

DISSEMINATION OF REPRODUCTIVE HEALTH KNOWLEDGE BY QUESTIONS AND ANSWERS THROUGH TELEPHONE HOTLINE: A FEASIBILITY STUDY IN MYANMAR

Ko-Ko-Zaw¹, Than-Tun-Sein¹, Kyaw-Minn¹, Khin-Maung-Lwin², Ye-Htut¹, Yin-Thet-Nu-Oo¹, Theingi-Myint³, San-Shwe¹ and Khin-Pyone-Kyi¹

¹Department of Medical Research (Lower Myanmar), ²Central Health Education Bureau, ³Maternal and Child Health, Department of Health, Yangon, Myanmar

Abstract. This study was conducted to determine the feasibility of disseminating reproductive health (RH) information to the general public of Myanmar in a confidential, anonymous and interactive way through a telephone hotline. We carried out a cross-sectional study using a short questionnaire interview with the RH hotline callers and analyzing sample audio recordings of conversations. The hotline was advertised in print media. It was answered by trained hotline responders (medical doctors) of Department of Medical Research (Lower Myanmar) (DMR-LM). There were 743 calls during six months, from all 14 States and Divisions. Most of the calls were from Yangon, Mandalay and Bago Division. Both male (48%) and female (52%) callers used the hotline. The majority of callers (74%) were between 25 and 45 years old; 21% were young people (15-25 years old). Married people (81%) used the hotline more than singles (19%). Most of the callers (91%) had a high school to graduate education level. The most frequently asked topics were infertility (23%), birth spacing (22%), sexual problems (13%) and adolescent health, including reproductive function (12%). The anonymity of the callers, the non-judgmental attitudes of the responders and the use of media for publicity appeared to facilitate the use of the hotline by the public. More linkages with service entry points, enhancement of communication skills, sexual counselling training and use of media can improve topic coverage and utilization of the reproductive health hotline.

Keywords: reproductive health, hotline, health communication, Myanmar

INTRODUCTION

There has been improvement in many aspects of population health in Myanmar.

Correspondence: Dr Ko-Ko-Zaw, Medical Statistics Division, Department of Medical Research (Lower Myanmar), No 5, Ziwaka Street, Dagon Township, PO 11191, Yangon, Myanmar.

Tel: 95 01 375457; Fax: 95 01 251514

E-mail: zawkzaw@gmail.com

The under 5 mortality rate is decreasing in Myanmar (73.1 per 1,000 live births in 2000 to 64.15 per 1,000 live births in 2006 in urban areas) (Ministry of Health, 2009). But there are still gaps in some aspects of population health in Myanmar. For example, maternal mortality in Myanmar is still high (3.16 per 1,000 live births in 2006) (Ministry of Health, 2009). This morbidity and mortality is partly attributable to poor health knowledge and consequently delay

in utilizing available health services at the community level. Therefore, various health education activities are being carried out in Myanmar.

Despite these initiatives, research shows there are still major gaps in knowledge regarding reproductive health (RH) and HIV, especially among young people. (Thein-Thein-Htay *et al*, 1999). These gaps can be filled using modern communication technology, since Myanmar is enjoying increasing access to modern communication technology. In 2005, there were 482,128 telephone lines, including auto telephones, cellular telephones and wireless local loops; the telephone density of the country is 0.89 per 100 inhabitants (Myanmar Post and Telecommunication, 2009).

Hotlines (also known as help lines) are telephone lines established to provide information to a caller, serve as an entry point for first time counselling or act as a referral service. Discussion of health matters by telephone hotline has many advantages for health education. It is quick, low-cost, confidential and easy to discuss sensitive issues, especially for young people. Hotlines are also useful tools to educate illiterate or semi-literate audiences in urban settings (UNFPA, 2002). In many countries, a telephone hotline has been used as a source of general health information (Hu *et al*, 2002) and specific RH issues, such as HIV, sexually transmitted infections (STIs), sexual issues and teenage pregnancy (Boselli *et al*, 2003; Papaharitou *et al*, 2005; Steyn *et al*, 2005).

