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CHAPTER NINE

Surveillance and Monitoring

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Surveillance and monitoring are basic elements of programmes for both comprehensive reproductive health (RH) and general health care. The person who coordinates RH activities should ensure timely and appropriate inclusion of RH data and indicators in the general health-reporting system.

The Five Essential Components of a Monitoring System:

1. **definition of essential data to collect, including case definitions[1];**
2. **systematic collection of data;**
3. **organisation and analysis of data;**
4. **implementation of health interventions based on the data; and**
5. **re-evaluation of interventions.**

1. A case definition is "a set of standard criteria for deciding whether a person has a particular disease or health related condition." Criteria can be clinical, laboratory or epidemiologic.

Surveillance and Monitoring

The aims of monitoring are to:

- identify high-risk groups;
- identify the most serious and/or the most prevalent conditions; and
- monitor the trends of these conditions and the implementation and impact of interventions.

System Framework

This Chapter explains how to develop a system to collect and use essential RH data. The system starts when a refugee situation occurs and no existing services are present. It is described in chronological order and in order of priority. The scheme can be adapted and altered to respond to different situations.

Most RH surveillance should be integrated into the overall health-information system (HIS). During a refugee emergency, keep the HIS simple and limited to the most important causes of morbidity and mortality. Step 1 (of the eight-step approach described below) suggests the essential data relevant to reproductive health which staff should try to collect in the early phase. When more comprehensive services are available, other data can be incorporated (as described in subsequent steps).

Surveillance and monitoring of both health status and service delivery involve defining measurable programme ***objectives*** (what the programme will strive to achieve) and using indicators to measure progress toward achieving those objectives. An ***indicator*** is a measurement that, when compared to either a standard or desired level of achievement, provides information regarding a health outcome or a management process. Indicators are measurements that can be repeated over time to track progress toward achievement of objectives.

In this Manual, we use a simple framework for objectives and indicators.

Impact objectives target changes in mortality and morbidity expected to result from programme activities.

Outcome objectives target changes in knowledge, attitudes, behaviours, or in availability of needed services or commodities that result from programme activities. They relate directly to the priority intervention (e.g., HIV/STD prevention, child spacing), the target population (e.g., women of reproductive age), or those charged with caring for the target population (such as health care workers and family members).

Process objectives specify the actions needed for programme implementation, and correspond to various activities (such as training, supply of drugs and equipment, and health education) necessary to achieve the intended outcomes and impact.

Note that this Chapter presents mainly core impact and outcome objectives. Managers can develop additional items (especially process objectives) according to the populations, available resources, and working environments.

A selection of indicators is presented at the end of each chapter and the complete list of suggested indicators is presented at the end of this chapter. The RH Coordinator should select one or more indicators based on programme objectives. Before the indicator can be calculated, data will have to be collected for the numerator and denominator. Standard measures should be used when possible for comparison purposes, such as expressing some rates per 1,000 population. In some refugee settings, preliminary objectives may have to focus on setting up a system to collect information on births and neonatal deaths, for example, before the indicator neonatal mortality rate can be calculated. Once the neonatal mortality rate is calculated, this indicator can be followed monthly or for some specified time period, in order to monitor outcomes from the safe motherhood programme.

The following is an example of the evaluation framework:

	PROCESS	OUTCOME	IMPACT
Objectives	100% of community health workers trained to recognise and refer obstetric complications	100% of women with obstetric emergencies are referred in a timely manner and their complications managed appropriately	Maternal and neonatal mortality and morbidity reduced by ____%, in ____ year
Indicators	% of health workers able to recognise and refer obstetric complications	% of women with obstetric emergencies who received appropriate management	Reduction of neonatal mortality by ____%, in ____ year

An Eight-Step Approach to Surveillance and Monitoring

1. Collect Basic Demographic Data

Collect the following RH-related data as soon as possible.

- Total population (by age and sex)
- Number of births
- Crude birth rate
- Age and sex specific mortality rates
- Number of women/men of reproductive age
- Number of pregnant women
- Number of lactating women

In addition to using information provided by refugee workers, estimates might be made using registrations, or through community-based surveys (mortality, nutritional or household). Information from the country of origin of the refugees should also be obtained and used as estimates (for example, the Crude Birth Rate in the country of origin).

2. Define a System of Simple and Essential Data Collection

During programme design and implementation, programme planners should have established measurable objectives. Based on these objectives, determine which indicators will be used and what information is needed to calculate the indicators, and establish case definitions (such as those for live births and stillbirths) so that indicator measurements are clear. Next, determine the logical data flow, including time periods and reporting schedule. Identify people responsible for data collection, including refugees (see Step 3 below). Finally, incorporate into the routine programme/camp health-information forms, the data needed to calculate the RH indicators. (See Sample worksheet for RH reporting–Annex 6.)

