


Postpartum women's knowledge and planned use of contraception in Myanmar

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ABSTRACT

Background Maternal mortality in Myanmar is one of the highest in the WHO South-East Asian region. Additionally, the country has a high unmet need for contraception and low rates of uptake of long-acting reversible contraceptive methods (LARCs) including intrauterine devices (IUDs) and implants. Engagement with health professionals around the time of a birth is an ideal opportunity for women to access contraception but immediate postpartum provision is not widely offered in Myanmar.

Methods We undertook a cross-sectional survey of women immediately postpartum at two hospitals in Yangon to investigate their knowledge, and past use of, contraceptive methods and their plans for postpartum contraception including perceptions of implants and IUDs. Four trained obstetrics staff collected data using electronic tablets between January 2017 and January 2018.

Results Of the 1755 participants, 55.1% had used pills and 42.2% injectables. In contrast, only 0.5% had used an IUD and 0.3% an implant. Few women (4.4%) anticipated starting contraception immediately postpartum and only a minority would consider future use of an implant (36.9%) or an IUD (13.0%). Fear of side effects was the major barrier to future implant and IUD uptake, reported by 64.5% and 62.5%, respectively.

Conclusions Women in maternity care in Yangon have some awareness of IUDs and implants but many hold misconceptions about their side effects leading to reluctance to use. Reducing the unmet need for contraception and improving maternal outcomes in Myanmar could be achieved by improving education, policy and practice around immediate postpartum contraception provision, with a particular focus on LARC methods.

Key messages

- ▶ There is scope to address some of the unmet need for contraception in Myanmar by scaling up immediate postpartum family planning programmes.
- ▶ Currently women in Myanmar lack experience and understanding of the benefits of long-acting reversible contraceptive methods (LARCs).
- ▶ National health policy in Myanmar needs to support the development of postpartum LARC programmes that educate women and upskill practitioners.

INTRODUCTION

Maternal mortality in Myanmar is one of the worst among countries in the WHO's South-East Asian region with 2800 women dying from pregnancy and childbirth annually, corresponding to a maternal mortality ratio of 282 per 100 000 live births.^{1 2} Leading causes are postpartum haemorrhage and unsafe abortion with certain maternal characteristics such as high parity, young age at conception (less than 20 years of age) and pregnancy in older women (aged over 40 years) corresponding to a greater risk of maternal death.² Although fertility rates have fallen to 2.2 births per woman, data suggest women are having more children than desired with 16% of women reporting an unmet need for family planning.³ This lack of access to contraception is recognised worldwide as a significant contributor to maternal deaths, and reducing this unmet need is of utmost importance both to women's health and to sustainable development.⁴

According to Family Planning 2020, modern contraceptive prevalence in 2019 in Myanmar was 54.1% among married women and 32.8% among all women.⁵ However, contraceptive method options for women in Myanmar are largely limited to injectables, pills and sterilisation. Only 7.4% of women are using the most reliable reversible methods, namely the long-acting reversible contraceptive methods (LARCs) that include intrauterine devices (IUDs) and implants.⁵ In Myanmar, a lack of sexual and reproductive health services in primary care, coupled with a shortage of healthcare professionals trained in LARC method counselling and insertion, means that many women are not offered these options.^{6,7} This especially impacts use for women in rural areas, who have a higher unmet need for reliable contraception and consistently higher fertility rates.^{3,8}

LARC methods are highly effective choices in the postpartum period that can enable women to better limit the number of children they have and better plan the timing of their births.⁹ All LARC methods can be commenced immediately after childbirth and are safe to use with breastfeeding.¹⁰ The Government of Myanmar's recent commitment to expand immediate postpartum contraception provision has yet to be widely implemented,¹¹ but there is enormous potential to expand access to LARC methods in this way. This study sought to explore past use of contraception among women who had just given birth, and understand their plans for postpartum family planning, including knowledge and acceptability of LARC methods in two tertiary hospitals in Yangon, Myanmar.

