A Strategy for Advancing Reproductive Health in Myanmar

The implementation of the strategic approach to contraceptive introduction has convinced decision makers of the need for resources and effort to be put into the reproductive health progammme

By Thein Thein Htay, Katherine Ba-Thike, Michelle Gardner, Christopher Elias and Peter Fajans*

The implementation of a strategic approach to the introduction of contraceptive services has had a significant impact on the development of the reproductive health programme in Myanmar. At the time of the initial

* Thein Them Htay, Department of Health, Yangon, Myanmar; Katherine Ba-Thike, UNFPA Country Technical Services Team for East and South-East Asia, Bangkok, Michelle Gardner, Population Council, Yangon; Christopher Elias, Program for Appropriate Technology for Health (PATH), Seattle, United States; and Peter Fajans, World Health Organization (WHO), Geneva, Switzerland. The views expressed in this article are those of authors and do not necessarily reflect the views of the organizations with which they are affiliated.

Stage I activity, entitled "An assessment of the contraceptive method mix in Myamnar" (Ministry of Health (MOH) and WHO, 1997), public sector contraceptive service provision was very limited in geographic coverage, and there was no framework for the integration of contraceptive services with other areas of reproductive health. That assessment provided vital information for informing the development of many components of the reproductive health programme in a context where such a programme was in its infancy. Subsequent follow-up activities comprising behavioural and operations research have provided useful tools for improving the quality of care and for moving towards a more comprehensive reproductive health programme.

Background to the assessment

Initial discussions about the possibility of Myanmar implementing the strategic approach to contraceptive introduction promoted by WHO began in mid-1995. At the time, a rapid expansion of the provision of contraceptive services in the public sector was being discussed. In that year, the Government of Myanmar provided birth-spacing services in 33 of the country's 320 townships (the township is the primary administrative division in Myanmar) covering approximately 15 per cent of the population of Myanmar.

In 1995, there were ongoing discussions between the Government of Myanmar and UNPPA to support birth-spacing services in an additional 46 townships by the end of 1997, representing a rapid expansion of the public sector provision of contraception. Owing to the relatively recent availability of such services in the public sector, and the sensitivity with which the Government viewed the provision of such services, very little data were available to inform the development of such an expanded programme. It was in this context that WHO initially approached the Government of Myanmar to discuss the possibility of undertaking a contraceptive method mix assessment to inform programme expansion.

Reproductive health situation

In the mid-1990s, little reliable data were available concerning reproductive health conditions in Myanmar. Despite the lack of research, available information indicated that reproductive health problems were both widespread and serious. One large-scale survey undertaken in 1991, before the introduction of any public sector birth-spacing services, found a low level of contraceptive use, at around 16.8 per cent of all married couples

(Ministry of Immigration and Population (MOIP), 1995). The unmet need for contraception was large, leading to unregulated and unwanted fertility, which was placing a significant burden on the reproductive health of women, particularly in terms of maternal morbidity and mortality.

Estimates of maternal mortality varied significantly, from 100 to over 500 per 100,000 live births (MOH, 1993; Myamnar Maternal and Child Welfare Association (MMCWA) and others, 1994; Adamson, 1996). No matter what was the actual rate, maternal mortality had generally been recognized as a serious health problem in Myamnar. Although induced abortion is illegal in Myanmar, considerable anecdotal evidence suggests that it is a large contributor to maternal mortality. One hospital-based study found that complications of abortion accounted for 38.3 per cent of maternal deaths (Krasu, 1992), and estimates have been made that one third of all pregnancies end in abortion (Ba Thike, 1997). By the mid-199Os, awareness of the importance of sexually transmitted infections (STIs) and HIV/AIDS was growing, although the available data were still limited. By September 1996, only 13,773 cases of HIV and 612 cases of AIDS had been officially reported to the National AIDS Programme; however, WHO estimated that the number of people with HIV could actually be up to 30 times higher (Goodwin, 1997). Sentinel surveillance data from the same year found an HIV prevalence of 1.3 per cent in pregnant women (Department of Health, 1997). Islam (1995) estimated that the incidence of new cases of curable STIs was 665 per 100,000 population.

Contraceptive method mix assessment

The methodology for the contraceptive method mix assessment was based on the strategy developed and promoted by WHO for examining the introduction of contraceptive technologies. As described elsewhere (Spicehandler and Simmons, 1994; Simmons and others, 1997; and Satia and others, 2000 [in present issue of this Journal]), this strategy places policy choices and identification of research needs in the context of the service environment and user demand. Although contraception and quality of care remained the entry points, the importance of including a consideration of the links between contraception and other areas of reproductive health was considered particularly relevant in Myanmar in view of the infancy of the public sector birth-spacing programme. During discussions on a background paper and the development of an agenda for a planning workshop, strong emphasis was placed on links with adolescent reproductive health, reproductive tract infections (RTIs), abortion, and, to a lesser extent, other reproductive health issues such as maternal health.

