

A Reproductive Health Needs Assessment in Myanmar



**Ministry of Health
Union of Myanmar**



UNFPA

**United Nations Population Fund
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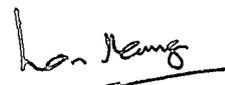
ACKNOWLEDGEMENT

Myanmar being one of the signatories in International Conference on Population Development (ICPD, 1994), the Government of the Union of Myanmar has put much emphasis in improving reproductive health status of the nation as a whole. The National Health Committee and Ministry of Health acknowledge the importance of delivering high quality care towards making sound reproductive health a reality for all. Based upon the available information concerning reproductive health in Myanmar, it is principally accepted that there is a large need and much more room for improvement. It is our strong belief that only with the benefit of a comprehensive assessment of the reproductive health situation, the strategies and interventions could be developed and improved.

In order to address the reproductive health problems and the unmet need, the Department of Health and UNFPA had organized a co-ordinated effort which was of participatory nature by the representatives of the various constituencies involved in the promotion of reproductive health. For the assessment to be effective, an assessment mission was undertaken which included well-experienced international and national experts.

This report contains the findings and recommendations in holistic view which will timely be incorporated into the country's reproductive health programme. The assessment process also created a very important foundation on which all related departments and organizations would be able to work in a co-ordinated manner as partners which will have a positive bearing on the future reproductive health activities. While this study focused on a situation analysis of reproductive health and its needs, it affirms the critical as well as essential role of reproductive health in nation's development. It is gratifying to find a true understanding and strong support by various United Nations agencies and international NGOs.

Certainly, I would like to express my heartfelt thanks to UNFPA for providing funds an making this assessment possible with important findings which I am sure will help us in improving our future programme strategies and activities. Thanks are also due to the International Council on Management of Population Programmes, Malaysia, and the Population Council, Bangkok; WHO, Geneva; UNFPA/CST, Bangkok for their active role. I would also like to express my appreciation and thanks to Department of Population, Ministry of Immigration and Population; Myanmar Maternal and Child Welfare Association; Department of Medical Research; and Department of Medical Science who took part in this assessment very enthusiastically: without their hard work the assessment will not have been accomplished; the mission members for their technical assistance and full support throughout the process; and last but not the least, all the community members and service providers in the field for their time and their participation in making this assessment successful.



Dr. Wan Maung
Director General
Department of Health

Foreword

It is generally accepted that there is a need for expanded and improved reproductive health services in Myanmar. The ability to address these needs is inhibited, in part, by the scarcity of available information. Both the Government and the donor agencies interested in the promotion of reproductive health in Myanmar recognise the need for a more comprehensive base of information regarding the broad reproductive health situation in Myanmar. Such information is essential if appropriate and well co-ordinated interventions are to be developed.

The Reproductive Health Needs Assessment mission was first conceived during the Tripartite Review of the UNFPA-supported Birth Spacing Project in October 1997 and proposed as part of the 1998 work plan. This was discussed at the United Nations Country Team Meeting in November 1997 and also in the United Nations Thematic Working Group on Primary Health Care and Reproductive Health. The United Nations agencies welcomed the idea and extended their full support in the conduct of the mission activities.

Mission activities were conducted in a highly participatory manner by a broad based and interdisciplinary team. The assessment team began its activities by meeting with policy makers and representatives of a number of United Nations agencies. This was followed by a workshop of approximately 30 key stakeholders in reproductive health in Myanmar. The views and suggestions expressed during these initial meetings informed the process and content of the field assessment. On returning from the field assessment, a dissemination workshop was held to present the draft findings, and to solicit further input from policy makers, the United Nations agencies and other key stakeholders.

The report of the assessment presented here will provide an essential information base for the activities of all the United Nations agencies in the area of reproductive health, and will be an important input into the programme development of other organizations and agencies.

I wish to express my appreciation to all the assessment team members for their hard work in conducting this extremely important activity. Thank you also to the many individuals, both in Yangon and in the townships visited, who took their time to meet and talk with the assessment team.



Dr Sheila Macrae
Country Director, Myanmar
UNFPA

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Introduction

Recognizing that the reproductive health situation is a crucial component in human resource development, Myanmar's National Health Policy places high priority on strategies that seek to encourage, strengthen and intensify actions for improving reproductive health. The International Conference on Population and Development (ICPD) enhanced the Government's concern for reproductive health. Therefore the Government of Myanmar and the United Nations Population Fund (UNFPA) decided to carry out a Reproductive Health Needs Assessment. This report presents the findings of the assessment conducted in Myanmar during May 1998.

REPRODUCTIVE HEALTH STATUS

Very little reliable information is available concerning reproductive health conditions in Myanmar. Despite this lack of research, available information indicates reproductive health problems are both widespread and serious. The following summary offers a brief overview of conditions relating to reproductive health in Myanmar, highlighting issues of particular importance as identified by either local communities themselves or by recently completed research. A number of key indicators are presented in Table 1 at the end of this section.

Maternal Health

Estimates of maternal mortality differ substantially, yet all demonstrate that deaths related to pregnancy and childbirth pose a serious problem in Myanmar. A National Programme of Action study published in 1993 estimated the in-hospital maternal mortality ratio (MMR) at 140 per 100,000 live births (Ministry of Health 1993). Given that probably between 70 and 80 per cent of births take place at home (Ministry of Health 1996, Ministry of Health 1997a), actual maternal mortality rates are likely to be much higher, particularly in areas where access to emergency obstetrical services is limited by the geographic situation. Some estimates place the national MMR as high as 500 or 580 per 100,000 (Adamson 1996, UNICEF 1998a). Data on maternal morbidity are even more difficult to obtain, although unsafe abortion is likely to be a significant contributor.

Unsafe Abortion Practices

It appears that induced abortion is widely practised despite the fact that it is illegal in Myanmar. Both women and providers run the risk of severe punishment if they are identified as having performed or undertaken an induced abortion. Women who undergo a termination of pregnancy also have to contend with the possibility of social stigmatization and the risks to their health from unsafe procedures that are often conducted under unsanitary conditions. Provisional results of a study currently under analysis appear to indicate that both women and service providers are greatly concerned with the reproductive health problems related to unsafe abortion practices and have personal knowledge of their occurrence in their communities (Department of Health 1998).

Despite incomplete data regarding unsafe abortion, it is widely accepted as a leading cause of morbidity and mortality among Myanmar women. A 1992 hospital-based study concluded that 38.3 percent of maternal deaths are abortion-related (Krasu 1992). A 1994 study in Yangon's Central Women's Hospital reported that 60 per cent of maternal deaths were attributable to

septic induced abortion. At the population level it has been estimated that one-third of pregnancies end in abortion (Ba Thike 1997).

Birth spacing

Earlier UNFPA and UNDP surveys of townships reached by birth spacing services suggested a contraceptive prevalence rate of approximately 22 per cent (Bo Kywe and Maung Maung Lin 1993, Bhatnager 1996). A nation-wide survey in 1991 (MOIP 1995) found a contraceptive prevalence rate of 16.8 per cent. Preliminary results of a more recent survey indicate that this figure may have increased in recent years to approximately 32 per cent (MOIP 1998a). For the one year period preceding the studies, these two surveys found a total fertility rate of 2.9 and 2.7 in 1991 and 1997 respectively. There are indications that these could be under estimates. For the 1991 survey, if household data is used to look at births over the preceding five years, the total fertility rate is calculated to be closer to 3.4. There are also indications that the unmet need for birth spacing methods is high. The 1991 survey found that among married women not currently using contraception, 17.8 per cent wanted to postpone their next birth and 46.4 per cent did not want more children. A further discussion of unmet need for contraception is presented in the birth spacing chapter. A high rate of induced abortion, as discussed above, also serves as a proxy measure of unwanted pregnancy.

RTIs, STDs and HIV/AIDS

Knowledge of reproductive tract infections (RTIs) appears to be low in Myanmar. Women with symptoms that they presume indicate an infection (usually a vaginal discharge) frequently treat themselves with antibiotics or seek care from a variety of private providers. The recent *Assessment of the Contraceptive Method Mix in Myanmar* (Ministry of Health 1997a) found that both women and service providers were largely unaware of reproductive tract pathogens and did not distinguish between infections that could be transmitted sexually and those resulting from endogenous infection. Service providers often lack the facilities for obtaining or conducting appropriate diagnostic tests and providing necessary treatments. At the same time, however, anecdotal evidence appears to indicate that reproductive tract infections may be highly prevalent and, consequently, may contribute significantly to women's reproductive morbidity.

Specifically, data concerning the prevalence of STDs in Myanmar are limited, and interpretation of what information is available, such as limited surveillance data for syphilis, gonorrhoea or genital ulcerative diseases, is complicated by the fact that diagnostic techniques rely on inadequate laboratory facilities. There are indications, however, that the problem of HIV in particular has the potential to increase rapidly in Myanmar. Although the epidemic has not been well characterized, by the end of 1996 there were already official reports of 13,773 cases of HIV infection and 1,612 cases of AIDS. Adjusting for a presumed underreporting, the actual number of HIV positive people in Myanmar is likely to be significantly higher. The most affected regions are thought to be in the north of the country and in those areas bordering northern Thailand, such as the eastern Shan State. Data from the HIV sentinel surveillance indicate that the prevalence of HIV among pregnant women in Myanmar is 1.9 per cent (Department of Health 1997).

Youth

It is now widely acknowledged that young people are particularly vulnerable to sexually transmitted infection and HIV transmission, due to immature physiology, as well as low levels

of sexual autonomy. There is also anecdotal evidence that suggests that teenage pregnancies are of particular concern in less educated and under-privileged population groups in Myanmar. Sexual behaviour, concerns, and awareness among the youth of Myanmar are issues that have been left largely unaddressed to date.

Development indicators

Myanmar has a relatively fast growing population, with the most recent available estimate of population growth to be 1.8 per cent per annum between 1983 and 1996. The majority (60 per cent) of the population in Myanmar have access to a safe water source (National Health Committee 1998). This represents 50 per cent of the rural population, and 78 per cent of the urban population. Education levels are generally high in Myanmar, with only small differences between men and women. In a recent UNICEF publication (1998) figures of 78 and 89 per cent were quoted for adult literacy rates for women and men respectively. School enrolment figures, females as a per cent of males, indicate almost total equality between the sexes, 96 per cent for primary school and 100 per cent for secondary school.

Table 1. Key Indicators in Reproductive Health in Myanmar

Maternal Health			
Maternal mortality ratio (per 100,000 live births)	1990	580	UNICEF
% of births attended by a trained attendant	1991	46	1998a
	1997	56	MOIP 1995 MOIP 1998a
Birth spacing			
Contraceptive prevalence rate	1991	16.8	MOIP 1995
	1997	32.7	MOIP 1998a
Total fertility rate	1991	2.9	MOIP 1995
	1997	2.7	MOIP 1998a
Abortion			
% of maternal deaths in hospital which are abortion related	1992	38	Krasu 1992
RTI/STDs			
% of pregnant women who are HIV positive	1997	1.9	DOH 1997

REPRODUCTIVE HEALTH SERVICES

Health service structure

Public sector health services are structured in a three level system: central; state and divisional; and township. The central level is responsible for formulation of policy, planning, training, supervision, monitoring and evaluation of health services throughout the country. The Department of Health is the body charged with responsibility for health care services in the areas of maternal and child health, birth spacing and reproductive health. Activities such as planning, training and monitoring are undertaken by the state and divisional level staff.

Below the state and division, health services are provided at a number of different levels within a township, under the responsibility of the township medical officer. The administrative centre of each township has a township hospital that provides routine services for inhabitants of the town, and acts as a referral centre for others in the township. Maternal and child health services are provided at MCH centres in small towns, and at urban health

centres in cities. At the village tract and village level there are station hospitals, rural health centres, rural health sub-centres and village health posts. In small towns, MCH activities are co-ordinated by a lady health visitor with a staff of two or three midwives at the MCH centres. In cities where there are urban health centres, the MCH activities are conducted within the larger health centre setting.

Station hospitals are 16-bedded hospitals situated in strategically selected villages. Such hospitals run an outpatient clinic for maternal and child health, and usually allocate six to eight beds for MCH related emergencies. If a station hospital exists in the same village as a rural health centre, it is referred to as a station health unit. Rural health centres cover a population of approximately 20,000. Staff of the rural health centre are one health assistant who acts as team leader, a lady health visitor, five midwives and a number of public health supervisors who act as multipurpose health workers. Maternal and child health care is the major activity carried out by the lady health visitor and the midwives. The area served by the rural health centre is usually divided into five sub-regions, each charged to a midwife from the rural health centre. These become rural health sub-centres. The midwives usually hold an open clinic for two days each week, and do home visits on the other days. The lady health visitors and midwives are responsible for the training and supervision of voluntary health staff.

A number of health volunteers are active in the provision of MCH services in Myanmar. Auxiliary midwives are selected from villages in which no midwife resides, and given six months of training. Her main activities are antenatal care, assistance at normal deliveries, referral to a higher level of service when required, postnatal care, health education, and the treatment of minor ailments. There are also a number of traditional birth attendants who have been given sixty hours of training in how to conduct a safe delivery, and to recognize the need for referral.

In addition to the reproductive health services being provided in the public sector, a number of NGOs are active in providing such services, including the grass roots organization the Myanmar Maternal and Child Welfare Association. A large well developed private sector also provides reproductive health services throughout Myanmar. This consists of about 8,000 private, general practitioners, and numerous drug shops and public sector staff who provide private services in their off-duty time.

Services provided

Maternal health

As discussed above, the maternal health care services are provided at all levels of basic health care. These include all the standard antenatal care services, except for those related to RTI/STDs. Similarly postnatal services are provided at all levels of the health care system. Deliveries are generally assisted by TBAs, auxiliary midwives and midwives.

Provisional data from the recently conducted *Fertility and Reproductive Health Survey* (FRHS) and the 1991 *Population Changes and Fertility Survey* (PCFS) show that antenatal coverage and attended births have been rising. In 1991, 61 per cent of women received antenatal care by a trained provider (excluding traditional birth attendants), in 1997 this figure was 76 per cent. Similarly, 46 per cent of births were attended by trained providers

(again excluding traditional birth attendants, the level of training of whom is unclear) in 1991, and 56 per cent in 1997.

Birth spacing

Birth spacing services have been available through the public sector only since 1991. The United Nations Population Fund (UNFPA), the United Nations Development Programme (UNDP) and Family Planning International Assistance (FPIA) are currently supporting public sector birth spacing services in 117 of Myanmar's 320 townships (MOH 1997). The Myanmar Maternal and Child Welfare Association, a national non-governmental organization (NGO), also provides limited but critical services in some townships, distributing condoms and pills, and providing training courses in birth spacing education. Approximately 35 per cent of the population are believed to have no access to public sector primary health care services of any kind. Considering this background, it is not surprising that the largest provider of health services in Myanmar, including those related to birth spacing, is the private sector. Data concerning the specific content, quality and coverage of these services is extremely limited.

Women in Myanmar have traditionally spaced their births primarily through the use of breastfeeding (Thein Thein Htay 1996), although many are now using modern contraceptive methods. The most easily procured, and therefore the most widely used methods, are injectable and oral hormonal contraceptives. There is limited use of long-term methods of contraception: sterilization is only available after approval from a board through a process that can take many months; and intrauterine device (IUD) use to date has been limited. The condom is the only method available in Myanmar for dual protection against pregnancy and sexually transmitted infections, and its access is highly limited.

RTI/STDs

The Department of Health's STD control programme co-ordinates a network of 36 STD teams that operate in 25 townships throughout the country. In these townships the teams are responsible for STD surveillance, treatment, and contact tracing.

Youth

Although health education with a component on sexuality has been made available to some adolescents through "school based-curriculum" (i.e. optional) classes, few other interventions have been directed at unmarried adolescents who have sexual health needs related to preventing unwanted pregnancies or infections that are not being met by the current constellation of services.

Current activities of international organisations and NGOs in Myanmar

There are a number of international organizations and non-governmental organizations (NGOs) active in the area of reproductive health in Myanmar. Below is a brief description of their activities in this field. This is also presented in the three tables in Annexes I, II and III.

United Nations Development Programme (UNDP)

UNDP has a mandate to enact programmes that will have a grassroots level impact. Activities under the Human Development Initiative have been implemented since 1994. The

primary health care component of the project is currently being undertaken in 36 townships in Myanmar. Activities in these townships include: IEC; the promotion of community participation; provision of essential drugs; and, the training of community health staff, in a number of areas of primary health care including birth spacing. UNDP is also active in the field of HIV/AIDS. Within the framework of UNAIDS, UNDP is undertaking a number of activities to address the increasing problem of HIV/AIDS in Myanmar. The primary objectives of these activities are to build the capacity of civil society organizations; to introduce innovative models to address both care and prevention of HIV/AIDS; to enhance the capacity of the National AIDS Programme; and, to co-ordinate HIV/AIDS activities within Myanmar.

United Nations Children's Fund (UNICEF)

UNICEF has activities addressing a number of different areas of reproductive health. The Women's Health Project focuses on critical interventions for reducing maternal mortality, and involves the mobilization of women in maternal health related activities, the strengthening of community care, and the support for the decentralisation of planning and information activities. UNICEF's HIV/AIDS activities focus on the promotion of reproductive health as a strategy to prevent the transmission of HIV among young people and women of reproductive age. Many national and international NGOs have been working closely with UNICEF to implement this programme.

United Nations Population Fund (UNFPA)

UNFPA has been supporting activities in Myanmar on an ad-hoc basis since 1988. UNFPA has supported a number of studies in population related areas, including the FRHS and a longitudinal study on maternal mortality. By 1996, UNFPA was supporting birth spacing projects in 72 townships. The activities within this project include: strengthening of institutional capacity of the Government's birth spacing programme; direct support for township level provision of birth spacing services through training and provision of commodities; production of a training manual on birth spacing; strengthening of the IEC programme; providing community education materials; and setting up a management information system.

World Health Organization (WHO)

Within the current plan of action of WHO in Myanmar is a programme on reproductive health which is designed with the following objectives: to enhance capabilities for programme development; to increase technical knowledge and skills of staff; to increase public awareness and community involvement in reproductive health; and to improve access to reproductive health services for adolescents. In addition, WHO Geneva is supporting the Department of Medical Research with a long-term institutional grant to build their capacity for reproductive health research. WHO Geneva is also working with the Department of Health on a number of activities related to contraceptive introduction and quality of care in reproductive health services. WHO is also offering support for Myanmar nationals to undertake degree courses in HIV/STD epidemiology.

United Nations High Commission for Refugees (UNHCR)

UNHCR are currently active in the Northern Rakhine State in Myanmar, and as part of their activities are working with MMCWA in the area of reproductive health. Their activities include: training sessions; promotion of community-based contraceptive distribution systems; and, health education projects to improve maternal health and address STD/HIV issues.

International NGOs

A number of international non-governmental organizations have been working on reproductive health issues in Myanmar. Family Planning International Assistance, Care, Medicins du Monde, World Vision International, Population Services International, Marie Stopes International, Medicins Sans Frontiers, the Population Council and ICOMP have been working very closely with local non-governmental organizations in awareness raising campaigns, out-reach activities, development of IEC materials, research activities and in the social marketing of condoms.

National NGOs

There are a number of national non-governmental organizations working in the field of reproductive health in Myanmar. The most active is the Myanmar Maternal and Child Welfare Association which works through its country-wide network to disseminate information on the prevention of HIV/AIDS, provision of maternity homes, and the provision of some child care and birth spacing to the village level. The Myanmar Medical Association works primarily with the private sector, and plays an active role in a number of United Nations sponsored reproductive health projects, particularly in the area of HIV/AIDS. Some township level Red Cross groups have been involved in UNICEF's HIV/AIDS projects, and blood donation programmes.

Health sector expenditure and financing

It is difficult to analyse the financing of the health sector in Myanmar as no careful study of expenditure on health services has been carried out. Two major observations can be made, however. First a large proportion of health expenditure is in the private sector. A consumer expenditure study, estimated that 2 to 3 per cent of total household expenditure was on health. In 1994 to 1995, the government budget on health totalled approximately 2,000 million kyats, which has been estimated to be about 0.5 per cent of GDP (UNICEF 1998b). Thus the total health sector expenditure could be estimated to be approximately 3 per cent of GDP. However, in the "Health for All" strategy, the health expenditure is targeted to have a 5 per cent share of GDP by the year 2000 (Ministry of health 1996).

Second, it appears that the public health sector is significantly under financed. The World Bank (1993) has estimated that low income countries would need to spend US\$8 per person per year on an essential clinical services package and US\$4 per person per year on public health, resulting in a total cost of US\$12 per person per year. In 1995, the per capita income in Myanmar was estimated to be approximately US\$300 (UNDP 1995). If we use the figure above (i.e. 3 per cent of GDP for health sector expenditure), then we can estimate that approximately US\$9 per person per year is spent on all health care. Even if this was all spent on public health and essential clinical services, it would still represent only 75% of the World

Bank's recommended minimum health sector expenditure. Given that this aggregate figure includes all hospital services, however, many of which are costly and not "essential", it appears that public health programmes suffer from significant resource shortages.

ASSESSMENT OBJECTIVES AND METHODOLOGY

Terms of reference

The terms of reference for the assessment mission, stated that, in the context of the ICPD Programme of Action, the mission should:

- (1) Review the reproductive health situation in all its components in Myanmar based on available data and secondary literature;
- (2) Assess, in particular, the existing situation with respect to: (a) contraceptive use and unmet need for birth spacing; (b) induced abortion, maternal mortality/morbidity and emergency obstetric care; (c) prevention and diagnosis of RTIs/STDs and HIV/AIDS; and (d) adolescent/youth reproductive health;
- (3) Assess the existing public and private sector responses/interventions (government, NGOs, private commercial sector, international agency supported projects) including approaches/strategies used to address above, and the capabilities of the service delivery system to implement those approaches/strategies in view of the needs of individuals and communities;
- (4) Review the nature and extent of integration of various reproductive health components in the above approaches/strategies;
- (5) Address gender concerns and the role of men, to the extent possible in the mission, while carrying out (2), (3) and (4) above;
- (6) Reflect the perspectives of a range of groups concerned with reproductive health including, for example, women's health groups, youth groups, health care providers at the periphery as well as the central level health planners, researchers and non-governmental organisations while carrying out (2), (3), and (4) above;
- (7) Suggest approaches/strategies (necessary policy changes, programme actions including IEC and service delivery, advocacy, research, and other) addressing the four key reproductive health areas identified in (2) above;
- (8) Review the draft report of the mission within a one day workshop involving officials from government, NGOs and UN agencies; and
- (9) Finalise the report in view of the deliberations of the above workshop and submit the final report to UNFPA.

Assessment Methodology

According to the above terms of reference, the assessment methodology comprised of a rapid literature review, consultations with key stakeholders in Yangon, and field observations. The assessment was conducted by a multi-disciplinary team comprising both national and international professionals. Using a participatory and largely qualitative methodology, the team assessed user and service provider perspectives, utilization of reproductive health technologies, and the interface between the users and service providers. It then integrated the observations and developed recommendations to address the problems identified. These were discussed in a workshop and finalized.

Team selection

The national members of the assessment team were selected to be representative of a range of multiple perspectives in the field of reproductive health in Myanmar. Individuals from a number of government departments, as well as national non-governmental organizations and international organizations participated in the assessment field work. The team also comprised a number of non-national experts in reproductive health, who help to facilitate the assessment process. A list of the team members is given below.

National Team Members

Daw Khin May Aung	Department of Immigration and Population
Daw Khin Ma Ma Aye	UNFPA, Myanmar
Dr Htay Lwin	Department of Health
Dr Thien Thein Htay	Department of Health
Dr Katherine Ba Thike	Central Women's Hospital, Institute of Medicine (1)
Dr Nu Aye Khin	MMCWA
Daw Su Su Naing	Central Health Education Bureau
Dr Khin Ohmar San	National AIDS Programme
Dr Kyu Kyu Than	Department of Medical Research
Dr Ko Ko Zaw	Department of Medical Research

Non-national Team Members

Dr Christopher Elias	Population Council, Bangkok
Dr Peter Fajans	WHO, Geneva
Ms Michelle Gardner	Population Council, Bangkok
Dr Suman Mehta	UNFPA, CST, Bangkok
Dr R.S.S. Sarma	UNFPA, Myanmar
Prof Jay Satia (Team leader)	ICOMP

Meetings with policy makers

During the first two days of the team's activities in Myanmar, meetings were held with key policy makers from both the Government and the international organizations active in Myanmar. These meetings were an opportunity for the assessment team to inform these key individuals of the proposed goals and scope of work of the assessment. The input received during these meetings was also valuable in defining the final content and process of the assessment.

Workshop of key stakeholders

On 13 May 1998 a workshop of key stakeholders was convened in Yangon. This workshop brought together approximately 30 individuals from 15 institutions and organizations that play an active role in reproductive health in Myanmar. The aims of this workshop were to familiarize the key stakeholders with the assessment activities, and to receive feedback from them regarding areas of focus for the assessment. The participants were split into non-homogenous groups so that a number of different experiences and areas of interest were represented within each group. These groups were asked to discuss the concept of reproductive health, and identify key areas of focus for Myanmar. Birth spacing, unwanted pregnancy/abortion, maternal health, RTIs/STDs and adolescent reproductive health were the priority areas identified by each group. Areas of reproductive health considered of lesser

importance in Myanmar were infertility, reproductive cancers and violence against women. The discussions and presentations at this workshop provided input to the preparation of guidelines and the fieldwork.

Development of guidelines for field observations

In view of the terms of reference, and feedback from the workshop, the team members developed guidelines for interviews and group discussions with men, women and young persons, community leaders, NGOs, and service providers at various levels and for observation of service provision.