METHODS

We undertook a cross-sectional survey of immediately postpartum women (n=1755) at two hospitals in Yangon which serve suburban and rural populations: the North Okkalapa General Hospital which has 8000 deliveries per year and the Insein General Hospital which has 9000 deliveries per year. Participants were women in the postnatal wards of these hospitals who had given birth to a live infant where the child had no identifiable health issues. The four researchers (two at each site) recruited women at various times and on various days across the hospitals over a 1-year period between January 2017 and January 2018,

Eligible women were identified with assistance from hospital staff shortly after giving birth and approached and provided with a study information sheet in Burmese that outlined the rationale for the study and what would be required of their participation. Women were asked to sign or provide a thumb print to indicate their consent and were informed that the study was voluntary and that they would not be individually identified in their responses. No eligible woman declined participation. Respondents, with the assistance of the researchers, were asked about: previous reproductive history, previous contraceptive use, their

knowledge and perceptions of contraception options, and future plans for pregnancies and contraception. The questionnaire was based on previously validated questionnaires including questions used in the Demographic and Health Survey (DHS).¹ This included questions about contraceptive knowledge. In these DHS questions methods are classified as either being well known if the woman mentions the method spontaneously, known if she recognises the method when it is mentioned, or unknown when she does not recognise the method when mentioned.

The interviews were conducted face to face, in the local language, in a suitably private location. The trained interviewers used CommCare, a mobile data capture application on android tablets. CommCare enables data to be captured offline in the field and uploaded to the server at a later time when internet connectivity is available, which was an important feature for the context in which this survey was conducted. Data were collected between January 2017 and January 2018.

Data were analysed in IBM SPSS Statistics version 24 reporting descriptive statistics.

We aimed for a sample of 1311 women based on population data indicating there are approximately 2.125 million women of reproductive age in Yangon¹² and on the current crude birth rate of 17.4 per 1000 women. To estimate their past use of contraception (previously reported at 67%)⁸ with 95% confidence and 2.5% margin of error, we sought to survey at least 1311 women and oversampled to account for non-response rates.

Ethics approval was obtained from The University of Sydney (protocol number 2017/565) and from the Ethics Review Committee of the University of Medicine 2 Yangon, with permission from the Ministry of Health and Sports, Myanmar.

Patient and public involvement

Neither patients nor the public were involved in the design, conduct, reporting or dissemination plans of the research.

RESULTS

Between January 2017 and January 2018 we recruited 1755 postpartum women. The demographics of the sample can be seen in [table 1](#) and less than 3% of the data were missing for all variables. In brief, more than 60% of the participants were under the age of 30 years and almost all (99.7%; 1750) were married. Most identified their ethnicity as Burmese (88.9%; 1560). One-third of the sample had had two or more children and 31.8% (559) had delivered two to four children and 3.4% (59) five or more.

Pregnancy planning

Over two-thirds of women stated that their recent pregnancy was planned (66.4%; 1166), over a quarter

Table 1 Baseline characteristics of 1755 postpartum women in the Myanmar study population.

Demographic and pregnancy characteristics	n (%)
Age (years)	
<20	157 (9.0)
20–29	974 (55.7)
30–39	551 (31.5)
≥40	55 (3.8)
School attendance	
Yes	1703 (97.0)
Highest level of school attained*	
Primary	427 (25.1)
Secondary	850 (49.9)
Higher	426 (25.0)
Mother's ethnicity	
Burmese	1560 (88.9)
Kayin	93 (5.3)
Other ethnicity	102 (5.8)
Religion	
Buddhism	1651 (94.1)
Christian	55 (3.1)
Hindu	23 (1.3)
Islam	26 (1.5)
Marital status	
Married	1750 (99.7)
Not in a union	3 (0.3)
Parity (n)	
1	1137 (64.8)
2–4	559 (31.8)
≥5	59 (3.4)

*3% of the data were missing.

were unplanned (28.3%; 497) and a small proportion were unsure (5%; 88). Among those who reported an unplanned pregnancy, three-quarters stated the pregnancy was mistimed (75.7%; 376) and the remaining unwanted (24.1%; 121).

Knowledge of contraception

Among the methods of contraception known to the women, the injectable method was the most common method mentioned spontaneously (89.1%; 1564) followed by pills in 87.9% (1542). LARC methods (implants and IUDs) were spontaneously mentioned by 62.8% (1103) and 57.3% (1006), respectively (figure 1). Younger women (aged under 20 years) and those with a lower level of education were significantly less likely to mention the LARC methods spontaneously (both $p < 0.001$).