After the preparation of the background paper and discussions at a central level workshop, primary data collection for the assessment was undertaken in seven townships in five states/divisions. The townships were selected to represent a range of socioeconomic, geographic, ethnic and health situations. Four of the townships reflected reproductive health programmes supported by different international agencies, and three had no such public sector programme. Selection of the groups for interview and the development of the interview guidelines was undertaken by the assessment team which comprised representatives of the Maternal and Child Health (MCH)/Birth Spacing, Health Education, Health Systems Research and HIV/AIDS/STD Sections of the Department of Health, the Department of Medical Research, the Central Women's Hospital, the Department of Medical Sciences and MMCWA, a national NGO. WHO, the International Council on Management of Population Programmes and the Population Council provided technical assistance throughout the process. Interviews were conducted with over 90 service providers in the public and private sectors, more than 170 women, men and adolescents, and 17 community leaders. In addition, 60 midwives, more than 40 MMCWA members, around 20 community leaders and eight general practitioners participated in group discussions.

Availability of and access to birth-spacing services

As noted previously, at the time of the assessment, public sector birth-spacing services covered 33 townships, accounting for approximately 15 per cent of the total population of Myanmar. Programme townships generally received birth-spacing training for public sector staff, information, education and communication (IEC) materials and some contraceptive commodities. In other townships, a birth-spacing training manual had been distributed to township medical officers, although it was unclear how much additional training had taken place. Neither IEC materials nor contraceptives were provided by the public sector in these non-programme townships.

Even within the programme townships, the assessment team found that there were a number of public sector staff who had not been trained in birth spacing. This resulted from the single round of training provided by most of the programmes and the often high turnover of staff. Although IEC materials were technically provided in the programme townships, the assessment team found very little in the way of available information materials in the townships visited.

Supplies of contraceptives at public sector service delivery sites were often limited, and the logistics systems appeared to have not yet stabilized. This was being complicated by the different requirements for procurement and supply of contraceptives between the different programmes. At the time of the assessment, some townships were found to be receiving more contraceptives than they could use, whereas others were experiencing shortages.

In all townships, contraceptive services were being provided by the private sector. Pharmacies and drug shops were well stocked, and many private providers, mainly in urban areas, would provide contraceptive services. Public sector providers were also providing contraceptive services in their private practice in their off-duty hours.

During the fieldwork, the team saw two brands of monthly irjectables from China, the two-monthly progestin-only injectable NET-EN (norethisterone enanthate), and several brands of the three-monthly progestin-only injectable DMPA (depot medroxyprogesterone acetate). National surveys indicate that 18.5 per cent of contraceptive users were using injectable contraceptives in 1991, and 35.7 per cent in 1997 (MOIP, 1995; MOIP and UNFPA, 1999). Women visited a range of service providers for injectable contraceptives, including basic health staff, private general practitioners and "quacks". While private providers often did not have stocks of injectable contraceptives, most of those interviewed would regularly give an injection to women who had purchased the product from a drug shop. Injectables were found to be widely available in drug shops in all the townships visited, and through the basic health staff in programme townships, although it was reported that, in the public sector, stocks were commonly exhausted.

Oral contraceptives were the most widely used method in 1991 (23.8 per cent of current users), and the second most used method in 1997 (22.5 per cent) (MOIP, 1995; MOIP and UNFPA, 1999). Most users of oral contraceptives indicated that they purchased their supplies from either independent drug shops or those adjoining private clinics. Such drug shops were generally well stocked with both the once-a-month pill from China and several brands of daily oral contraceptives. In those townships where public sector birth-spacing programmes were in effect, daily oral contraceptives were available from basic health staff, but it was unclear who was being reached by this service. Some providers reported that they did not prescribe oral contraceptives for certain women because they did not think that the women would be able to take them daily.

Condoms were not as widely available as the hormonal methods, although many drug shops did have a supply, as did the public sector in the programme townships visited. Many providers perceived an association between the use of condoms and people having multiple sex partners; the team interviewed many providers who had never seen a condom out of the wrapper.

Services related to the provision of the intra-uterine device (IUD) were particularly limited, even when there was a public sector birth-spacing programme, because few providers, particularly midwives, had received the relevant training. Even for those who had received training, the ability to provide the method was constrained by a shortage of equipment and limited privacy. A number of potential providers were reluctant to provide IUDs because of the perceived health risks.

Female sterilization was the one contraceptive method available in all townships, regardless of the implementation of the birth-spacing programme. However, it was available only to women who had previously received permission from a division/state-level board. Although criteria varied, in general, the woman to be sterilized should be at least 30 years of age, have at least three living children and have a health condition that would endanger further childbearing. Although few applications were rejected, the lengthy application procedure and associated costs made it a method not easily accessible to many women. Vasectomy is legal only if the man's wife has received permission for a sterilization but she is unable to go through the procedure for health reasons. However, many people knew of vasectomies taking place in the private sector.

Most clients actively had to seek contraceptive services from providers. Although midwives were expected to visit every three months all households with married women of reproductive age, they were not expected to provide birth-spacing services. Proximity to a birth-spacing service provider was therefore a key determinant of the availability of services. In programme townships, many public sector providers had been trained, and therefore access tended to be better. In urban areas of non-programme townships, access to private sector contraceptive services was good. In rural areas, it depended on whether the midwife provided such services as part of a private practice.

In addition to availability of services and geographical access, cost was an important barrier to access in all of the townships visited. The

government has a policy of cost sharing for most medicines, including contraceptives, but since contraceptives were provided in a limited number of townships, many couples could not benefit from this provision. Generally the providers and community members interviewed felt that many potential users could not afford injectable contraceptives from the private sector, which ranged between 100 and 150 kyats (US$ 1 = 160 kyats in 1996) per ampule.

