒ Care Team

- The various players involved in the care system are
- Changing dynamics between these players.

Not just the doctors, could be machines also.

• family, gym trainer, engineers, nurse, dietician, beautician

Note

⇒ Organisation

Physical space where services are provided & utilized

↳ hospital, clinic, nursing home

↳ decision making system

↳ operating system - canteen

↳ Processes (financial, administrative, human resource, clinical)

↳ business level.

Resources -

Again discuss pillars (availability---)

- Doctor patient ratio - How many per

In India, 1700 people per doctor - Govt. Hospital
 Ideally it should be < 500

- Nurse - patient ratio

Ideal - 1:3

In India - more than > 2000

- Hospital bed ratio

1 hospital bed for 877 people

In-patients

Intensive care

Out-patients

< Ans>
strategy

Treatments & Rehab

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despite having a large number of doctors we have poor ratio.
We don't have enough trained doctors, enough available health care services — is it or in public / private sector and can they be availed.

Political and Economic Environment :-

General gov. expenditure on health as % of government's total expenditure.

Earlier total budget had less than 1% share for health. Thus, the quality suffers and a lot of private clinics have mushroomed. It's not just availability but the cost of the services matter too. in social and economic health care services.

13.02.'18

→ policies are certain guidelines.

→ In India health policy was known as population policy because they were more oriented towards controlling the population.

→ In 1948, the first population policy was made.

Bhore Committee in 1948 formed under Bhore. They wanted to find out. They provided a report on both : curative and preventive aspects of health for the population.

5-Year Plans:- Taken up by central govt and they set some targets to achieve in next 5 yrs by setting

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aside some resources how many schools how many
classmate
docs. 6.5 million was allocated to family issues

from 1951 - 1956.

- ↳ how can the growth rate be controlled
- ↳ family planning to control family size
- ↳ integrate family planning with health
- ↳ centres

Sterilisation camps became a common sight
and Indira Gandhi lost after the emergency

↳ main purpose wasn't to control the fertility
but a holistic development but the govt.
went about on a larger-scale mass
sterilisation — forceful sterilisation in lieu of
monetary benefits Thus, the people went against
the government

In July 1971 in Kerala, 6,76,930 people went
for vasectomy. 0.01% percent out of
6.5 million was spent for this. In next
plan it went to 0.05%. 1969-70
money was spent on sterilization and
1.8% of total money was spent. Not
much care was taken to improve
the primary and secondary health services
but a more target based approach was
opted.

In 1990, there was paradigm shift
shifting from coercion and control

Infant mortality rate: children who don't
live for their first birthday.

In 1994, ICPD conference set a trademark
for the population policies

1993 — a committee by MG Swaminathan said.

down Swaminathan Committee which after the
ICPD set a goals for Indian population
and said we don't have to go by targets but
go beyond. Goals:

① Universal access to contraceptives to
lower fertility to 2.1.

② Reduce maternal mort. rate to
100 lives per birth

any woman who dies coz of
childbirth or issues related to
child birth.

③ Immunisation of all children against
tb, diphtheria, whooping cough, polio,
and measles, tetanus.

The Committee also said:

→ Reduce IMR to 30 per 1000 live births

→ focus on mortality among children
and low birth weight babies (< 2.5 kg)

→ Containment of AIDS and STDs

→ Complete registration of births, deaths
and marriages.

→ prevention of marriage of girls
below 18 and set a legal age of
marriage, hence high maternal mortality
rate is controlled.

→ Need to implement min. needs program
and both sexes need be educated.

International Conference on Population development
ICPD said we have to be more concern about socio-economic factors rather than just fertility rate.

Significance of ICPD -

i) Role of Women

women were not simply tools for achieving population goal
agents of voluntary changes.

health equity, empowerment

We need to make them educated

they should be in position to take decision and, ^{also execute it.}
their health should not be neglected.

they should have good social position

ii) Shift to Reproductive Health -

Earlier, they just talk about health issues in general
but then they also focus on reproductive health of men and women.

lot of women were dying in pregnancy, & child birth
Women's rights to take fertility decision.

Better spouses communication should be there.

We also need to talk about adolescence needs.

In rural areas, girls are married in the age below 18 years that leads to certain health problems.

iii) Desebanding of targets

We need to go for target-free approach.

We can't give incentives, ^{to meet those targets.} depending

on population. It's kind of bribing. That's very unethical. You can't simply give money or deprive them from facilities. It is a behavioural change ^{have} and long term effect. We can't have time-bound targets

No should give importance to the clients' perspective. What is the need of community? Rather than what we want to have.

Socio-cultural factors are influencing different needs varies.

We need to focus on various stakeholders like Frontline Health workers, NGOs, women group Ashas, Anganwari to work at grass-root level.

But they lack training and monetary remuneration.

Features of target-free Approach -

	Target Approach	Target-free Approach
1. driving force	Targets	Community needs
2. orientation	from the side of provider	Clients perspective
3. concern	Target Achievement	Quality of care
4. Goal	Demographic Impact	Reproductive health status
5. Approach	Top-down (Sterilisation camp)	Bottom-up (Immunisation)