Possible sources of data are:

- Daily birth or delivery reports. At minimum, the reports must include age of the mother, place of delivery, mode of delivery (vaginal, caesarean section), sex, birth outcome (live, stillbirth), and birth weight. If over- or under-reporting is suspected, cross check the information with the esti-

mated number of pregnant women or with the agency responsible for distributing rations.

- Clinic-based log books or registries for antenatal care, referrals, family planning, and STD syndromic case management as part of the out-patient log book. Women seeking care for the complications of unsafe or spontaneous abortions should also be tracked through clinic and hospital-based registration/ log books.
- Health facility records, community reporting, cemetery records and referral facilities records outside the refugee situation. These should be used to track maternal and neonatal deaths.

Other sources of data include community surveys, case investigations, laboratory reports and community outreach-worker reporting.

3. Identify, Organise and Train Workers from the Refugee Community for Data Collection

Begin by identifying those refugees with midwifery skills and/or trained traditional birth attendants (TBAs), including those already providing services, who can be trained to collect data. Otherwise, community members will have to be recruited. Organise these workers (by geographical sector, for example) and have them report to a key person and place. Organising them this way will help gain access to and knowledge about the pregnant and lactating women in the population and provide a communication system to help refer women with serious complications related to pregnancy, delivery, the postpartum period or spontaneous or unsafe abortion. Conduct training on the objectives and flow of data collection, case definitions, completion and timely submission of collection forms, and on the use of the data to improve programmes.

4. Implement Specific Reporting Procedures

Experience has shown that several specific areas of RH monitoring and surveillance have not been routinely conducted in refugee situations. These include investigations of each maternal death and reporting on cases of sexual violence.

Investigating Maternal Mortality

Investigating the causes of maternal deaths can help identify gaps in services and the need to improve referral procedures for obstetric complications. By reviewing cases, health care providers can strengthen their skills in identifying the early warning signs of obstetric emergencies. Camp staff should investigate deaths due to pregnancy (direct maternal mortality) and deaths of pregnant women caused by the effects of pregnancy on pre-existing conditions (indirect maternal mortality). Both types of information are essential, since direct mortality is often underestimated. The goal is to determine which deaths were caused by pregnancy or childbirth, or by complications or the management thereof, and how deaths can be prevented in the future.

Points to be investigated include:

- time of onset of life-threatening illness;
- time of recognition of the problem and time of death;
- timeliness of actions;
- access to care, or logistics of referral; and
- quality of medical care until death.

The information may come from grave watchers, hospital/health-post staff or from community reports. Verbal autopsy, which has been used in certain refugee situations, has proved relatively successful when medical records are unavailable.

Reporting Rape/Sexual Violence

The person responsible for addressing sexual violence can devise an appropriate tracking

system, in collaboration with camp authorities and health care workers. Survivors of sexual violence may be seen in health facilities or reported by TBAs, community workers or other key informants. Since sexual violence is sensitive and usually under-reported, note all reported cases or suspected cases. Confidentiality of survivors must be ensured.

5. Analyse the Data

Analyse the data to address the problems raised by the programme objectives.

- Calculate rates, ratios and proportions, and prepare tables, graphs and charts. Compare these rates with expected values or reference rates. Trends are more important than point estimates.
- Prioritise the most important health problems as judged by cause-specific morbidity and mortality.
- Identify the subgroups at highest risk for health problems by person, place and time (such as by age and sex).
- Identify the factors potentially responsible for morbidity and mortality. For example, a high number of reported cases of genital ulcer disease among adolescent women could indicate a need to target them for syphilis prevention and treatment.
- Share data analysis with service providers and the community.

6. Implement Programmes Based on the Analysis

- Use the data to develop feasible, effective and efficient strategies for achieving the programme objectives.
- Implement the selected strategies and a system to monitor their progress.

7. Assess Programme Progress

- Assess programme progress by confirming whether programme objectives have been met.
- Prepare and distribute summary reports to all interested persons, agencies and host-country authorities, as indicated.
- Reassess programme objectives, indicators and interventions. Indicators can be evaluated in terms of their accuracy, completeness, relevance and timeliness.

8. Improve Assessment Capability and Surveillance Systems According to Need

As disease incidences change, the situation stabilises and service provision becomes more comprehensive, the surveillance system may need to be adapted. The system may need to be expanded to include more conditions in the list of reportable illnesses. Programmes can add or change indicators, or they can add sources and methods of data collection.