Community knowledge and perceptions related to birth spacing

Most community members were aware of both birth spacing and contraception, although misperceptions were common. For example, many people expressed concern about the use of contraception for more than three years continuously. Hormonal methods were often incorrectly linked with difficult deliveries in future pregnancies, and with an increased risk of cancer. Knowledge of injectable and oral contraceptive methods was greatest, although this knowledge was usually superficial.

Some women preferred the once-a-month injectable because a single dose is cheaper than one dose of a three-monthly injectable and menstruation is more regular. Many women, however, were aware of the higher failure rate, and therefore would prefer the three-monthly injection. It was also perceived to be more convenient because it only required contact with a service provider once every three months. Concern with amenorrhoea was common, with a fear that the unexpelled blood would accumulate and cause health problems. Many women, however, said that they were willing to tolerate the lack of bleeding for the convenience and security offered by injectables. One common misperception among women was that there was no need to return for a re-injection until menstruation had returned, possibly resulting in the relatively high number of contraceptive failures reported to the assessment team.

Women who chose the monthly oral contraceptive pill generally did so because of its low cost. Most women recognized the high risk of contraceptive failure associated with the monthly pill, and many associated it with nausea and vomiting. Daily oral contraceptives were the preferred choice of some women because they were cheaper than injectables and menstruation was perceived to be more regular. Reports of side-effects, however, were high, particularly dizziness, headache and nausea. Users of oral contraceptives often did not know when in the menstrual cycle contraceptive pills should be started. There were also a number of reports of intermittent use resulting from balancing the perceptions of risk of

pregnancy with the cost of the method. The team also met a number of women who started using the oral contraceptive pill on the day of unprotected sex or postcoitally, believing that pills prevent pregnancy as soon as they are taken.

Far less was known about the IUD, particularly in those townships without a birth-spacing programme. Although several satisfied IUD users were interviewed during the assessment, most women considered IUDS to have many disadvantages and to be dangerous for health. There was fear that IUDs could lead to erosion of the uterus, cause a tumour in the uterus or adversely affect sexual function. Anecdotes related to dislocation of the IUD were also common. Even current users thought that they should stop using IUDs after a few years to avoid serious health problems. A significant number of people had not heard of condoms, and of those who had, few associated them with birth spacing; considering them to be only a means of STI prevention. Concern was expressed over the health effects of both female and male sterilization, fearing that this method would adversely affect strength and sexual function in men and cause neck stiffness and back pain in women.

Perceptions of the potential health risks associated with contraceptive use, particularly hormonal methods, were of great concern, and one of the main reasons for the non-use of contraception. Side-effects were also one of the main factors in the choice of a specific method, with this aspect being balanced with an assessment of the perceived efficacy, convenience and cost. Method switching, particularly between oral and injectable contraceptives and between brands of hormonal methods was common, and again the experience of side-effects, particularly menstrual disturbances, was a key reason for such switching. Choice between brands of three-monthly injectable contraceptives was usually made on the basis of price and availability rather than factors associated with side-effects and efficacy, however. Choice of brand of daily oral contraceptives was often based on availability, price and reputation, with the more expensive “gold-card” brands being associated with the most regular menstruation, and therefore the preferred choice of those who could afford it.

Provision of birth-spacing information and counselling

When services were provided and accessed, there were a number of constraints to the provision of high quality information and counselling. At the time of the assessment, neither the basic training for midwives, nor the

additional training for female health visitors included birth spacing. Staff in programme areas had received in-service training, but staff turnover meant that even in programme areas there were untrained staff. Midwives appeared to have acquired some information about hormonal methods based on the experience of their clients, but that knowledge was superficial and many did not know the details of good technical practice. For example, few providers considered the whole interval up to seven days after the start of menstruation as appropriate for a woman to begin injectables and, although most knew of the re-injection window, few were able to appropriately explain what they would do if a woman returned after this time. Most providers could not distinguish between high- and low-dose oral pills, and did not know that combined oral contraceptives should not be given to breastfeeding mothers for the first six months after delivery.

During the assessment, the team did not have the opportunity to observe directly service provision. It was found that in the rural areas, in the public sector, most service provision took place outside of the formal setting of a clinic, therefore making observations difficult within the context of a rapid assessment. Despite this, both providers and clients indicated that counselling of clients was limited. Counselling was generally conducted in a passive manner, with providers responding only when a client enquired directly about birth spacing. Other opportunities for counselling, such as antenatal care, were generally missed. The limited knowledge of providers also meant that, other than common side-effects, such as irregular bleeding and amenorrhea for DMPA and nausea for oral contraceptives, potential side-effects were generally not mentioned to women and follow-up and contraindications were not sufftciently discussed. Providers appeared to have a bias towards injectable contraceptives, so even when some form of counselling did take place it was often not in the context of contraceptive choice. Private general practitioners additionally mentioned that they were too busy to provide adequate counselling. Women who attended private clinics had usually already made the decision regarding contraceptive method choice, and if not then they would normally rely on the provider's choice of method. Counselling and provision of information at drug shops was even more limited.

Levels of supervision within the public sector were highly varied. Where supervision was relatively intense, providers were generally able to put their training into practice, and provide higher quality counselling to clients. Because of limited human resources at the central level, and the

difficulty of accessing many rural areas, such supervision was not universal, however.