Site selection

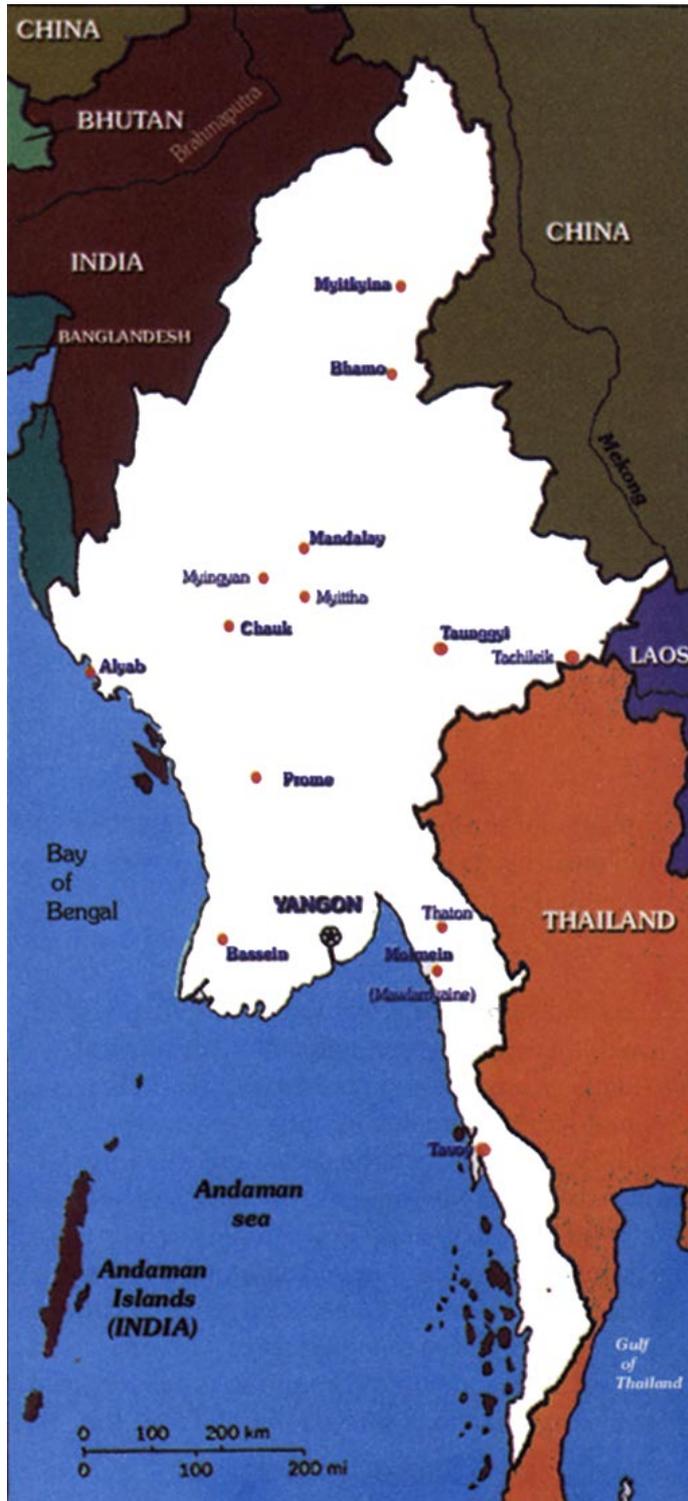
The fieldwork was conducted in six townships in three States/Divisions. These were selected to include a range of the more predominant socio-economic and cultural environments that exist in Myanmar. The assessment team does not suggest that these townships are representative of Myanmar on a national level, but by identifying the similarities and differences between the selected sites, a sense of the current reproductive health needs in Myanmar can be achieved. The six townships visited were: Mawlamyine and Thaton (Mon State) Myittha and Myingyan (Mandalay Division); Taunggyi and Tachileik (Shan State). Figure 1 identifies these sites.

Field assessment

The assessment team was split into two sub-teams for the field assessment. In selecting each of the sub-teams, careful attention was paid to ensuring the representativeness of a range of perspectives and expertise. Each sub-team visited one township in each of the States/Divisions.

Within each township, a number of urban and rural service provision facilities were visited. These generally included the township hospital, the MCH centre, and a number of rural health centres and sub-centres. Interviews, focus group discussions and observations were conducted at each of these sites. Interviews and focus group discussions were conducted with a range of service providers and community members. Public sector service providers interviewed included township medical staff, lady health visitors, midwives and voluntary health staff. Interviews were also conducted with private general practitioners and drug shop vendors. Community interviews and focus group discussions covered as broad a cross-section of society as possible. Women and men were interviewed across a range of different ages, of different marital status, and with different reproductive experiences. In order to elicit a broader community perspective, interviews were conducted with community leaders, and leaders and members of a number of grass-roots organizations such as the MCWA, the MMA, the MRCS and the USDA.

Figure 1. Map of Myanmar showing the six townships visited during assessment field work



Preparation of the draft report

In the field, the team met frequently to consolidate its observations and identify key issues that needed further attention in the subsequent field visits. Each team member also prepared their field visit notes. The consolidated observations and the field notes were utilized to finalize the field observations for inclusion in the report. After the field visits, the team reviewed its observations and discussed recommendations to address the findings arising from the field observations. Then the team discussed ways to operationalize the reproductive health care services in Myanmar. A sub-group of team members were responsible for writing the first draft of each of the chapters. These were then reviewed by the team, and revised in an iterative process as discussions continued between team members and other interested parties.

Dissemination meeting

A dissemination meeting comprising largely of the same participants as that of the stakeholders workshop was held on 28 May 1998. At this workshop the assessment team's recommendations were presented in the context of the major field observations and recent secondary data. Participants provided their insights and feedback to the team regarding the findings and recommendations. These were generally endorsed, and some issues were raised which needed either further elaboration or clarification.

Finalization of the report

The draft report was revised based on the discussions during the dissemination workshop and was reviewed by the assessment team towards the end of June 1998. The final draft was presented to UNFPA at the beginning of August.

STRUCTURE OF THE REPORT

This report presents the findings and recommendations for the reproductive health needs assessment in Myanmar. The next four chapters discuss and contextualize the assessment teams findings in terms of the four priority areas of reproductive health: maternal health; birth spacing; HIV/AIDS; and adolescent reproductive health. These chapters are followed by a chapter entitled *Conclusions and Recommendations* which looks at the cross-cutting issues in reproductive health services, and presents the teams recommendations. The final chapter of the report addresses the issue of operationalizing these recommendations into a clear reproductive health programme in Myanmar.

Maternal Health

MATERNAL MORTALITY IN MYANMAR

The estimates of maternal mortality in Myanmar vary considerably. UNICEF/WHO estimate the Maternal Mortality Ratio (MMR) to be 580 per 100,000 live births (UNICEF 1998a). A figure of 231 per 100,000 births in 1994 is often used as the estimated MMR in official communications, this figure coming from a study conducted by MMCWA (MMCWA 1994).

An UNFPA-supported study of maternal mortality is currently in progress (ENVIPRO 1998). The provisional results from this study, when adjusted for possible under-estimates of both births and deaths, provides an estimate in the same range as that of WHO. Hence, for practical purposes the WHO estimate of 580 maternal deaths per 100,000 live births can be used. It is safe to conclude that maternal mortality remains high and, as observations indicate, a significant proportion of it is avoidable.

ANTENATAL CARE

A large proportion of women receive antenatal care from midwives, both those currently in government service and midwives who have retired from service. Results from the FRHS regarding the provision of antenatal care are presented below in Table 2. Approximately 65 per cent of women receive antenatal care from nurses and midwives. Doctors provide antenatal care for about 12 per cent of pregnancies, but these are mainly in the urban areas. The FRHS did not distinguish between public and private doctors, so no data are available regarding the proportion of women receiving antenatal care from private general practitioners. Data regarding the number of antenatal care visits are scarce, although one source gives the figure of 3.5 visits per pregnancy (Union of Myanmar 1998, National Health Committee 1998).

Table 2. Per cent of pregnancies receiving antenatal care by type of provider

	Doctor	Nurse/midwife	TBA	Other	None	No. of pregnancies
Age						
15-24	9.2	63.6	8.4	0.7	17.9	2484
25-34	12.3	64.6	7.0	0.3	15.8	7843
35+	11.6	64.0	7.2	0.3	17.0	4159
Residence						
Urban	38.8	52.3	2.5	0.5	6.0	2895
Rural	4.7	67.2	8.5	0.4	19.1	11592
Total	11.5	64.3	7.3	0.4	16.5	14487

Source: Ministry of Immigration and Population (1998) *Fertility and Reproductive Health Survey* (preliminary results).

Antenatal care practices of midwives

In urban areas, antenatal care is generally provided in the outpatient department of the hospital or at the maternal and child health centre. In rural areas, women receive antenatal care through two channels. There are regularly scheduled days at rural health centres and

sub-centres on which antenatal care is provided, and midwives also conduct visits to the homes of pregnant women.

The midwives interviewed by the assessment team reported that the typical content of antenatal care at a health facility includes history-taking, weighing of the woman, blood pressure measurement, a physical and abdominal examination, the administration of tetanus toxoid, urine examination for albumin, and taking blood for a VDRL syphilis testing. Pregnant women also receive information regarding the use of iron tablets, immunization days, appropriate diet, breast care, exercise and personal hygiene, and are advised to come back to the midwife if problems arise.

Women who receive antenatal care at home are provided with a more limited range of services. Midwives report that care is restricted to a physical examination, including clinical screening for anaemia and pedal oedema, and an abdominal examination, and advice on nutrition. Thus, women who receive antenatal care at home do not have their weight recorded, urine or haemoglobin examined, nor do they have their blood taken for a VDRL test. Women receiving domiciliary care are advised to visit the antenatal care clinic in a health facility three times during the pregnancy, but it is unclear how many women do so.

The quality of the antenatal care actually provided in the public sector is, however, highly variable, both in terms of quantity and content of care. Health providers have been trained to provide monthly visits up to the 28th week of pregnancy, bimonthly from 29 to 36 weeks and weekly visits thereafter. The Department of Health recommends that at least three antenatal visits be conducted, one in each trimester. Antenatal care practice is reported to be somewhat different, with the first visit/contact usually taking place at 20 weeks and visits may not be spaced over trimesters. Some women do not realise the importance of antenatal visits, and may have their first contact with a provider only near term.

Whilst VDRL testing is generally seen as an essential part of antenatal care, it is unclear what is actually happening in this regard. The team observed that blood samples are being collected in station hospitals and MCH centres and transported to the nearest STD team or district or township hospital. It is not clear, however, whether the tests are actually being done, and if they are, if the reports are getting back to the appropriate provider and being acted upon. The VDRL testing is more systematic when women attend the district or township hospital.

The only cost involved in routine antenatal services is for iron tablets, which have to be purchased from the pharmacy or from the midwife at a nominal cost. There is no cost for VDRL testing or tetanus immunization. The practice of prescribing vitamin injections without any specific indication was noted, often at the request of the woman, and it is not possible to say how widespread the practice is. The team wondered whether there may be a cost rationale for this practice, since the midwives charge for the injection with a significant profit margin involved.

Antenatal practices of traditional birth attendants

In addition to midwives, traditional birth attendants provide some women with antenatal care. The team spoke with a number of traditional birth attendants, about the content of their antenatal care practices. They say that they estimate the duration of pregnancy, give health education, and “rearrange the abdomen” if a woman consults them for a tight feeling in the

abdomen or if the baby is in an abnormal position. This latter practice is believed to be common, as found in a study of traditional birth practices in a rural area of Myanmar, in which 90 per cent of women interviewed stated that it was necessary to “manipulate the uterus” and “rearrange the baby” (Win May et al. 1997). The content of health education was somewhat unclear, but one traditional birth attendant reported telling women to avoid lifting heavy weights, to avoid sex during pregnancy and up to 45 days postpartum, about diet during pregnancy, and about possible complications to the baby.

Antenatal practices of general practitioners

Some in-service personnel who carry out maternal and child health care activities provide antenatal care in their private practices. Antenatal care could be on a regular basis, involving assessment of anaemia, measurement of blood pressure and performing an obstetric examination. Prescription of vitamins, administration of tetanus toxoid and giving health education are also carried out. Sometimes patients will present because of a pregnancy complication, for example oedema of the legs or leakage of water, and are usually referred to the hospital. If elevated blood pressure is found on examination, the patient is also referred.

ROUTINE DELIVERY CARE

The majority of deliveries are performed at home. A couple of estimates put the figure at between 70 and 80 per cent (Ministry of Health 1996, Ministry of Health 1997a). Many women prefer to deliver at home for several reasons, including the availability of family support and the low costs. There is a general belief that it is perfectly safe to deliver at home, and therefore few women consider going to hospital. Nationally, it is generally recommended that all first births should be delivered in hospital, midwives, however, report that even when they counsel a woman to deliver in hospital, she usually chooses to stay at home. According to the preliminary findings of the FRHS (shown below in Table 3) 95 per cent of births were delivered by a doctor, nurse, midwife or TBA. It is unclear to what extent TBAs in Myanmar have had training. Most of those TBAs interviewed in Mon State and Mandalay Division reported having received some training in the past, although the Government has generally not provided such training in the past five years. Most TBAs appear to have learned their trade from their mothers and grandmothers.

Table 3. Per cent of births being attended by various types of provider

	Doctor	Nurse/ midwife	TBA	Relative /neighbour	Herself	No. of pregnancies
Birth order						
1	18.6	46.9	31.4	1.8	1.2	2676
2-3	12.8	45.6	37.0	2.4	2.2	4298
4-5	6.6	44.8	40.9	2.9	4.6	2360
6+	4.1	40.4	47.2	3.0	5.3	1730
Residence						
Urban	38.7	48.5	12.5	0.1	0.4	2253
Rural	4.7	44.0	44.5	3.1	3.6	8811
Total	11.5	44.9	38.1	2.5	3.0	11064

Source: Ministry of Immigration and Population (1998) *Fertility and Reproductive Health Survey* (preliminary results).

In villages where a midwife or an auxiliary midwife is resident, these people usually assist deliveries, although some women still prefer to be attended by a traditional birth attendant. In one study, 50 per cent of women residing in villages with auxiliary midwives had their deliveries conducted by them (Win May et al. 1997). It is not clear whether community preference is for the auxiliary midwife or the midwife when both are available in the same village. A number of different models of interaction between midwives and auxiliary midwives appear to exist in Myanmar. In some cases the auxiliary midwives assist the midwives with delivery. In others the auxiliary midwife attends the pregnant woman during labour and calls the midwife for the delivery. Alternatively, it may be that the auxiliary midwife would attend both the labour and the delivery. Due to the voluntary nature of the auxiliary midwife's work, she may conduct deliveries only in the times of the year when she is not involved in farm work. In villages where neither a midwife nor an auxiliary midwife is resident, the community mainly relies on traditional birth attendants. If no midwife, auxiliary midwife or traditional birth attendant are present then an "experienced" woman will deliver the baby.

People appear to have faith in the traditional birth attendant, although some women reported seeking assistance at delivery by the traditional birth attendant only because the midwife was not available. This availability is constrained by a number of factors including position vacancies, distance between her residence and that of the pregnant woman or her own absence from the community. Frequently mentioned by both community members and providers was the socio-economic differential. Those that can afford to pay will be attended by a private general practitioner or go to the hospital, whilst the poorer women will be attended by the TBA or midwife. Some women say that they prefer the traditional birth attendant because she will also do the housework and wash the clothes. Traditional birth attendants also tend to be cheaper than midwives. One midwife reported that it is the custom to give midwives and traditional birth attendants the reasonable amount of money or in kinds as presents in addition to the cost of gloves and materials used during delivery.

Traditional birth attendants report conducting between two and five deliveries per month. They are usually called as soon as labour starts. At the start of labour they give offerings to the four mother spirits and pray for an uneventful delivery. They help the labour by giving the abdomen a gentle massage to keep the woman comfortable. The traditional birth attendants assess the progress of labour by monitoring the contractions and feeling the head through the abdomen. Some traditional birth attendants report calling the midwife, if there is one available, when the delivery is near, whilst others say that they only call the midwife if there are complications during the delivery. In most cases, the relationship between midwives and traditional birth attendants was reported to be good.

The babies are usually delivered without the direct intervention of the traditional birth attendant. However, some traditional birth attendants reported the worrying practice of pushing on the abdomen with their hands or a bamboo or wooden stick. One traditional birth attendant said that she wore plastic gloves for delivery, which cost five kyats. Another said that she used rubber gloves, which she would wash and reuse. They reported that they were following the instructions of the midwives in this regard. Once the baby has been born, the TBA will tie the cord with knotted thread, then cut the cord with a blade that may have been cleaned with spirit or soaked in hot water. They massage the abdomen and deliver the placenta, which is then buried under the steps of the house or in the courtyard. After the delivery, the birth attendant usually massages the abdomen to ensure cessation of bleeding and clearing out of the womb. To induce sweating, the woman is seated over a pot of hot

water and leaves, then covered with a blanket. Some woman also applies saffranin paste all over the body and takes saffranin pellets orally.

The traditional birth attendants interviewed had delivered both normal and breech presentations (“folded babies”). One TBA reported that if the labour were prolonged, they would give the woman water in which her husband had washed his hands. The belief is that the woman has had the upper hand in the family and this was causing the labour to be prolonged, and that drinking this water would undo it. One TBA had conducted a labour in which bleeding occurred just before delivery. She sent for the midwife but the woman delivered shortly after. They had come across women with retained placenta, and reported calling the midwife if it could not be delivered within a half to one hour. One traditional birth attendant recounted a case that she and the midwife had delivered where the placenta was retained. They sent for the lady health visitor but in the end they had to take the woman to a nearby township hospital for removal. Another TBA referred to a patient who had postpartum haemorrhage who was referred to the station hospital and later to the township hospital.

There were a number of instances reported to the assessment team in which the TBA failed to recognise complications during delivery and delayed the call for help. Such actions can sometimes lead to life threatening complications in the women and the baby. This is illustrated by following cases.

A 21 year old woman in her second pregnancy had had a very unfortunate obstetric history. In her first pregnancy, she had no antenatal care and went into labour at term. She was attended by a TBA. She went into labour and after her membranes ruptured the traditional birth attendant waited for two days. After that she noticed that the baby stopped moving and then called a doctor. The doctor gave an injection and the woman delivered a stillborn baby.

During her current pregnancy, she also did not take any antenatal care. When she went into labour, a midwife was called. The midwife was not in the village, however, since she was travelling to Yangon. The TBA of that village (they had now moved to another village) attended the birth and reassured her that all was well. Again, the baby had not been born two days after her membranes ruptured. At this point the husband called the auxiliary midwife from another village. The auxiliary midwife said that the baby was transverse and sent them to the township hospital (at 7:00 am) six miles from the village. They arrived at the hospital at 9:40 am. The baby had stopped moving on the way to the hospital. Emergency caesarean section was performed for transverse lie with prolapsed hand. A stillborn baby was delivered at 12:40 am. She had postoperative fever that had subsided by the fourth postoperative day. The estimated cost during her stay in the hospital is about 5,000 kyats.

A 23 years old woman went into labour at term. A traditional birth attendant was called for help, but she failed to diagnose a twin pregnancy and continued to provide assistance. The first baby was delivered normally. After waiting for six hours, she referred the woman to the township hospital for delivery of the second twin. The doctor in the hospital noted that the baby was already dead and that the uterus had contracted and that there were no labour pains. The doctor performed a caesarean section to deliver the dead second twin. The woman remained in the hospital for about ten days at considerable social and financial cost.

The midwives were generally found to provide adequate quality of assistance at normal deliveries. Many of the midwives' clinical practices have not been updated, however, and are not based on current international best practices for obstetric management. For instance, ergometrine was found to be widely used instead of oxytocin, which is the drug of choice internationally for prevention of postpartum haemorrhage. On probing, it transpired that while some midwives recommend and administer ergometrine injection, others advise ergometrine tablets for prevention of postpartum haemorrhage. The practice varies by preference of the midwife and the family's ability to pay. Labour is not monitored using the partograph. Midwives are not formally trained to perform and suture episiotomies. They do perform these procedures, however, including the repair of lacerations (without anaesthesia, especially in deliveries conducted at home). Although the training of midwives includes instructions for referrals, there are no formal guidelines and no monitoring mechanisms to ensure the appropriateness of their decision-making.

Most midwives generally recognise complications and refer the labouring woman to hospital. Some patients, however, are reluctant to deliver in hospital and continue to labour at home. Only when labour becomes prolonged or obstructed do they decide to go to a referral centre. If patients have postpartum haemorrhage, midwives usually give intramuscular ergometrine. A few would put up an intravenous infusion. Patients can be more easily persuaded to go to hospital for haemorrhage than for obstructed labour.

The midwives interviewed had not seen many cases of eclampsia during their years of service. Oedema is regarded with nonchalance by both pregnant mothers and midwives. There is a common Myanmar belief that "a woman gets oedema three times before she delivers" Oedema is therefore considered to be a natural phenomenon.

Most normal deliveries in hospitals are conducted by midwives. Doctors are usually only contacted when labours become complicated. They perform forceps deliveries, attend the labour of women with heart disease or hypertension and manage women with ante- and post-partum haemorrhage.

POST-DELIVERY CARE

Post-delivery care is provided by the midwives and auxiliary midwives at the woman's home. National guidelines require the midwife to visit the woman each day during the first week after delivery, and then again at six weeks. According to the information provided to the team, however, while the usual care does involve daily visits for the first seven days, a follow-up visit is conducted only if the woman is experiencing problems. The content of care concentrates on care of the neonate. On probing regarding services for the women, service providers, including the traditional birth attendants, mentioned advice on breastfeeding, breast and cord care, and sometimes counselling for birth spacing. Administration of vitamin injections, sometimes for up to seven days, for which the woman or her family pays, is also a common practice.

CAUSES OF MATERNAL MORBIDITY AND MORTALITY

The assessment team observed that the number of maternal deaths continues to remain high. Preliminary data from the ongoing UNFPA-supported study of maternal mortality indicates that 57.4 per cent of maternal deaths take place at home and 3.7 per cent on way to the hospital. Even though a substantial percentage of women die before reaching the hospital, it

is noteworthy that 37 per cent of deaths take place in government hospitals. Limiting identification of maternal deaths to the examination of hospital statistics provides a different picture since we know that the proportion of deaths that take place in hospitals is relatively small. The assessment team observed that one of the reasons for such a situation is that there is a tendency for relatives to sign-out women who are in a serious condition who are likely to die, so as to prevent them from dying in hospital. Typically, the maternal mortality is higher in remote and economically poor areas.

An analysis based on verbal autopsies in the ongoing UNFPA-supported maternal mortality study shows that the major causes of maternal deaths are complications of induced abortion, hemorrhage, eclampsia and prolonged labour. This pattern is similar to the observations made by the team in various hospitals and communities, although regional variations in relative magnitude were noted. Service providers and community members in most places visited by the team identified postpartum haemorrhage as a relatively common complication of delivery. Postpartum haemorrhage, however, was often not the main cause of maternal death reported in the hospitals visited during the assessment. Septic induced abortion emerged as the most common cause of maternal death in many of the hospitals visited, followed in a number of cases by prolonged labour. Malaria during pregnancy was also reported to be a common cause of maternal death in the Mon State, an area with a high rate of endemic malaria.

Although difficult to assess, the burden of maternal morbidity is considerable. The most common complications of pregnancy include pre-eclampsia, eclampsia, prolonged/obstructed labour, antepartum haemorrhage, and malpresentation. Among older women, grand-multipara women are more likely to have serious complications related to pregnancy. Discussions with specialists at the hospitals showed that grand multiparity is also a factor in maternal mortality. With an increasing prevalence of birth spacing, however, both community members and providers reported that the number of grand-multipara women is decreasing.

THE PROBLEM OF ABORTION

The team observed that abortion and its related complications continued to be a major reproductive health problem. Most community members mentioned that many women in their community seek abortion for unwanted pregnancy. Although the incidence of abortions is difficult to estimate, the proportion of admissions for abortion-related complications to the total obstetrical and gynaecological admissions in the hospitals visited by the team vary from 1.1 to 58.6 per cent. There is also a variation in the proportion of these who are under 20 years of age (see Table 4). Reports from previous studies indicate that approximately 50 per cent of maternal deaths are due to abortion related complications (Tun Yee 1990, Than Than Yin 1992, Central Women's Hospital 1997).

Opinions among the providers differed on whether abortion and its related complications are increasing or decreasing. Many felt that they were decreasing because: (a) birth spacing was becoming more widely known, available and practised; (b) people are more conscious of the dangers of abortion; and (c) availability of antibiotics has reduced the dangers of post-abortion sepsis. On the other hand, in some areas, the incidence of abortions and its complications was reported to be on the rise.

Table 4. Abortion related admissions in the hospitals visited by the assessment team

Hospital	Per cent of OG admissions which are abortion related			Per cent of abortion admissions who are under 20 Years old (1997)
	1995	1996	1997	
Htanaungdaing	17.2	25.0	36.1	0.0
Mawlamyaing	14.2	12.6	12.0	8.7
Mudon		27.6	20.4	23.9
Myingyan	21.2	20.7	21.4	26.1
Myitthar	7.3	9.2	8.4	1.3
Tachileik	14.6	9.0	1.1	0.0
Taunggyi	27.0		16.7	
Thaton			32.0	2.2
Theinzeik	47.5	46.4	58.6	2.0

It is difficult to estimate the number of abortions in Myanmar as induced abortions are illegal. It may be possible to comment, however, on trends in abortions based on data from the PCFS and provisional results of the FRHS data using Bongaarts proximate determinants of fertility method (see Annex IV). Using figures for total fertility rate in 1990 and 1996 as 2.90 and 2.72 respectively, we calculate that abortions have declined. There is some concern, however, that both these estimates are too low. If we accept the more conservative estimates implying a drop in total fertility rate of 0.3 per cent, the calculation still shows that the proportion of pregnancies that end in abortion has declined between 1990 and 1996, although with a smaller magnitude. What is particularly important about these calculations is that in neither case was abortion seen to be on the increase.