Previous use of contraception

Among the participants, 78.1% (1370) had previously used methods to delay or avoid pregnancy.

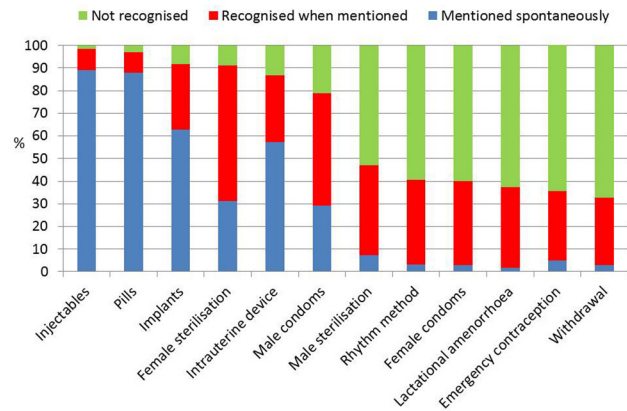


Figure 1 Knowledge and recognition of contraceptive methods by postpartum women in the Myanmar study population.

Most commonly the most recent method participants reported using was the pill 55.1% (756) followed by an injectable method (42.2%; 579). There were low rates of use of implants (0.3%; 5) and the IUD (0.5%; 8). Women reported that they obtained this most recent method of contraception from the private (81.1%; 1111) and public sectors (14%; 192), with 4.9% (67) from other sources.

Future pregnancy plans

The desire for future children, the ideal interval and the plans for contraception are documented in table 2. Almost half of the women reported that they would not like to have more children (47.2%), and almost all reported that they would use a contraceptive method to delay or prevent a pregnancy (96.7%). The most commonly reported method was the injectable contraceptive (46.7%).

Postpartum use of LARC methods

Only one-third of women would consider using an implant in the future (36.9%; 648) and just over one-tenth an IUD (13.0%; 229). The two most common reasons given for not using the implant were fear of side effects (64.5%; 714) and lack of familiarity (13.1%; 145), followed by disliking the method (8.3%; 92) and preferring another method (7.2%; 80). Other reasons (cost, no time, unknown) comprised only a small proportion of responses (6.9%; 76). For IUD refusal, the reasons given were similar with 62.5% (995) women citing they were afraid of side effects and 11.1% (171) stating that they were unfamiliar with the IUD. Similar proportions stated a dislike of the method (8.9%; 136) and their preference for another method (8.9%; 136).

DISCUSSION

We found among postpartum women in Yangon maternity care that only two-thirds had planned their current pregnancy, and while they are interested in using contraception to delay or limit pregnancies, many are unaware of the possibility of immediate

Table 2 Women's plans for future pregnancy and contraception

Question about future pregnancies	n	%
Would you like to have another child?		
Yes	488	27.8
No	829	47.2
Unsure	438	25
How long (in years) would you like to wait from now until the birth of your next child (among those who wanted another child)?*		
≤2	46	9.4
3–4	215	44.1
≥5	227	46.5
Do you think you will use a contraceptive method to delay or avoid pregnancy at any time in the future?		
Yes	1697	96.7
No	38	2.2
Don't know	20	1.1
When will you start this method?		
Before I leave hospital	77	4.4
After 6 weeks	1504	85.7
When I stop breastfeeding	25	1.4
Not sure	91	5.2
Response missing	58	3.3
Which method will you use?		
Female sterilisation	59	3.4
Pills	232	13.2
Intrauterine devices	56	3.1
Injectables	820	46.7
Implants	282	16.1
Condoms	3	0.2
Lactational amenorrhoea	1	0.1
Calendar	1	0.1
Combination of several methods†	244	13.9
Response missing	57	3.2

*Of the 488 women that wanted more children.