Quality of contraceptive products

The assessment team identified a number of problems related to the quality of contraceptive products, particularly hormonal methods. One of the methods on the market, the once-a-month oral contraceptive from China, has not been adequately tested for safety and efficacy (Yibin and Pengdi, 1997), and the monthly injectable is known to have a relatively high pregnancy rate (Newton and others, 1994). A number of the more popular oral contraceptive brands contain high doses of oestrogen, which is likely to be contributing to the experience of side-effects. Many of the three-monthly injectables also have not been tested for content and purity, and the team saw many vials that did not have labels with the country of origin or the expiry date.

Other related reproductive health issues

Although issues related to areas of reproductive health other than birth spacing were not a primary focus of the assessment, the team addressed them as part of the broader reproductive health framework within which the assessment was undertaken.

Antenatal care coverage was generally high, and the provision of ferrous sulfate tablets and tetanus toxoid immunization was found to be routine, as was referral for syphilis screening in townships where an STD laboratory was available. Essential equipment such as blood pressure cuffs was not always in working order, however. Midwives could usually identify women at high risk of complications during childbirth whom they believed should deliver in a health facility. Both women themselves and providers, however, reported that women were often reluctant to do so, preferring to deliver at home. For postpartum care, if a midwife had delivered a baby, she would regularly visit the mother for five consecutive days after the birth. This was an opportunity to counsel the woman on various issues related to child care, breastfeeding and nutrition. Birth-spacing information, however, was found either to be not given or superficial. If a midwife did not attend the birth, it was unclear if the woman received postpartum care from other providers, and if so what was the scope of such care.

Concern about the regularity of menstruation was high. Women reported using a variety of menses inducers, including the injection of

Menstrogen (estradiol and progesterone), a variety of local herbal preparations, and a mixture of ginger and jaggery (palm sugar). Used to induce menstruation, these methods were not generally considered to be abortifacients, although some were said to be so if used in higher doses. In fact, these methods were often used as a proxy for pregnancy testing, as they were assumed not to work if the woman was pregnant.

Abortion is illegal in Myanmar, but most providers knew of them taking place in their community and recognized that significant numbers of women experienced complications of unsafe abortion procedures. Community members were very aware of the risks associated with induced abortion, and it was described as a desperate action by women who did not want any more children. A range of methods were reportedly used to induce abortion, including uterine massage, followed by the passing of a variety of instruments through the cervix if this did not work. Treatment guidelines for women with incomplete abortion were available to service providers, and evacuation and curettage, or dilation and curettage were generally used. Manual vacuum aspiration equipment was not available.

The assessment team was repeatedly told by community leaders that young people did not face any problems during adolescence, and that premarital sex was uncommon despite the high average age at first marriage (20.0 years for women and 23.3 years for men in 1997) (MOIP and UNFPA, 1999). Many also felt that it was the responsibility of parents to provide adolescents with the necessary information on sexuality and reproduction. From discussions with young people, however, it appeared that these subjects were rarely discussed openly at home, and that adolescents acquired much inaccurate information from a range of informal sources. Many of the young people interviewed during the assessment recognized that the information they had was superficial and expressed interest in receiving more accurate information regarding reproductive health issues.

Many of the men and women interviewed during the assessment were much more aware of HIV/AIDS than other STIs and RTIs, possibly reflecting the prominence of HIV/AIDS issues in the media. It was diffcult for the assessment team to determine the depth of information the community had regarding HIV/AIDS, beyond the primary modes of transmission and the association with commercial sex and drug use. Providers, too, seemed to have more knowledge of HIV/AIDS than other RTIs.

Self treatment with antibiotics from drug shops prior to consultation with a private general practitioner appeared to be the normal practice for

men with genital symptoms. Most men would not go to the public sector for treatment, primarily for reasons of privacy and to avoid stigmatization. Women would also prefer to go to the private sector, but only if the provider was a woman.

When there was consultation with a formal health care provider, many limitations to case management were identified. At the rural health centre level, female health visitors and midwives generally lacked the appropriate skills to treat a woman presenting with symptoms; for those with the skills, appropriate antibiotics often were not available. Private general practitioners tended to use a variety of syndromic approaches to the treatment of RTI symptoms, with little scientific rational. In some cases, providers described prescribing the wrong antibiotics, and more commonly there were reported inaccuracies in the dosage or duration of prescribed therapies. Primarily because of the lack of equipment and privacy, neither laboratory testing nor vaginal examinations were common, particularly at private general practitioners and in the rural health centres, making accurate diagnosis difficult. Clients were also often reluctant to return for follow-up if it was perceived that symptoms had been relieved with the initial treatment.

Assessment recommendations

Based on the findings from the contraceptive method mix assessment, a number of key programme, policy and research recommendations were made.