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ANNEX 1

RH Indicators for Early Phase

Programme/Component Objectives	Indicator	Type	Definition (numerator/denominator)	Data use, Remarks, Important Assumptions
MINIMUM INITIAL SERVICE PACKAGE (MISP) – THESE INDICATORS ARE APPLICABLE TO BOTH THE EARLY AND STABLISED PHASES				
1) SV prevention: Reduce the incidence of reported SV from ___% to ___%.	Incidence of sexual violence	Impact	Number of incidents of SV reported in the specified time period ———————— × 10000 Total population	Consider providing age and sex-specific incidence rates. A case definition of Sexual Violence needs to be developed.
2) Universal precautions: 100% of health facilities will have adequate supplies to carry out universal precautions against HIV/AIDS transmission.	Supplies for universal precautions	Outcome	Number of health facilities with adequate supplies to carry out universal precautions ———————— × 100 Number of camp service delivery points	Measures the effectiveness of distribution system for supplies related to universal precautions. Each service must define "adequate supply" based on the number of potential exposures.
3) Condom distribution: Distribute supplies of condoms adequate for at least ___% of the total population.	Estimate of condom coverage	Outcome	Number of condoms distributed in specified time period ———————— × 1000 Total population	Measures whether condom supplies are adequate.
4) Intra-partum care: Distribute sufficient clean delivery kits for ____% of pregnant women.	Estimate of coverage of clean delivery kits	Outcome	Number of clean delivery kits distributed ———————— × 100 Estimated number of pregnant women	Measures whether women in late pregnancy have access to clean delivery kits. May have to estimate number of pregnant women (see Chapter 9, Annex 5)

ANNEX 2/1

RH Indicators for Stabilised Phase

Programme/Component Objectives	Indicator	Type	Definition (numerator/denominator)	Data use, Remarks, Important Assumptions
SAFE MOTHERHOOD				
1) Maternal and child health status: Reduce the neonatal mortality rate by ___%.	Neonatal mortality rate	Impact	Number of live born infants who die < 28 days of age in the specified time period ——————— × 1,000 Number of live births in the specified time period	Measures the overall health status of new-borns.
2) Maternal and child health status: Reduce the rate of live born infants weighing <2,500 gms., from ___% to ___%.	Low birth weight percentage	Impact	Number of live born infants weighing <2,500 gms in the specified time period ——————— × 100 Total number of live births (with birth weight recorded) in the specified time period	Measures the health status of pregnant women and the adequacy of antenatal care. Birth weights also identify infants at higher risk who may need special care.
3) Maternal and child health status: Reduce the rate of live born infants weighing <1,500 gms., from ___% to ___%.	Very low birth weight percentage	Impact	Number of live born infants weighing <1,500 gms in the specified time period ——————— × 100 Total number of live births (with birth weight recorded) in the specified time period	Measures the health and nutritional status of pregnant women, and can help detect disease outbreaks in a camp.
4) Maternal and child health status: Reduce the number of infants born dead from ___% to ___%.	Stillbirth ratio	Impact	Number of infants of 22 gestation weeks or greater or greater than 500g who are born dead in the specified time period ——————— × 100 Total number of live births and stillbirths in the specified time period	A general measure of pregnancy outcome. May be elevated during outbreaks of diseases such as malaria or syphilis. Verify definition of stillbirth based on national policies.
5) Maternal and child health status: 100% of reported maternal deaths are investigated according to established guidelines, and the results are disseminated to health staff.	Investi-gation of maternal deaths	Process	Number of reported maternal deaths which are investigated according to established guidelines, and the results of which are disseminated to health staff ——————— × 100 Total number of reported deaths of maternal deaths.	Measures the programme's capacity to identify all maternal deaths and to determine the risk factors that contribute to those deaths. Assumes that: a) both indirect and direct maternal mortality events are investigated, to reduce under- reporting; b) a protocol for investigations is in place.

The list of indicators provided in Annex 2 has been developed as a "master list". It is the responsibility of the RH Coordinator to select from this list indicators that should be assessed in a given situation. The indicators selected should be based on the objectives of the RH programme in each situation. Targets set for each objective should be based on knowledge of the actual situation or information from country of origin where possible.