†Combination of methods was mainly women who named both the pill and implants, or injectables and implants, or intrauterine devices and implants.

postpartum provision and lack knowledge and familiarity with LARC methods. Importantly, while participants recognised IUDs and implants, less than 1% had used these methods previously, despite the fact that IUDs have been available in the country for over 40 years and implants since 2017.¹³ There was a high level of trepidation about using LARC methods, with almost two-thirds fearing future use because of side effects. The unmet need for contraception was evident in our participants as more than one in four had not planned their current pregnancy. A transition to LARC methods is important in Myanmar if the country is to reduce maternal mortality.¹⁴ Experience from other

low- and middle-income countries points to the significant reductions in maternal and neonatal morbidity that can be achieved by limiting the number of high-risk birth through increased use of LARC methods.^{15 16}

The reported unplanned pregnancy rate in this study is higher than in the most recent DHS survey,³ which found that 91% of women had planned their most recent pregnancy. These differences may arise because the DHS data ask women about both current pregnancies and births and those in the 5 years prior to the survey. Responses may be more prone to recall bias and changing sentiments about how desired the pregnancy was.¹⁷

Currently in Myanmar the most commonly used methods – injectables and pills – do not prevent pregnancy as effectively as LARC methods.¹⁸ They are also subject to higher discontinuation rates¹⁹ and supply chain shortages and ultimately are not as cost effective as LARC.²⁰ The over-reliance on shorter-acting hormonal methods observed in Myanmar also occurs in many other low- and middle-income countries. A prevalent cause is young age at having the first child, poverty and low levels of formal education,^{21–23} as well as pervasive myths about the adverse effects of LARC.^{24 25} The Government of Myanmar has committed to increasing funding for reproductive health including improving access to commodities, addressing supply chain issues and expanding training in LARC methods. Our results indicate that low levels of knowledge about LARC methods are particularly prevalent among younger and less-educated women and so any initiative will need to be accompanied by significant public health education campaigns to dispel the widespread community misconceptions and provide sex education in schools. Evidence from elsewhere suggests these barriers can be overcome through strategies such as mobile outreach services and postpartum provision prior to hospital discharge.^{16 26 27}

Currently it is not routine practice to initiate contraception before hospital discharge but immediate postpartum provision of LARC methods can overcome many of the barriers to community supply.¹⁰ While the majority of the women in the present study did not identify this as a clear option, immediate postpartum LARC programmes are now routine in many settings. This practice is supported by evidence that implants inserted before hospital discharge have no impact on breastfeeding, nor on infant growth and well-being.^{28–30} Evidence also supports the insertion of IUDs within 48 hours of vaginal delivery or at the time of caesarean section,³¹ although there is a higher risk of expulsion compared with insertion at 6 weeks postpartum. Nevertheless, the benefits of provision before discharge outweigh the risks, mainly because many women simply do not return for the 6-week device insertion visit.^{32 33} For such programmes to be successful, women need to be educated about the role birth spacing plays in optimising maternal and

neonatal health.^{34 35} Studies suggest information on contraception can be successfully provided in the antenatal period, although women may be more responsive to this information immediately following delivery.^{36 37} Experience from Africa and Asia³⁸ shows that it is important to identify clinical champions who can provide leadership in the roll out of postpartum contraception counselling, training and capacity-building programmes.^{39 40}

This study was undertaken in only two hospitals on the outskirts of Yangon, and while it captures both urban and semi-rural populations it may not be representative of postnatal contraceptive practices across the country. Although there were few missing data because the questionnaire was completed with the researcher entering the data, this may have biased the participants' responses and hence the results.

CONCLUSIONS

Women in maternity care in Yangon have some awareness of IUDs and implants but many hold misconceptions about their side effects leading to reluctance to use. There is scope to address some of the unmet need for contraception by scaling up immediate postpartum family planning programmes and counselling women about the benefits of LARC methods. This requires national policy to drive programmes to educate women about these options and to train healthcare professionals involved in antenatal care to provide contraceptive counselling and to develop an accessible immediate postpartum contraceptive services.

Contributors HHY, KKN, CRG and KIB were involved in the study's conception and funding. HHY, SHH and NKWY contributed to the methods and recruitment. HHY, NSM and KIB were involved in data analysis. KIB, CRG, HHY and NSM were involved in write up and all authors reviewed the final manuscript.

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Competing interests KIB was a member of an interational advisory board for Bayer Healthcare that examined postpartum insertion of intrauterine devices.

Patient and public involvement Patients and/or the public were not involved in the design, or conduct, or reporting, or dissemination plans of this research.

Patient consent for publication Not required.

Provenance and peer review Not commissioned; externally peer reviewed.

Data availability statement The data that support the findings of this study are available from the corresponding author, [KIB], upon reasonable request.

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