Enhancing community capacity for birth spacing

The majority of birth-spacing services were provided in the private sector. Given the limited availability of financial and human resources in the public sector, the assessment concluded that strengthening of community involvement in the support and provision of birth-spacing services was important. Many community members had limited or inaccurate information about birth spacing and contraception. Accurate information on contraceptive methods should be made widely available to ensure that community members have the necessary information to make an informed choice regarding birth spacing. Since there were very few IEC materials available in Myanmar, the development of an effective IEC strategy will involve further research to determine the most effective communication formats. The needs and potential role of men in birth spacing had not been adequately addressed. The only widely available method for men, the

condom, was unknown by many men interviewed, and not considered a method of contraception. If community capability was to be enhanced, men would need greater access to accurate information and condoms, which could be instigated through the network of male basic health staff. The assessment also concluded that the role of national NGOs in the provision of birth spacing could be strengthened, particularly that of the Myanmar Maternal and Child Welfare Association and the Myanmar Medical Association. MMCWA has branch associations in all townships, and its role in birth spacing would be strengthened by more frequent refresher training and the strengthening of links with health care providers and local authorities. The Myanmar Medical Association has the potential to reach private general practitioners for training on service provision and IEC-related activities in birth spacing.

Improving access to and availability of birth-spacing services

The limited geographic coverage of public sector birth-spacing services constrained the impact that the programme was having on reproductive and abortion-related morbidity, and the assessment recommended the expansion of organized programme efforts to enable all townships to provide high quality contraceptive services. The finalization of the National Population Policy and strengthening of the capacity of the MCH/Birth Spacing Section of the Department of Health would be instrumental in facilitating such an expansion. Although a range of contraceptive methods was theoretically available in Myamnar, in reality most women had access only to oral and injectable contraceptives. In this context, the assessment suggested a controlled reintroduction of the IUD to improve access while ensuring adequate quality of care. A review of the administrative procedures related to sterilization would also significantly improve access. An improvement in the access to condoms was needed, possibly through an expansion of social marketing activities. The team also concluded that people should be made aware of the contraceptive properties of condoms.

Ensuring the quality of contraceptive services and commodities

During the field work, the assessment team noted that within the national programme a variety of brands of low-dose oral contraceptives and three-monthly injectables were being provided. There was concern that this could lead to confusion, and it was recommended that a limited number of brands of each different method be included in the public sector programme. Within the private sector, the range of methods was even wider, including a number of methods of uncertain or decreased safety and

efficacy, primarily utilized because of their low cost. By strengthening the drug regulatory process and placing safe and effective contraceptives on the national essential drugs list to allow duty-free importation, the use of these doubtful methods could be discouraged.

The team encountered weaknesses in several areas of quality of care in birth-spacing service delivery, including limited counselling and insufficient technical knowledge. Updating of the training curricula and expanded training activities was therefore one of the key recommendations resulting from the assessment. Given the importance of the private sector, it was recommended that training be provided not only for public sector providers at all levels, but also for drug shop staff and private general practitioners.

Abortion and management of its complications

The assessment identified great concern regarding the risks associated with unsafe abortion procedures. Recognizing that much of this demand for abortion is the direct result of the unmet need for contraceptive services, the assessment further recommended expanding the availability of birth-spacing services. Improving access to long-term methods such as the IUD and voluntary sterilization would be of particular importance in reducing the recourse to abortion. It was also suggested that the introduction of emergency contraceptive pills may decrease the number of abortions. Women who presented with incomplete and septic abortions were being treated with evacuation and curettage or dilation and curettage. The introduction of vacuum aspiration would significantly improve the management of incomplete abortion. Since little was known about the phenomenon of abortion in Myanmar, further research to document practices of menstrual induction and abortion-seeking behaviour would be important to future programmatic activities in this area. Data describing the profile of women having abortions and experiencing complications, their knowledge of birth spacing, and their access to contraception would also be useful.

Broadening the scope of reproductive health services

The integration of other reproductive health services with those for birth spacing was limited. Very little birth-spacing counselling was conducted in maternal health services, and the team concluded that efforts should be made to avoid missing opportunities to provide information and counselling in antenatal and postpartum case settings. Services and information related to RTIs were generally provided independently of birth

spacing. It was therefore thought to be important to incorporate accurate information on RTIs into IEC, health education and training materials for providers, community members and specific subgroups at risk. Improving the skills of providers at all levels in the syndromic identification and management of RTI symptoms and in appropriate counselling would be an important intervention, as would upgrading laboratory equipment and technical skills at the maternal and child health clinics for the identification and treatment of RTIs.

Implications for the method mix and contraceptive introduction

The strategic approach to contraceptive introduction addresses three basic questions: Should any method be removed from the contraceptive method mix? Do any methods need reintroduction? Should any methods be added to the mix? The contraceptive method mix assessment in Myanmar concluded that the use of injectables of unproven safety and efficacy should be discouraged, which would be facilitated by a lowering of the cost of effective and safe methods, and the introduction of a safer and more effective once-a-month injectable. The monthly oral contraceptive pill and high dose oestrogen pills should also be discouraged in favour of lower dose combined oral contraceptives. IUDs, sterilization and condoms are available in Myanmar, but the use of these methods was limited by a number of service- and user-related factors. Efforts to expand access to these methods with high quality of care would significantly improve contraceptive choice. As well as considering the introduction of a once-a-month injectable contraceptive, adding a progestin-only pill to the contraceptive method mix for breastfeeding women would be a significant enhancement of postpartum services. There may also be a role for emergency contraception in the birth-spacing programme, but further research to investigate this potential would be a first step.

Follow-up to programme activities

The contraceptive method mix assessment has proved to be an effective tool for advocating additional input to be made in the Myanmar reproductive health programme. The Department of Health, other participants in the assessment process, international organizations and donors have recognized that the assessment provided critical, programme-oriented information for the development of programmes and future interventions. Since the 1996 assessment, a number of agencies and organizations have undertaken activities specifically responding to the findings and recommendations of the assessment.