Programme/Component Objectives	Indicator	Type	Definition (numerator/denominator)	Data use, Remarks, Important Assumptions
6) Antenatal care: Trained personnel will attend to all pregnant women at least once.	Coverage of ante-natal care	Outcome	Number of women delivering in the specified time period who had attended antenatal services (at least once). ——————————— × 100 Number of live births in the specified time period	Measures whether pregnant women are receiving minimal antenatal visits. * This indicator is measured at the time of birth.
7) Antenatal care: 100% of pregnant women will be screened for syphilis before delivery.	Coverage of syphilis screening	Outcome	Number of women delivering in the specified time period who had been tested for syphilis during the pregnancy ——————————— × 100 Number of live births in the specified time period	Measures whether pregnant women are being screened for syphilis. * This indicator is measured at the time of birth.
8) Antenatal care/STD prevention: Reduce the percentage of pregnant women who test positive for syphilis from ___% to ___%.	Syphilis infection among pregnant women	Impact	Number of pregnant women screened for syphilis in the specified time period who tested positive for syphilis ——————————— × 100 Number of pregnant women who were tested for syphilis in the specified time period	Measures how common syphilis infection is among pregnant women, and the potential for congenital syphilis. There is a possible bias if syphilis testing is not systematic. Is only valid if all pregnant women are tested.
9) Antenatal care: The incidence of unsafe and spontaneous abortions should be less than ___%	Incidence of unsafe and spon-taneous abortions	Impact	Number of unsafe and spontaneous abortions before 22 weeks of gestation or below 500g in the specified time period. ——————————— × 1000 Number of live births in the specified time period	Measures effectiveness of antenatal care in preventing early pregnancy loss. Also is measure of women's general health.
10) Antenatal care: At least ___% of women delivering is adequately vaccinated with tetanus toxoid.	Tetanus vaccination coverage	Outcome	Number of women delivering in the specified time period who had been adequately vaccinated with tetanus toxoid ——————————— × 100 Number of live births in the specified time	Measures whether women of reproductive age are being vaccinated with tetanus toxoid. * This indicator is measured at the time of birth. Neonatal tetanus cases should also be reported.

ANNEX 2/3

RH Indicators for Stabilised Phase

Programme/Component Objectives	Indicator	Type	Definition (numerator/denominator)	Data use, Remarks, Important Assumptions
11) Intra-partum care: Reduce the incidence of obstetric complications from ___% to ___%.	Incidence of obstetric complications	Impact	Number of obstetric complications in the specified time period ——————— × 1000 Number of live births in a specified time period	Measures the coverage and outcome of antenatal and obstetric care. Cause-specific rates can be calculated for various obstetric emergencies such as ruptured uterus, eclampsia, or haemorrhage.
12) Intra-partum care: 100% of women with obstetric emergencies will be treated in a timely and appropriate manner.	Management of obstetric emergencies	Outcome	Number of women with obstetric emergencies who are treated in a timely and appropriate manner in the specified time period ——————— × 100 Total number of women with obstetric emergencies in the specified time period	Measures the quality of obstetric care. Case definitions for various obstetric emergencies need to be developed.
13) Intra-partum care: A trained health worker will attend at least ___% of deliveries.	Coverage of trained delivery services	Outcome	Number of women who deliver in the specified time period who are attended by a trained health worker ——————— × 100 Number of live births in the specified time period	Measures whether trained health workers attend deliveries. Trained health workers could include staff in facilities and hospitals, etc. (TBAs are not included in this category, per WHO guidelines.)
14) Intra-partum care: At least ___% of women of reproductive age can name at least two danger signs of obstetric complications.	Knowledge of danger signs of obstetric complications	Outcome	Number of women of reproductive age who can name at least two danger signs of obstetric complications ——————— × 100 Number of women of reproductive age	Measures whether women can identify danger signs of obstetric complications, which can facilitate referral for proper care.
15) Intra-partum care: % of deliveries performed by Caesarean section will be at acceptable standards (depending on the physical characteristics of refugee women).	Caesarean section percentage	Outcome	Number of women delivered by Caesarean section in the specified time period ——————— × 100 Number of women delivering in the specified time period	Measures access to emergency surgical obstetric services. Caesarean section rates will depend on the physical characteristics of refugee women (e.g., pelvic size is hereditary and will affect these rates).