A variety of methods are used to terminate an unwanted pregnancy. Commonly used methods are massage, insertion of a foreign body (bicycle spokes, twigs, herbal medicine), oral traditional medicines for menses induction such as *Kay Thi Pan* and *Kya Nga Gaung* (Five Tigers). A previous assessment (MOH 1997) found that the usual sequence of events are that a woman takes *Kay Thi Pan*, if this has no effect they visit a provider to get a menstrogen injection, and if this still does not induce bleeding they will seek the services of an abortionist. Massage is the most commonly reported method used, but most abortion complications resulting in hospital admission are due to the insertion of a foreign body into the uterus. Instances were also reported to the team of the use of anti-malarial drugs, and a combination of *Kay Thi Pan* and alcohol. The team found that most people seem to know where to get an abortion, but sometimes were reluctant to share this information with interviewers. Many community members mentioned that the cost of getting an abortion varies by the duration of pregnancy, and the cost seemed to vary by region. One woman told the team that the cost was 1,000 kyats per month. Another study of abortion found that the cost varies from 100 to 500 kyats for early pregnancies (less than three months gestation), and from 300 to 1,000 kyats for late pregnancies (Ba Thike et al. 1996).

Management of abortion-related complications

Many midwives reported that women consult them for problems related to spontaneous abortions and when they experience a complication following an induced abortion. The help of lady health visitors, midwives and auxiliary midwives is generally not sought before the procedure. When a woman consults for bleeding, fever, incomplete abortion or other complications of induced abortion, the provider will generally refer the women to hospital.

They also report counselling them about birth spacing, advising them to use pills, injections or female sterilisation. Contraceptive supplies are generally not provided post-abortion in the hospitals visited by the team, however.

Most of the patients admitted for abortion-related complications are older women (35 or more), but complications among younger women (16 to 18) are not rare. Many community members believe that abortion among unmarried women is rare, because when an unwanted pregnancy is experienced the woman would be expected to marry and carry the pregnancy to term. There are, however, reports of unmarried women having an abortion to avoid the stigma of childbirth out of wedlock. There is also a social stigma associated with complications of abortion in unmarried women so they may not be taken to the hospital for treatment. Older women generally seek induced abortion because they do not want a large family and the associated economic burden.

Most providers reported that once the patient is admitted to hospital with abortion related complications, the chances of survival are good even though in terms of numbers, many women do die in the hospital. Some complications may be quite serious, however, as is evident from this provider's experience.

If women have abortion-related complications and a foul smelling vaginal discharge, fever or pain in suprapubic area, she will generally go to the general practitioner in the hospital to obtain a referral note for the hospital. In the past year and a half, the hospital had treated two very ill abortion patients. One had generalised peritonitis and was referred to a tertiary hospital but did not go. She signed herself out and left the hospital. Another, who was also referred to tertiary hospital had septicaemia and survived the experience. However, her total expenses came to 45,000 kyats. This girl was unmarried, about 28 years of age.

If a woman is admitted with her cervical os open, an evacuation is done. If the os is closed, the state of the pregnancy is determined and a dilatation and curettage is performed in the operating theatre if it is an incomplete abortion. Women may have to stay up to 10 days in the hospital if there is sepsis. Post-abortion contraception is generally not provided and therefore it was common for the team to hear that repeat abortion is quite prevalent, with one case report of as many as six induced abortions experienced by a woman.

CONSTRAINTS TO BASIC OBSTETRIC CARE

Access and referral

One of the reasons women die even after arriving at the hospital is the extensive delay they may experience in reaching the hospital. This is a major factor determining the seriousness of the condition of the woman at arrival. There are many factors contributing to such delays, including failure to recognise the seriousness of the problem, physical access to a relevant facility, an ill-defined referral chain, and cost considerations.

It was observed during discussions with community members, as well as with health care providers, that the woman herself, as well as her family and the person attending the birth (traditional birth attendant, auxiliary midwife or midwife), do not always recognise that complications have occurred and that the woman needs to be referred to a higher level of care. Many midwives and auxiliary midwives do not recognise that early rupture of the

membranes is a problem, and therefore often do not take prompt action to prevent complications arising.

Many times when the traditional birth attendant or auxiliary midwife is assisting the woman during labour, if in need she calls for the services of a midwife. It was reported that in such situations the midwife is not always available. When the midwife is available, however, she reassesses the condition, and in most instances refers the woman to the station or township hospital. The need to include the midwife in the referral chain results in delays in making the decision to go to the nearest health facility. The midwives interviewed generally thought that the auxiliary midwives were capable of doing the referral herself. Transportation is not usually readily available, and thus, once the decision to refer has been made, such transportation has to be arranged, resulting in another delay. Other factors such as distance and the state of the road, particularly during the rainy season, were also mentioned as factors limiting access to referral facilities,

Other factors influence the timeliness of the decision to refer a woman. Many women would prefer to stay at home to minimise the disruption caused to their family, and therefore put off the decision to go to the hospital in the hope that everything will resolve itself at home. The knowledge that the cost of transportation and hospitalization are high also delays the decision to go to the hospital.

Costs

The cost of transportation to hospital was reported to be often rather high, which, as mentioned above, was a major deterrent to seeking care at a hospital facility. This figure is often significantly higher at nights. The story of delays and the cost factor does not end after a woman reaches a hospital. It was clear that most families are expected to pay for supplies once the woman reaches the hospital. This includes the cost of medicines, IV sets, laboratory tests, gloves and needles. There are, however, no formal charges for the service provider, especially for the care provided for management of complications in women who seek care for obstetric emergencies. Costs were reported to be a major barrier to timely referral and appropriate treatment. As one community member in Mon State stated “unless you have reasonable amount of money” you don’t think about going to the hospital”. This seems to be a general perception based on previous experiences of the family and other community members.

Cost sharing in health is a relatively new concept for Myanmar. It appears that there is no clear policy describing the cost sharing mechanisms and guidelines for fixing costs for specific service components are not well defined. The team found that the practice of cost sharing varied widely and that policies were not clearly understood by the community or the providers. Between different health care facilities charges for products, laboratory tests and other procedures vary significantly. For example, policy states that hospital charges should not be made for routine laboratory tests, but in a number of facilities the team found that patients are paying for such services. The implementation of cost sharing is not uniform even within the same facility and varies between doctors. Doctors generally make the decisions regarding the required interventions and treatments, and it was reported that if the woman is being treated with hospital resources she will not necessarily receive the first choice drugs. Women also know that the poor are supposed to be treated for free, and many service providers claim that women will say that they cannot afford to pay so that they get this free treatment. Hospital staff do not have a mechanism for identifying those women and families

who really cannot afford treatment. In one township the team observed that, in pharmacies attached to hospitals, the drug prices were set at ten per cent above the market price to cover establishment and running cost of the hospital. Since such outlets are convenient and ensure quality of the products, many service providers feel such costs are justified.

Preparedness of the hospital

Preparedness of the hospital to deal with complications and emergencies is an important aspect of quality of care related to pregnancy and childbirth. It was observed that the facilities for managing emergencies and complications are generally very basic. In one station hospital only one oxygen cylinder was available for the whole hospital, there was no refrigerator, a very limited number of instruments (retractors, scissors, clamps, speculums), and the labour room did not have an examination light. Although the district hospital at another location had this essential equipment and supplies, they were in poor condition. Facilities for general anaesthesia were generally unavailable in the hospitals visited and most procedures have to be conducted under spinal anaesthesia or ether and mask.

Township and district hospitals were found to have limited resources for caesarean section and for the provision of blood. In none of the sites visited by the team were there fully functional blood banks at the station, township or district hospitals, and hospitals have to rely on live donors. Although donors are contacted from a list maintained at the township hospital when blood is needed, this process often introduces significant delays. State and divisional hospitals do have functioning blood banks.

A 31 year old woman in her fourth pregnancy went into labour at home in a village. She had been in established labour since 10:00 pm and had not delivered by five o'clock the next morning. The midwife of the village was pregnant and so she was attended by the TBA, who advised that she should deliver in the hospital. The family went by horse cart to the town to get a car to take her to hospital. She arrived at the hospital between 9 and 10 o'clock. She continued to labour and the decision to do a caesarean section was made at 4:00 p.m. Her husband, however, had to look for a blood donor so she did not have the caesarean section until 8:00 p.m. Arranging for the transport and the donor took a total of approximately 8 hours in this case. The baby was 9 lbs 2oz and the mother required two units of blood.

In the case described above facilities for HIV and hepatitis B testing were available and the woman received the blood after such screening. In some hospitals, however, blood is administered after cross matching without testing for HIV or hepatitis B. There is no charge reported for blood administration or for testing for HIV and hepatitis B.

It was also noted during the assessment that some of the procedures and drugs used during the management of complications during pregnancy are not based on practices currently recommended internationally. For example, diazepam continue to be the drug of choice for management of eclampsia instead of magnesium sulphate, which is cheaper, more effective and recommended by WHO.

The team found that quality of care was ultimately a function of the skills and motivation of individual service providers, which varied considerably. Even the availability of equipment was, to some extent, dependent on the initiative of the township medical officer to request supplies from the central medical store.

Birth Spacing

The Government of Myanmar started to provide birth spacing services in the public sector in 1991 with assistance from a number of international agencies. Public sector birth spacing programmes currently provide services in 117 of the country's 320 townships, including 72 supported by UNFPA and 36 supported by UNDP. The majority of birth spacing products and services are, however, still provided by the private sector.

UNMET NEED FOR BIRTH SPACING

There are a number of indications that there is a significant unmet need for birth spacing in Myanmar. From the provisional results of the FRHS (MOIP 1998a) it was found that approximately 10 per cent of previous births were either not wanted at all (6.6 per cent) or not wanted at that time (3.3 per cent). These figures were slightly higher in rural than urban areas of Myanmar. The proportion of women reporting that they do not wish to have any more children rose from 46 to 58 per cent between 1991 and 1997 (MOIP 1995, MOIP 1998a). The difference between 1991 and 1997 was greatest amongst urban women and those with a higher level of education (see Table 5).

Table 5. Per cent of currently married women wanting no more children

	1991	1997
Education		
No schooling	52	63
1-4 standard	45	57
5-8 standard	41	56
9-10 standard	39	57
University	23	51
Residence		
Urban	47	63
Rural	46	57
Total	46	58

Source: Ministry of Immigration and Population (1998) *Fertility and Reproductive Health Survey* (preliminary results), and Ministry of Immigration and Population (1995) *Myanmar Population Changes and Fertility Survey*.

In 1997, one quarter of the women reporting that they wanted no more children were found to not be currently amenorrhoeic, pregnant or abstaining, but not using a contraceptive method. Data were also collected for women who reported wanting to space their next birth for more than 24 months (18.9 per cent of currently married women). Of these women, nearly 30 per cent were not amenorrhoeic, pregnant or abstaining and not using contraception. From this calculation, a total of 20.6 per cent of the currently married women were found to be in need of contraception to either space their next birth, or to limit their family size.

Table 6. Unmet need for birth spacing

	%
Currently married women	100.0
+ wanting to space or limit births	77.2
+ not using contraception	42.7
+ not currently pregnant, amenorrhoeic or abstaining	20.6

Source: Ministry of Immigration and Population (1998) *Fertility and Reproductive Health Survey* (preliminary results).

SOCIAL ACCEPTABILITY OF BIRTH SPACING

Community leaders were found, in general, to approval of the use of birth spacing. Many felt that this was a community necessity in “current times”, since economic considerations have become an important factor related to family size. Not everyone has this positive attitude towards the use of birth spacing, however, and the team heard about a number of people who were opposed to the idea. For instance, in one township, a general practitioner was reported to be advising women against the use of birth spacing.

The FRHS found that 42.7 per cent of wives and 40.6 per cent of husbands disapproved of the use of contraception. Of those currently married women not using contraception, however, only 13.8 were not doing so because of opposition to use (either their own, their husbands, religious prohibition, or other opposition) (see Table 8). During the current assessment the team found that most of the women interviewed seemed to approve of birth spacing, and only a few of the men appeared to disapprove. A couple of the women interviewed said they did not tell their husband they were using injectables for a number of months because they thought that he would want to have more children.

USER AND PROVIDER PERSPECTIVES ON BIRTH SPACING

Almost all women that the team spoke to knew about the use of pills and injectables and many also knew about IUDs and sterilisation. Condoms, however, were rarely mentioned as a birth spacing method. The FRHS asked women about their knowledge of contraceptive methods, and from the table below it can be seen that a similar pattern emerged.

Table 7. Per cent of ever married women who have heard of specific modern contraceptive methods

	1991 PCFS	1997 FRHS
Pill	75.1	88.3
Injecton	72.4	87.5
IUD	47.5	55.5
Condom	23.9	24.1
Female sterilisation	65.6	78.5
Male sterilisation	61.8	71.6

Source: Ministry of Immigration and Population (1998) *Fertility and Reproductive Health Survey* (preliminary results), and Ministry of Immigration and Population (1995) *Myanmar Population Changes and Fertility Survey*.

Despite knowing of a number of methods, the assessment team found that women’s knowledge is often superficial and is derived largely from their own or other women’s experiences of using the method.

Provisional data from the recent FRHS show that the fear of side effects of modern contraception is a major reason why women do not use contraception. The FRHS found that, of 10,486 currently married women who weren’t using contraception at the time of the survey, 14 per cent were not doing so because of “health concerns”. This was the second most common reason after “desire to get pregnant” (see Table 8)

Table 8. Reasons for non use of contraception

Lack of knowledge	7.7
Opposition to use	
Respondent’s opposition	11.0
Husband’s opposition	1.9
Others’ opposition	0.1
Religious prohibition	0.8
Fertility related reasons	
Menopausal	8.9
Postpartum/breast feeding	8.2
Infrequent sex	1.9
Desire to get pregnant	18.9
Pregnant	11.8
Method related reasons	
Health concern	14.0
Access/availability	1.4
Costs too much	0.7
Inconvenient to use	0.6
Other	12.0

The team found that all hormonal methods are perceived to be associated with a number of common side-effects, although some women claim that pills are worse, and others that injectables are worse. For example one woman said that pills cause giddiness and vomiting, and that therefore women prefer injections, whilst another woman said that injectables are associated with irregular menstruation and that therefore pills were better. Becoming thin was another of the negative side-effects mentioned in relation to taking the pill. The choice between one-monthly and three-monthly injectables is also reported to be, in part, dependent on a woman’s attitude towards irregular menstruation. Method failure and the risk of infertility after extended use were also mentioned as problems with hormonal methods. Providers in particular attributed method failure to the woman not taking the pills regularly, or not returning at the right time for a re-injection. These side effects do not seem to be stopping women from using these methods, but many women report constantly changing between various hormonal methods in an attempt to avoid the negative consequences.

Most providers and community members interviewed perceived the condom solely as a means to prevent sexually transmitted infection, and not as a birth spacing method. The condom is often perceived to be an inconvenient method to use, and disposal and storage problems were also mentioned as reasons for non-use of the method.

Despite the increase in the number of men having vasectomies discussed below, some fears about the method are still expressed in the community. It is often thought that vasectomy can lead to impotence and the inability to do heavy work, and is perceived to be only suitable for educated men because they do not have to do hard labour. This attitude was expressed more frequently in townships where vasectomy was reported to be uncommon.

A number of fears were expressed in discussions about the potential use of the IUD. One woman said that she knew of a woman who had an IUD fitted and then died of renal failure. Another reported that after she had an IUD inserted the strings had got lost after eight months and that her menstruation stopped. When the IUD was pulled out, she had an abortion. It is also reported an IUD got “lost” inside the woman. Many women and service providers say that they know of women who have become pregnant while using the IUD. Many of these perceptions may be a result of past experience within the community with the Lippe’s Loop.

BIRTH SPACING SERVICES

In a number of townships with internationally supported birth spacing programmes, a broad range of contraceptive services are provided in the public sector. Two such townships were visited during the current assessment. The other four townships visited were without a public sector birth spacing programme. In the non-programme townships only female sterilisation is officially provided within the government system. In all townships, both programme and non-programme, a large percentage of contraceptive commodities and services are provided in the private sector. The private sector includes drug shops and private general practitioners as well as the private practice of government service staff. The MMCWA, a national NGO, also provides some birth spacing services. There are limited data available regarding the private sector and it is generally unknown what share of the birth spacing services are being provided in the private sector in programme townships.

Public sector services

As noted above, public sector birth spacing services are only available in a limited number of townships. Female sterilisation is, however, legally available at all township hospitals in Myanmar, but only after the woman has received the appropriate approval (see below). In townships where public sector birth spacing programmes are in effect, oral contraceptive pills, injectables and condoms are available down to the village level. IUDs are provided in township and station hospitals, and a few selected rural health centres. As in non-programme townships, sterilization is only performed in the township hospital.

Drug shops

Drug shops provide the majority of contraceptive commodities, but provide very little information to women and men. Most drug shops keep a broad range of birth spacing methods in stock, although the quality and price is highly variable between regions, between shops and between brands. Information regarding appropriate method choice and instructions for use are not spontaneously given and, if requested, may be extremely inaccurate. For example, one drug shop owner reported that the 3ml injectables could be divided into three 1ml doses, and be taken as a once-monthly injectable.

The decision to accept a method is often more a factor of availability and cost than brand loyalty or method choice. When clients seek contraceptive commodities from commercial

outlets they do not seem to distinguish different brands of a given contraceptive, e.g. oral contraceptive pills. They also appear to be relatively flexible regarding the specific type of contraceptive they receive. For example, a client seeking an injectable contraceptive may not mind accepting a pill if that is all that is available or affordable. Thus, brand-loyalty and method choice play a minor role in regard to drug shop purchases, where cost and the availability of commodities are major considerations.

In major towns, better stocked drug shops can often provide a number of different injectable and oral contraceptives, condoms and IUD, and some were found to also have emergency contraception in stock.

Private general practitioners

The number of general practitioners in a town is a factor of the size of the town and the township. In larger towns, such as Taunggyi, there may be as many as 100 general practitioners. In smaller townships, five to ten general practitioners are generally found, usually concentrated in the central urban area. A few women seek birth spacing advice from private general practitioners, but the majority of women seem to consult with these providers only for the purpose of administering the method, primarily injections. Many women buy their contraceptive injection from the drug shops and take it to the private doctor to administer the injection.

Information provided by general practitioners tends to be better than that given by pharmacists. They have generally not been trained in the provision of birth spacing, however, and did not tend to have detailed knowledge. The cost seems to vary significantly among general practitioners and regions. On average, the service and supply for an injection seems to cost between 150 and 250 kyats and an IUD between 350 and 700 kyats.

During the course of the assessment there were also a number of reports of private general practitioners providing vasectomy and inserting IUDs. The reports of vasectomy costs at general practitioners varied widely, from 1,000 to 5,000 kyats.

Public sector staff (in-service private practitioners)

Public sector staff also provide birth spacing services in all townships as a part of their private practice. This is predominantly the lady health visitors and midwives, but some doctors and other medical staff also have a private practice. Even in non-programme townships, where public sector staff do not officially provide birth spacing services, most midwives and lady health visitors give information on contraception to women, and many administer the methods once women have bought them from the drug shop. Others will advise the woman to go to a general practitioner for this service. In some sites health staff report buying methods from the drug shops themselves and subsequently selling them to women in their local area.

The Maternal and Child Welfare Association

The Maternal and Child Welfare Association provides advice to women regarding birth spacing, and were reported to be helpful to women during the process of sterilisation application by supplying the forms and information for this application. In some townships visited by the team, the MCWA had also been active in the distribution of contraceptive pills

and condoms. They had received their supplies from the central level during a special activity, but the number they were provided with were not enough to make a serious impact. Despite the small number of condoms available for distribution, MCWA members still felt that it was difficult to give them away. This is probably a reflection of the population to which MCWA generally has access, and of the fact that many members were uncomfortable talking about condom use. The MCWA have also been actively involved in the 72 townships with UNFPA birth spacing projects. In these townships, five volunteers from MCWA have been trained as trainers on birth spacing and reproductive health. They, in turn, have provided training to an additional 20 health volunteers in each township.

Social Marketing

The condom social marketing activities began in mid-1995, with formative research being conducted with UNICEF support. This resulted in the development of an appropriate brand name, packaging design and motivational messages. Population Services International (PSI) then began to implement a condom social marketing project with its own funds. Beginning with one township in July 1996, the social marketing campaign has expanded to cover eight urban centres that represent the major population centres of central Myanmar. The social marketing project targets groups that are at high risk for HIV such as transport workers, migrant workers, commercial sex workers, intravenous drug users and their sex partners. In October 1997 a one-year UNAIDS-funded project was initiated, and during the 11 months of this project 2.54 million condoms were sold through a network of 878 retail outlets across 11 states and divisions (PSI 1998, Honeyman 1998).

BIRTH SPACING PRACTICES

During discussions with both community members and service providers it was mentioned that over the past few years the number of people using contraception has increased. One obstetrician/gynaecologist said that she thought that the contraceptive prevalence rate had increased from 20 to 60 per cent. Whilst this is likely to be a significant over-estimate, it indicates the perceived magnitude of the change in some communities. These anecdotal impressions corroborate the preliminary findings of the recent FRHS, which show that 32.7 per cent of the currently married women are using a method of birth spacing, and 28.4 per cent are using a modern method. These figures are in contrast to the 1991 PCFS in which the rates were found to be 16.8 and 13.6 per cent respectively (Table 9). Since the public sector birth spacing programme has only been in its infancy during this period, and covers only a small proportion of the country, it is hypothesised that this increase in contraceptive use is primarily through the private sector.

From the team's field visits and the FRHS, the most common methods were found to be the hormonal methods (pills and injections). The relative balance of these two, however, may be shifting, with more injectable users in recent years. Other methods available and used to some extent in Myanmar are sterilisation (both male and female), the condom and the IUD, as well as some traditional methods.

Table 9. Per cent of currently married women of reproductive age who are currently using a birth spacing method (per cent of current contraceptive users who are using a specific birth spacing method)

	1991 PCFS	1997 FRHS
Pill	4.0 (23.8)	7.4 (22.8)
Injecton	3.1 (18.5)	11.7 (36.0)
IUD	0.9 (5.4)	1.3 (4.0)
Condom	0.1 (0.6)	0.1 (0.3)
Female sterilisation	3.7 (22.0)	5.5 (16.9)
Male sterilisation	1.8 (10.7)	2.2 (6.8)
Traditional methods	3.2 (19.0)	4.3 (13.2)
Total	16.8 (100)	32.7 (100)

Source: Ministry of Immigration and Population (1998) *Fertility and Reproductive Health Survey* (preliminary results), and Ministry of Immigration and Population (1995) *Myanmar Population Changes and Fertility Survey*.

Hormonal methods

The extent of the use of hormonal methods has been well documented in a number of recent studies (see Ministry of Health 1997a). The findings from the current assessment confirm much of what was already known, particularly that both pills and injectables are widely preferred throughout Myanmar. One new finding from this assessment is that the use of injectables appears to be increasing, and in many places they are now more popular than pills. This also corroborates the FRHS findings. There are many types and brands of injectables on the market and in use, including one-monthly Chinese injectables, two monthly (Noristerate) and three-monthly (DMPA) injections. Similarly, there are several brands of oral contraceptive pills available.

From discussions with community members and service providers, the team found that there had been a considerable decrease in the use of two specific hormonal methods made in China, the once-a-month Chinese injectable and the once-a-month pill. During the WHO sponsored Assessment of the Contraceptive Method Mix conducted in 1996, the use of these methods was reportedly high, and was identified as a cause for concern (Ministry of Health 1997). Many providers during the current assessment seemed to be aware of the low efficacy and possible harmful effects of these methods. Providers reported, however, that some women use them because of their low cost.

Female sterilisation

As noted above, female sterilisation is the only method available in the public sector in townships without a birth spacing programme. In the 1997 FRHS 17 per cent of currently contracepting married women of reproductive age were found to rely on female sterilisation, representing 5.5 per cent of the total currently married women of reproductive age. One provider reported that the popularity of sterilisation was on the increase. In terms of per cent of currently married women, this appears to be true from the PCFS and FRHS data presented above (Table 9), but the relative prominence of this method in the overall method mix has somewhat decreased.

The method is only available to women who have been given specific permission. Application for sterilisation involves the submission of a form signed by the woman, her

husband, and a service provider. The sterilisation board then considers her case. Approval from this board tends to be given, but the procedure is lengthy.

It appears that a significant proportion of all sterilisations are performed immediately postpartum or in the few months after delivery. Many women choose to begin the application process while they are pregnant, in order to guarantee that this is their last pregnancy. Doctors also report that they prefer women to have their sterilisation immediately after delivery, as they are concerned that otherwise the woman may not come back until it is too late, and she may become pregnant again.

Male sterilisation

The team found that the prevalence of vasectomy within the communities visited was significantly higher than previous expectations. Whilst the recent FRHS does indicate a rise in the per cent of users of this method, from 1.8 to 2.2 since 1991, awareness of both the method and available providers, as well as reported users, were all unexpectedly high. Under the present policy, a vasectomy is permitted for the husband only if the wife has approval for female sterilisation but is found medically not fit for her sterilisation to be performed. Most men were getting vasectomy without this permission, and many did not appear to know that such permission was required.