Reproductive morbidity studies

Following the contraceptive method mix assessment there was recognition of the importance of RTIs in the reproductive health of the Myanmar population. Reproductive tract infections, including STIs, were addressed in the context of birth spacing in the assessment, but the team did not manage to acquire as much information as had been hoped, primarily because of the differences in language and definitions of RTIs used by community members, providers and indeed the assessment team members themselves, Further clarification of these issues was seen as essential in order to develop appropriate interventions in the context of a reproductive health framework. Therefore, WHO supported the Department of Health in undertaking a qualitative study of reproductive morbidity in two townships as a preparatory activity for a broader focused interventions research project (see below). This study, entitled "Perceptions of reproductive morbidity among women, men and service providers in Myanmar" (Department of Health and the Population Council, 2000), undertaken in late 1997, focused on RTIs, but the opportunity was also taken to address by qualitative methodologies other areas of reproductive morbidity. It was conducted in two townships, Pyay in Bago Division and Kalaw in Shan State, which had already been identified as the sites for the interventions research project described below. A variety of qualitative data collection techniques were used, free-listing, focus group discussions, in-depth interviews and pile sorting. This reproductive morbidity study corroborated the findings of the initial assessment, using more structured research techniques, and provided more detailed information on many areas of reproductive morbidity.

Improving quality of care in reproductive health

As the second stage of the strategic approach to contraceptive introduction, WHO is currently supporting the Department of Health to undertake an interventions research activity which puts into action many of the recommendations from the contraceptive method mix assessment. The project, entitled "A township model for improving quality of care in reproductive health services in Myanmar", aims primarily at improving the quality of currently available contraceptive services and increasing the attention given to related reproductive health services, particularly regarding the prevention and treatment of RTIs.

Major activities of the project include reviewing and improving existing IEC materials and developing new materials; training for public sector basic health staff, private general practitioners, drug shop staff, and members of

the Myanmar Maternal and Child Welfare Association; a community advocacy component; and efforts to strengthen township-level and health centre staffs management capabilities related to planning, supervision and logistics.

Research and evaluation activities employ methodologies such as rapid qualitative assessments, a modified situation analysis including facility inventories and observations of service delivery and quantitative surveys of women. The surveys collect data concerning women's perspectives on and patterns of use of contraceptive methods, men's involvement in reproductive health issues, women's health-care-seeking behaviour focusing on both contraception and RTIs, and other related issues including abortion in the community. Qualitative user perspective research addresses similar reproductive health issues, as well as including additional emphasis on client and community perspectives on the quality of reproductive health services, counselling and the new IEC materials developed by the project.

Although the interventions have only recently been implemented in the two pilot townships, and research has not yet been undertaken to demonstrate the impact of the interventions, the Department of Health considers the revised training curriculum for public sector health staff to be a significant improvement over those previously used. Efforts are already under way to utilize the new curriculum for training and refresher training in all of the UNFPA-supported townships, and to distribute the curriculum to the township medical officers in non-programme townships.

Reproductive health needs assessment

In early 1998, a reproductive health needs assessment (MOH and UNFPA, 1999) was undertaken with UNFPA support, eliciting the technical assistance of the same groups that had participated in the initial assessment. This assessment utilized a similar process as the contraceptive method mix assessment, but interview guide development and data collection were conducted with a view to providing detailed information on maternal health, birth spacing, RTIs and adolescent reproductive health.

The assessment showed that considerable effort would be required to implement a comprehensive reproductive health programme in Myanmar. In view of the fact that a large proportion of services are delivered through the private sector and the public sector has severe resource limitations, the key role for the government in the provision of reproductive health services would be to improve the quality of care by strengthening community

awareness as well as the education and training of all service providers in all townships, and establish standards and guidelines. As there is considerable regional variation in reproductive health status, it would be useful to target specific interventions at different townships to address specific reproductive health problems. The report of the assessment included recommendations for policy change, programme development and research; it also laid out an approach for operationalizing an essential service package for the national reproductive health programme.

Following this broader assessment, a range of pilot activities has been implemented in a number of areas of reproductive health, and discussions continue between the government, international organizations and donor agencies regarding the implementation of additional follow-up initiatives. The identification of reproductive health as one of the priority areas of WHO's work in Myanmar over the period 2002 to 2005 is a significant stimulant for these discussions.

Maternal health

The reproductive health needs assessment team observed that the number of maternal deaths remains high. Preliminary data from a UNFPA-supported study of maternal mortality indicated that 57.4 per cent of maternal deaths took place at home, and 3.7 per cent on the way to the hospital. Even though a substantial proportion of women died before reaching the hospital, a noteworthy finding from this study was that over one thud of the maternal deaths took place in government hospitals (cited in MOH and UNFPA, 1999). One of the reasons that women died even after arriving at the hospital was the extensive delay often experienced in reaching the hospital. Several factors were found to be deterrents to seeking timely care at the hospital, including women's preference to deliver at home, the cost of transportation to the hospital and the perceived high cost associated with hospitalization. It was also observed that the facilities for managing emergencies and complications were generally basic. For instance, in none of the township or district hospitals visited were there fully functional blood banks, although these did exist in state/division-level hospitals.

