MATERNAL CHILD HEALTH – FAMILY PLANNING NOTES

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LEVEL II 2014

OUTLINE

INTRODUCTION

RATIONALE FOR EMPHASIS ON MCH IN DEVELOPING COUNTRIES

GOALS OF MCH

HISTORY OF HEALTH SERVICES IN KENYA

A MODEL FOR ANALYZING CHILD HEALTH

A FRAMEWORK FOR ANALYZING DETERMINANTS FOR MATERNAL MORTALITY & MORBIDITY

MILLENIUM DEVELOPMENT GOALS (MDGs)

1. INTRODUCTION

- Objectives by the end of the course
  - Outline the goals & rationale for maternal & child health services.
  - Outline the family life cycle, the life cohorts & the interventions at every stage/ cohort in the KEPH.
  - Describe the analytical models for maternal & child morbidity & mortality.
  - Describe the global and national interventions for addressing priority maternal & child health problems.

References

- The Kenya Demographic & Health Surveys
- Kenya Reproductive & Child Health Policy & Strategy Documents
- Maternal & Newborn Health Roadmap
- National Health Sector Strategic Plan II & III
- UN agencies & Maternal & Child Health Reports
  - United Nations Child Emergency Fund (UNICEF)
  - United Nations Fund for Population Assistance (UNFPA)

2. RATIONALE FOR THE EMPHASIS ON MATERNAL & CHILD HEALTH IN DEVELOPING COUNTRIES

- This can be discussed under 3 sub – headings:
  a) Demographic considerations
  b) Increased rates of morbidity & mortality
  c) Preventability of diseases & deaths

a. Demographic considerations

- A **population pyramid** is a graphic representation of the population distribution by age & sex.
- The pyramids of developing & developed countries vary.

Expansive pyramid

- It has a broad base indicating a high proportion of children particularly under 5 years, i.e. **young population** (>35% of the population is aged <15 years)
- It also represents a rapid rate of population growth and a low proportion of older people.
- This is the typical pattern for less economically developed countries due to:
  - Little access to & incentive to use birth control
  - Negative environmental factors
  - Poor access to health care

Constrictive pyramid

- This shows large numbers or percentages of young people
- People are generally older as the country has:
  - Long life expectancy
    - The country with one of the highest life expectancy is Japan
  - Low death rate
  - Low birth rate
- The population is old (>10% of the population is aged >65 years)

b. High rates of morbidity & mortality

- The mortality rates for mothers & children in Kenya are very high
- These include:
  - Infant Mortality Rate → 52 per 1,000 live births
  - Under 5 Mortality Rate → 74 per 1, 000 live births
  - Maternal Mortality Rate → 488 per 100, 000 live births

Factors contributing to high mortality rates

Mothers:

- Obstetric conditions
- Malaria
- Anemia
- STIs (including HIV)

Children:

- ARI: Pneumonia & URTI
- Measles
- Malaria
- Diarrhea
- Malnutrition
- HIV

c. Preventability of diseases & deaths through:

- Use of MCH services:
  - Pre – conception care & family planning
  - Pre – natal, post – natal & post – partum care
  - Child welfare clinics
- Improved home environment
  - E.g. Water, Sanitation & Hygiene (WaSH) Program
- Early treatment and referral
- Health education/ communication/ promotion

3. GOALS OF MCH

To make MCH services **available** to mothers & children

To **promote** health by encouraging good health, behavior & attitudes

To **educate** parents

To **prevent** disease

To **treat** disease

To **identify** high risk cases & arrange frequent follow – up or referral

a. Making MCH services available

- Accessibility:
  - Services should be within a walking distance (4 km) & they should be static.
  - Where this has not been achieved, mobile clinics are put up that are community based.
- Regularity
  - In the past, MCH services have been designated for particular days, usually market days. It has been realized that this is not the best approach in terms of supply. It has been found much more sensible to make the supply conform to demand rather than the other way round.
  - It has been decided that health facilities should be made available every day and at a definite place & time.

Cont.