Condom

Although the condom appears to be widely available in many drug shops, the assessment team did not come across anyone who was using it as a birth spacing method. As mentioned previously, it is viewed by most as primarily a method for preventing sexually transmitted disease. Less than one per cent of the current contraceptive method mix (MOIP 1998a) is attributable to condoms.

IUD

The use of the IUD remains limited with just 1.3 per cent of currently married women relying on it as a contraceptive method, representing 4 per cent of the current contraceptive method mix. These figures have not changed significantly since 1991, although the IUD has been provided within the expanding public sector birth spacing programme.

ROLE OF MEN IN BIRTH SPACING

The role of men in birth spacing appears to be quite limited. The use of the two male methods available in Myanmar, condoms and vasectomy, are constrained by a number of social and legal issues. The condom has a poor image amongst both men and women, being generally associated with prostitution and sexually transmitted disease. Hence, few men or women consider using the method for birth spacing. The other available method, vasectomy, is only legally available to a very select group of men, as described above. From the FRHS, only 2.3 per cent of currently married women of reproductive age were relying on a male method for contraception.

While not opposed to contraceptive use, the assessment team found that husbands were generally not actively supportive of their wife's desire to use contraception. Not all men

were against the practice, but many people, both women and men, reported that men believe that it is the responsibility of the woman to make decisions regarding contraceptive use.

CONSTRAINTS TO THE PROVISION OF QUALITY BIRTH SPACING SERVICES

Access and availability of methods and services

The currently limited geographic reach of the public sector birth spacing programme is certainly a barrier to access. Only 117 townships out of a total of 320 are providing contraceptive and birth spacing services in the public sector. Outside of these townships people have to rely on the private sector, in which the quality and availability of services and commodities is highly variable.

Availability of a woman's desired contraceptive method is not always assured. There are certain brands that are more widely available than others, particularly the Chinese made oral pills. The team noted a greater availability of methods in the urban areas. The fact that general practitioners and drug shops tend to be clustered in the towns and cities limits the access of all women to contraceptive products, but particularly those living in non-programme townships. In a number of the non-programme sites visited, government sector staff report buying contraceptive products when they are in the urban areas, and reselling them to women in the rural areas. The informal nature of this arrangement obviously has implications for the continuity of supplies.

Access to female sterilisation is limited, in part because of the lengthy application procedure. The length of this application procedure reportedly varies between townships, and appears to be influenced by the motivation of the providers at township level and the regularity of the sterilisation board meetings. In Mon state it was reported that the board consists of five people, of whom at least four must be present for decisions to be taken. This board meets only once every two to three months, thus women experience a significant delay between application for sterilisation, and receiving the surgery itself. The process in Taunggyi is reportedly shorter, taking only one month. It may be noted that female sterilisation is permitted only under certain circumstances, predominantly for health reasons. Women seeking sterilisation should have at least three children and be at least 30 years old, although if there are strong medical grounds for sterilization these criteria can be waived. One provider interviewed during the assessment knew of women under the age of 30 who had had their applications refused. Another said that if a woman is under 30 she will lie about her age on her application form. In Tachileik, the assessment team heard numerous reports of women travelling to Thailand to obtain sterilization. Despite the relatively high cost (1,000 baht – US\$25), the advantages of not having to go through the application process in Myanmar apparently inspired this behaviour.

The major constraint to access to male sterilisation is the legality of the procedure. Officially vasectomy is only available to men whose wives have received permission for female sterilisation from the sterilisation board, but who are unable to undertake the procedure due to medical reasons. In both programme and non-programme townships there are very few health staff trained in the insertion of IUDs.

Costs

Throughout the assessment, both women and service providers mentioned the cost of contraception as a major factor influencing use and choice of effective and appropriate methods.

In terms of hormonal methods, cost is a serious consideration not only in the decision of whether or not to use a method, but also of brand. Many women choose the cheapest available brand of her chosen product (i.e. pills or injections), regardless of the perceived effectiveness or health risks. Others will make the decision between pills or injectables based on affordability. Other women report that they just cannot afford to buy any method, or that when they have money they will use contraception, but that they cannot afford it all of the time.

A range of prices was given for injectables and pills, and often an additional charge will be made for administering the injection. There was a greater range in the price of pills than there was in that of injectables, with daily pills selling for between 15 and 160 kyats per month. Difference between prices of pills was generally related to the brand of pill, although geographic variations were also seen. The cheapest of the daily pills seen on the market was referred to as the “Finger” pill, and reported to be the new version of the more expensive and popular Combination 5. The daily oral pill from China was generally the cheapest oral pill, being between 14 and 20 kyats in the drug shops visited by the assessment team. Prices for the three-monthly injectable were in the range of 100 to 200 kyats, and for the one-monthly injectable the price was approximately 20 kyats. Even in townships with a birth spacing programme, women report that cost is a significant barrier to use, and that it is significantly more expensive to get injectables from the sub-centre (250 kyats) than to buy it from the drug shop (125 kyats).

In addition to the complicated nature of the application process and the time delay between application and approval, cost is a major barrier to the use of female sterilisation. Officially women are only expected to pay for the drugs and equipment used during the procedure. In reality, however, the financial burden is much greater and gifts are given to providers throughout the process. Some women said that the total cost could be as high as 10,000 kyats. The cost to the client includes procedure costs, transportation, and costs related to five to seven days stay in hospital.

The cost of condoms was not mentioned as a reason for them not to be used. The team found, however, that there was often a wide gap between the price of condoms as mentioned by men, and the price quoted in drug shops. Men often thought the price of condoms was three to four times as expensive as was quoted in drug shops. This in itself may prevent them from using the method. As with the hormonal methods, a range of prices was seen in the drug shops for condoms of different brands (from 2 to 20 kyats per piece).

The cost of both the IUD itself and the insertion is prohibitive for many women. In birth spacing townships the charge is generally between 100 and 200 kyats. If a woman has to buy the method from a drug shop and then pay a private provider to insert the IUD, the costs could be much higher. In the drug shops visited by the team, when available, a Multiload

IUD could be bought for between 1,000 and 1,300 kyats. A number of CuTs were also seen, and were said to be between 165 and 220 kyats.

Cost sharing is one mechanism through which the public sector has sought to provide contraceptive methods and services at affordable prices. The assessment team found, however, that, in the project townships visited, cost sharing was understood in a variety of different ways. In some instances, there is one amount charged under the cost-sharing system, for example by the midwife. In other instances there is an additional cost added at more than one level, for example at township level and again at provider level.

Quality of care

During the fieldwork, the team identified a number of issues related to the quality of care in the provision of birth spacing services. Inadequate skills and knowledge, limited time for counselling, and a number of missed opportunities were observed to be reasons for the low quality of care in general. The quality of care seems to be better in the birth spacing programme townships where counselling is a formal part of the service provision.

Providers at all level were found to have only a superficial knowledge of the contraceptive products they provide. This was particularly true of drug shop dispensers, from whom most women get their contraceptives. General practitioners tend to provide better quality information, but are generally untrained in birth spacing, and therefore not fully informed. In either case, providers report only giving women detailed information when they specifically ask. Public sector providers in non-programme townships, particularly basic health staff, were found to have superficial knowledge of contraception, which inevitably affects their ability to adequately counsel the women they are in contact with.

The timing of a woman's visit to a service provider also limits the provider's ability to provide quality counselling on a range of contraceptive methods. When a woman visits a private general practitioner, she has usually already made a decision regarding the method she wishes to use. For example, women will buy a contraceptive injection or IUD from a drug shop, then visit a private provider for the injection or insertion. One lady health visitor interviewed said that she cannot give a woman contraceptive advice before pregnancy because her first contact with the woman is during antenatal visits, once the woman is already pregnant.

Despite these limitations reported by providers, the team noted a number of missed opportunities for birth spacing counselling. Most providers reported that they only discussed birth spacing issues with women if they specifically came for such advice. Providers do not perceive the importance of discussing birth spacing with women who consult for other medical services. Even when discussing other areas of reproductive health, providers appear reluctant to bring up the subject of birth spacing and contraception. For example, counselling on birth spacing for women with complications of induced abortion, or for women in the post natal period, was found to be superficial if provided at all.

The quality of commodities available in the private sector was difficult for the team to determine. A recent assessment conducted by the Ministry of Health (1997) identified a number of issues in relation to the quality of contraceptive products, including the availability of hormonal methods for which safety and efficacy had not been adequately tested. The current assessment identified the labelling of products to be a factor limiting the appropriate

use of a number of methods. None of the contraceptive products available in Myanmar (other than condoms supplied by PSI) were found to have packaging in the Myanmar language. Many were found to provide no information at all, and others were written in English, Bengali, Thai, Chinese, and a number of other languages. Even the products provided in the public sector are not labelled in the Myanmar language, and although it appears to be true that most township level providers are competent in the English language, this is not true of the village level providers or the women themselves.

Reproductive Tract Infections

The term “reproductive tract infection” (RTI) is used to refer to a variety of infections that may occur in men and women. It includes the numerous sexually transmitted diseases (STDs), as well as iatrogenic and endogenous infections of the reproductive tract. The latter are most common among women and either result from genital tract procedures, such as IUD insertion and induced abortion (iatrogenic infection), or the disturbance of vaginal ecology, with an associated overgrowth of organisms normally present in the vagina (endogenous infection). Bacterial vaginosis and candida (yeast) infection are the common endogenous RTIs and together are responsible for the majority of vaginal discharge symptoms among women. STDs include genital ulcerative diseases (such as syphilis, chancroid, and herpes), gonorrhoea and chlamydia (the most common causes of urethral and cervical infection), and numerous viral infections. Viral pathogens include Human Papilloma Virus (HPV), which has been associated with the development of several genital tract cancers, and Human Immunodeficiency Virus (HIV), the cause of Acquired Immune Deficiency Syndrome (AIDS).

Given the serious and well-described epidemic of HIV that emerged in neighbouring Thailand in 1989, great concern has been raised regarding the potential spread of HIV/AIDS within Myanmar over the past several years. Relatively less attention has been directed toward the broader category of STDs, although a vertical programme for the control of STDs has existed for many years. Endogenous RTIs have received very little attention and the need to address this category of infection has only been brought into focus by recent attempts to expand and integrate the provision of reproductive health services. As in most other countries, iatrogenic infections have remained almost entirely undocumented.

OVERVIEW OF RTI PREVALENCE

Ironically, the best prevalence data currently available concern the newest RTI pathogen, HIV. A national sentinel surveillance programme for HIV infection was established in March 1992. This programme involves the semi-annual (March and September) collection of anonymous, unlinked blood samples from a number of “sentinel” groups. The sentinel groups are designed to include a number of “at risk” groups (e.g., STD patients, sex workers, and injection drug users), as well as several groups more indicative of prevalence among the general population (e.g., pregnant women, blood donors, and new military recruits). Results from the September 1997 round of surveillance screening are summarised in Table 10 (March 1998 results were not available at the time of this report). Review of the site specific data reveal a considerable amount of geographic variation in the prevalence of HIV among the various sentinel populations, with rates generally higher in the eastern States and Divisions bordering Thailand, Laos, and southwestern China (Yunnan) (DOH 1997). A review of temporal trends (Table 11) indicates that rates of HIV infection are extremely high among injection drug users and are generally increasing among sex workers and STD clients (male and female). Of particular concern is the steady rise in seroprevalence rates among the “lower risk” sentinel groups (blood donors, pregnant women, and military recruits). This suggests that current efforts to reach “high risk” populations are ineffective and the epidemic is spreading further within the general population. The most recent HIV prevalence rates among antenatal clients range between 0.0 per cent in Yangon and Bago and 5.1 per cent in Kawthaung on the Myanmar-Thailand border.

Table 10. Sentinel surveillance results for September 1997

Population Group	Number of Sites	Number screened	Number Positive	Percent Seropositive	Median	Range
Male STD clients	18	1723	145	8.4	8.0	0.0 – 21.0
Female STD clients	7	666	71	10.7	10.0	4.0 – 19.0
Sex Workers	2	200	52	26.0	-	16.0 – 36.0
Injection drug users	5	445	250	56.2	65.0	19.0 – 80.0
Pregnant women	14	2799	54	1.9	2.0	0.0 – 5.1
Blood donors	2	11126	107	1.0	-	0.8 – 1.5
Military recruits	2	1199	28	2.3	-	1.2 – 3.5

Source: Department of Health (1997) *Sentinel Surveillance Data for September 1997*. Yangon: AIDS Prevention and Control Project.

The Tuberculosis Institute, in co-operation with the National AIDS Programme, began surveying new TB patients for HIV infection in March 1995. Among 15 sites surveyed in September 1996, rates ranged from 0.0 per cent to 14.0 per cent, with a median of 5.0 per cent. The temporal trend shows steadily increasing prevalence (from 1.7 per cent in March 1995 to 4.4 per cent in September 1996). Rates are higher among male TB patients than female patients.

Table 11. Sentinel Surveillance Results: March 1992 to September 1997

Population Group	1992 March	1993 March	1994 March	1995 March	1996 March	1996 Sept	1997 March	1997 Sept
Male STD clients	9.0	6.9	5.7	7.1	7.7	10.2	8.9	8.4
Female STD clients	6.5	3.1	4.7	4.4	4.0	8.3	8.2	10.7
Sex workers	4.3	8.9	16.4	18.0	21.5	20.5	25.0	26.0
Injection drug users	62.8	74.3	71.4	54.5	66.4	65.0	54.1	56.2
Pregnant women	0.0	1.3	1.5	1.3	1.3	1.3	1.5	1.9
Blood donors	0.3	0.5	0.5	0.4	0.7	0.7	0.7	1.0
Military recruits	1.3	0.4	0.5	0.5	0.4	1.3	0.5	2.3

Source: Department of Health (1997) *Sentinel Surveillance Data for September 1997*. Yangon: AIDS Prevention and Control Project, and Institute of Economics (1997) *Socio-Economic Conditions of Migrant and Transport Workers in Border Areas of Myanmar and HIV Transmission*.

There is little data on the epidemiology of non-sexually transmitted RTIs and the prevalence of STDs aside from facility-based studies. RTI prevalence data from a clinic-based study conducted at the Central Women's Hospital, Yangon are summarised in Table 12. The study measured the prevalence of RTI among 346 women with symptoms of "white discharge" or "pelvic pain" who came to an out-patient gynaecological service in Yangon. Unfortunately, this study did not assess the prevalence of chlamydia and used some imprecise definitions of "RTI" (e.g., the prevalence of "non-specific" infection was 54.4 per cent) (Khin Myint Wai et al. 1997).

There are no prevalence data available from community-based studies concerning any RTI. The FRHS did include several questions regarding current symptom status. Fourteen percent of women surveyed reported currently suffering from vaginal discharge (4 per cent had "smelly discharge") and 3 per cent had vaginal itching. Given a rather poor correlation

between reported symptoms and the presence of infection as documented by clinical and laboratory exam, it is not clear how well these reported symptoms describe the actual situation concerning RTIs in the community.

Table 12. Prevalence of RTIs in a Women's Out-Patient Department (per cent)

Presenting symptom	Gonorrhoea	Trichomonas vaginalis	Candida	Syphilis (VDRL+)	N
White discharge	0.8	10.5	0.8	2.8	247
Pelvic Pain	4.0	3.0	-	2.0	99

Source: Khin Myint Wai et al. (1997) *Reproductive Tract Infections among OPD attendees of Central Women's Hospital, Yangon*

In all the townships visited by the RH assessment team, both government health workers and private general practitioners (GPs) reported seeing STD patients in their clinics, however, the number of patients varied considerably. Government STD teams reported that the number of clients at their clinics ranged from 3 to 30 per day. While some community members were not aware of STDs, many people interviewed believed that STDs were quite prevalent in their community. Health care providers of various types shared the opinion that STDs were common.

Syphilis (VDRL) serosurveillance has recently been included within the national HIV sentinel surveillance programme and behavioural sentinel surveillance was introduced in the sentinel surveillance sites in Yangon and Mandalay for the first time in September 1997. The behavioural sentinel surveillance attempts to link HIV prevalence data with information on the frequency of high-risk behaviours. Questionnaires are administered at the time of blood sampling, asking individuals in the surveillance programme to provide information on condom use, symptoms of other STDs, and sexual and drug use practices. Table 13 summarises this data for the first round of behavioural surveillance, conducted in September and October, 1997. The sample included 632 individuals from Yangon and 417 from Mandalay (Department of Health 1997).

Table 13. Results from first round of behavioural sentinel surveillance

Sentinel Group	Number screened	Regular condom use	# of partners past 6 months (range)	IDU alone	Needle sharing	VDRL positive	Discharge	Ulcer
Male STD Clients	180	7.8	1-5	2.8	1.1	N/A	11.1	30.6
Female STD Clients	72	4.2	1-5	1.7	N/A	43.9	12.5	11.1
Sex Workers	201	34.3	1-100	2.5	N/A	41.0	3.5	4.0
Injection Drug Users	80	28.8	0-5	86.2	58.8	N/A	8.8	10.0
Pregnant Women	307	2.0	1	N/A	N/A	8.8	0.3	1.6
Blood Donors	209	8.6	0-2	0.5	0.5	N/A	N/A	1.9

Source: Department of Health (1997) *Sentinel Surveillance Data for September 1997*. Yangon: AIDS Prevention and Control Project.

Data from the National STD Control Programme

The National STD Prevention and Control Programme was established in 1951 and operates under the auspices of the Department of Health (Disease Control). Currently, 36 STD control teams work in 25 of Myanmar's 320 townships. The Teams work to reduce the transmission of STDs and HIV, diagnose and treat cases of STDs, and monitor, record, and report STD regional trends to the Central STD team in Yangon. They are also encouraged to promote and provide condoms and engage in outreach prevention activities, particularly with target groups such as commercial sex workers and youth. They are also responsible for implementing the serological and behavioural sentinel surveillance programme described above.

The Central STD Team in Yangon compiles data from the field and publishes annual statistics regarding STDs in Myanmar. The most recent available report, for 1996, indicates, for example, that 3.8 per cent of screened primipara pregnant women were VDRL positive, 2.3 per cent of blood donors, 16.8 per cent of male STD clinic clients and 25.4 per cent of female STD clinic clients. Information regarding the incidence of other STDs is generally presented numerically, rather than as a percentage of screened clients. As a result, comparisons need to be made across townships or time. For instance, incidence rates for gonorrhoea and chancroid seem to have fallen since the mid-1980s and both discharge and ulcerative STDs are recorded at much higher rates in the urban centres of Yangon and Mandalay than they are for any of the other townships (Ministry of Health 1997b).

The temporal trend presented in the 1996 Annual Report confirmed a 1995 retrospective incidence study that investigated the number of STD cases reported by the AIDS/STD control teams since 1985 (Ministry of Health 1997b). In the most recent years, new cases of syphilis measured among pregnant women as an "indicator group" decreased from 5.2 per cent of women screened in 1993 to 4 per cent in 1995. The data gathered by the STD control teams, however, do not give a reliable indication of STD prevalence throughout Myanmar as they only reflect infection rates of clients seeking treatment at public STD facilities.

The township level STD Control Teams are also centrally involved in the UNICEF-sponsored project "Prevention and Control of HIV/ AIDS in Myanmar through Promotion of Reproductive Health." In an effort to strengthen the teams' capacity for diagnosis and treatment of STDs, the programme has given team leaders refresher training on STD care and management, and involved them in improving STD services offered by private medical practitioners. The project is also working to develop and strengthen the Central STD Team's data management system.

COMMUNITY KNOWLEDGE AND PERCEPTIONS

Knowledge of STDs and AIDS and their prevention

The recently completed FRHS included a number of questions concerning women's knowledge of STDs and AIDS and strategies for prevention. These data, summarised in Table 14, show a number of important patterns. Knowledge of STDs, AIDS and HIV prevention strategies is clearly better in urban areas, where women presumably have better access to media and health education initiatives. There is also a strong association between awareness of AIDS and educational attainment (MOIP 1998a). Knowledge of AIDS was

consistently greater than that concerning STDs; a finding that was corroborated by discussions conducted in the community as part of our field assessment.

Table 14. Knowledge of AIDS and Prevention Strategies

	% of ever-married women who have heard about STDs	% of ever-married women who have heard about AIDS	% of ever married women who know how to prevent AIDS
Residence			
Urban	86	96	78
Rural	71	77	43
Education			
No schooling	55	60	27
1-4	77	85	48
5-8	87	96	70
9-10	95	99	88
University	98	99	97
Total	75	82	51

Source: Ministry of Immigration and Population (1998) *Fertility and Reproductive Health Survey* (preliminary results)

Table 15 summarises the knowledge regarding specific means to prevent HIV transmission among the 82 per cent of women who knew one or more method of preventing infection. It is worth noting that, even among women, the most commonly reported means of preventing AIDS was “avoid sex with a prostitute.” As described below, many people interviewed by the assessment team strongly associated AIDS with commercial sex and, simultaneously, felt themselves to not be at significant risk.

Table 15. Knowledge of ways to prevent HIV transmission

Prevention strategy	% of ever-married women
Use condom during sex	5.4
Have only one sex partner	27.8
Avoid sex with prostitute	35.3
Avoid sex with homosexuals	6.5
Avoid kissing	1.4
Avoid blood transfusion	16.0
Avoid injections	24.8
Avoid IV injection of narcotic drugs	8.5
Avoid tattooing, acupuncture, other skin piercing	2.7
Other	0.5

Note: Does not to 100 per cent because of multiple responses

Source: Ministry of Immigration and Population (1998) *Fertility and Reproductive Health Survey* (preliminary results)

Such attitudes were found to be widespread in a number of recent studies. The results from a 1994 study of 6000 interviewed participants, fewer than 50 per cent of participants believed that AIDS could happen to people like themselves, or that they would ever become infected in their lifetime. Similarly, an open-ended question soliciting spontaneous responses about means of HIV transmission was most frequently answered with “having sex with a

prostitute.” Respondents’ sense of invulnerability was further reflected in attitudes toward condoms. Although many individuals in the sample knew that use of condoms could reduce the risk of HIV transmission, only 9.6 per cent of those who answered the question about personal use stated that they or their partner had ever used a condom. Further emphasising the perceived links between HIV and commercial sex, over 85 per cent of respondents stated that condoms need only be used with prostitutes (Population Council and UNICEF 1998).

It was apparent from our assessment that many people do not have adequate knowledge concerning RTIs, STDs, and HIV. Few individuals, including health care providers, make a clear distinction between sexually transmitted and non-sexually transmitted RTIs and often all symptoms of RTI — for example vaginal discharge — are attributed to STDs. This was especially of concern among women, given that statistically endogenous infections are more common than STDs as a cause of vaginal discharge symptoms. Several women reported that vaginal discharge was a certain sign of STD and, consequently, marital infidelity. Hence, it seems that lack of a clear understanding of the variety of RTI causes may sometimes lead to false assumptions regarding the partner’s sexual behaviour and result in marital discord. Some individuals also reported incorrect beliefs about the types of people at risk of RTIs. For example, several respondents reported that the problem of vaginal discharge is found only in young girls or those with special occupations, such as teachers and seamstresses. It was not clear where these beliefs had originated. On the other hand, some respondents reported that occasional “white discharge” was a normal occurrence. There was some variability in the local terms used and generally little consensus about the importance of RTI symptoms or the appropriate course of action required in terms of seeking health services.

Sources of information and beliefs concerning transmission and condom use

The diversity of languages used in different locales was found to be a significant barrier to the acquisition of information regarding RTIs, as well as the process of seeking the appropriate treatment for RTI symptoms. This was particularly the case in areas with a high proportion of ethnic minorities, such as the Shan State. Information materials are generally only available in the Burmese language, although in many areas of the country significant numbers of men and women belong to ethnic minority groups and do not read Burmese. This was also a problem in regard to the labelling of prescribed drugs, which have not been marketed specifically for Myanmar and are consequently labelled in Thai, Chinese, Hindi, Bangla, or other languages from nearby countries. Any printed directions regarding administration, as well as indications, counter-indications, side effects, or restrictions are not legible to most of the people purchasing these pharmaceutical products. In Tachileik, in the Eastern Shan State, people reported travelling into Thailand for RTI treatment; where they sought access to health care providers as well as drugs. One of the major reasons given for this care seeking behaviour was that they could communicate better with the Thai providers (the northern Thai dialect is quite similar to Shan, while the Burmese language is very different).

Many men and fewer women had heard about specific STDs. Some people have acquired knowledge about STDs by attending talks given in their villages by the local STD team or by members of the MCWA. STDs are generally seen as diseases men acquire because they visit sex workers. A commonly used term for STDs among both men and women is “phar-kyo”, which literally means, “broken by a prostitute.” Men who are drunk are thought to be more likely to visit sex workers. Many people also believed that young men would frequent sex workers and that this was a common venue for sexual initiation among male youth. The

assessment team was also told that, as prostitution is highly criminalized and the venues for commercial sex restricted, often several men would spend an evening with a single sex worker in a secluded location. In these situations it would be rare for the sex worker to use condoms for every sexual encounter and, hence, the risk of disease transmission is very high. Many respondents also mentioned that men go to work in Thailand and bring back STDs and, particularly HIV, which they have acquired from prostitutes. There is a very strong association made between STDs, AIDS, pimps, and prostitutes. As a consequence, few people see this as a problem that directly affects their own lives. While women generally do recognize that they can acquire STDs from their husbands, most feel that their own personal risk is low because their husband “does not visit prostitutes” or “does not work in Thailand.” The strong association between STDs and commercial sex creates one of the greatest barriers to more widespread condom use, as condoms are seen primarily as a means of preventing infections associated with sex workers. Indeed, in some locales the mere possession of a condom by a man is seen as an intention to visit sex workers and, for women, having a condom may be used to corroborate an accusation that she is a sex worker herself.