Since the assessments were made, the Ministry of Health has been in discussion with many donors and potential partners in the international community for the development and implementation of action plans for addressing the issues that were highlighted during the assessment. To date, post-abortion care has been the area of maternal health receiving the most

focused programme development. The Department of Health recognizes this as an important public health issue, and an important entry point for reaching women with reproductive health information and services. Given the sensitivities of activities related to abortion, the interventions currently being implemented are being done so in a limited number of townships as pilot projects. Both the Population Council and Family Planning International Assistance are supporting training for service providers in the provision of contraceptive services, counselling and follow-up for women who have undergone an abortion. Both of these organizations are also currently discussing the pilot introduction of modern equipment in a limited number of settings, as recommended by both of the needs assessments.

Birth spacing

By 1997, the coverage of the public sector birth-spacing programme had increased to 117 of Myanmar's 320 townships. The national Fertility and Reproductive Health Survey undertaken in 1997 found that the use of contraceptive methods had also increased to 32.7 per cent of married women of reproductive age, with injectable contraceptives becoming relatively more popular than oral contraceptives (MOIP and UNFPA, 1999). Since the expansion of public sector programme activities was still very new at the time of the data collection for this study, much of the increase is likely to be a result of increases in the private sector. Despite the increase in contraceptive use, the unmet need for birth spacing remains significant, with a total of 20.6 per cent of the currently married women found to be in need of contraception either to space their next birth or to limit their family size. Broadly speaking, the findings of the reproductive health needs assessment in relation to birth spacing corroborated the findings of the earlier contraceptive method mix assessment.

Reproductive tract infections

Data on reproductive tract infections continued to be limited in 1997. HIV sentinel surveillance data indicated a relatively high and increasing level of HIV among both high- and low-risk groups, however. Between 1994 and 1997, the prevalence of HIV infection in sex workers increased from 16.4 to 26.0 per cent, and in blood donors from 0.5 to 1.0 per cent. In contrast, data from injection drug users showed a decline in HIV infection from 71.4 to 56.2 per cent. The data also revealed considerable geographic variation in HIV prevalence (Department of Health, 1997). The assessment confirmed many of the findings of the contraceptive method mix assessment, but was able to address issues related to RTIs in considerably more detail.

Since the assessment, further research into the epidemiology and management of RTIs has been initiated. This research, being undertaken in Mandalay General Hospital and a number of private clinics in Mandalay, will provide cross-sectional descriptive data on the prevalence of RTIs among symptomatic female clients to document the prevalence of RTIs, using gold-standard laboratory tests. This study will also assess the predictive value of simple, clinic-based diagnostic tests and determine the behavioural and demographic characteristics of women with various RTIs. In addition, the study is aimed at addressing the important operations research questions related to the costs of implementing and maintaining various standardized diagnostic and treatment guidelines.

Adolescent reproductive health

In 1997, adolescent reproductive health was a new issue for Myanmar, and very little data were available. The lack of data was limiting providers' and policy makers' understanding of adolescent attitudes, knowledge, practices and needs. Providers interviewed by the assessment team did not generally associate adolescence with reproductive health concerns. Although most believe the traditional assumption that unmarried people are not sexually active, many people acknowledged that young men were currently engaging in sexual activity before marriage.

The involvement of a number of key programme officials in the two needs assessments was a valuable asset to advocacy for the need to expand activities in the field of adolescent reproductive health. The reproductive health needs assessment gained general consensus regarding the services that needed to be provided to young people as part of an essential package of reproductive health care, and noted that very few of these were currently included in the national programme. Since that time, a number of international agencies have been working with the Department of Health and national NGOs such as the Myanmar Red Cross Society to strengthen the programme response to the reproductive health needs of young people. To date, interventions have been on a limited scale, focusing on peer education and training of health staff in adolescent reproductive health. A number of research activities are also under way, highlighting the scarcity of information available for programme development in the area of adolescent reproductive health.

Structural impact of the assessment process

In additional to the specific programme areas and interventions discussed above, the assessment process has had a significant impact on the

environment within which reproductive health programmes are developed and implemented in Myanmar.

Increased awareness of assessment team members

One of the greatest impacts of the assessment has been on the assessment team members. By giving them an opportunity to talk to both providers and clients in the field, and to interact with other experts in reproductive health, their awareness and appreciation of many aspects of reproductive health have been greatly enhanced. For example, previously there had been little understanding of issues of quality of care in reproductive health. The team now recognizes the importance of considering both client and user perspectives in the design and implementation of reproductive health programmes.

Technical capacity-building of team members

In addition to increasing the awareness of team members, the assessment process improved the technical capacity of team members to utilize a qualitative, participatory research methodology. Through active participation in the assessment process under the guidance of an experienced technical assistance team, national team members became familiar with the principals and methods associated with qualitative data collection. Many of the team members have since used both rapid assessment and qualitative information gathering in the context of their institutional positions in Myanmar and abroad.

Links between organizations

The participatory approach used in the assessment gave individual team members an insight into the value of collaboration between institutions and stakeholders in reproductive health. This collaboration between individuals from the Department of Health, the Department of Medical Research, the Department of Medical Sciences and the Myanmar Maternal and Child Welfare Association has, to some extent, continued beyond the scope of activities related to the introduction strategy.