- Punctuality
  - Services should be delivered on time & the waiting time should be reduced to not more than 30 minutes.
- Comprehensiveness
  - Offering all maternal & child services at every clinic & every day
  - At times, some clinics designate specific days for vaccination and a child that comes any other day isn’t vaccinates.
  - This constitutes missed opportunities.

b. Promoting health by encouraging good health, behaviors and attitudes

- A good maternal health clinic must have health education as a major agenda every day.
- The major topics handled are:
  - Breast feeding: exclusive for the 1st 6 months and continuation to 2 years
  - Good nutrition: food adequacy/ security and balance in infants & young children
  - Personal hygiene: there should be adequate and portable water particularly to prevent communicable skin diseases & four use in latrines
  - Lifestyle changes: regarding exercise, diet, smoking, drugs, alcohol & stress

c. Educating parents

- Parents should be educated on:
  - How to cope with health problems at home – KEPH level 1
    - For e.g., a sick, febrile child may be brought to the clinic by the mother covered with so many clothes. This could be fatal.
    - Health education should be done on how to handle such cases
  - Use of maternal and child health services
    - They need to be educated on which clinic should be used for what purpose.

d. Preventing disease

- This should be done particularly through the use of effective immunization.
- Vaccines should be maintained in a viable site from the time of delivery to a health clinic to that of injection into the child.

e. Treating disease

- Diseases should be treated early in MCH clinics to reduce the risk of complications.

f. Identifying high risk cases & arranging for frequent follow – up & referral

- Such cases may be related to clinical disasters, nutritional conditions, obstetric and social problems (esp. vulnerable populations i.e., the poor)

4. HISTORY OF HEALTH SERVICES IN KENYA

- KANU manifesto → 1965
- National Family Planning Program, NFPP → 1967
- Establishment of MCH/FP program → 1974 – 1979
- Integrated Rural Health & FP program → 1980 – 1988
- Cost – sharing → 1989
- National Reproductive Health, NRH (1997 – 2010) → 1996
- The 20:10 cost – sharing policy → 2004
- NHSSP II → 2005
- Abolition of delivery services fees in dispensaries & health centers → 2007
- National Reproductive Health policy → 2007
- The president's free maternity & primary care initiative → 2013

KANU manifesto, 1965

- This included:
  - Free health services for all Kenyans
  - To fight disease, ignorance (through education) & poverty

National family planning program, 1967

- It was previously run by the FPAK
- It wasn’t found necessary for Africans initially & it took a lot of convincing to make the founding fathers of the nation understand otherwise.

Establishment of MCH/FP program, 1974 - 1979

- This resulted in the expanding of paramedic training.
- Establishment of a national coordinating center for MCH services was done & it was initially labelled as **National Family Welfare Center (NFWC).**
- It was then renamed to **Division of Family Health** in the department of FP in PHC

Integrated rural health & FP program, 1980 - 1988

- This involved strengthening the rural health facilities so they are be able to offer:
  - Clinical FP services, i.e. actual administration of contraceptives
  - Information, Education & Counselling, i.e. IEC component
- There was a strong argument against putting both components under the same umbrella due to the risk of prejudice by the clinicians.
- The IEC was therefore placed under the Ministry Of Learning
- Establishment of the National Council for Population & Development (NCPD) which now conducts IEC for FP across the sectors.

Cost – sharing, 1989

- This was started in government facilities as it was decided that the burden of health expenditure was too great for the government to bear it alone.
- This is after it had stated ‘free health for all’ as part of its manifesto in 1965.

The '20 – 10' cost sharing policy, 2004

- Due to a big decline in the utilization of MCH services, after the cost – sharing policy, it was decided in rural health facilities, to subsidize the fee for the mothers & children attending clinic to 20 Kshs. & to 10 Kshs. In those attending a dispensary.

The 2nd National Health Strategic Plan (NHSSP II), reversing the trend, (2005 – 2012)

- The NHSSP II was mandated to reverse the trend of deteriorating health indicators which involves the improving of MCH service.