The team found that in most large villages people knew that condoms could prevent STD transmission and were sometimes also aware of places where condoms could be purchased. Some even reported that condoms are available at the brothels. Most individuals mentioned that the price is 20 kyats apiece whereas the shops reported selling them for 5 kyats. Thus, while the use of condoms for STD prevention is generally known, condoms are rarely used. This reflects both the stigma associated with condoms (described above), as well as their cost and limited availability.

Attitudes toward condom use were significantly different in Tachileik, where proximity to Thailand and the Thai national AIDS prevention campaign, as well as a large population of persons living with AIDS, may have contributed to greater awareness of the widespread nature of HIV and the need to prevent infection. This is probably related to the fluid border between Tachileik and Mae Sai and the fact that many Shan can understand the Thai language. It was also reported that much of the commercial sex purchased by men from Myanmar residing in Tachileik actually takes place in Thailand. Consequently, the effects of Thailand’s “100 per cent condom use” policy — which has been aggressively implemented in Chiang Rai and other northern Thai Provinces — would have reached these men.

As noted previously, awareness of HIV/AIDS is generally higher than other STDs. Many people have heard about HIV/AIDS from television, billboards, pamphlets, and radio songs and most know that it is a serious, incurable, and fatal disease. There is also a general belief that the incidence of HIV/AIDS is on the rise. This was often attributed to the “risky sexual behaviours of young people.” Their knowledge of HIV/AIDS is quite superficial, however. Although most know about the principle modes of transmission, few are able to distinguish between HIV and AIDS or able to say how long it takes before a person with HIV infection will develop AIDS. Most people who reported a personal experience with persons living with HIV/AIDS referred to knowing someone who had gone to work in Thailand and came back suffering from AIDS. These individuals were reported to have become very thin with high fever. They later became listless and died. The rather uniform nature of these descriptions may reflect an incomplete understanding of the multiple presentations of HIV disease. Deaths from HIV/AIDS were most commonly reported to be among returning migrant workers.

Health seeking behaviour

Most people suspecting that they have a STD will self-treat before consulting with a health care provider. This self-treatment usually involves discussion with their friends and buying a number of drugs from a local drug shop. The advice and treatment received in this way is generally not appropriate as it usually involves the wrong medicines in the wrong doses and on the wrong schedules. Only when symptoms do not resolve will treatment be sought, usually from a private provider.

Both men and women most often reported visiting private GPs for the treatment of symptoms related to RTIs. For many this was a matter of convenience, as well as confidentiality. In some areas, public sector providers were thought not to have the training, drugs, or equipment needed to appropriately manage these infections. Women generally expressed a strong preference for female providers when seeking consultation for any problems related to the reproductive tract. Women reported that most were “shy” of these problems and, for some women, one “advantage” of visiting a private GP was that they would receive antibiotic treatment without having to undergo an internal gynaecological exam.

The use of traditional methods of treatment using herbal remedies and “patent medicines” by both men and women was found to be widespread, particularly in rural areas where access to other drugs and private providers was more limited. Similar findings emerged during the provision analysis of a recent study of perspective of reproductive morbidity, conducted in Pyay and Kalaw townships (Department of Health 1998).

UNICEF Life Skills Training Project

UNICEF has implemented the project “Prevention of HIV/AIDS through Promotion of Reproductive Health” since 1994. The project initially covered 25 townships throughout Myanmar and recently has been expanded to a total of 69 townships. The primary goal of the project is to strengthen the integration of STD and MCH services through training, prevention counselling, and the development of user-friendly services. It includes improving RTI case management through the training of MCH workers, as well as private GPs (through the MMA). In several townships, UNICEF has also established “user-friendly clinics” that are less stigmatised and open at more convenient hours than public sector clinics. A critical element of UNICEF’s HIV/AIDS prevention programme has been a set of life skills training efforts, which are being implemented in the project townships by the Myanmar Red Cross Society (MRCS) and the MMCWA. The MRCS activities target youth in the project townships, while the MMCWA works primarily with married women in both urban and rural settings. The curriculum for this training programme was developed in a very participatory manner with assistance from the Thai Red Cross. UNICEF and the implementing NGOs have conducted a recent evaluation of this programme, which found that overall it had been extremely successful. Knowledge and ability to discuss and negotiate important topics had improved markedly among participant youth, for example. The recommendations from the evaluation have helped to guide future plans for project execution, monitoring, and performance appraisal as the HIV/AIDS prevention programme is expanded to cover 69 townships.

PROVIDERS PERSPECTIVES

Attitudes

In referring to the health care seeking behaviour of patients with STDs, providers described these diseases as being considered “silent” conditions. They felt that STDs mostly affected men and sex workers and were treated secretly. Many providers felt that certain groups of men were at special risk, such as truck drivers. Young persons were also generally seen to be a category of people especially vulnerable to STD.

Midwives

Midwives mentioned that women sometimes seek their help for “white discharge.” They reported that they normally provide oral metronidazole, with one tablet to be taken three times a day for 3-5 days as an initial treatment for most types of vaginal discharge. Some midwives mentioned that if the woman’s discharge is thick or has foul odour, and the patient can afford it, they prescribe mycostatin vaginal (tablets) or canesten for presumed candidiasis. A few mentioned that they examine the vulva to determine the type of discharge. Specula are generally not available at rural or more peripheral health centers, however, so vaginal exams are rarely conducted.

The role of midwives in respect to prevention and/or treatment of STD, specifically, appears negligible. Although some have received training from the STD teams or through basic health training, this training is often not used in practice. Midwives rarely if ever provide health education in the community concerning STDs and only provide advice on RTI symptoms for individuals who request it directly, such as when they experience unusual vaginal discharge, as mentioned above. Training for midwives does not emphasize comprehensive case management and does not include use of standardised treatment flowcharts, condom counselling or partner notification.

Midwives are, however, involved in collecting blood samples for VDRL testing of women seeking antenatal care at some urban MCH centres and district hospitals. Such screening is also carried out at more peripheral levels in some townships where there is a STD team. The results of such screening tests are often not returned to the providers, however, and it is not clear what proportion of women with positive VDRL tests actually receive appropriate treatment for themselves and their sexual partners.

When asked who was at risk of STDs, midwives often mentioned that “young boys” in the village (especially those who are wealthy or “own motorcycles”) are likely to have multiple sexual partners. They claim to know this because some of these boys request penicillin injections from the midwives. Most midwives said they do not give such injections and the boys then go to private GPs or “quacks.” Most young boys we interviewed, however, said that if they had STD symptoms, they would not go to a midwife because she is female. Boys and men reported a strong preference for male health care providers. The midwives also appeared quite judgmental about persons with STDs, believing that these diseases are caused by immoral behaviour. They commonly reported that the prevalence of STDs is on the rise because young boys are increasingly exposed to pornographic videos.

General Practitioners

In the townships visited by the assessment team, specific GPs would often become locally known as STD specialists. As a result, these providers could have as many as 100 STD patients a month. In contrast, other GPs in the same locale would have 5-10 STD patients per month. One reason why clients prefer to seek care for RTI syndromes within the private sector relates to concerns about confidentiality within state-run services. For instance, there is some indication that the confidentiality of VDRL test results is not being respected in all instances. In one township visited it appears that the local administrative authorities may be receiving reports of all positive test results.

Unfortunately, private GPs have received little or no training since medical school concerning the case management of RTI syndromes. The only exception is in townships receiving support through UNICEF's HIV/AIDS prevention efforts. In these townships, the Myanmar Medical Association (MMA) has been providing training in syndromic management through continuing medical education efforts for private GPs. The AIDS/STD Department has also conducted some training in syndromic management in some townships. In townships where this training was available, MMA staff reported considerable interest among the GPs, with over 50 per cent of registered local doctors attending the training when offered.

The GPs reported that in their current experience, most patients come for symptoms of urethral discharge (which the providers assume to be due to gonorrhoea) or genital ulcers. Almost all such patients are given treatment only on the basis of self-reported symptoms and are neither clinically examined nor referred for laboratory tests. Generally, injections of Penicillin are given for genital ulcers and Kanamycin, Norfloxacin, or Spectinomycin are used to treat urethral discharge presumed to result from gonorrhoea. Furthermore, pharmacists mentioned that many male STD patients buy penicillin 500,000 IU tablets for self-treatment of RTI syndromes, without consulting a GP first. The price of medicines to treat RTI syndromes is highly variable and in some places the costs of the most effective medications are prohibitively high. There is sometimes also a problem of availability of pharmaceutical supplies, although cost is a more common problem.

The content of STD case management is highly variable. As mentioned above, many syndromes are presumed to be caused by a single etiologic agent when several potential causes are possible. For example, there was no knowledge among providers of chlamydia as a cause of STD syndromes and not a single provider described the use of co-therapy with tetracycline or doxycycline for treating possible chlamydia infection alongside gonorrhoea. The lack of standardised treatment guidelines and inadequate training also results in haphazard therapeutic practices, often resulting in either under- or over-treatment of common conditions. The dose and duration of treatment with many medications prescribed were often at variance with international standards for best practice. Over-treatment was also common and, among private GPs, sometimes appeared to be profit motivated. It was not uncommon to hear that a man with urethral discharge would receive two or three drugs effective against gonorrhoea. This practice of "polypharmacy" was recently reported in a health facility survey conducted by the Department of Health in five townships in lower Myanmar under the auspices of UNICEF (Uhrig 1998).

In that study, researchers from the Myanmar Medical Association identified providers who care for the most patients with sexually transmitted diseases in the community, interviewed

them, and directly observed examinations. The survey found that examinations often were not adequate, especially for women. It also confirmed that providers tend not to utilise a standardized, syndromic approach and generally treated just one disease, usually either gonorrhoea or syphilis. The health facility survey recommended that interventions focus on identifying those providers who serve the largest numbers of STD clients, and work to encourage and strengthen a syndromic approach to treatment. In addition, improvements in examinations, condom counselling, and partner notification were cited as priority areas. At the moment, private GPs generally do not stock condoms because they are concerned that this will ruin their reputation as a service provider (because condoms are so closely associated with prostitution). One STD team we visited reported that they do not routinely give condoms to STD patients “because they won’t use them.”

Prevention and partner notification

RTI and STD case management is primarily focussed on treatment of individuals. GPs mentioned that, despite their advice to use condoms for prevention of future infection, most individuals do not use them. There is apparently very little active counselling for condom use and condoms are rarely actually given to clients.

Notification, referral and treatment of partners are also rare in cases of documented STDs. There is some attempt at such outreach in those Townships where there is an active STD team (only 25 townships out of 320), however; even their efforts appear to be quite minimal. Most private GPs do not routinely advise clients concerning the need for partner treatment. They assume in advance that such advice will not be heeded, as husbands “would not want their wives to know that they had been to sex workers.” Similarly, midwives rarely reported talking with women about the possibility of sexually transmitted infection.

The MCWA has also begun to distribute condoms in some of its township-level projects. This is a potentially important channel for further condom distribution; however, the volume of condoms distributed by the MCWA has been quite limited in most locales. For example, in one township where such efforts had been established, only a few hundred condoms had been dispensed in the first year.

CRITICAL ISSUES CONCERNING RTIs, INCLUDING STDs, AND HIV/AIDS

The above observations suggest that several issues need to be addressed to strengthen RTI prevention and treatment efforts.

Although HIV/AIDS awareness is generally high, there is a lack of appreciation that prevention and treatment of other STDs can significantly slow the spread of HIV. Many providers have not yet received any training (and those trained are often transferred). Those who have received such training often do not apply it in their community health education activities. For example, midwives perceive RTIs to be primarily a concern of men. Similarly, the public health supervisors have not been very involved in STD prevention and control and do not see it as an important part of their duties. Responsibility for STDs is generally left to the STD Teams, which have a limited geographic coverage (only 36 teams nationwide). Even at the programme management level (central and state/divisional level), the activities for prevention and treatment of STDs and HIV/AIDS are not well integrated. Clearly such a linkage needs to be established both in training, IEC and service delivery activities. Developing a set of national guidelines to standardize RTI case management and

other aspects of RTI programmes would serve as an important first step toward concentration of STD and HIV/AIDS control activities.

The role of STD teams in prevention and management of STDs also needs to be strengthened considerably. Currently many are understaffed for their responsibilities and plagued by frequent transfers, vacancies and sabbaticals in the existing authorized staff positions. Where they exist, the STD teams have carried out some limited IEC activities. The quality of STD team activities is also highly variable. Although their role seems to be more broadly defined, they often concentrate mostly on treatment services and surveillance activities. Their linkage with the basic health system also needs to be better operationalized. In Taunggyi the STD team reported doing training in syndromic STD case management for a number of basic health staff. These trained staff, however, were based near the STD team and generally only covered urban areas within the main District Township. Where women and men have a choice, they tend to consult with private GPs for suspected STD symptoms, hence basic health staff are only likely to be a significant source of advice for STDs in rural areas, where private GPs do not reside. In addition to this geographic limit, concern was expressed that even when basic health staff used the flow charts, they had no access to the appropriate antibiotics recommended for treatment.

As mentioned, there is a need for standardisation of case management recommendations for RTI treatment in Myanmar. Experiences in other countries have shown, however, that flow charts for the standardised case management of RTI syndromes need to be adapted to the local epidemiological situation, otherwise their use may result in considerable over-treatment and a consequent waste of resources. Unfortunately, there is little data concerning the prevalence of most RTIs in Myanmar, hence, some further research concerning the prevalence of RTIs will be needed. A better understanding of health care seeking behaviour is needed to complement such data.

There is also an urgent need for more active encouragement and counselling on the use of condoms. Although widely known, their use is currently very limited. In addition to developing appropriate IEC materials, the involvement of community leaders will be needed to support behavioural change. Special outreach efforts are also required to inform and educate sex workers and the community members who frequent them.

The problem of iatrogenic infection remains largely undocumented. During the assessment visits it was reported to be rare by most providers interviewed, with the exception of the problem of septic abortion, which was described as an extremely important cause of morbidity and mortality in all locations. Some providers were concerned about these infections, however, and in order to decrease the occurrence of puerperal infections, one facility - the MCWA maternity shelter in Taunggyi - gave all women antibiotics immediately following their delivery. Based on observations of facilities that provide delivery services, however, it can be recommended that further attention to issues of asepsis and supply of sterile medical equipment should be provided. This is also an important consideration as the number of IUD insertions increase.

Adolescent Reproductive Health

Adolescent reproductive health is a relatively new issue for Myanmar, and only very limited data are available. The reproductive health programme officially defines adolescents to include youth, and covers the ages 10 to 24.

The lack of research into client needs severely limits providers' and policy makers' understanding and factual knowledge of adolescent attitudes, knowledge, practices and needs. Whilst this assessment did add to the pool of available information somewhat, the data collection methodologies used during the fieldwork were found to be limited in their appropriateness for discussion of adolescent reproductive health issues.

In Myanmar, young people constitute approximately 30 per cent of the total population of 46 million as of October 1997 (MOIP 1997). The age of marriage is generally high in Myanmar, and therefore most adolescents are unmarried. From the recent FRHS the mean age of marriage was estimated to be 26.4 years for women and 27.5 years for men. Just 2.2 per cent of men and 6.6 percent of women aged 15 to 19 years, and 23.3 per cent of men and 34.8 per cent of women aged 20 to 24 had ever been married (MOIP 1998a). The bulk of the observations and recommendations discussed in this report, therefore, are relevant to unmarried rather than married adolescents. During the course of the assessment, however, the assessment team visited a number of areas where age at marriage was significantly lower, and some women marry as young as 14 years. This indicates that the reproductive health concerns of young married people also need to be addressed.

PREVIOUS STUDIES ON TEENAGE PREGNANCY AND ADOLESCENT REPRODUCTIVE HEALTH

There have been a few hospital-based studies carried out on teenage pregnancy in Myanmar. The result of one study showed that teenage mothers and their spouses tended to belong to lower income groups and were less educated. Anaemia was found to be more common in the teenage groups, as was the chance of having a low birth weight baby and a perinatal death. The perinatal mortality rate (46 to 67 per 1,000 births) was twice that of pregnancies among women in older age groups (Aye Aye Thien 1995).

A situation analysis study (Thein Thein Htay and Khin Thet Wai 1997) of adolescent reproductive health carried out in 1997 explored the perception and knowledge of adolescents, community members and service providers regarding adolescent reproductive health. Young girls mainly discussed their menstrual problems, particularly menstrual irregularities. During focus group discussions, it was revealed that the majority of adolescents lack accurate knowledge of how conception occurs. Adolescents in the focus groups were familiar with and willing to discuss contraceptives. They reported getting much of their information from books, although some of them had been prohibited from reading such books by their parents and elders. Most of the adolescents knew about AIDS, although very few knew about other STDs. Some girls felt that it was embarrassing to read or discuss such issues with others. The boys, however, reported frequently discussing these issues amongst themselves. Those groups believed to be at risk of STDs were prostitutes, businessmen and frequent travellers. Focus group discussants agreed that adolescents preferred privacy when seeking treatment for STDs, and would prefer to take advice from their peers than from the formal health sector. The majority of community members

interviewed believed that there is a considerable unmet need for reproductive health information and services among young people.

The findings to date of an on-going UNFPA-supported maternal mortality survey (ENVIPRO 1998) indicate that 7.4 per cent of the maternal deaths were to women under the age of 20 years. The FRHS found contraceptive use among currently married women aged between 15 and 19 years to be 21.3 per cent, and that of women aged 20 to 24, 30.4 per cent. Regarding antenatal care, the survey found that women under 19 years are more likely to receive antenatal care from a traditional birth attendants or to receive no antenatal care, than those over 19 years (MOIP 1998a).

Table 16. Provision of antenatal care by age of mother

	Doctor	Nurse/midwife	TBA	Other	None	Number of pregnancies
Age group						
15-19	6.0	55.8	11.8	0.4	26.1	319
20-24	9.7	64.8	7.9	0.7	16.7	2165
24+	12.0	60.4	7.1	0.3	16.2	12002
Total	11.5	64.3	7.3	0.4	16.5	14486

Source: Ministry of Immigration and Population (1998) *Fertility and Reproductive Health Survey* (preliminary results)

ADOLESCENT SEXUAL BEHAVIOUR

As the assessment team spoke with service providers, it became clear that they did not associate adolescence with reproductive health concerns. Whilst this lack of concern probably stems from the traditional assumption that unmarried people are not sexually active, both service providers and community members now believe that many boys are engaging in sexual activity before marriage. The practice of young unmarried men paying for sex with prostitutes appears to be quite common, and the team met with a number of young men who said that they themselves had visited prostitutes. The willingness of providers and youth to discuss men's pre-marital sex with the assessment team varied between townships, and between rural and urban areas, but the team generally felt that it was much easier to discuss these issues that it had been just a few years previously.

Pre-marital sex amongst girls is still said to be very rare. Providers and community members consistently say that it does not happen in their community. On the other hand, during discussions of induced abortion, one of the at-risk groups mentioned were young unmarried women. Attitudes of providers and older community members towards people who participate in pre-marital sex are generally negative and it is discussed as a "bad behaviour". They tend to be less strong about condemning the actions of a young man who gets a STD from visiting a prostitute, however, than of an unmarried woman who gets pregnant.

The experience of the assessment team in Tachileik was in contrast to that in the other townships visited. In Tachileik a number of different types of sexual exposure for young people were discussed very openly by both service providers and community members of all ages. As in other townships, young men were reported to be visiting sex workers. Their first exposure was often said to be in Thailand when they went there to seek work. Also of great concern is the reportedly common practice of young girls travelling to Thailand to find work,

and ending up working as prostitutes. It is unclear whether or not they plan to work as prostitutes, or fall into this trade, but it appears that when they return to Myanmar they are sometimes admired for the amount of money they have managed to make. The HIV prevalence amongst this group of women is reported to be extremely high, and many return to Myanmar when they are in the final stages of the disease. Premarital sex was also reported to be increasingly common among couples who were soon planning to be married, especially in Tachileik.

ADOLESCENTS KNOWLEDGE OF REPRODUCTIVE HEALTH ISSUES

In many areas young girls and young boys have some information about HIV/AIDS and the use of condoms to prevent infection, but they have very limited knowledge of other STDs. The understanding that they do have about HIV/AIDS and STDs is misinformed and is probably not adequate for them to be able to protect themselves. For example, in one township the team visited, one adolescent boy, when asked about STDs, very innocently mentioned hydrocele as a STD. The same is true of contraception in terms of misinformation. Many have heard of a number of methods and sources of information, but do not know anything about the mode of use or the potential side-effects. Many said that they did not even like to talk about such things as STDs. There were a few exceptions, however, when a young person had exposure to information on health issues, particularly if their relatives were health personnel.

Very limited information material is available which address the reproductive health concerns of young people specifically, and it appears that young people really do not have the information they need or want. For example, adolescent girls report that they did not know anything about menstruation and menstrual care before menarche, neither did they know about the relationship between menarche and fertility. The issue of menstrual irregularity is of particular concern for young girls, and was reported to be a much more common problem than other reproductive health concerns such as abnormal discharge. This was observed to be the case amongst both urban and rural girls alike. Many girls reported being emotionally upset by such menstrual problems. Mothers and elder women in their families generally acted as their confidantes when they experience irregular menstruation. Various brands of indigenous medicine were reported to be used in order to regulate menses, and if these do not work then some will consult doctors to receive an injection to regulate the menstrual flow (i.e. to induce withdrawal bleeding).

ACCESS TO SERVICES

It is reported to be easy for unmarried women to get contraceptive supplies. They are unlikely to go to public sector providers but can purchase methods from the drug shops in towns. They may also go to private general practitioners who are considered to be more confidential. There are also reports that young women can say that they are buying contraceptives “for my sister” or “to increase my weight” or “to regulate my menstruation”. We were unable to gain an understanding of the magnitude of contraceptive use among unmarried adolescent girls since the issues of pre-marital sex is still extremely taboo in many areas.

In Taunggyi, where the public sector birth spacing programme is relatively new, the township medical officer told the assessment team that some of his basic health staff had been asking him what to do when unmarried women came to them for contraceptive methods. He says

that he encourages them to supply these young people with contraception, but finds it difficult to account for this on his official reporting forms.

Despite the fact that many providers believe that all women want to get pregnant immediately after marriage, there are indications that many women who marry young do wish to delay their first birth and do have need of contraceptive services. Many community members interviewed during the assessment made this point to the assessment team. It appears however, that contraceptive use is not generally started until after the marriage itself, and the first sexual exposure. The team spoke with one man whose wife had taken a three-month injectable on the day after their wedding so that she wouldn't get pregnant too soon.

Tachileik was an exception to this, where as noted previously the issue of pre-marital sex is more openly discussed and accepted than in other areas. The contraceptive utilisation rate among young woman, both married and unmarried, seems to be quite high. Most of these contraceptives were purchased across the border in Thailand where it was reported that fewer questions were asked, anonymity is maintained, and the quality of the products is perceived to be higher. This is true of all reproductive health services despite the availability of formal health services at all levels on the Myanmar side of the border. The team noted that, since they were unable to visit any of the more remote areas of Tachileik township, this may not be the case throughout the township.

Midwives appear to be judgmental when seeing unmarried adolescents with reproductive health problems. They often have pre-formed ideas about the appropriate actions such individuals should take. This partly influences young people's decisions to go to private providers or not to seek formal health care at all.

INFORMATION MATERIAL AND SOURCES

As noted above, very few information materials are available which address the reproductive health concerns of young people specifically, and adolescents tend to have very limited access to formal channels of health education. Both the youth themselves, as well as parents, teachers and providers, report being reluctant to initiate discussions that involve sensitive issues related to sexual behaviour. If provided with appropriate support, however, a number of different groups of people were felt to be able to provide accurate information on reproductive health to the young population, including teachers, parents, and health personnel.

During the assessment, MCWA members who were working closely with the community consistently mentioned that mothers were the best source of information for their daughters. The major concern expressed with this strategy was the limited health literacy of many mothers themselves. There was no similar suggestion that fathers would be a good source of information for their sons. Most community members, including the adolescents, explained that discussions of sexual and reproductive matters did not occur between people of different sexes in a family.

The need for more health education in schools for adolescents on reproductive health issues was expressed strongly by providers, parents and young people themselves, although the young people thought that there may be objections from teachers and parents. They thought that before any reproductive health education could be successfully provided in schools, advocacy activities would need to be conducted with both parents and teachers to make them

aware of the need for such education. There is some community concern that providing information and education on issues related to sexual activity will lead to experimentation and increased sexual activity amongst the young people. When asked specifically about this issue, one woman said that the risk that this might happen was worth taking, as reproductive health information for young people was essential and currently lacking.

Whilst teachers were spontaneously mentioned as a potentially effective source of information, as discussions progressed, some concerns were expressed. For example, some students felt that teachers are not always held in high enough regard for this to be an effective means of information provision. Also, young people don't want to be talked to about these sensitive issues by someone that they interact with on a daily basis. From the point of view of the teachers, they don't feel comfortable discussing these issues with their students. If such education was to be conducted in schools then youth themselves felt that it should begin at 14 to 16 years of age, and should be conducted separately for boys and girls to prevent embarrassment.

Another way to reach school children would be for health personnel to visit schools to give reproductive health talks. The information may be more believable from such people since they are perceived to be knowledgeable about health matters. Young people may also be more comfortably asking such people questions, than talking to either family members or teachers because of the perceived impartiality of service providers. For middle school students, basic reproductive information is arranged to be provided through "Healthy Living and Prevention of HIV/AIDS", a school-based curriculum developed and implemented jointly by the Department of Education and UNICEF.