Empowerment of national team members

The country-led process through which the assessment was undertaken has been an important tool in the empowerment of technical staff involved in reproductive health programme implementation in Myanmar. Before the assessment, many policy and programme decisions had been made with

little constructive discussion with programme managers, and activities were often determined primarily by the donor and political environments. The assessment process gave team members a sense that they can influence the development of a reproductive health programme in Myanmar.

Credible source of information

Both the contraceptive method mix assessment and the reproductive health needs assessment are seen as credible sources of information to guide Ministry decision-making, because they are both nationally owned and have the credibility of an international organization. An example of this was the use of the findings and recommendations as background documentation in a presentation to the Deputy Minister of Health for his review of the decision to allow an acceptability trial of Cyclofem, a monthly injectable contraceptive containing progestin, medroxyprogesterone acetate and oestrogen.

Conclusion

The implementation of the strategic approach to contraceptive introduction in Myanmar has catalysed a process of assessment, pilot testing and scaling-up of successful programme interventions as an evidence-based systematic process of moving towards reproductive health programmes in Myanmar. The assessments have proven to be a useful tool for providing critical information in the design of reproductive health programmes and interventions as well as being instrumental in identifying areas that require focused operations research type activities. In this regard, the reports from both the contraceptive method mix assessment and the reproductive health needs assessment have been particularly important for advocating internally to decision makers in Myanmar and to the international donor community the need for resources and for effort to be put into the reproductive health programme. In addition, the process has led to the increased empowerment of technical staff within the Department of Health and to greater collaboration between the various groups working in reproductive health in Myanmar.

Acknowledgements

The authors would like to thank the following national assessment team members who spent considerable time collecting and reviewing information, discussing the findings and developing consensus on recom-

mendations: Htay Lwin, Khin Myint Wai, Khin Ohmar San, Myint Zaw, Nilar Tin, Saw Isaac, Su Su Naing and Tin Tin Cho from the Department of Health; Khin Thet Wai, Ko Ko Zaw and Kyu Kyu Than from the Department of Medical Research; Khin May Aung of the Department of Population; Khin Win Kyu and Nu Aye Khin from the Myanmar Maternal and Child Welfare Association; and Khin Ma Ma Aye, UNFPA/Yangon. The additional technical support provided by R.S.S. Sarma and Suman Mehta of UNFPA is also acknowledged. Finally, the authors would like to thank Jay Satia of ICOMP for his technical assistance concerning the contraceptive method mix assessment, leadership of the reproductive health needs assessment, and dedication to ensuring that this article was finalized.

References

Adamson, P. (ed.) (1996). *The Progress of Nations* (New York, UNICEF).

Ba-Thike, K. (1997). "Abortion: a public health problem in Myanmar" *Reproductive Health Matters* 9:91-100.

Department of Health (1997). "Sentinel surveillance data for September 1997", Yangon, AIDS Prevention and Control Project (unpublished).

_____ and Population Council (2000). "Perceptions of reproductive morbidity among women, men and service providers in Myanmar", draft.

Goodwin, D. (1997). Myanmar *National AIDS Program: HIV/AIDS Surveillance Thru September* 1996 (Yangon, WHO for Department of Health).

Islam, Q. (1995). Travel report to Yangon, 18 November-2 December 1995 (unpublished). Geneva, Family Planning and Population Unit of the Division of Reproductive Health, WHO.

Krasu, M. (1992). *An Overview of Morbidity in Myanmar: Proceedings of a Seminar on Maternal Morbidity* (Yangon, Obstetric and Gynaecological Section, Myanmar Medical Association).

Ministry of Health (MOH) (1993). National programme of action for the survival, protection and development of Myanmar's children in the 1990s (Yangon, Ministry of Health).

_____ and World Health Organization (WHO) *(1997). An Assessment of the Contraceptive Method Mix in Myanmar* (Geneva, World Health Organization).

Ministry of Health and UNFPA (1999). *A Reproductive Health Needs Assessment in Myanmar* (Yangon, Ministry of Health).

Ministry of Immigration and Population (MOIP) (1995). "Myanmar population change and fertility survey, 1991", Yangon, unpublished,

_____ and UNFPA (1999). *Fertility and Reproductive Health Survey, 1997* (Yangon, Department of Population).

Myanmar Maternal and Child Welfare Association (MMCWA), Yangon Institute of Economics, Ministry of Education, Department of Planning and Statistics, Ministry of Health (1994). "Maternal mortality survey", unpublished.

Newton, J.R., C. d'Archangues and P.E. Hall (1994). "Once-a-month combined injectable contraceptives" *JoumaI of Obstetrics and Gynaecology* 14(Suppl. 1), pp. S1-S34.

Satia, J., P. Fajans, C. Elias, M. Whittaker (2000). "A strategic approach to reproductive health programme development" *Asia-Pacific Population Journal* 15(4):5-20.

Simmons, R., P. Hall, J. Diaz, M. Diaz, P. Fajans and J. Satia (1997). "The strategic approach to contraceptive introduction" *Studies in Family Planning* 28(2):79-94.

Spicehandler, J. and R. Simmons (1994). *Contraceptive Introduction Reconsidered: A Review and Conceptual Framework* (Geneva, WHO).

Yihin, S. and Z. Pengdi (1997). "A review of studies of once a month oral contraceptives in China" *Journal of Reproductive Medicine* 6(Suppl. 1). Beijing, National Research Institute for Family Planning.