ANNEX 2/4

RH Indicators for Stabilised Phase

Programme/Component Objectives	Indicator	Type	Definition (numerator/denominator)	Data use, Remarks, Important Assumptions
16) Intra-partum care: 100% of women with complications due to unsafe and spontaneous abortions will be treated in a timely and appropriate manner.	Manage-ment of complica-tions due to abortions	Outcome	Number of women with complications due to abortions who are treated in a timely and appropriate manner, in the specified time period ——————————— × 100 Total number of women with complications due to abortions, in the specified time period	Measures the quality of care for complications due to unsafe and spontaneous abortion.
17) Post partum care: At least ___% of women will receive at least one post partum visit within ___ days.	Coverage of postpar-tum care	Outcome	Number of women who have delivered in the specified time period who have received at least one postpartum visit within ___ days ——————————— × 100 Number of live births in the specified time period	Measures whether women receive postpartum visits. Time period can be up to 42 days following delivery. Factors determining the timing of the visit include: incidence and type of obstetric complications, the percent of low birth weight births, the proportion of home deliveries, and the neonatal mortality rate, among others.
18) Post partum care: At least ___% of new-borns will receive BCG and Polio vaccinations within first month of life.	Vaccination coverage for BCG and Polio in new-borns	Outcome	Number of new-borns who receive BCG and Polio by first month birthday ——————————— × 100 Number of live births during specified period	Measures the extent to which new-borns receive first vaccinations early. It is also used as indicator of quality of postpartum care.

ANNEX 2/5

RH Indicators for Stabilised Phase

Programme/Component Objectives	Indicator	Type	Definition (numerator/denominator)	Data use, Remarks, Important Assumptions
SEXUAL VIOLENCE				
1) SV response: Provide basic psychosocial and medical services to 100% of reported SV survivors.	Coverage of services for SV survivors	Outcome	Number of reported SV survivors who receive basic set of psychosocial & medical services in the specified time period ——————— × 100 Number of reported SV survivors in specified time period	Measures whether SV survivors receives critical services. Assumes protocols for psychosocial and medical services are defined and disseminated.
2) SV response: ____% of SV survivors will present for care within 3 days of an event.	Timely care for SV survivors	Outcome	Number of SV survivors who present for care within 3 days of an event in the specified time period ——————— × 100 Number of reported SV survivors in a specified time period	Measures the ability of patients to access services quickly, including emergency contraception.
3) SV response: Prosecute at least ____% of identified offenders in reported SV cases.	Prosecution of SV offenders	Outcome	Number of identified SV offenders who are prosecuted in the specified time period ——————— × 100 Number of reported cases of SV in a specified time period	Measures whether security forces can effectively apprehend and prosecute offenders. Assumes that survivors have made the choice to take legal actions. Assumes guidelines and procedures are defined for prosecuting offenders.
4) SV response: All designated health workers are trained to respond to SV survivors.	Coverage of health worker training in serving SV survivors	Process	Number of designated health workers trained (or retrained) within the past 2 years to provide services to SV survivors ——————— × 100 Number of designated health workers	Measures the number of health workers who can potentially service SV survivors.

"Designated health worker" is defined as those workers who will be providing a particular service.

ANNEX 2/6

RH Indicators for Stabilised Phase

Programme/Component Objectives	Indicator	Type	Definition (numerator/denominator)	Data use, Remarks, Important Assumptions
STDs including HIV/AIDS				
1) Safe blood provision: 100% of blood drawn for transfusion will be screened for HIV.	Blood screening for HIV	Outcome	Number of blood samples drawn for transfusion that are screened for HIV in the specified time period ——————————— × 100 Number of blood samples drawn for transfusion in the specified time period	Measures blood safety for transfusion. Assumes HIV test kits are available and used correctly. % of blood which tested positive could also be reported
2) STD control: Reduce the incidence of STDs from ___% to ___%.	Incidence of STDs	Impact	Number of cases of STDs reported in a specified time period ——————————— × 1000 Total population	Measures a programme's potential impact on the incidence of STDs. Optimally, age, sex and syndrome rates could be calculated.
3) STD control: ___% of patients with STDs will be assessed, treated and counselled according to protocol.	Quality of STD case manage-ment	Outcome	Number of patients with STDs assessed and treated according to protocol ——————————— × 100 Number of patients with STDs	Measures the quality of STD case management. Assumes STD case management protocols and appropriate drugs in place. Requires observation of skills as part of supervision.
4) STD control: All designated health workers will be trained (or retrained) to manage STD cases appropriately.	Training in STD case manage-ment	Process	Number of designated health workers trained to manage STD cases according to protocol ——————————— × 100 Number of designated health workers	Measures the extent of STD case management training for health workers. Assumes STD case management protocols and appropriate drugs in place.
5) Universal precautions: ___% of health workers will carry out universal precautions.	Practice of universal precautions	Outcome	Number of health workers who demonstrate use of universal precautions ——————————— × 100 Number of health workers	Measures whether health workers comply with universal precautions. Requires observation of skills as part of supervision.
6) Condom use: Condoms will be available for distribution in 100% of potential outlets.	Outlets for condoms distribution	Outcome	Number of potential outlets with condoms available for distribution ——————————— × 100 Number of potential outlets	Measures the effectiveness of condom distribution systems. List of potential outlets needs to be developed, but could include health facilities, bars, and outreach workers.