Any health programmes conducted in school will, inevitably, miss any youth who are no longer attending school. It is therefore essential to consider strategies for reaching these people. In fact, it is possible that out-of-school youth are at higher risk of sexual exposure than those in school. The use of health personnel to reach such people was felt to be the most appropriate strategy, although motivation would be required, as would the assistance of community members in the identification of out-of-school youth.

Much information is also acquired indirectly by overhearing adults discussing reproductive health issues. Parents and teachers, particularly, have an influential role in an adolescent's life, and as such are in a powerful position to provide reproductive health information to adolescents both informally and formally. These informal information channels invariably lead to perpetuation of many misperceptions held by adults in the community.

The major source of information regarding reproductive health for young people is their peer group. It appears that these issues are discussed quite openly between friends, particularly males, and that this would be the first line of help-seeking behaviour should a young person experience a reproductive health problem. Since this is the most utilized source of information, it is not surprising that youth would like peer education to play a significant role in any future health education activities.

One peer-education style project that has been implemented in Myanmar is the UNICEF-sponsored life skills training project. The project aims to reduce HIV/AIDS through the promotion of reproductive health by giving training to youth to become friend-to-friend counsellors. In one township visited by the assessment team the Red Cross has been involved in this activity, however none of the youth we interviewed had heard of the project. It

appears that these activities are not currently reaching a broad range of youth in some townships. As mentioned above, a recent evaluation of the UNICEF life skills training programme does suggest that there has been a significant multiplier effect from friend-to-friend counselling in programme townships, however, the selection of participants for the training programme has resulted in some variation between programme effects in various townships.

Mass media represents one of the most powerful influences of all. Comic books, magazines designed for young, radio and television programmes, publicity in the cinema, newspaper articles and posters are being used. In some magazines, information is provided about physical, psychological and social aspects of young people's development, including the rights and responsibilities of young people. There are currently many popular magazines designed for young girls that combine education with entertainment. Ensuring that these provide accurate and sensitive reproductive health information could be a highly effective way to reach these girls.

Various different formats were discussed for new information materials. There was some objection to the standard format of written information in brochures and posters, feeling that the young did not take time to read and study such things. Video, however, was a very common suggestion. Visiting video houses is a popular pastime for the young boys, particularly in the urban areas. Providing short, informative, and eye-catching videos to be shown in the intervals was felt to be an effective way to reach youth. This information channel would not be as effective for girls, as they tend to frequent the video houses on a less regular basis.

Television spots would also reach a large adolescent audience, particularly girls who tend to spend much of their time in the home. Most people have access to television, either in their own home, or in the home of friends and relatives.

Conclusions and Recommendations

The previous four chapters have discussed the teams observations on maternal health, birth spacing, RTI/STDs, and adolescent reproductive health. This chapter identifies the cross cutting issues across these four areas and makes specific recommendations to improve reproductive health in Myanmar.

CROSS-CUTTING ISSUES IN REPRODUCTIVE HEALTH SERVICES

The assessment team observed that several issues concerning the availability and utilization of reproductive health services emerged across all programmatic areas. While specific issues detailed in the latter part of this chapter need to be addressed for each reproductive health programme area, the cross-cutting issues discussed immediately below are critical to the successful achievement of integrated reproductive health services and an improvement of reproductive health status.

Community involvement

Our discussions with community leaders (mainly men) revealed that they were both inadequately informed and insufficiently concerned about STDs, birth spacing or adolescent reproductive health issues. They were better informed about maternal health issues and more aware of HIV/AIDS, although even for the latter their understanding was often quite superficial. Their level of concern was significantly greater in regard to other health problems, such as malaria and dengue. This is perhaps not surprising, as there have been few specific attempts in the past to involve community leaders in reproductive health issues other than safe motherhood.

MCWA members in the community are generally quite knowledgeable and concerned about a broader range of reproductive health problems. These women are active in providing birth spacing education, as well as organising assistance at delivery through MCH centres and maternity shelters. The MCWA has also been actively involved in the UNFPA-supported birth spacing programme townships and UNICEF's life-skills training project. In many townships, the MCWA members provide an important linkage between the community and the full range of reproductive health programme activities. During the assessment, and in discussions with key reproductive health stakeholders, it was observed that some members of the Myanmar Red Cross Society are also involved in activities that impact reproductive health. For example, in some townships the Myanmar Red Cross has been instrumental in setting up transportation networks to the township hospital. They also maintain lists of blood donors, a critical resource for women experiencing obstetrical complications, such as post-partum haemorrhage. Given their decentralized structures, the potential role that the Myanmar Maternal and Child Welfare Association and the Myanmar Red Cross could play in enhancing reproductive health in Myanmar is highly dependant on the motivation of the township level organisation and can be increased through greater community involvement.

Quality of care

Several important issues arose with respect to the quality of reproductive health care. The effectiveness of service delivery programmes in achieving an improvement in reproductive health status will be contingent on significant improvements in quality of care. For example,

the quality of antenatal care varies greatly. Consequently, while antenatal services exist almost everywhere, many women do not reliably receive important interventions (such as effective antenatal syphilis screening) because of inadequate quality of care. Similarly, some of the delivery practices of untrained traditional birth attendants may be harmful and, consequently, require change. In many locales the clinical management of obstetrical complications needs to be updated urgently to be in consonance with the currently known best international practices. The referral of obstetrical clients should be more timely, however, ensuring that women transported for emergency care receive quality services is equally important. Maternal morbidity and mortality could also be dramatically reduced through the introduction of vacuum aspiration techniques for the management of incomplete abortions. The quality of post-abortion counselling was an area where the quality of service was consistently poor.

The need for improvements in service quality extended beyond maternal health services. In the area of birth spacing, contraceptive commodities with questionable efficacy continue to be used and there is considerable switching between the once-monthly Chinese injectable and three-monthly injectables, such as DMPA, due to sporadic supplies, cost factors, and inadequate provider knowledge. The counselling provided in relation to side effects also needs to be improved. RTI case management desperately needs to be standardised, with greater attention to partner referrals and more proactive counselling for condom use, as current practice presently focuses solely on antibiotic provision (often with the wrong antibiotics). Adolescents currently face serious barriers in accessing reproductive health services and often receive incomplete and inaccurate information.

The importance of improving the quality of current reproductive health care services has been highlighted by the assessment team. Considerable efforts will be required to improve this quality of care. At a minimum, however, standards for services and protocols for treatment should be established where they do not currently exist and be made known widely.

Role of private sector

The distinction between public and private sector providers is somewhat blurred in Myanmar. The service providers in the public sector also often have their own private practice. In addition, persons retired from government service, as well as traditional birth attendants, private general practitioners, pharmacists, and drug shop personnel also provide a variety of health services. Several NGOs carry out a range of IEC activities related to reproductive health issues. Recently, the social marketing of condoms was introduced in a number of programme townships, however, evidence suggests that even larger areas are being reached through significant diffusion.

As a consequence, a considerable proportion of Myanmar's reproductive health services are currently provided in the private sector. Except for few clients seeking STD services from the STD teams, most clients go to private general practitioners for symptoms of RTI. In townships without a formal birth spacing programme, only female sterilization services are offered in public sector. In birth spacing programme townships (117 out of a total of 324 townships), contraceptive commodities (injectables, pills, condoms and IUCDs), as well as sterilization services are provided in the public sector. Even in programme townships, however, the majority of contraceptive supplies are provided by private sector sources.

A larger proportion of maternal health services are provided by the public sector. Almost all antenatal care, many deliveries, and most treatment of obstetrical and abortion-related complications are provided by the public sector. Even here, however, the role of the private sector is expanding. The assessment team found that among those who can afford to pay, some women prefer general practitioners for antenatal care. In large cities, some private facilities now even have maternity beds and an instance of gynaecological surgeries being performed in the private sector was reported. Traditional birth attendants continue to provide assistance at a significant proportion of deliveries. It was reported that even when services were delivered in the public sector, providers often receive gifts for their services.

Any reproductive health care programme therefore must build an effective partnership with the private sector. UNICEF, for instance, has involved private general practitioners, through the Myanmar Medical Association, in the development of its user-friendly STD clinics. Partnership with the private sector needs to go beyond these initial attempts, however. International experience shows that the private sector can significantly expand access and availability, as it has already done in Myanmar. As with the public sector, however, there is a need to ensure a better quality of services. As mentioned previously, quality of care is a serious issue throughout the health sector in Myanmar. GPs are currently perceived as offering a better quality of care than the public sector, however, we observed numerous instances of poor quality services - particularly in regard to infection prevention and client counselling. Innovative ways need to be found to involve private sector in efforts to ensure the quality of care. These could include training, skills development and quality audits through peers. Ideally, a partnership between public and private sectors should be forged for improving the reproductive health status of men, women and young persons.

Cost as a barrier to improved reproductive health care

Community members repeatedly mentioned to the team that the cost of commodities and services was a major consideration in whether to seek services, what services to seek, where and from whom. In many cases concerns about cost were described as determining the accessibility, availability and quality of care. For example, often women are reluctant to go to hospital for delivery complications even when referred because they wish to avoid having to spend money for transport and hospital costs. Delays in seeking emergency obstetrical care result in avoidable morbidity and mortality. Other women reported switching to the once-monthly injectable made in China because they did not have money to pay for DMPA. Similarly, service providers often mentioned that they may not prescribe their first choice of treatment if they felt that the client would not be able to afford it. To compensate, doctors themselves often donate money for tests and drugs for very poor patients.

Gender issues

Although the situation of women has not been fully documented, the gender distinctions in Myanmar are remarkably muted. Marital patterns also attest to a high degree of autonomy. The challenge is to ensure that gender gaps do not arise as a consequence of rapid economic and social change. Consequently, gender considerations need to be included in all aspects of development activities.

While health care services include several services specifically for women, a full understanding of women's reproductive health risks is yet to develop both among the community and the health system. Access to birth spacing still remains constrained and most

of the men are not aware of birth spacing methods; viewing contraceptive use as primarily a responsibility of women. Women are also at considerable risk of acquiring STD/HIV from their spouses because men are more likely to have multiple sex partners and use of condoms is very low. Thus, there is a need for community education activities on women's overall reproductive health risks and special IEC materials need to be developed to enhance men's role in birth spacing and responsible sexual behaviour.

The assessment team found that violence against women is not common. But some specific instances were reported, usually in the context of alcohol use. The team was not able, however, either to assess domestic violence or violence against women in the society. Therefore, a fuller programmatic response will have to await the results of research studies currently in progress.

SPECIFIC RECOMMENDATIONS

Improving maternal health

Through its fieldwork, the assessment team observed evidence of significant maternal morbidity and mortality. Our observations revealed many missed opportunities to prevent maternal illness and serious deficiencies in the system for providing essential and comprehensive obstetrical care. Consequently, improvement of maternal health care in Myanmar requires a broad range of interventions. To date, considerable emphasis has been placed on antenatal care and the establishment of an infrastructure for basic obstetrical care for the management of pregnancy. While there is certainly scope for improving ANC, particularly in regard to screening efforts for antenatal syphilis detection, the most significant benefits would derive from strengthening the obstetrical care system. It is essential that the interventions recommended below be considered as a package since isolated action will not be sufficient for improving maternal health status.

Improving technical skills of maternal health providers

Technical skills are essential for delivery of quality maternal health care. Any woman can develop complications during pregnancy, labour, and/or the postpartum period and it is not possible to accurately identify all woman who will develop a complication based on risk profiling. Many complications can be prevented, however, through provision of quality antenatal, delivery, and postnatal care. Unfortunately, at present the training of maternal health providers in Myanmar is not yet adequate to ensure that all pregnant women receive pregnancy related care from a well-trained provider.

There is an urgent need to update the curriculum for training midwives, auxiliary midwives, and traditional birth attendants to develop competency in the provision of routine maternity care, as well as the recognition of complications and referral. Appropriate decision-making by primary maternal health care providers is the foundation of essential and comprehensive obstetrical care. This curriculum should be used in a co-ordinated effort to train and periodically retrain basic health staff. Training of township-level trainers should be given the highest priority in implementation of this training.

The development of a competency-based curriculum will serve to set a national standard for high quality maternal health care. In developing this standard important decisions need to be

made regarding the optimal management of obstetrical complications based on a review of current international best practice (for example, routine administration of oxytocin versus ergotamine for prevention of post-partum hemorrhage and the use of magnesium sulfate versus diazepam for the management of eclampsia). Ensuring that this standard is met throughout the maternal health system in Myanmar will require diligent efforts in regard to management and supervision. Supervisors must certify that maternal health care at all levels of the service system meets national standards.

In line with the revised maternal health care curriculum, a set of technical guidelines should be prepared which describe this standard of care. These guidelines should be periodically updated as new scientific data becomes available. These technical guidelines should be used by supervisory and management personnel through the health delivery system to certify an appropriate level of quality in maternal health services.

Doctors and other health personnel at hospitals almost always reported to the assessment team that patients with serious delivery complications come too late. Some of these delays appear to be due to delayed referral from primary maternal health providers (e.g. midwives referring the women after extremely prolonged labour or auxiliary midwives calling midwives first when it should have been clear the woman needed referral to the hospital.)

A critical element of the maternal health training curriculum should focus on prompt identification of those conditions requiring immediate referral to a medical facility. A clear set of referral guidelines adapted to the local transport, resource, and facility setting should be clearly articulated by township-level supervisors. Supervisors should also be alerted to those instances when referral has been delayed and subsequently review such cases with the responsible maternal care providers.

The use of a partograph (with adaptation for use by midwives or auxiliary midwives) could be one effective tool for monitoring of labour. Prior experience with the use of the partograph in Myanmar, however, has been mixed and opinions regarding its utility differ widely among obstetricians and gynaecologists. Consequently, a pilot trial of a tool adapted specifically for use in Myanmar is recommended.

In some places, the township medical officers or other doctors at station hospitals do not carry out Caesarean Sections. In these instances the referral chain for essential obstetric care becomes even longer, with negative consequences for maternal health.

Efforts should be made to train (or provide refresher training) in the emergency care of obstetrical complications, including the performance of caesarean section, for medical staff at all township hospitals, and where appropriate station hospitals. In those situations where this proves to be impossible, primary maternal health care providers must be instructed to refer women with obstetrical complications to alternative health facilities capable of providing such essential care, without delay.

The team observed that there were numerous vacancies in basic health staff positions responsible for maternal health (i.e. vacant midwife positions and some communities without auxiliary midwives). Simultaneously, traditional birth attendants are performing a substantial proportion of deliveries and many of them are untrained. Obstetrics and gynaecology specialists also reported that they had seen women with obstructed labour where traditional

birth attendants had pushed with hands or sticks in attempts to facilitate delivery or used other potentially harmful practices.

Priority should be given to filling vacant staff positions within the basic health services responsible for maternal health care. In the meantime, training of traditional birth attendants should be pursued as a means to bridge the gap until all women have access to trained midwifery care. TBA training should focus on the content of maternal care, including the avoidance of harmful practices, the observance of aseptic measures during delivery, and the need for early recognition and referral of complicated obstetrical cases. Linkages between the traditional birth attendants, auxiliary midwives and midwives should be strengthened. The role of the TBA in postpartum care, including birth spacing counselling, should be better defined.

Post-delivery care

Although current national guidelines stipulate that the midwife should visit the woman for up to a week post-partum and then see her again at six weeks post-partum, midwives in most townships reported that, while they routinely visit the woman every day for the first week, they only see her again if she experiences problems. As a result, an important opportunity to provide post-partum birth spacing counselling is missed.

Maternal health providers should be encouraged to follow national guidelines regarding the schedule of post-partum visits, with special attention to follow-up at five to six weeks. Training concerning the provision of post-partum birth spacing counselling, including the use of progestin-only pills (where available) among lactating women, should be provided to all maternal health providers.

Essential equipment for health providers and facilities

Adequately equipped health facilities are a pre-requisite to provision of quality maternity care. Skilled service providers will be successful only if necessary equipment and supplies are available at referral facilities as well as at the primary care level. For midwives, auxiliary midwives, and traditional birth attendants, having an appropriate delivery kit and other instruments for delivery care are as important as essential surgical equipment for the hospitals. Since sepsis is one of the major causes of maternal mortality in Myanmar, interventions to reduce the risk of sepsis are essential.

Given that most deliveries take place at home, the feasibility of providing a disposable, clean delivery kit should be considered. Since most women currently pay for all medical supplies used during their delivery anyway, women could be encouraged to purchase such a kit in advance of their labour. Public sector services could subsidise the provision of such delivery kits for women who could not afford to purchase them.

A checklist of essential equipment and supplies should be developed for the first referral level, including surgical instruments for Caesarean section, fluid volume expanders, forceps, examination lamp, labour room table, suction machine, steriliser, oxygen cylinder, refrigerator for essential drugs, etc. This checklist could be used to strengthen logistic and supply systems to ensure that all referral facilities were equipped to provide essential and comprehensive obstetrical care.

Management of maternal health services

The team noted that O/G specialists had recently have been placed in 50 district hospitals across Myanmar, and commended this policy as it has the potential to contribute substantially to improved technical quality throughout the country. Currently many of O/G specialists, however, perceive their tasks as limited to hospital care. The linkage between the O/G specialists and the TMOs is also unclear at present.

An expanded role for the district O/G specialists should be explored. These specialists have the potential to provide a much broader range of technical support for maternal health care services in the district through.

- *Establishing referral mechanisms and strengthening the referral chain for management of obstetrical complications;*
- *Developing and utilizing the checklists for essential equipment and supplies at different levels of basic health services;*
- *Orienting TMOs and other practitioners to the national standards of care;*
- *Training all levels of maternal health care providers; and*
- *Periodically reviewing the maternal health situation in the district, including maternal deaths, and identifying appropriate actions.*

Increasing Community Awareness

Most community leaders in the areas the team visited were neither adequately informed nor concerned about maternal health. The exception was in very remote areas where maternal mortality was reported to be very high and community leaders identified this as a major health concern.

Advocacy to raise awareness among community leaders regarding the magnitude of maternal morbidity and mortality in Myanmar is needed as a means of mobilizing community commitment for interventions to improve safe motherhood. Township medical officers should be encouraged to organise meetings with local community leaders to describe the extent of maternal morbidity and mortality, as well as other reproductive health problems as a means of increasing their awareness and commitment to address these problems.

Health education can play an important role in raising awareness among communities, spouses and other family members, and pregnant women concerning the risk of serious morbidity and possible mortality associated with pregnancy complications. Health information should stress that most complications can be prevented and lives saved through timely and appropriate action.

IEC programmes should include information concerning the prevention and early detection of maternal complications. Messages should include information on healthy behavioural practices (e.g. related to diet, food, and physical rest), as well as recognition of danger signs associated with pregnancy (such as bleeding, symptoms of pre-eclampsia, and severe anaemia), child birth (premature labour, early rupture of the membranes, prolonged labour, and haemorrhage), and the post-partum period (e.g. fever, abdominal pain, etc.). Direction on where to seek care for serious problems should be included as part of the health education package.

The challenge of access to maternal health care is an important issue. The assessment team observed that often women could not access essential obstetrical services because they were unaffordable or due to difficulties in obtaining transport. Community mobilization efforts are an important means to address some of the access problems. While the absolute lack of transport was an aspect of access in some places, more commonly, difficult terrain, the costs of transportation, the cost of hospital services and expected donations to the hospital were more serious deterrents to timely use of referral facilities.

Efforts should be pursued to work with local community leaders to mobilize transportation networks for referral of women requiring emergency care of obstetrical complications. Community leaders should also explore mechanisms to mobilize local resources to pay for emergency obstetric services for those women for whom cost is a significant barrier. Given the extremely high costs to society that result from maternal death, public services should consider subsidizing the provision of emergency obstetrical care as a cost-effective intervention for the health of the public.

Addressing abortion-related morbidity and mortality

Reducing unwanted pregnancies: The team discussed the reasons for unwanted pregnancies at length with women and service providers. Contraceptive failure, ineffective use, and non-use of contraceptives were all observed to be causes of unwanted pregnancy and it is difficult to estimate the most important factor. All would need to be addressed as part of a strategy for reducing the occurrence of unwanted pregnancies. Experience in other settings would suggest that where the quality of care is high and full information on proper use of method(s) is provided to prospective users, method failure should decline as a factor associated with unwanted pregnancy. As contraceptive prevalence increases and the unmet need for contraception is reduced, the overall unwanted pregnancies should also decline.

Access to birth spacing needs to be increased and the quality of birth spacing services needs to be improved. Health education programmes should also include accurate information about the dangers of unsafe abortion.

Clinical management of abortion-related complications: Clinical management of abortion-related complications can be improved by use of manual vacuum aspiration technique. This technology is currently not available in Myanmar, however. Manual vacuum aspiration is a recommended procedure and has been used in many countries to treat incomplete abortions. It offers a wide range of clinical and economic advantages over sharp curettage. Studies comparing the rates of major complications associated with manual vacuum aspiration and sharp curettage (such as excessive blood loss, pelvic infection, cervical injury, or uterine perforation) show that complication rates were significantly lower with manual vacuum aspiration (mean of 5.6 per 100 procedures) than with sharp curettage (mean of 14.8 per 100 procedures).

The introduction of manual vacuum aspiration technology for the management of incomplete abortion should be pursued as a means to reduce complications associated with abortion.

Post-abortion counselling: Post-abortion birth spacing counselling presents an important opportunity to reduce the occurrence of repeat abortions. In our assessment, however, such

counselling was found to be very inadequate. In most cases it involved simply telling women in hospital with abortion-related complications to use birth spacing without ensuring access to information concerning specific birth spacing methods or referral to a source of contraceptive commodities. Some patients are actually scolded by providers because they have had an abortion (i.e. due, as one provider mentioned, “to anger arising out of compassion”). The providers also mentioned that they can give advice about sterilisation but follow-up is difficult. They also sometimes advise the use of an IUD, but few return for IUD insertion. Clients seem to prefer hormonal injections and oral contraceptives.

The provision of birth spacing counselling, including information concerning a range of methods and referral to appropriate birth spacing providers should become a routine component of post-abortion care, which should be provided in a non-judgmental and friendly manner.

Birth Spacing

Service provision

General practitioners - The assessment team observed that the majority of birth spacing services were provided by the private sector. Unfortunately, the quality of these services was highly variable and there seemed to be little awareness of the technical standards for providing specific contraceptive methods. In addition, clients currently receive very limited counselling and information material when they consult with a private general practitioner for birth spacing methods. Consequently, there is a need to improve the quality of birth spacing services provided by private general practitioners.

Four particular issues regarding the quality of birth spacing services provided by private general practitioners need to be addressed: the quality of contraceptive commodities provided, the standardisation of technical skills, the need for training, and the content of information provision. Consequently,

- *The availability of high quality contraceptive commodities to private general practitioners at cost price should be facilitated.*
- *Appropriate technical guidelines need to be developed and distributed to private general practitioners.*
- *Training should be offered to improve the technical skills of general practitioners in the provision of birth spacing services and counselling.*
- *High quality IEC materials need to be supplied to general practitioners for distribution to clients.*

Commodity supply, standards setting, training, and information provision activities for general practitioners should focus on oral and injectable hormonal contraceptives, as well as condoms. Similar efforts regarding the IUD should be made for private obstetric and gynaecology specialists.

It was noted that, while many private general practitioners provide some birth spacing services, there is a large degree of variation in the number of clients served. Given that the organisation of training programmes will take some time, some selection of which general practitioners to train first will need to be made.

Priority for training and provision of materials should be given to GPs currently providing the highest volume of birth spacing services.

Drug shops - Many women obtain contraceptive commodities directly from drug shops. For users of oral contraceptive pills this may be their only contact with a service provider. Users of injectable contraceptives may visit general practitioner or other health care providers to receive their injection, however, they have typically already purchased the injection, along with a needle and syringe, at a drug shop prior to seeing the health professional. Hence, important decisions regarding *which* injectable contraceptive to buy have already been made by the time the client meets the GP. Consequently, drug shops play a major role in the provision of birth spacing services within Myanmar.

Township medical officers should conduct a one-day training to improve the skills of drug shop staff in the provision of contraceptive methods. The focus of this training should be on oral and injectable hormonal contraceptives. This will require providing the township medical officers with training regarding the use of Curriculum on Birth Spacing recently adapted for use with drug shop dispensers.

Recently oral contraceptive pills and injectable contraceptives have been placed on Myanmar's essential drug list. This major policy decision allows these contraceptives to now be imported duty free. As a consequence, the supply of affordable and high quality contraceptive commodities in Myanmar should improve rapidly by allowing legally imported contraceptives to compete in price with inferior commodities currently brought across borders from neighbouring countries.

The Food and Drug Supervisory Committee at township level should encourage drug shop owners to procure supplies from the most reliable sources.

National NGOs - Given their extensive network of affiliates at township level, there is a potential for Myanmar Maternal Child Welfare Association to play a greater role in birth spacing activities. This includes expansion of their current sensitisation and community mobilisation activities, as well as the provision of selected birth spacing services, such as the community-based distribution of condoms and oral contraceptive pills. Other NGOs, such as the Red Cross, should also be sensitised to issues related to birth spacing. In order to achieve this potential, the MCWA will require both technical and IEC material support.

The reproductive health training and multiplier training activities of the Maternal and Child Welfare Association should be expanded to reach all townships and, within townships, attention should be given to rural, as well as urban areas.

All national NGOs should be provided with appropriate IEC materials for distribution to community members.