5. A MODEL FOR ANALYZING CHILD HEALTH

DISTANT (UNDERLYING) VARIABLES

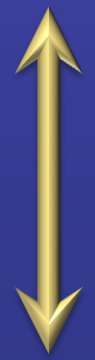
- Household characteristics
- Community factors
- National/ global context

IMMEDIATE VARIABLES

- Constitution at birth
- Nutrition
- Exposure
- Susceptibility
- Curative health care

PROXIMATE VARIABLES

Infection



Malnutrition

DEMOGRAPHIC OUTCOME

- Mortality
- Disability

I. Distant (underlying) variables

Household characteristics:

- Education of parents esp. the female
  - An unlearned parent will not know the importance of valuing child health.
  - Lack of knowledge about common first aid skills impact child health.
- Income of the parents
- Work status of the parents
- Utilization of health services
- Demographic constitution of the household

Cont.

Community factors:

- SES & power structure
- Status of women
- Level of health and social services
- Availability of safe water

Cont.

National/ global context

- National context:
  - The economy: what is the budgetary allocation to health
  - Policies in place: e.g. cost sharing
  - Legislation: child rights
  - Politics: devolution of health
- Global context:
  - World economy & politics: SAPs, trade imbalances etc.
  - Donor support for child health programs: ARVs, Vaccines, Relief food etc.

II. Intermediate variables

Constitution at birth

- Reproductive pattern: maternal age, parity & child spacing
- Health & nutrition during pregnancy
- Immunization (TT, MMR)
- Peri – natal care: management of prolonged labor & asphyxia
- Birth weight

Cont.

Nutrition

- Breast – feeding
- Weaning
- Post – weaning nutrition
- Frequency of meals
- Seasonal food availability

Cont.

Exposure

- Personal & domestic hygiene (plus food hygiene)
- Feeding mode
- Traditional practices
- Water supply & use
- Sanitation habits
- Crowding

Cont.