In Myanmar hotlines have been used for health education, counseling and the National AIDS Program (NAP) has used a telephone hotline for HIV/AIDS information and counseling (Aye-Aye-Mon *et al*, 1998). The Maternal and Child Health

Section of Department of Health operated a telephone line for a period of time to respond to the queries on RH issues from the public, but there has been no formal assessment on the feasibility of a hotline providing information on RH issues in Myanmar; therefore, the Department of Medical Research (Lower Myanmar), in collaboration with the Department of Health, carried out a feasibility study regarding dissemination of RH knowledge among the general public, especially adolescents and youths, through setting up a hotline. The general objective was to test the feasibility of disseminating RH information using the hotline, and specific objectives were to assess the use of the hotline, provide demographic information regarding the people using the hotline, determine the topics asked about and the frequency among male and female callers and identify how the caller heard about the hotline.

MATERIALS AND METHODS

Study design and study population

This was a cross-sectional study using a short questionnaire interview with all RH hotline callers from March 23 to October 30, 2009. The audio recordings of hotline conversations were then analyzed.

Description of the process of setting up the hotline

With the guidance of a steering committee and technical committee, a Reproductive Health Questions & Answers Source Book in the Myanmar language (RQAS-Myanmar) was compiled by the team. It was then edited by technical editors from the DMR-Lower Myanmar, Department of Health and Health Education Bureau. A total of 56 participants (medical doctors) were trained in DMR-Lower

Myanmar for 5 days, from September 29 to October 3, 2008 on reproductive health issues and communication skills to answer hotline questions. The week prior to opening the hotline, it was publicized in public newspapers and in popular health tabloids and health magazines. The RH hotline was advertised periodically during the project.

Before opening the RH hotline, medical officers from DMR (Lower Myanmar) were briefed on their roles and responsibilities as hotline responders. A trained research officer (medical doctor) was assigned daily to the RH hotline. Hotline responders are provided with access to the Internet and a RH library equipped with a wide range of resources and IEC materials on reproductive and sexual health. Referral lists for further information and available health services were distributed to hotline responders.

Data collection and data analysis

To collect caller profiles the hotline responder used a short questionnaire to ask 6 questions for the caller to answer (age, sex, marital status, education, state or division and township of residence, and their source of information about the hotline) and 4 questions for the interviewer to answer (serial number, date, time, caller's question and responder's action). The hotline interviewer only asked questions after addressing the caller's questions, and obtaining informed consent from the caller after assuring the caller the information was confidential. The questions and answers were recorded with a digital recorder for content analysis. The recordings were kept confidential and accessible only by the principal investigator.

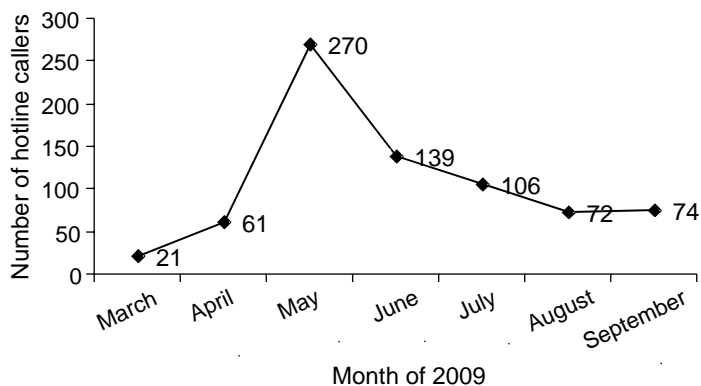


Fig 1—Number of hotline by month during the project in 2009.

The callers were classified by age, sex, marital status and education level. The RH questions asked were ranked by frequency and compared between male and female callers. The sources of information about the hotline and the interviewers answers were also recorded. Content analysis was done by randomly sampling the audio recordings.