ANNEX 2/7

RH Indicators for Stabilised Phase

Programme/Component Objectives	Indicator	Type	Definition (numerator/denominator)	Data use, Remarks, Important Assumptions
7) Condom use: ___% of persons in target population will recognise a condom, know its preventive effects, and will be able to describe how to use it correctly.	Knowledge of function and correct condom use	Outcome	Number of persons in target population who recognise a condom, know its preventive effecs, and can describe how to use it correctly / Number of persons in target population $\times$ 100	Measures the impact of a community-education programme about condom use on knowledge.
8) Condom use: ___% of persons in target population will report condom use at last intercourse with a non-regular partner.	Condom use with non-regular partners	Outcome	Number of persons in target population reporting condom use at last intercourse with a non-regular partner, within a specified time period / Number of persons in target population who report having had intercourse with a non-regular partner, within a specified time period $\times$ 100	Measures the impact of a community-education programme about condom use on behaviour

ANNEX 2/8

RH Indicators for Stabilised Phase

Programme/Component Objectives	Indicator	Type	Definition (numerator/denominator)	Data use, Remarks, Important Assumptions
FAMILY PLANNING				
1) Family planning: At least ___% of women of reproductive age will use a method of contraception.	Contraceptive prevalence rate (CPR)	Outcome	Number of women of reproductive age using any method of contraception / Number of women of reproductive age × 100	Measures what per cent of women is using contraception. Knowledge of the CPR in country of origin will assist in setting this target.
2) Family planning: All health workers who provide family planning services will be trained (or retrained) to provide appropriate family planning services.	Coverage of family planning training	Outcome	Number of health workers who provide family planning services and who were trained (or retrained) in the past 2 years to provide family planning services / Number of health workers who provide family planning services × 100	Measures extent of family planning training provided to health workers.
3) Family planning: At least ___% of sexually active refugees will demonstrate appropriate knowledge about family planning.	Community knowledge concerning family planning	Outcome	Number of sexually active refugees able to site major messages about family planning / Number of sexually active refugees targeted for family planning messages × 100	Measures knowledge of family planning in the population and is based on the major messages given during awareness activities.
4) Family planning: All contraceptive service delivery points will maintain a minimum of 3 months' supply of each of combined oral contraceptive pills, progestin-only pills, and injectables.	Contraceptive supply	Outcome	Number of service delivery points which maintain a minimum of 3 months' supply of each of combined oral contraceptive pills, progestin-only pills, and injectables / Number of service delivery points × 100	Measures effectiveness of contraceptive supply distribution system.

ANNEX 2/9

RH Indicators for Stabilised Phase

Programme/Component Objectives	Indicator	Type	Definition (numerator/denominator)	Data use, Remarks, Important Assumptions
REPRODUCTIVE HEALTH OF YOUNG PEOPLE				
1) Young people and STDs: Reduce the incidence of STDs among young people from ___‰ to ___‰.	Incidence of STDs in young people	Impact	Number of reported cases of STDs among young people in the specified time period ———————— × 1,000 Total number of young people	Measures a programme's potential impact on the incidence of STDs among young people. Need to define age group for young people relevant to local situation.
2) Young people and safe motherhood: Reduce the percentage of all births that occur to young women from ___% to ___%.	Young women birth percentage	Impact	Number of live births to young women in the specified time period ———————— × 100 Number of live births in the specified time period	Measures how common births are among young women. Need to define age group for young women relevant to local situation.
3) Young people and family planning: At least ___% of sexually active young people will use a method of contraception	Contraceptive prevalence rate among young people	Outcome	Number of sexually active young people who use a method of contraception ———————— × 100 Number of sexually active young people surveyed	Measures what per cent of sexually active young people are using contraception.
4) Young people and STDs/HIV: At least ___% of sexually active young people will report condom use at last intercourse.	Condom use among young people	Outcome	Number of sexually active young people reporting condom use at last intercourse ———————— × 100 Number of sexually active young people surveyed	Measures the impact of a community-education programme about condom use on young people's behaviour.
5) Quality of care: ___% of young people receiving adequate care according to protocol.	Quality of reproductive health services for young people.	Outcome	Number of young people who are assessed, treated and counselled according to protocol during specified time period ———————— × 100 Number of young people seeking services at health facility during specific time period.	Measures the quality of reproductive health services for young people. Requires observation of skills performance as part of supervision.