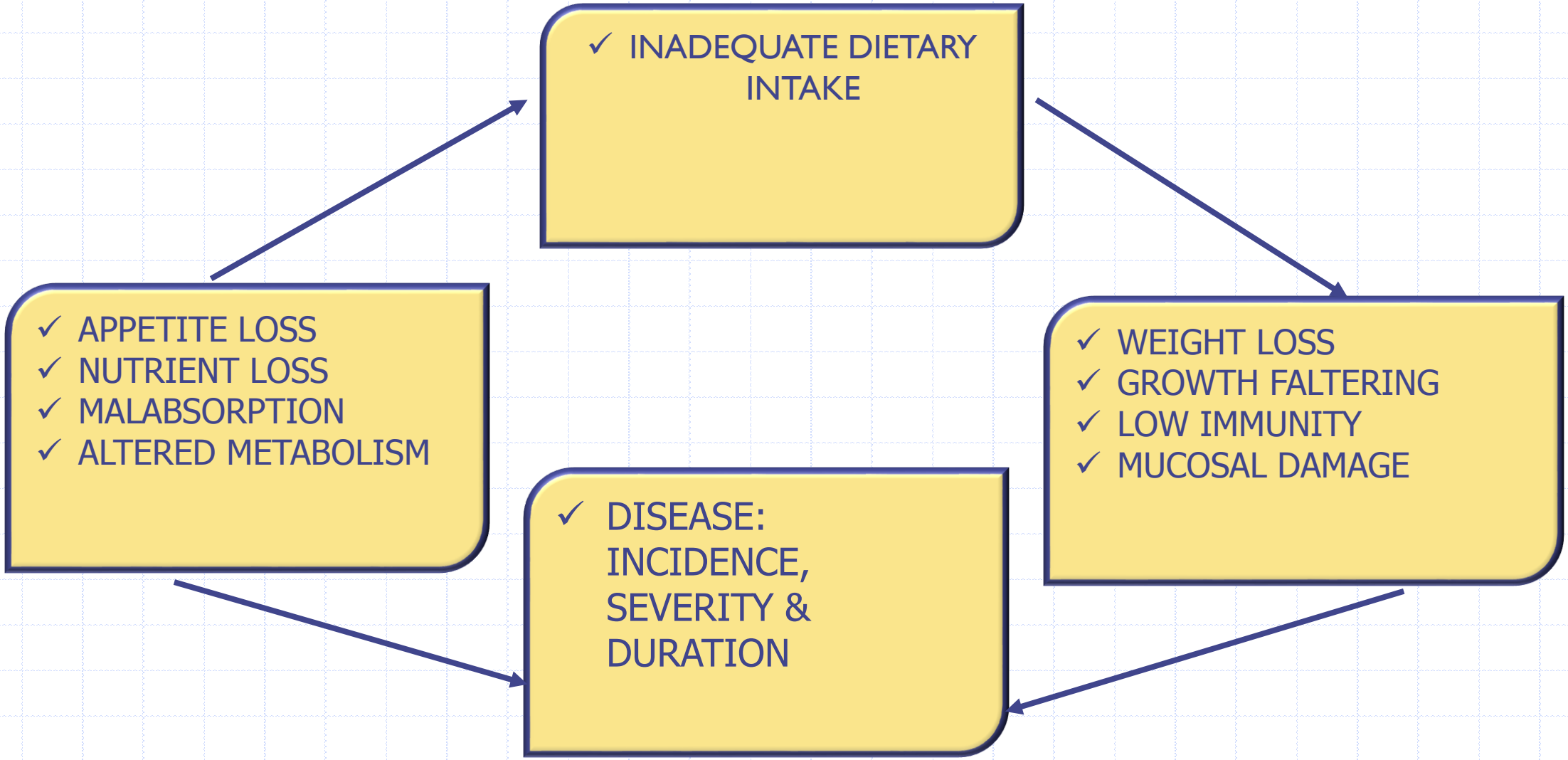
Susceptibility

- Immunization
- Specific nutrition deficiency e.g. vitamin A
- HIV infection

Cont.

- Health care/ curative
- Life – saving drugs e.g. ORS, antimalarials
- Prophylaxis e.g. vitamin A capsules, food fortification
- Disease control by chemotherapy e.g. helminthes & schistosomiasis

IV. Proximate direct variables



IV. Demographic outcome

Mortality

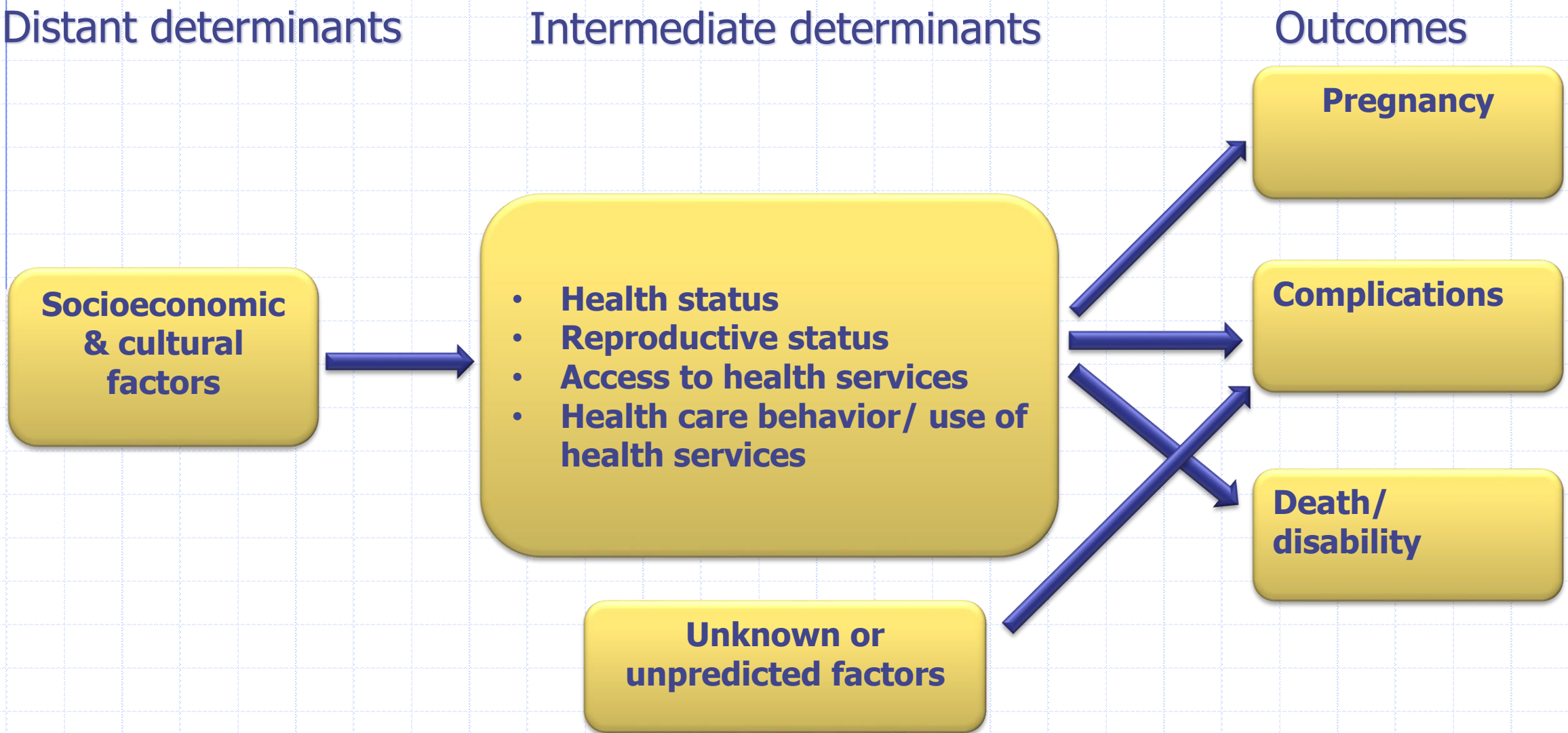
- Perinatal mortality rate
- Neonatal mortality rate
- Infant mortality rate
  - NB: IMR in Kenya: 52 children out of 1,000 do not celebrate their 1st birthday
- Child mortality rate
- Under – 5 mortality rate