Ethical considerations

The study was approved by the Institutional Ethical Review Committee of the Department of Medical Research (Lower Myanmar). The investigators ensured strict confidentiality with the recordings of the conversations.

RESULTS

Utilization of the hotline

There were 743 calls during the 7 month period. Fig 1 shows the frequency of calls per month since starting the RH hotline.

Calls came from all 14 States and Divisions of Myanmar. The most calls come from Yangon, Mandalay and Bago Division and the fewest calls came from Chin, Rakhine, Kayah and Karen States, which are remote border areas.

Table 1
Socio-demographic profiles of
hotline callers, 2009.

Socio-demographic characteristics	Number	Percent
Age (years)		
15-24	157	21.1
25-44	507	68.2
45-59	43	5.8
60-74	36	4.9
Sex		
Male	356	47.9
Female	387	52.1
Marital status		
Married	599	80.6
Unmarried	144	19.4
Education		
Primary school	8	1.1
Middle school	17	2.3
High school	105	14.1
University	108	14.5
Graduate	465	62.6
Post-graduate	40	5.4
Total	743	100

Caller profiles

Table 1 shows the socio-demographic characteristics of the hotline callers.

Nearly three-fourths of the callers were 25 to 44 years old and one-fifth of the callers were young people (15-24 years). Nearly equal male (48%) and female (52%) callers used the hotline. Married people (81%) used the hotline more frequently than unmarried (19%) people. Most of the callers (91%) had a high school to graduate level education.

Topics of reproductive health asked

The left side of Table 2 shows the reproductive health topics asked in order of frequency (except for the "miscellaneous" category which was placed last), beginning from the most frequently asked to the least frequently asked topics. The right

side of Table 2 shows a comparison of the frequency of these reproductive health topics asked by male and female callers.

Infertility, birth spacing, gynecological problems, safe motherhood, reproductive cancers and abortion were asked about by women more often than men. Sexual problems and HIV/STI/reproductive tract infections (RTI) were asked about by men more than women. These differences are statistically significant. There were no differences between male and female callers in frequency of calls regarding adolescent health, including reproductive function.

Content analysis of tape recordings

Analysis of recordings were carried out. Most people had questions about their own personal problems rather than calling for general information. A few callers expressed concerns about family members or others.

"Can I bear a child...I am hepatitis C positive?" (28 year old married woman).

"My wife is 3 months pregnant. We haven't seen a doctor. I want to know if it is necessary to go and see a doctor." (30 year old married male).

"I called this line when I found out I was pregnant...I wanted to abort it. I went to 3 obstetricians and they each refused to do it. I don't know what to do...." (19 year old unmarried female).

Some people called for information without mentioning a specific problem.

"What is miscarriage and how can one avoid it?" (22 year married male).

Some callers called the hotline seeking a second opinion after seeing a doctor.

Table 2
Reproductive health topics asked by hotline callers.

Rank by total frequency	Topic	Number(%)	Sex		p-value
			Male N (%)	Female N (%)	
1	Infertility	169 (22.8)	52 (30.8)	117 (69.2)	0.001
2	Birth spacing	166 (22.3)	76 (45.8)	90 (54.2)	0.02
3	Sexual problems	99 (13.3)	87 (87.9)	12 (12.1)	0.001
4	Reproductive function and adolescent health	86 (11.6)	47 (54.7)	39 (54.3)	0.88
5	HIV/STI/RTI	52 (7.0)	34 (65.4)	18 (34.6)	0.001
6	Gynecological problems	49 (6.6)	8 (16.3)	41 (83.7)	0.001
7	Safe motherhood	47 (6.3)	21 (44.7)	26 (55.3)	0.003
8	Reproductive cancers	25 (3.4)	6 (24.0)	19 (76.0)	0.001
9	Abortion	15 (2.0)	4 (26.7)	11 (73.3)	0.001
	Miscellaneous	35 (4.7)	-	-	-
	Total	743 (100)	356 (47.9)	387 (52.1)	0.25

STI, sexually transmitted infection; RTI, reproductive tract infection

"My wife has a growth in her uterus and has to undergo surgery, the doctor told her. She has heavy bleeding every month. She doesn't want to have surgery; what else can we do? What are the side effects if the uterus is taken out?" (40 year old married male).