ANNEX 3

RH Reference Rates and Ratios

RH Reference Rates and Ratios

The figures shown here have been collected from various sources and cover different periods. They are intended to give estimates of what may be expected in some populations. These figures are not to be used as definitive baseline rates or as rates to be achieved. They merely indicate the possible range and may assist with resource planning and with targeting specific programmes.

Abortions	**10-15%**	of all pregnancies may spontaneously abort before 20 weeks gestation
	90%	of these will occur during the first three months
	15-20%	of all spontaneous abortions that occur require medical interventions
Hypertensive Disorder of Pregnancy (HDP) or Pre-eclampsia	**5-20%**	of all pregnancies will develop HDP
	5-25%	of all primigravida pregnancies will develop HDP
Labour and Delivery Complications	**15%**	of all pregnancies will require some type of intervention at delivery
	3-7%	of all pregnancies will require a Caesarean section
	10-15%	of all women will have some degree of cephalo-pelvic disproportion (higher in poorer socio-economic populations)
	10%	of deliveries will involve a primary postpartum haemorrhage (within 24 hours of delivery)
	0.1-1.0%	of deliveries will involve a secondary postpartum haemorrhage (occurring 24 hours or more after delivery)
	0.1-0.4%	deliveries will result in uterine rupture
	0.25-2.4%	of all deliveries will result in some type of birth trauma to the baby
	1.5%	of all births will have a congenital malformation (does not include cardiac malformations diagnosed later in neonatal period).
	31%	of these malformations will result in death.

Data Sources

WHO Collaborating Centre in Perinatal Care and Health Services Research in Maternal and Child Health, Pregnancy and Infant Health Branches, Division of Reproductive Health, NCCDPHP, Centers for Diseases Control and Prevention, Atlanta, GA., 30333 USA

Sing, S. and Wulf, P., Estimated Levels of Induced Abortion in Six Latin American Countries, International Family Planning Perspectives, 1994, 20 (1): 4-13.

Reference Rates and Ratios for RH Indicators

Regional Indicators

Indicator	Sub-Saharan Africa	South East Asia and Pacific	Industrial Countries	(1)
Safe Motherhood				
Crude birth rate (per 1000 population)	44	26	13	
Neonatal Mortality Rate (per 1000 live births)	53	36	5	
Perinatal Mortality Rate (per 1000 live births)	83	51	8	
Maternal mortality ratio (per 100,000 live births)	971	447	31	
Infant mortality rate (per 1000 live births)	97	50	14	
Coverage of Antenatal Care (%)	63	65	95	
Low birth weight percentage (per 100 live births)	16	15	6	
Births attended by trained health personnel (%)	42	53	99	
Institutional Deliveries (% of live births)	20	41	98	
Unsafe Abortion (1000 women 15-49)	26	15	1	
Anaemia in Pregnant Women (%)	52	57	18	
Coverage of Tetanus vaccination (Preg. Women)	46	49	–	
STDs, including HIV/AIDS				
STD Incidence Rate (per 1,000 population)	254	160	77	
AIDS cases (per 100,000)	94	80	27	
Family planning				
Contraceptive prevalence rate	15.9	53.2	70.5	
Others				

Reference – UNDP Human Development Report - 1997 and World Health Report 1996

(1) Complete this table with country-specific information either from host or country of origin.

ANNEX 5

Estimating Number of Pregnant Women in a Population

Estimating Number of Pregnant Women in the Population If Total Population is 100 000

	If CBR is (per 1,000 population)	55	45	35	25
a)	Estimated number of live births in the year	5500	4500	3500	2500
b)	Estimated live births expected per months (a/12)	458	375	292	208
c)	Estimated number of pregnancies that end in stillbirths or miscarriages (estimated at 15 per cent of live births = a $\times$ 0.15)	825	675	525	375
d)	Estimated pregnancies expected in the year (a + c)	6325	5175	4025	2875
e)	Estimated number of women pregnant in a given month (70 % of d)*	4400	3600	2800	2000
f)	Estimated % of total population who are pregnant at a given period	4.4	3.6	2.8	2

* this is a weighted estimate of full-term pregnancies plus those pregnancies that terminate early

ANNEX 6/1

Sample Worksheet for Monthly Reproductive Health Reporting

Sample Worksheet for Monthly Reproductive Health Reporting

Month:

Total Pop:

Camp Name:

Pop of Women 15-49:

Agency:

1 – Safe Motherhood – Ante-natal Care	**<19 years**	**>19 years**	**Total**
1a: Number of antenatal visits - First Time			
1b: Number of antenatal visits - Repeat			
1c: Total antenatal visits			
1d: Number of women treated for complications of abortions			
1e: Number of pregnant women screened for syphilis			
1f: Number of pregnant women screened for syphilis testing positive			