Cont.

Disability

- It can be physical or mental
- Examples are:
  - Polio – paralysis
  - Measles – mental retardation
  - Acute respiratory infections – valvular heart disease
  - Chronic Otitis Media – Hearing loss
  - Birth asphyxia – Cerebral palsy
  - Vitamin A deficiency – visual loss

6. A FRAMEWORK FOR ANALYZING DETERMINANTS OF MATERNAL MORTALITY & MORBIDITY



I. Distant determinants

- These are factors away from the woman and that ae concerned with the context in which the woman finds herself.
- They include the following:

Women's status in the family & community at large

- Education
- Occupation
- Income
- Social & legal autonomy: women should be encouraged to make decisions relating to their health on their own.

Cont.

Family status in the community

- Family income
- Land ownership
- Education of others
- Occupation of others

Community's status

- Aggregate wealth
- Community resources e.g. doctors, clinics, ambulances etc.

Cont.

Global perspectives

- Global population & health priorities: family planning vs. HIV
- Reproductive health agenda and initiatives: FP, EmOC, MDGs 5 & 6
  - The global health agenda determines what will be funded

II. Intermediate determinants

Health status

- Nutritional status (anemia, obesity, stunting)
- Infections and parasitic diseases e.g. malaria, hepatitis, HIV & TB
- Chronic conditions e.g. DM, HTN
- Prior history of pregnancy complications

Reproductive status

- Age
- Parity
- Marital status

Cont.

Access to health services

- Location of services for FP, prenatal care, EmOC, pre – conception care & other primary care services
- Regarding the services, the following are important:
  - Range of services available
  - Quality of care
  - Access to information about the services

Cont.

Health – seeking behavior/ use of health services

- FP, pre – natal & antenatal care
- Modern care for labor & delivery (skilled birth attendance as opposed to obsolete TBA)
- Post – partum care
- Harmful traditional practices
- Illicit/ induced abortion

Cont.

Unknown or unpredicted factors

- Sometimes the cause of maternal death cannot be understood especially when the best conditions are given to support the pregnant mother

III. Outcomes

Pregnancy

- This is a biological state through which other factors influence maternal death.
- A maternal death must fulfill the following pre – requisites:
  - Death of a woman while she is pregnant or
  - Within 6 weeks (42 days) after the termination of the pregnancy by birth or abortion
  - From any cause related to or aggravated by the pregnancy or its management
  - But not from any accidental or incidental causes

Cont.

Complications

Direct	Indirect (existing but aggravated by the pregnancy)
• Hemorrhage (MCC) • Sepsis • Hypertensive disease of pregnancy • Obstructed labor & ruptured uterus • Acute liver failure • Amniotic fluid or air embolism related to the delivery	• Anemia • Heart disease • DM

Cont.