Public sector - The assessment team noted that while birth spacing services are provided throughout Myanmar in the private sector, quality and price of commodities and services in this sector are often a barrier to access and appropriate use. Public sector services have been more effective in addressing these issues, to date, however, these services have only been provided in a limited number of townships.

In order to improve access to quality services and commodities at an affordable price, efforts should be made to extend public sector birth spacing programme activities to all townships.

It was evident from the fieldwork that levels of contraceptive use have increased significantly in all townships, including those with organized birth spacing programme efforts, as well as those without such programmes. This trend was corroborated by the recent national FRHS, which revealed a sharp increase in contraceptive prevalence compared to previous data from 1991. The team found that knowledge concerning the characteristics and side effects of various birth spacing methods was significantly greater in birth spacing programme townships.

Given the increasing use of contraception throughout the country, it is important for all public sector health staff to receive training in the provision of birth spacing methods, emphasizing the need for appropriate client selection, information provision, counselling regarding potential side effects, and follow-up. Training efforts should be expanded to non-programme townships as soon as possible.

Specific methods

Female sterilisation - The current process for applying for sterilisation is generally long and cumbersome, although it is variably implemented. High cost was also a common reason for failure to access sterilisation procedures. In border areas, however, women reported travelling to Thailand to receive sterilisation, despite the high cost (approximately 6,000 kyats), rather than wait for approval from a state/division-level board. Women wishing to limit their fertility who do not have access to sterilisation or other long-term methods generally use alternative methods, which may have a higher failure rate. The occurrence of an unwanted pregnancy in an older woman was described as a common scenario leading to induced and unsafe abortion.

A number of changes should be made to streamline the sterilisation approval process:

- *The frequency of state/division-level sterilisation board meetings should be increased to reduce the current waiting time,*
- *Action should be taken to reduce relatively high costs associated with sterilisation procedures,*
- *Now that an obstetrics and gynaecology specialist has been posted to each district, consideration should be given to further decentralisation of the sterilisation board to the district level.*

Vasectomy - According to current laws, men can receive vasectomy procedures only if approved by a state/divisional sterilisation approval board. In general, the boards only grant approval for male sterilisation if the woman has a medical condition that prohibits her having a sterilisation procedure and she has already been approved to receive such a procedure. This two step process results in extremely long delays and contributes to the exceptionally low use of vasectomy in Myanmar. As with female sterilisation, men in border areas were reported to travel to Thailand for vasectomy procedures.

The legal status of vasectomy should be reviewed and the current approval criteria for vasectomy should be streamlined. Ideally, the sterilisation approval process could be reduced to one step, with approval applying to either the husband or the wife in the event that the woman is medically unable to have a sterilisation procedure.

Intrauterine device (IUD) - In view of the long-term protection offered, its low cost and reversibility, the IUD could be an important method of contraceptive use, especially for couples who have completed the desired family size and do not want to have any more children in future. As noted previously, many of these women cannot currently access, sterilisation services because of the cumbersome approval process. There is a need for improving the access and availability of IUD services, however, there is a need to guarantee the quality of care.

A pilot project should be designed to explore the most appropriate means of providing the IUD in a variety of service settings while ensuring adequate quality of care.

Once-a-month injectable contraceptive - The assessment team was pleased to find that the use of once-a-month injectable contraceptives of unproven safety and efficacy had decreased substantially in comparison to a year and a half ago when the WHO-sponsored *Assessment of the Contraceptive method Mix in Myanmar* was conducted. We found that the vast majority of providers and most clients were aware that the Chinese once-a-month injectable had a higher failure rate and should be avoided in preference of other methods. We did hear reports of continued use, however, primarily by very poor women who could not afford other birth spacing methods.

The use of the once-a-month injectable made in China should continue to be discouraged in favour of more effective alternatives. Other once-a-month injectables of unproven safety should also be discouraged. Removing these methods from the method mix will depend ultimately upon lowering the cost of other birth spacing methods and, following appropriate introductory research, the introduction of a safer and more effective once-a-month injectable contraceptive such as Cyclofem or Mesigyna.

Oral contraceptive pills - The team did find that reports of use of the once-a-month pill were very uncommon, suggesting that the broader availability of other birth spacing methods had succeeded in reducing demand for this marginally effective method of unproven safety. Unfortunately, despite the fact that daily oral contraceptive pills are one of the two most common methods used by women in Myanmar, awareness of the need to choose low dose estrogen formulations in preference to higher oestrogen content pills was generally lacking among both clients and providers. The high dose pills offer no benefits in terms of effectiveness and have a higher rate of adverse effects.

The use of these high dose estrogen, pills should be discouraged in favour of lower dose combined oral contraceptive pills.

Little progress has been made concerning the introduction of either progestin-only pills for lactating women or emergency contraception. These methods are generally unavailable in Myanmar, although Postinor is available in drug shops where it is sold as post-coital contraception.

Both progestin-only pills and emergency contraception should be included in the birth spacing curriculum. Further research to explore the best means of introducing these birth spacing methods should be conducted.

Condoms - Condoms have received relatively little attention as birth spacing methods in Myanmar. It was commonly reported to the assessment team that condoms were to be used primarily for the prevention of sexually transmitted disease. Condoms were often discussed solely in reference to their use in commercial sexual encounters. As a consequence, the use of condoms was stigmatized and many individuals - men and women - had never seen or used them.

Information and services for birth spacing should include discussion of the potential use of condoms as a contraceptive method. This should involve an emphasis on the need for correct and consistent use, as well as appropriate technique of use and disposal.

Information, education, and communications

Despite a trend toward increasing use of birth spacing throughout the country, the assessment team observed significant deficiencies in knowledge regarding contraceptive side effects, characteristics of appropriate use, and efficacy. This was particularly evident in townships that did not currently have organized birth spacing programme efforts. It was also reported to be a serious problem in the Shan State, where a significant portion of the population cannot read health educational materials written in the Myanmar language. The problem is even greater in certain ethnic minority areas where rates of primary language literacy are low.

Accurate information concerning the efficacy, side-effects, and appropriate use of all available contraceptive methods should be made widely available to women and men through a well-designed IEC strategy using appropriate media, which must include attention to the diversity of languages used throughout Myanmar, as well as the needs of low literacy population groups.

Reproductive Tract Infections

Programme activities

Primary prevention - The team found that awareness of HIV was high throughout the country and that most people had fairly accurate knowledge concerning the principle means of HIV transmission. Knowledge concerning other STDs was more limited and many women did not distinguish between endogenous infections and STDs as potential causes of vaginal discharge. Evidence suggests that in those townships where life skills training has been provided through NGOs there has been a beneficial effect on community knowledge, although in some cases the training participants did little subsequent training of other community members.

Health education programmes would be strengthened by community-level counselling activities, such as the life skills training efforts of the MMCWA and MRCS. To be most effective, these programmes should focus their selection of participants broadly within the township and on those most likely to engage in outreach activities within the community.

Experience from other countries suggests that targeted interventions for groups at highest risk of HIV infection are especially important in the early stages of the epidemic. In the course of our interviews several groups were identified consistently as facing a higher risk of infection. These included sex workers, men who travel away from home frequently (who are seen as being more likely to visit sex workers), male youth (who often initiate sexual activity with sex workers), and both men and women who migrate to Thailand for work.

Targeted primary prevention interventions, such as peer education programmes for high risk groups (including sex workers and their clients) should be developed and evaluated. These programmes should stress personal vulnerability to infection and include skills training for negotiation and condom use.

While knowledge of HIV/AIDS and the modes of transmission was high, some inaccurately believe they can acquire HIV through touching, etc., resulting in unnecessary fear and stigmatization of persons living with HIV/AIDS. Many individuals also had only superficial knowledge concerning STDs and condom use. When asked how to prevent HIV, most men and women simply said “avoid prostitutes”. As with birth spacing, the lack of health education materials in languages other than Myanmar was also a barrier to accurate knowledge among some populations.

Improved health education materials are needed regarding HIV/AIDS and other STDs, including materials in a range of languages that emphasize the role of STDs in augmenting the transmission of HIV and provide accurate information about techniques for using a condom.

A review of sentinel surveillance data suggests that HIV presents a serious public health problem in Myanmar, particularly along the eastern border areas. While there is considerable variability, STDs are also felt to be a common problem as well. With the exception of the eastern Shan State and the Thanintharyi Division, the number of reported AIDS cases remains low and there is a generally poor perception of personal vulnerability to infection on the part of most community members. Familiarity with condoms remains very low, despite the fact that widespread condom use is one of the few means of preventing further spread of the HIV epidemic.

There is a need to expand condom promotion efforts. This will require a special effort to reach men with both information and high quality commodities. Achieving and sustaining higher levels of condom use will, in turn, demand improving logistical and supply systems and strengthening social marketing programmes.

At present the national network of STD teams focus primarily on the treatment of symptomatic individuals, the training of other health staff who may encounter patients with STD symptoms, and limited syphilis screening and surveillance activities. Given the expertise of these teams, they have a potential to become more involved in primary prevention activities, such as counselling training, condom promotion, and awareness raising. Similarly, local branches of the Myanmar Medical Association (MMA) have also focused primarily on the training of GPs concerning the management of symptomatic STDs.

The STD Teams and MMA should become more involved in primary prevention efforts to promote a broader awareness of the risk of STDs and HIV and the ways to reduce transmission, especially through the promotion of early and prompt treatment of STDs and condom use.

Reports of the occurrence of iatrogenic infection due to lapses in infection control procedures were reported to be rare by most health providers. Both clients and providers emphasized the need to use disposable needles for injection, however the client must purchase a clean needle themselves and, consequently, it is probable that some reuse of needles occurs. It was not clear that all health facilities have adequate equipment for high level disinfection and sterilization of instruments.

There is a need to strengthen infection control procedures within medical care services as a means to prevent iatrogenic infection.

Management of symptomatic infections - The vast majority of people indicated that first line treatment for symptoms potentially related to STDs was self-medication with antibiotics purchased through drug shops. A variety of traditional medicines or practices were also commonly reported. The net effect of these behaviours is to delay appropriate therapy and prolong the period that the person is potentially able to further transmit the infection. The inappropriate use of antibiotics may also play a significant role in causing vaginal yeast infections among women.

Health education materials should discourage the self-treatment of illness symptoms potentially related to STDs and delays due to use of ineffective indigenous medicines. Such materials should stress the need to seek health services promptly from a well-trained provider and encourage the appropriate use of antibiotics, including complete adherence to prescribed therapy.

During the course of the assessment the team interviewed a broad range of people who provide treatment for symptoms potentially related to STDs, including public sector providers at all levels, GPs, and drug shop dispensers. The variation in current therapeutic practices was striking. Many providers are prescribing or selling the wrong drugs sometimes in the wrong dose and for the wrong period of time. It was very common for clients to receive two and sometime three antibiotics where one would have sufficed, adding significantly to the cost of therapy and increasing the risk on the emergence of antimicrobial resistance. Finally, many providers were using drugs for certain illness that may no longer be effective because of antimicrobial resistance (i.e. the use of penicillin to treat gonorrhoea).

There is an urgent need to develop and disseminate standardized guidelines for the case management of men and women with STD and other RTI symptoms. These guidelines should be disseminated widely for use by private GPs, staff working within government health facilities, and drug shop dispensers.

In addition to national guidelines that seek to rationalize the provision of antibiotic treatment for RTI syndromes, there is a need to train providers in other aspects of RTI case management. At present, treatment focuses narrowly and the provision of antibiotics and little attention is paid to the issues of primary prevention counselling, condom promotion, and partner notification and treatment. Also, some women mistakenly believe that all vaginal discharge symptoms are the result of STDs, when in fact endogenous infections are probably

more common in most areas. This misunderstanding can result in accusation of infidelity and marital discord.

Training should be organized for both public and private sector providers (including GPs, STD clinic staff and basic health staff in the use of standardized case management guidelines, including the need to incorporate condom promotion, counselling, compliance, and partner notification into their routine care for clients with RTI symptoms. Such training should emphasize that some RTI syndromes are caused by both STDs and endogenous infections.

One responsibility of the STD Teams is to provide training for basic health staff concerning STD prevention and treatment. Similarly, in recent years the MMA has begun to provide such training to private GPs. It is not clear how comprehensive the coverage of such training is, however, especially given the high rates of health staff turnover in some townships.

There is a need to strengthen the role of the STD Teams and MMA in training a variety of providers who see clients with RTI symptoms in both the public and private sectors. A schedule of periodic refresher training should be developed to ensure that all providers receive accurate information based on the latest scientific knowledge and national data concerning antimicrobial resistance.

Periodic lapses in the supply of essential drugs for the management of STDs and other RTIs was found to be a major threat to the provision of quality care for clients presenting to public health facilities with symptoms related to RTIs. If a client cannot receive the required therapy when they come for care, the credibility of the health care system suffers and the client may receive delayed or inappropriate treatment.

There is a need to strengthen the logistic and supply systems to ensure essential drugs for STD and RTI treatment are available where they are needed. The use of a limited number of drugs to be provided in accordance with national standards as promulgated in the case management guidelines will help to simplify drug procurement procedures.

STD screening - Given the severity of congenital syphilis, experience indicates that antenatal syphilis screening is a highly cost-effective intervention, even in areas where the prevalence of infection is quite low. To be effective, however, all pregnant women must be screened and a positive result must be followed by appropriate treatment. Unfortunately, given that antenatal care is fairly decentralised and the facilities that conduct VDRL testing are located at township and station hospitals, we observed that a significant proportion of pregnant women are not adequately screening for syphilis infection.

Antenatal syphilis screening programmes need considerable strengthening to ensure that all pregnant women are screened results are promptly reported, and VDRL-positive women and their partners receive correct therapy. To ensure that syphilis screening receives the full participation of all pregnant women, the confidentiality of test results must be assured and the cost should be subsidised.

Presumptive treatment - Congenital eye infection caused by sexually transmitted disease pathogens acquired during the passage through the birth canal represent a rare, but preventable cause of blindness. Given that an extremely inexpensive and safe intervention

exists to prevent these infections – the instillation of eyedrops immediately after birth – current international recommendations are that all newborn infants receive presumptive treatment to prevent ophthalmia neonatorum. This was not reported to be routine practice among TBAs, AMWs, midwives, or hospitals in facilities visited during the assessment.

National guidelines regarding the importance of administering ophthalmia neonatorum prophylaxis for all newborn infants should be developed and disseminated widely to all health staff who provide care for newborn infants. Given the high social costs associated with preventable blindness, consideration should be given to public subsidy of such prophylaxis.

Research needs

International experience suggests that the task of developing standardised case management guidelines for symptomatic RTIs is greatly simplified by the availability of accurate prevalence data regarding the most common pathogens associated with the various RTI syndromes. At present very little data are available concerning RTI prevalence in Myanmar.

Better data are needed regarding the prevalence of RTIs, including both STDs and endogenous infections. Studies should focus on those client populations most in need of RTI case management, for example, clients of private GPs, women seeking services at rural and urban health centres, and men and women attending STD clinics. Broadening the testing for syphilis in routinely collected blood samples drawn for the semi-annual HIV sentinel surveillance programme would be desirable.

Deciding which antibiotics to recommend as part of the national RTI treatment guidelines requires a careful consideration of the cost, likelihood of patient compliance, and effectiveness of various antibiotic for the treatment of various RTI syndromes.

There is a need for periodic studies of the antimicrobial resistance of gonorrhoea in order to inform the selection of antibiotics for standardized RTI case management guidelines.

Once standardized flowcharts have been developed it is important to validate them among the client populations for which they will be used. Experience from other countries suggests that variations in the epidemiology of RTIs require flowcharts that are adapted to the national context. Some flowcharts have been found to result in significant over-treatment with antibiotic therapy, a unnecessary expense that potentially contributes to increased antimicrobial resistance.

Research is needed to validate the RTI flowcharts recommended as part of standardized case management guidelines.

Several recent studies suggest that a number of interventions may be partially effective in reducing the perinatal transmission of HIV from mothers to newborns. This includes providing safe alternatives to breastmilk for HIV infected women, as well as the administration of antiretroviral drugs in the peripartum period. The cost and operational feasibility of this strategy for use in Myanmar has yet to be explored.

In areas of high HIV prevalence, a pilot project to evaluate the feasibility of voluntary antenatal HIV screening and affordable interventions to reduce perinatal transmission of HIV should be designed and evaluated.

Adolescent Reproductive Health

The assessment team found that very few activities were being undertaken in the community to address adolescent reproductive health. There was, however, a strongly felt need to improve the reproductive health knowledge of adolescents, and to improve the quality and accessibility of services for young people.

Providing information regarding adolescent reproductive health

No formal mechanisms were in place to ensure that young people, as well as their parents and teachers, received appropriate information on reproductive health issues. A variety of different media could be utilized to channel information to adolescents.

Community members and youth indicated that “health talks” given by health personnel would be one important mechanism for ensuring that appropriate information concerning reproductive health reached young people.

Feasible mechanisms should be sought for involving health personnel in the conduct of health talks on reproductive health issues. They should be encouraged to ensure that such talks reach community leaders, parents, and other adults, as well as youth themselves.

Many youth reported reading a number of magazines, and acquiring some of their limited reproductive health knowledge from these sources.

The effective use of printed matter, such as comic books and youth magazines, should be considered as a potential channel through which young people could receive reproductive health information.

One of the most frequently mentioned formats believed to be effective in bringing reproductive health information to young people was video. Many adolescents, particularly boys, spend much of their spare time in local video houses.

The role that videos could play in disseminating reproductive health information to adolescents, particularly boys, should be evaluated. The format and content of such videos need to be carefully considered.

During the course of the assessment fieldwork it became clear that the majority of the information that youth have obtained relating to reproductive health, is through their peers. It is also reported that these are the only people who they currently feel comfortably discussing these issues with. This would appear to indicate that a peer education intervention would be appropriate, however the effectiveness of such interventions, where they have been tried, has been varied.

There is an urgent need to develop and evaluate models for peer intervention regarding STD/HIV education, condom promotion and unintended pregnancy, especially in areas of high HIV prevalence.

Reducing individual exposure to reproductive health problems

In a number of townships visited, out-of-school and out-of-work adolescents were at a particularly high risk of reproductive health problems. For example, in Tachileik, it was reported that young men and women are travelling to Thailand because of the greater job opportunities, and, once there, are becoming exposed to the risk of STDs and HIV/AIDS. There is some indication that many of these individuals did not know about the risks they may be exposed to, and did not have the necessary tools to protect themselves.

There needs to be an expanded range of opportunities for adolescents (for further education, jobs, etc.) to reduce economic migration to other areas where they face additional reproductive health risks. For those young people who do migrate, there is a need to provide education regarding the reproductive health risks they may encounter. This education should include information regarding STDs, HIV, and unintended pregnancy.

Provision of services to adolescents

Whilst many service providers reported the need for adolescents to receive appropriate information and services regarding reproductive health, there was some indication that the information and services currently provided are delivered in a somewhat judgmental manner. Pre-marital sex is often considered to be a “bad-behaviour” which influences the counselling given to a youth that is consulting with reproductive health problems. Adolescents also report that they do not feel comfortable discussing these issues with health care staff, indicating that staff attitudes are also affecting help-seeking behaviour.

Health providers need to be trained to provide reproductive health information and services in a non-judgmental and youth-friendly manner.

The desire to delay the first birth after marriage was often expressed to the assessment team. However, many women reported that they did not begin contraceptive use until after the marriage itself, thus exposing themselves to the risk of unwanted pregnancy,

Health providers should be prepared to provide appropriate pre-marital counselling for youth that might want to delay their first birth after marriage.

Research needs

The information currently available regarding adolescent reproductive health is limited, and a number of areas for further study are indicated. Clarity is lacking regarding both the sexual behaviour of adolescents and their specific health needs.

Further research should be conducted to more accurately define the health and sexual behaviour of adolescents.

From this assessment and previous studies, it is known that it is necessary to provide services that are accessible and provide non-judgmental care to young people. The model such services should follow is less clear and requires further study.

Several pilot projects to test models for providing youth-friendly services should be developed based on local needs assessments.

Costs and financing

Guidelines for cost sharing within public sector health services exist as a result of recent policy decisions regarding health care financing. The team observed that the cost sharing schemes at government health facilities differed widely and was left with the impression that the implementation of current health financing policy varies tremendously depending on local interpretation. Clients also seem confused by the current policy and are often uncertain about the costs that may pertain to services they need, including birth spacing. As a consequence, cost (and in some cases perceived cost) present an important barrier to service access.

There is a need to determine the effect of current cost sharing policies for birth spacing. If it is found that the associated user fees discourage women from seeking appropriate reproductive health care there will be a need to review and revise these guidelines.

At present, throughout Myanmar individuals personally purchase the bulk of reproductive health services and commodities with little subsidy from the state. The cost of such services is often a barrier to seeking appropriate health care and, consequently, significant delays in care seeking sometimes result. There is often a trade off between cost and quality. Yet current international best practices recommend that interventions to improve reproductive health status should be a part of an essential package of health services and studies have shown that investments in reproductive health are extremely cost-effective and provide significant public health externalities, justifying significant public sector subsidy. (World Bank, 1996, pp. 106,112)

The current situation regarding the financing of reproductive health services in Myanmar should be reviewed, with serious consideration given to expanding the public subsidy of critical services, such as emergency obstetrical and STD care. Given that cost is often a barrier to appropriate health service utilization, there is a need to review and refine cost sharing schemes, especially for the poor. More formal research should be conducted on reproductive health care costs and financing options in Myanmar.

Operationalizing Reproductive Health Care Programmes

The assessment team saw that many services were provided within the severe resource constraints which is a credit to the health care service providers and managers at all levels. Much more can be done, however, to improve reproductive health status, not only to address current problems but also to prevent emerging problems from becoming more serious provided more resources can be made available. In this chapter we provide a road map for operationalizing reproductive health care programming.

ESSENTIAL SERVICE PACKAGE

In operationalizing reproductive health service programmes, we not only have to address the crosscutting issues discussed in the previous chapter, but also to evolve a service delivery package. In Myanmar the areas to be covered in an essential service package for reproductive health have been widely agreed upon. These four priority areas are: maternal health, including safe motherhood and prevention of abortion complications; birth spacing; RTI/STD; and adolescent reproductive health. A comprehensive service package would expand on this to include violence and infertility, and cover the whole life span to include problems of the elderly and osteoporosis.

For delivering the essential service package, there is general agreement regarding the various services that need to be provided at different levels of the public health service delivery system. Tables 17 to 22 show these services for antenatal, delivery and postpartum care, birth spacing, RTI/STDs and adolescent reproductive health. The required services are presented for community and sub-centre, rural health centre and MCH centres, and station, township, district and state/division hospital levels.

The assessment team spent some time discussing the services presented in these tables in the context of Myanmar. Services that are currently not being provided within the public health service have been marked in bold. It can be seen that there is a large variation in the proportion of services currently being provided between the different areas of reproductive health. For antenatal, delivery and post partum services, most of the services to be provided as part of the essential service package are currently part of the public sector programme. However, moving to birth spacing and RTI/STD services, a greater proportion of the services are bolded, indicating that new services need to be initiated.

Those services related to maternal health have been perceived to be a priority in the public sector for many years, which is reflected in the extensiveness of the services already provided in these areas. As noted in early chapters of this report, quality remains a serious concern for many of these services, and although few new services need to be set up, these quality issues need to be addressed.

Public sector birth spacing services are still in their infancy in Myanmar, and the range of services provided at each level needs to be broadened if the agreed upon essential package of services is to be implemented in Myanmar. A similar situation is seen for RTI/STDs, where a number of services are provided, but where the majority of essential services are still absent from the public sector.

Adolescent reproductive health has only recently become an issue for discussion in Myanmar, and public sector services are currently in the process of developing an appropriate response to the perceived needs of adolescents in the area of reproductive health. From the table it can be seen that the many new services need to be initiated within the public sector if the reproductive health needs of adolescents are going to be adequately addressed.

In addition to the provision of services to address the areas of reproductive health highlighted above, it will be necessary to strengthen the links between these various service areas. The assessment team observed a number of missed opportunities in the provision of reproductive health services. For example: comprehensive reproductive health education including birth spacing education/counselling is often not given on the occasion of antenatal and post natal care; women do not currently receive post-abortion counselling on reproductive health including birth spacing and maternal health; there are no activities aimed at providing adolescent reproductive health education during organized gatherings of young people; and, activities aimed at building awareness of RTI/STD/HIV/AIDS do not currently take place at all possible opportunities.

For linkages between areas of reproductive health to be successfully implemented, there is a need for the orientation of health service providers to the overall reproductive health of the client. They need to perceive reproductive health as an integrated matter and provide counselling for other areas when there is a client contact for a specific reproductive health service.