Source of information about the hotline

Most callers (68%) heard about the hotline from popular tabloid newspapers, especially during the later months of the hotline. Some callers heard about the hotline from a public newspaper (14%), especially during the early months. About one-tenth of callers was informed about the hotline by friends or other persons.

Hotline responders' answers to callers' questions

The responders answered the majority of the hotline questions (72%), but deferred the answers of some callers (3%) to a consulting obstetrician-gynecologist at a

later time or to references for more accurate detailed information. The responders referred about 25% of callers to obstetrician-gynecologists, other health care providers or health service centers.

Some callers were anxious and the responders needed to comfort them in addition to providing information.

"What are the causes that one can't have a child after getting married?".... I am 23 and have been married for 6 months now" (23 year old married woman).

In response to this, the female hotline responder answered the following:

"You are still young and have a high chance of getting pregnant at this age... you have been married only for 6 months now, and have had sexual exposure just once a week. You don't need to worry. You need to have more frequent intercourse and need to be aware of your

fertile period" (Female responder answering the call).

The confidentiality and anonymity the hotline offers caused some callers to talk freely about some sensitive topics like sexual health.

"Can I talk with a male doctor?
Can I ask something about marriage. I have been married for about one year and I "come" quickly. My sexual act lasts only about one minute; it's a real problem for me."
(29 year old married man).

DISCUSSION

A small proportion of the public throughout the country used the hotline to obtain a variety of reproductive health information: 743 callers (100 callers per month on average) from all states and divisions asked questions which fell into 9 main themes of reproductive health during 7 months. The calls increased during the middle of the project period, then decreased toward the end of the 7 month period.

The middle-aged married educated persons comprised the largest group of callers (equal numbers of male and female callers). Young people ranked second in frequency of calls (21%).

Fertility questions (infertility and birth spacing) and sexual behavior questions were the most common subjects asked about (45%). HIV/STI/RTI and safe motherhood, although important for public health, were asked about less frequently (7% and 6%, respectively).

More women asked about infertility, birth spacing, safe motherhood, reproductive cancers and abortion. More men asked about sexual problems and HIV/STI/ RTI. A reproductive health hotline in Shanghai

also reported that men sought answers to questions about sexual health more often than women (Hu *et al*, 2002). Interestingly, not a few men called for information about birth spacing and safe motherhood.

Most callers heard about the hotline from print media (68%). Hotline responders gave answers to the questions of most callers (75%), but 25% were referred to health care providers.

Some hotline use happened because of the anonymity of callers, and due to advertisement in the media. The drop in the number of calls later in the study seems to be due to decreased coverage by newspapers and popular tabloid magazines. The low number of calls from states and divisions in hilly and coastal regions may be attributable to less access to popular tabloid magazines and low telephone density.

Low priority and less coverage of infertility in health communication programs may create an information gap among the public, especially among infertile couples. This, compounded by the sensitive nature of the problem, may explain the high frequency of inquiries about infertility. The callers frequently asked for information about sexual problems possibly because reliable sources regarding sexual health information are lacking and discussion of sexual matters by hotline was less embarrassing (Hu *et al*, 2002; Boselli *et al*, 2003). The low frequency of inquiries about HIV/AIDS and safe motherhood may be due to high coverage of HIV/AIDS, antenatal care, reproductive health programs, HIV prevention programs and mass media.