Death/ disability

- Maternal death is the final outcome of the framework
- A few non – fatal conditions are responsible for most of the serious disabilities e.g. chronic UTI, uterine prolapse, obstetric fistula

7. MILLENIUM DEVELOPMENT GOALS

I. Eradicate extreme **poverty and hunger**

II. Achieve universal **primary education**

III. Promote **gender equality** & empower women

IV. Reduce **child mortality**

V. Improve **maternal health**

VI. Combat **HIV/AIDs**, malaria & other diseases

VII. Ensure **environmental sustainability**

VIII. Develop **global partnership** for development

I. Eradicate extreme poverty & hunger

a) Targets

I. Reduce the percentage of people that live with < 1$ per day by 50% compared to 1990

II. Reduce the percentage of people with hunger by 50% compared to 1990

b) Indicators

I. Percentage of population with < 1$ per day

II. Percentage of children who are underweight

III. Others

II. Achieve universal primary education

a) **Targets**

I. By 2015, all children (boys & girls) should be able to complete a full course of primary education

b) **Indicators**

I. Accessible basic education

II. Percentage of children that finalize basic education

III. Others

III. Promote gender equality & empower women

a) **Targets**

I. Eliminate gender disparity in primary & secondary education

b) **Indicators**

I. Proportion of M/F in basic & secondary education

II. Percentage of women with paid jobs

III. Percentage of female parliamentarians

IV. Reduce child mortality

a) Targets

I. Reduce U5MR by $\frac{2}{3}$ in 2015 compared with 1990

b) Indicators

I. U5MR
II. IMR
III. Measles vaccination coverage by 1 year

V. Improve maternal health

a) **Targets**

I. 5A: reduce maternal mortality by $\frac{3}{4}$ in 2015 compared with 1990

II. 5B: achieve by 2015, universal access to reproductive health

b) **Indicators**

I. 5A:
   I. MMR
   II. Proportion of deliveries attended by trained health personnel

II. 5B:
   I. Contraceptive prevalence rate
   II. Adolescent birth rate
   III. Antenatal care coverage
   IV. Unmet need for FP

VI. Combat HIV/AIDs, malaria & other diseases

a) Targets

I. Stop HIV/AIDs transmission before 2015 & start reducing prevalence
II. Stop transmission of malaria & other diseases before 2015 & reduce prevalence by 50%

b) Indicators

I. Percentage of HIV infected people among pregnant women aged 15 – 24 years
II. Percentage of orphans due to AIDs
III. Malaria cases/ mortality
IV. Percentage population using malaria prophylaxis
V. TB cases and mortality
VI. TB detection & cure rate (under DOTS)

VII. Ensure environmental sustainability

a) **Targets**

I. Integrate principles of sustainable development in national policies
II. Increase access to clean water by 50% compared with 1990
III. Improve living conditions of 100M people in urban areas

b) **Indicators**

I. Land covered by forest
II. Maintenance of biodiversity
III. CO_2 emission
IV. Percentage population with:
    I. Access to clean drinking water
    II. Access to good sanitation
    III. Safe housing

VIII. Develop a global partnership for development

a) **Targets**

I. 8E:

I. Provide access to affordable & essential drugs

II. Others

b) **Indicators**

I. Percentage population with access to affordable essential drugs

II. Others

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LEVEL V 2018

1. KEY STRATEGIES FOR REDUCING MATERNAL DEATHS & SUFFERING

Maternal death

- This is defined as the death of a woman while pregnant or within 42 days of the end of the pregnancy, from any cause related to or aggravated by pregnancy or its management.
- The tenth revision of the ICD – 10 includes a new definition concerning death related to pregnancy.
  - **Late maternal death**: the death of a woman from direct or indirect obstetric causes more than 42 days but less than one year after termination of pregnancy.

There are 3 key strategies

1. Simply meeting the unmet need for contraceptive services could reduce maternal mortality by 20% or more.
   - **Unmet need for FP** refers to the percentage of women who are at risk of unintended pregnancy but not using contraceptives.
     - Find out the relationship between **Contraceptive Prevalence Rate** Vs. **Unmet need for FP**.
2. Having skilled birth attendance and functioning referral systems available to all women in labor.
3. Timely EmOC for women who develop complications → this is the **central strategy** in efforts to reduce maternal deaths.