Table 17: Antenatal Services at Different Levels of the Health Service System

Community and sub-centre	RHC, MCH centres	Station, Township, District and State/Division Hospital
<p>Counselling and education for breast-feeding, nutrition, birth spacing, rest, exercise etc.</p> <p>Detection and referral for complications, e.g., hypertention, pre-eclampsia, eclampsia, severe anaemia, malaria, tuberculosis, diabetes, ante-partum haemorrhage and cephalopelvic disproportion</p> <p>Detection and referral of women with RTIs and STIs</p> <p>Immunization for tetanus prevention</p> <p>Treatment of malaria</p> <p>Provision of antenatal services at clinics and through outreach (at least 3 visits)</p> <p>Provision of ferrous sulphate</p>	<p>Counselling and education for breast-feeding, nutrition, birth spacing, rest, exercise, etc.</p> <p>Immunization for tetanus prevention</p> <p>Detection and referral of cases with complicated pregnancies</p> <p>Treatment of malaria</p> <p>Treatment of tuberculosis</p> <p>Provision of antenatal services at clinics and through outreach (at least 3 visits)</p> <p>Detection and management of complications, e.g., hypertention, pre-eclampsia, malaria, tuberculosis, and diabetes</p> <p>Referral for hospital delivery in cases with complications</p> <p>Routine testing for syphilis</p> <p>Diagnosis and treatment of selected RTIs and STIs and referral for others</p> <p>Management of referred cases and feedback to referral source</p> <p>Provision of ferrous sulphate</p>	<p>Counselling and education for breast-feeding, nutrition, birth spacing, rest, exercise, etc.</p> <p>Immunization for tetanus prevention</p> <p>Provision of antenatal service at clinics (at least 3 visits)</p> <p>Management of cases with complications</p> <p>Treatment of malaria</p> <p>Treatment of tuberculosis</p> <p>Routine testing for syphilis</p> <p>Diagnosis and treatment of RTIs and STDs</p> <p>Management of referred cases and feedback to referral system</p> <p>Provision of ferrous sulphate</p>

Health interventions that are not currently part of the present programme are highlighted

Table 18: Delivery Services at Different Levels of the Health Service System

Community and sub-centre	RHC, MCH centres	Station, Township, District and State/Division Hospital
<p>Detection of pregnancy complications and referral for hospital delivery</p> <p>Clean home deliveries with delivery kits</p> <p>Recognition of danger signals (rupture of membranes of more than 12 hours duration, prolapse of the cord, diagnosis of malpresentation haemorrhage) and referral</p> <p>Supervision of home deliveries</p> <p>Routine prophylaxis for gonococcal infection in the new-born</p> <p>Treatment for infection</p> <p>Arrangement of transport for referral</p>	<p>Detection of complications and referral for hospital delivery</p> <p>Clean home deliveries</p> <p>Supervision of home deliveries</p> <p>Routine prophylaxis for gonococcal infection in the new-born</p> <p>Arrangement of transport for referral</p> <p>Management of referral cases and feedback to referral sources</p>	<p>Provision of institutional delivery services</p> <p>Treatment of pregnancy complications</p> <p>Management of obstetrical emergencies</p> <p>Routine prophylaxis for gonococcal infection in the new-born</p> <p>Arrangement of transport for obstetrical emergencies</p> <p>Management of referred cases and feedback to referral source.</p>

Health interventions that are not currently part of the present programme are highlighted

Table 19: Postpartum Services at Different Levels of the Health Service System

Community and sub-centre	RHC, MCH centres	Station, Township, District and State/Division Hospital
Provision of postnatal care through five postpartum visits (including: less than 24 hours, 7-10 days and 5-6 weeks)	Provision of postnatal care through five postpartum visits (including: less than 24 hours, 7-10 days and 5-6 weeks)	Provision of postnatal care through five postpartum visits (including: less than 24 hours, 7-10 days and 5-6 weeks)
Provision of breast-feeding support	Provision of breast-feeding support	Provision of breast-feeding support
Provision of birth spacing counselling and services	Provision of birth spacing counselling and services	Provision of birth spacing counselling and services
Provision of nutrition education and supplements	Provision of nutrition education and supplements	Provision of nutrition education and supplements
Treatment of puerperal sepsis	Management of women referred with complications	Treatment of puerperal sepsis
Management of mild and moderate asphyxia of the new-born	Treatment of puerperal sepsis	Manual removal of retained placenta
Management of neonatal hypothermia	Resuscitation for asphyxia of the new-born	Resuscitation for asphyxia of the new-born
Outreach care within 24 hours of delivery	Management of neonatal hypothermia	Management of neonatal hypothermia
Management of low birth weight (2000-2500 grams) infants by feeding, temperature control and infection prevention methods	Referral for complications	Management of referred cases and feedback to referral source
Treatment for some and referral for other complications	Management of referred cases and feedback to referral source	Management of low birth weight (2000-2500 grams) infants by feeding, temperature control and infection prevention methods
	Management of low birth weight (2000-2500 grams) infants by feeding, temperature control and infection prevention methods	

Health interventions that are not currently part of the present programme are highlighted

Table 20: Birth Spacing Services at Different Levels of the Health Service System

Community and sub-centre	RHC, MCH centres	Station, Township, District and State/Division Hospital
<p>Sexuality and gender information, education and counselling</p> <p>Community mobilisation and education for adolescents, youth, men and women</p> <p>Community-based distribution of contraceptives</p> <p>Provision of oral pills, injectables and condoms at the sub-centre</p> <p>Education and counselling for POPS and emergency contraception</p> <p>Counselling, management and referral for side-effects, method-related problems, and change of method where indicated</p> <p>Referral for tubal ligation</p> <p>Provide birth spacing counselling for women with complications of induced abortion</p>	<p>Sexuality and gender information, education and counselling</p> <p>Provision of oral pills, injectables and condoms</p> <p>Education and counselling for POPS and emergency contraception</p> <p>Insertion of IUDs after screening for contraindications in selected facilities</p> <p>Counselling and management of cases referred for side-effects, method-related problems, and change of method where indicated</p> <p>Referral for tubal ligation</p> <p>Provide birth spacing counselling for women with complications of induced abortion</p>	<p>Sexuality and gender information, education and counselling</p> <p>Provision of oral pills, injectables and condoms</p> <p>Education and counselling for POPS and emergency contraception</p> <p>Insertion of IUD after screening for contraindications</p> <p>Conducting tubal ligation procedures</p> <p>Counselling and management of cases referred for side-effects, method-related problems, and change of method where indicated</p> <p>Provide birth spacing counselling for women with complications of induced abortion</p>

Health interventions that are not currently part of the present programme are highlighted

Table 21: Services for the Prevention and Treatment of RTIs and STIs at Different Levels of the Health Service System

Community and sub-centre	RHC, MCH centres	Station, Township, District and State/Division Hospital
<p>Sexuality and gender information, education and counselling for adolescents, youth, men and women</p> <p>Community-based condom distribution and condom provision at sub-centre</p> <p>Social marketing of condoms</p> <p>Implementation of management guidelines for symptomatic men and women</p> <p>Referral of women with vaginal discharge, lower abdominal pain and genital ulcers, and men with urethral discharge, genital ulcers, and swelling in the scrotum or groin</p> <p>Partner notification and referral</p> <p>Routine prophylaxis for gonococcal infection of the new-born</p>	<p>Sexuality and gender information, education and counselling for adolescents, youth, men and women</p> <p>Provision of condoms</p> <p>Implementation of management guidelines for symptomatic men and women</p> <p>Diagnosis and treatment of some infections and referral of others</p> <p>Partner notification, treatment and referral</p> <p>Routine syphilis testing in antenatal women</p> <p>Routine prophylaxis for gonococcal infection of the new-born</p> <p>Management of referred cases and feedback to referral source</p>	<p>Sexuality and gender information, education and counselling for adolescents, youth, men and women</p> <p>Provision of condoms</p> <p>Implementation of management guidelines for symptomatic men and women</p> <p>Limited laboratory diagnosis and treatment</p> <p>Partner notification and treatment</p> <p>Routine syphilis testing in antenatal women</p> <p>Routine prophylaxis for gonococcal infection of the new-born</p> <p>Management of referred cases and feedback to referral source</p>

Health interventions that are not currently part of the present programme are highlighted

Table 22: Reproductive Health Services for Adolescents at Different Levels of the Health Service System

Community and sub-centre	RHC, MCH centres	Station, Township, District and State/Division Hospital
<p>Provision of information and services in a non-judgmental and youth-friendly manner</p> <p>Evaluation of models for peer interventions</p> <p>Health talks on adolescent reproductive health to young people, community leaders, parents and other adults</p> <p>Life skills training in selected townships (69)</p>	<p>Provision of information and services in a non-judgmental and youth-friendly manner</p> <p>Health talks on adolescent reproductive health to young people, community leaders, parents and other adults</p>	<p>Provision of information and services in a non-judgmental and youth-friendly manner</p>

Health interventions that are not currently part of the present programme are highlighted

AN APPROACH TO PROGRAMME DEVELOPMENT

In developing a programme to provide the essential package of services to be delivered in an integrated manner, attention needs to be paid to varying epidemiology of reproductive health problems in Myanmar, and the priority and feasibility of needed interventions.

The assessment team observed that all the services in the essential reproductive health care package - maternal health, birth spacing, RTI/STD/HIV/AIDS and adolescent reproductive health - need to be provided. However, secondary data as well as the team's field visits showed that there were wide variations in the epidemiology of reproductive health problems. Although geography played a major role, other socio-economic and cultural factors also contribute to this variation. For instance, many areas closer to Thai border had higher prevalence of STD/HIV/AIDS. Areas with higher socio-economic status and improved access to health facilities seem to have lower levels of maternal health problems. Use of birth spacing methods, although increasing nearly everywhere, also varies widely depending on the social support for birth spacing, availability of services and people's ability to afford them. The young men in or those with access to urban areas are more likely to visit commercial sex workers and, therefore, are at higher risk of STDs/HIV infections.

A comprehensive set of interventions was presented in the previous chapter to address specific reproductive health problems. After developing the set of recommended interventions, the assessment team conducted an informal prioritization exercise. Each member of the team rated each of the recommendations as high medium or low in terms of four criteria: potential for impact; policy congruence; organizational compatibility; and, operational viability. After giving these ratings a numerical value (3 for high, 2 for medium, and 1 for low), the scores for the four criteria were pooled and each team member's score pooled. This produced an overall rating score for each recommendation, which were then reviewed by the assessment team.

One of the most interesting findings of this exercise was that a number of the recommendations that had been rated very highly for their potential for impact fell to the bottom of the overall list once the four criteria were pooled. These interventions were generally considered by the team to be extremely important in terms of impact, but that they would be difficult to implement because of the low level of policy congruence, organizational compatibility and operational viability. The most striking examples of this were in the area of STDs/RTIs. Condom promotion activities were jointly rated the highest priority (out of a total of 60 intervention recommendations) for potential for impact. However, once the other three criteria were included in the calculation, it fell to 50th position. Similarly, a recommendation regarding the need for targeted primary prevention interventions such as peer education programmes for high risk groups, dropped from a rank of 19 to 56.

Based on the varying epidemiology, and priority and feasibility of interventions, it is clear that a uniform programme would not be an efficient way to address reproductive health problems. An incremental and cost-effective approach to programme development would comprise of implementing (a) a core package of high priority interventions everywhere, and (b) additional interventions to address specific reproductive health problems in the geographic areas where the problem is serious as determined by key indicators of the criticality of the problem.

In the assessment team's collective judgement, the following are the high priority interventions which should form a minimum core package of interventions to be implemented in all the townships.

Community awareness and education

A number of activities are recommended for enhanced community awareness and education to improve reproductive health care practices.

Advocacy with community leaders about the importance of reproductive health problems including the magnitude of maternal morbidity and mortality is an important activity to enlist the support of community leaders in reproductive health activities. The community also needs to be mobilized to provide resources for transportation and other costs in the event of the need for referral of pregnant women to hospital.

Health education is another essential activity. This needs to be supported by high quality materials, and cover a range of reproductive health issues including: creating awareness of the family and pregnant women on the risk of serious morbidity related to pregnancy complications and abortions; IEC on birth spacing; greater awareness of RTI and STD symptoms and HIV/AIDS; encouragement of prompt and appropriate health care seeking behaviour; and, the dangers of unsafe abortion. Appropriate peer interventions for adolescent reproductive health must be developed and evaluated to address the needs of this currently underserved group.

A number of counselling activities are critical to a successful reproductive health programme. Community-level counselling, such as the life skills training efforts of the MMCWA and MRCS through their reproductive health training and multiplier training activities, need to be expanded. The provision of birth spacing counselling also needs to be strengthened and backed by high quality IEC materials. Such counselling should be included as a routine component of post-abortion care.

Training of all service providers

Both public and private sector providers need to be trained in all townships in the provision of birth spacing methods with appropriate quality of care. This should include training to improve the technical skills of GPs in the provision of birth spacing services and counselling, and the skills of drug shop staff in the provision of contraceptive methods.

There is an urgent need to update the curriculum for training midwives, auxiliary nurse midwives (AMWs), and traditional birth attendants (TBAs) to develop competency in the provision of routine maternity care, as well as the recognition of complications and referral. Efforts should also be made to train (or provide refresher training) in the emergency care of obstetrical complications, including the performance of caesarean section, for to medical staff at all township or station hospitals.

In addition, training should be organized for both public and private sector providers (including GPs, STD clinic staff, and basic health staff) in the use of standardized case management guidelines for RTIs. Health providers need to be trained to provide reproductive health information and services to young persons in a non-judgmental and youth-friendly manner.

Establishing standards and guidelines

Quality of care is a serious issue to be addressed in Myanmar. Therefore, standards and guidelines need to be developed, widely disseminated to all relevant providers, and mechanisms including supervision put in place for (a) standard of maternal health care, (b) referral guidelines adapted to the local transport, resource, and facility setting for complications of pregnancy, (c) birth spacing services provided by private GPs, (d) standardized guidelines for the case management of men and women with STD and other RTI symptoms and (e) on the importance of administering ophthalmia neonatorum prophylaxis for all newborn infants.

CRITICAL INPUTS FOR OPERATIONALIZING REPRODUCTIVE HEALTH PROGRAMMES

Three critical inputs are required to operationalize reproductive health programmes: a policy framework for creating a facilitating implementation environment, resources to enable implementation, and organizational arrangements for its implementation.

Policy framework

After the International Conference on Population and Development (ICPD), several countries in the region have initiated policies and programmes for reproductive health. For instance, in 1997, Thailand articulated a reproductive health policy to guide the achievement of comprehensive reproductive health services. In Bangladesh, the reproductive health services are a part of Essential Services Package that is an integral part of the Health and Population Sector Strategy. In India, the government is currently implementing a Reproductive and Child Health Programme. The assessment team recommends that Myanmar consider promulgating a policy on reproductive health.

Organizational arrangements for reproductive health programme

To implement effective reproductive health services programme, an unified organization is needed that links programmes addressing different components of reproductive health in the Ministry of Health as well as promotes involvement of NGOs and communities. This would ultimately require some organizational restructuring. However, as a first step, the linkages between various programmes need to be strengthened. The team identified two such actions:

An expanded role for the district O/G specialists should be explored. These specialists have the potential to provide a much broader range of technical support for maternal health care services in the district through (a) establishing referral mechanisms and strengthening the referral chain for management of obstetrical complications; (b) developing and utilizing the checklists for essential equipment and supplies at different levels of basic health services; (c) orienting TMOs and other practitioners to the national standards of care; (d) training all levels of maternal health care providers; and (e) periodically reviewing the maternal health situation in the district, including maternal deaths, and identifying appropriate actions.

Wherever STD teams exist, they should closely coordinate with the TMO (a) to develop and disseminate standardized guidelines for the case management of men and women with STD and other RTI symptoms, and (b) to train both public and private sector providers (including GPs, STD clinic staff, and basic health staff) in the use of standardized RTI case management guidelines.

Financial resources

As mentioned earlier, availability of financial resources is a major barrier to implement reproductive health care services. The National Health Plan (1996-2001) aims to achieve equal distribution of health care through out the country. However, the resources available to it are very limited. The external support to this sector is also small (MOIP 1998b). In view of this, the health sector is considering alternative sources of financing including experimentation with community cost-sharing schemes. As reproductive health-services address critical health problems, are cost-effective and have significant externalities, the government should consider allocating larger resources to reproductive health care and additional support from international agencies needs to be mobilised for ensuring much needed improvement in reproductive health status.

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ANNEX I

Summary of Reproductive Health Related Projects - International Organizations

Agency	Programme	Duration	Townships	Major interventions	Budget (US\$)
UNFPA	Birth Spacing project	2 years	20	<ul style="list-style-type: none"> ➤ Provision of birth spacing services ➤ Producing training manual on birth spacing ➤ KAP study on birth spacing ➤ Providing community education materials 	660,000
	Birth Spacing Programme	3 years	72	<ul style="list-style-type: none"> ➤ Provision of reproductive health services ➤ IEC material for birth spacing ➤ Maternal mortality study ➤ Management information system ➤ Fertility and Reproductive Health Survey ➤ Training of MCWA members ➤ Production of reproductive health training manual 	3.49 million
	Contraceptive Acceptability & Women's Reproductive	30 months	1	<ul style="list-style-type: none"> ➤ Determining the preference for contraceptive methods ➤ Strengthening the capability of basic health personnel ➤ KAP study of reproductive health among rural Myanmar women and also determining the reasons underlying the current patterns of reproductive health 	61,125
UNDP	Primary Health Care (Phase I)	2 years	11	<ul style="list-style-type: none"> ➤ Basic Health Services ➤ Immunization ➤ Tuberculosis ➤ Birth Spacing 	305,274
	HIV/AIDS (Phase I)	2 years	14	<ul style="list-style-type: none"> ➤ Prevention of HIV/AIDS ➤ Addressing social, economic & health needs of HIV affected persons 	1,754,900
	Primary Health Care (Phase II)	2 ½ years	36	<ul style="list-style-type: none"> ➤ Family self care ➤ Community-level health care providers ➤ Strengthening RHCs and ➤ Sub-RHC stations and township hospital ➤ Health support services, facilities including IEC ➤ Appropriate health technology ➤ Referral system 	9.9 million

Agency	Programme	Duration	Townships	Major interventions	Budget US\$
UNDP	HIV/AIDS (Phase II)	2 ½ years	14	<ul style="list-style-type: none"> ➤ Multi-sectoral strategies developed and adapted ➤ Behaviour change in forms of increased use of condoms, reduced infection among IDUs & CSWs ➤ HIV related programme and info broadcasted through mass media ➤ Extended coverage of blood safety programme ➤ Reduces transmission of HIV through blood transfusions ➤ Addressing social, economic & health needs of HIV affected persons 	2.4 million
UNICEF	Women's Health	5 years	69	<ul style="list-style-type: none"> ➤ Nutrition ➤ Antenatal care & post natal care ➤ Risk identification ➤ Safe delivery ➤ Birth spacing 	630,000
	HIV/AIDS prevention	5 years (on going)		<ul style="list-style-type: none"> ➤ Prevent HIV transmission among young people & women ➤ Reduce maternal mortality ➤ Minimise child deaths caused by AIDS 	800,000
	Border Areas Primary Health Care and development	5 years		<ul style="list-style-type: none"> ➤ Establishment and strengthening of PHC structure ➤ Training of auxiliary nurse & midwives ➤ Training of mothers & communities ➤ Development of leadership skills ➤ Capacity building of local NGOs 	560,000
WHO	Family Health Care	1994-95		<ul style="list-style-type: none"> ➤ Health care delivery ➤ Reduction of morbidity & mortality of mothers and children ➤ Training material and child health 	178,000
	Reproductive health, health of women and children	1996-97		<ul style="list-style-type: none"> ➤ Reduction of morbidity & mortality of mothers and children ➤ Strengthening the infrastructure for delivery of RH services ➤ Improving quality of care 	99,000
	Reproductive Health	1998-99		<ul style="list-style-type: none"> ➤ Formation of National Plan of Action ➤ Development of guidelines and manuals on RH ➤ Dissemination and transfer of knowledge for promotion of technical know-how & skill of staff 	

Agency	Programme	Duration	Townships	Major interventions	Budget (US\$)
UNHCR	Local Reintegration for health	1 year	3	<ul style="list-style-type: none"> ➤ Improve general health ➤ Improve skills of basic health staff and community health workers ➤ Construction of rural health centres ➤ Health education 	125,644
	Reproductive Health	1 year	3	<ul style="list-style-type: none"> ➤ Address reproductive health needs ➤ Improve community-based distribution of contraceptives ➤ Safe motherhood practices ➤ Address STD's & HIV/AIDS 	115,595

ANNEX II

Summary of Reproductive Health Related Projects - International NGOs

Agency	Programme	Townships	Major Interventions
Marie Stopes International	Reproductive Health	3	<ul style="list-style-type: none"> ➤ Establish reproductive health care clinics ➤ Establish mobile team ➤ Awareness raising of reproductive health practices ➤ Development of training programme ➤ Advocacy for broader Contraceptive Services
Care - Australia (Myanmar)	Health	10	<ul style="list-style-type: none"> ➤ Activities in prevention of HIV/AIDS
Medicins Sans Frontirers (MSF) Holland	Reproductive Health Services	-	<ul style="list-style-type: none"> ➤ Antenatal and post natal care, birth spacing ➤ Prevention and treatment of STDs ➤ Health Education on nutrition, sanitation, birth spacing and control of STDs
World Vision International	Public Health HIV/AIDS	5	<ul style="list-style-type: none"> ➤ Urban Integrated Health
Population Services International (PSI)	Social marketing of Condoms	69 townships under UNICEF's Umbrella	<ul style="list-style-type: none"> ➤ Condom Social Marketing
Medicins du Monde (MDM)	Health	3	<ul style="list-style-type: none"> ➤ Reduction of the spread of HIV/AIDS ➤ Conducting seminars and training of health professionals and social workers on AIDS
Medicins Sans Frontiers (MSF) France	Health	3	<ul style="list-style-type: none"> ➤ Provision of medical equipment
Family Planning International Assistance	Birth Spacing	7	<ul style="list-style-type: none"> ➤ Training of basic health staff on birth spacing service provision ➤ Provision of IUD insertion by trained LHVs. ➤ Provision of contraceptives

ANNEX III

Summary Reproductive Health Related Projects - National NGOs

Agency	Programme	Townships	Major Interventions
Myanmar Medical Association	Community health and primary health care	64	<ul style="list-style-type: none"> ➤ Conducting workshops and seminars on birth spacing. Role of GP's in Reproductive health, Safe Motherhood Initiative, Child's Right to Health, Maternal Morbidity, Baby Friendly hospital Initiative and HIV/AIDS ➤ Health Education talks for public ➤ MMA collaborates with UNICEF, WHO, UNDP, UNFPA in the implementation of some reproductive health projects
Myanmar Maternal and Child Welfare Association (MMCWA)	HIV/AIDS Birth Spacing	311	<ul style="list-style-type: none"> ➤ Maternal Child Health activities and services at MCWA maternity homes. ➤ Health education for prevention of HIV/AIDS ➤ Birth Spacing activities; health education, service delivery at maternity homes ➤ Promotion of birth spacing activities ➤ Support to Baby Friendly Health Initiative activities
Myanmar Red Cross society (MRCS)	Health Services		<ul style="list-style-type: none"> ➤ Training of trainers with the development of HIV/AIDS education and prevention programme ➤ Blood donation programme

Estimating the Extent of Abortions

Induced abortion is illegal in Myanmar. However, considerable anecdotal evidence suggests that abortion-related complications account for a significant proportion of all gynaecological admissions in the hospitals. Unfortunately, reliable estimate of the extent of abortions is not available as the procedure is illicit.

Indirect methods of estimation of the extent of abortions rely on either relating fertility to contraceptive usage or on hospital admissions for abortion-related complications. As recent data on hospital admissions for abortion-related complications are incomplete, we rely on the former procedure of using Bongaart's proximate determinants of fertility.

ESTIMATING IMPACT OF ABORTIONS ON FERTILITY

The Bongaart's model stipulates that

$$TFR = TF \times C_m \times C_c \times C_u \times C_i$$

Where:

TFR = total fertility rate

TF = a constant

C_m = index of marriage (equals 1 if all women of reproductive age are married and 0 in the absence of marriage).

C_c = index of contraception (equals 1 in the absence of contraception and 0 if all fecund women use 100 per cent effective contraception).

C_u = index of induced abortion (equals 1 in the absence of induced abortion and 0 if all pregnancies are aborted).

C_i = index of post-partum infecundity (equals 1 in the absence of lactation and post-partum abstinence and 0 if the duration of infecundity is infinite).

The following estimates for the parameters in the above model are derived from the provisional data available through the FRHS (MOIP 1998a)

$$C_m = 0.45, C_c = 0.68, \text{ and } C_i = 0.62.$$

Applying the model, we estimate that the abortions may be reducing the total fertility rate by 0.33.

CHANGES IN THE EXTENT OF ABORTIONS DURING THE PERIOD 1990-96

Using Bongaarts' proximate determinants model, we can also analyse whether the extent of abortions has changed between 1990 (based on the PCFS) and 1996 (based on the FRHS)

$$\frac{TFR_{96}}{TFR_{90}} = \frac{C_{m96}}{C_{m90}} \times \frac{C_{c96}}{C_{c90}} \times \frac{C_{u96}}{C_{u90}} \times \frac{C_{i96}}{C_{i90}}$$

Assuming that:

- (1) TFR in 1990 was 2.90 and in 1996 was 2.72;
- (1) C_i did not change during the period;
- (2) age of marriage increased and therefore, $C_{m96} < C_{m90}$; and
- (3) C_c estimates are as given below.

$$C_c = 1 - 1.08 \times u \times e$$

Where u = CPR; and e = average use-effectiveness.

Method (m)	u_m (1990)	u_m (1996)	e_m
Pill/injectable	0.071	0.192	0.90
IUD	0.009	0.013	0.95
Sterilization	0.055	0.076	1.00
Other	0.031	0.045	0.70
$u (\sum u_m)$	0.166	0.326	
e	0.898	0.898	
C_c	0.84	0.68	

We estimate that $C_{u96} > C_{u90}$, which shows that C_u increased during the period 1990 to 1996 suggesting that the extent of induced abortion declined.

Some concern has been expressed regarding the total fertility rate estimates, and many people believe that these figures are more conservative. If we assume that the TFR in 1990 was 3.4, and 3.1 in 1996, C_{u96} is still estimated to be higher than C_{u90} . Thus, with even these higher fertility rate estimates, there is no indication that the abortion rate has increased since 1990.