Indicators	**rates**
– Antenatal coverage: estimated (1a/2e) [This is an estimate – see 2j below]	
– Incidence of complications of unsafe and spontaneous abortion (1d/2e)	
– Coverage of syphilis screening (1e/2e) [This is an estimate – see 2l below]	
– Prevalence of syphilis infection in pregnant women (1f/1e)	

2 – Safe Motherhood – Delivery	**hospital**	**h.centre**	**home**	**total**
2a: Number of births attended by trained staff				
2b: Number of births NOT assisted by trained staff				
2c: Number of births				
2d: Number of stillbirths				
2e: Number of livebirths				
2f: Number of low birth weight (<2500 gms)				
2g: Number of livebirths who die <28 days (neonatal deaths)				
2h: Number of obstetric emergencies managed				
2i: Number of maternal deaths				
Number of women giving birth this period who received				
2j: Antenatal care services (1-3 Visits)				
2k: Adequate Tetanus Toxoid Vaccination				
2l: Screened for Syphilis				

ANNEX 6/2

Worksheet for Monthly Reproductive Health Reporting

Indicators	**Rates**
– Crude Birth Rate (2e/total population × 1000)	
– Neonatal Mortality Rate (2g/2e × 1000)	
– Low Birth Weight Rate (2f/2e × 100)	
– Stillbirth Rate (2d/2e × 1000)	
– Births attended by trained personnel (2a/2e × 100)	
– Coverage of antenatal care (2j/2e × 100)	
– Coverage of syphilis screening (2l/2e × 100)	
– Incidence of obstetric complications (2h/2e × 1000)	

3 – Safe Motherhood – Post-natal Care	**No.**
3a: Number of women visiting post-natal care services (within 6 wks of birth)	
Indicator – Post-Natal Care Coverage Rate – (3a/2e × 100)	

4 – Sexual Violence	**No.**
4a: Number of cases of sexual violence reported	
4b: Number of cases receiving medical care with 3 days	
Indicators	
Incidence of sexual violence (4a/total population × 10 000)	
Timely care for survivors of sexual violence (4b/4a × 100)	

5 – STDs including HIV/AIDS			**No.**
5a: Number of units of blood transfused			
5b: Number of units of blood for transfusion tested for HIV			
5c: Number condoms distributed			
5d: Number of cases treated for STDs (total by age, sex and syndrome)			
Syndromic Case Management	Male	Female	Total
– urethral discharge			
– genital ulcers			
– vaginal discharge			
Total			

ANNEX 6/3

Worksheet for Monthly Reproductive Health Reporting

STD/HIV Indicators	**Rate**
– Blood screening for HIV (5b/5a × 100)	
– Condom coverage (estimate – 5c/ total population × 1000)	
– Incidence of STDs (total – 5d/ total population × 1000)	
(STD incident rates could also be calculated by sex, age and syndrome)	

6 – Family Planning				**No.**
6a: Number of users of modern methods of family planning				
By Method	Registered beginning of month	New acceptors this month	Total end of month	
COCs				
Injectible				
POPs				
IUDs				
TOTAL				
Indicator - Contraceptive Prevalence Rate (6a/WRA × 100)				

7 – Training		
Type of Training in RH	Type of Health Worker	Number
a.		
b.		
c.		

ANNEX 7

Summary of Reproductive Health Indicators

Summary of Reproductive Health Indicators

Name of Refugee Situation _____ Year: _____

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ALL
Population – Total													
Number of Camps Reporting													
Indicators -Safe Motherhood													
Antenatal coverage: estimated													
Incid.of complic.of unsafe/spont.abort. per 1000 livebirths													
Coverage of syphilis screening: estimated													
Prevalence of syphilis infection in pregnant women													
Crude Birth Rate													
Neonatal Mortality Rate per 1000 live births													
Low Birth Weight Rate													
Stillbirth Rate													
Births attended by trained personnel													
Coverage of antenatal care													
Coverage of syphilis screening													
Incidence of obstetric complications													
Post-Natal Care Coverage Rate													
Indicators – Sexual Violence													
Incidence of sexual violence													
Timely care for survivors of sexual violence													
Indicators – HIV/AIDS/STDs													
Blood screening for HIV													
Condom coverage; estimated (per 1000 pop)													
Incidence of STDs (total – per 1000 pop)													
Indicators – Family Planning													
Contraceptive Prevalence Rate													

Further Readings

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