Basic Emergency Obstetric Care (BEmOC)

- This is provided in health centers and small maternity homes. It includes capabilities for:

Parenteral administration of antibiotics, oxytocics & anticonvulsants.
Manual removal of the **retained** placenta.
Removal of retained products of conception, POCs following miscarriage or abortion by MVA
Assisted vaginal delivery vacuum extractor (Use of forceps is discouraged)
Newborn resuscitator (Basic Emergency Obstetric & Neonatal Care (BEmONC)

Comprehensive Emergency Obstetric Care (CEmOC)

- This is typically delivered in district/ sub – county hospitals and higher levels.
- It includes **all basic functions above**, plus capabilities for:
  - Safe blood transfusion
  - Caesarean section
    - i.e., trained staff, a functional operating theatre and ability to administer anesthesia

Health care system structuring before the new constitution was promulgated included:

I. Community
II. Dispensaries
III. Health centers
IV. County/ district referral hospitals
V. Provincial/ regional referral hospitals
VI. National referral hospitals:
    - Kenyatta National Hospital
    - Mathare Teaching & Referral Hospital
    - Moi Teaching & Referral Hospital

With the new constitution, health is devolved and there are now 4 tiers:

I. Community
II. Primary care level: Previously, this was KEPH level II & III.
III. County level: Previously, this was KEPH level IV
IV. National level: Previously, this was KEPH level V & VI

Significance of maternal mortality

- Maternal mortality is widely acknowledged as a general indicator of the:
  - Overall health of a population
  - Status of women in society
  - Functioning of the health system
  - Useful for advocacy purposes
- Refer to MDG 5.

Issues with MMR

- Comparative rarity on a population basis due to context – specific factors, such as:
  - Reluctance to report abortion – related deaths
  - Problems of memory recall
  - Lack of medical attribution
  - Weak vital registration systems

Process Indicators

- Maternal mortality rates/ ratios are difficult and expensive to obtain and are often inaccurate because of under – reporting & misclassification – yet they are not actionable.
- **Process indicators** are monitoring tools that can provide information about where interventions are needed.
- The indicators focus specifically on monitoring whether women who develop serious obstetric complications receive the services they need.

6 Process Indicators by UN for monitoring obstetric care

INDICATOR	DEFINITION	MINIMUM LEVEL
Availability of Basic Emergency Obstetric Care (BEmOC)	Number of health facilities providing BEmOC functions per unit of population	4 BEmOC facilities for every 500, 000 population This is roughly a BEmOC for every sub – county (150, 000 people)
Availability of Comprehensive Emergency Obstetric Care (CEmOC)	Number of health facilities providing CEmOC functions per unit of population	1 CEmOC facility for every 500, 000 population
Institutional deliveries	Proportion of all deliveries taking place in health facilities	15% of all births taking place in health facilities
Met need for Emergency Obstetric Care (EOC)	Proportion of women with an emergency obstetric complication treated in EOC facilities	100% (all) women with emergency obstetric complications
Caesarian Section Rate (bipolar)	Proportion of cesarean sections to all births	No less than 5% and no more than 15%
Case Fatality Rate in facilities	Proportion of women with emergency obstetric complication admitted to a facility who dies	CFR should be less than 1%

RELEVANCE OF THE 6 PROCESS INDICATORS

- Indicators 1 & 2 deal with coverage answering the question: do enough obstetric services exist to serve the population?
  - Every woman should be within 4 km or within an hour's distance from a health facility.
- Indicator 3 deals with utilization, answering the question: are the services being used by pregnant women?
- Indicators 4 & 5 also deal with utilization, but focuses on the questions of complications: are the services being used by women who really need them, i.e., women experiencing obstetric complications?
- Indicator 6 tells us something about the quality of service by answering the question: can the facilities save a woman's life?

Assignments

- Evaluate Kenya's performance in executing the MDGs as at 2018.
- Discuss the 17 SDGs.

At the end of the day, it's not about what you have or even what you've accomplished.

It's about who you've lifted up; who you've made better & what you've given back. It's about the difference you make in people's lives. That is true success.

+JesusIsLord+