Infertility was more a concern among female hotline callers, perhaps because the wide spread perception it is the woman's fault, imposing social stigma on woman. It is natural that gynecological problems

and reproductive cancers were asked about more frequently by women. Stress on male involvement in reproductive health, in public health programs and possible changes in the perception of male roles in reproductive matters may account for the finding that nearly half the calls for information regarding birth spacing and safe motherhood came from men.

This study proved it is feasible to carry out a reproductive health hotline, providing personalized, sensitive health information to the public of Myanmar. There is room for improving geographical coverage and better targeting young people. Young people may benefit from an anonymous hotline since it provides a link between risk awareness and available medical services (USAID, 2004; Carlton *et al*, 2009).

The hotline was established to disseminate essential reproductive health information and counselling for family planning. There was an increasing demand for broader reproductive health topics, including infertility and sexual problems. It would be a challenge to provide all this information by the responsible medical officers.

The successful use of the hotline by the general public relied on marketing. The number of calls to the hotline decreased when the advertisements were no longer put in news media. A hotline project in Turkey also reported similar findings: when TV and radio advertisements decreased after two years, the number of calls soon began to decrease (Turkish Family Planning Association, 1998).

We recommend the availability of the hotline and the information available be advertised regularly through the media. Adolescents should be targeted when advertising the hotline and the information should be appropriate for this age group. The source book used by hotline provid-

ers needs to be expanded to cover a broader scope of RH issues. Training on sexual health should be given to the hotline responders. Linkages to service entry points should be strengthened.

ACKNOWLEDGEMENTS

This study was supported by the World Health Organization (South-East Asian Region). We thank Prof Dr Paing Soe for the original idea for the study, and for help in seeking funding for the study. We thank the research officers of DMR (Lower Myanmar) who operated as hotline responders and collected data. We are grateful to the facilitators of the training workshop for hotline responders. We appreciate the contributions of the team members and technical editors for compiling and editing the Reproductive Health Questions & Answers Sourcebook in the Myanmar language (RQAS-Myanmar).

REFERENCES

- Aye- Aye- Mon, Rai-Mra, Myint-Zaw, Hla-Htut-Lwin, Edward-Zan, Khin-Ohnmar-San. Assessing HIV and AIDS information needs of the general public using a telephone hotline in Yangon. *Myanmar Med J* 1998; 42: 9-11.
- Boselli F, Chiossi G, Gallinelli A. The Italian STD hotline: making people aware. *Sex Transm Dis* 2003; 30: 707-12.
- Carlton LM, Collins KC, Ransons A. Reproductive and sexual health information delivered via an anonymous hotline 2009. [Cited 2009 Nov 28]. Available from: URL: http://apha.confex.com/apha/134am/techprogram/paper_130824.htm
- Hu X-Y, Tong CL, Chen J, Xiao Z, Cheng L. Report from a 24 hour reproductive health hotline in Shanghai: a preliminary analysis of the first 9 months of hotline data. *J Reprod Med* 2002; 11(z1) (In Chinese)

- with English abstract).
- Ministry of Health, Myanmar. Health in Myanmar 2009. Yangon: Ministry of Health, 2009.
- Myanmar Posts and Telecommunications, Naypyitaw. 2009. [Cited 2009 Nov 26]. Available from: URL: <http://www.mpt.net.mm/mpt/index.htm>
- Papaharitou S, Nakopoulou E, Kirana P, Iraklidou M, Athanasiadis L, Hatzichristou D. Women's sexual concerns: data analysis from a help-line. *J Sex Med* 2005; 2: 652-7.
- Steyn PS, Britz A, Rolink H. A 24-hour toll-free hotline for youth emergency contraceptive services in the Western Cape Province, South Africa [Abstract]. St Petersburg, Florida: Reproductive Health 2500 Meeting, September 7-10, 2005. *Contraception* 2005; 72: 229-45.
- Thein-Thein-Htay, Khin-Thet-Wai, Ko-Ko-Zaw, Kyu-Kyu-Than. A reproductive needs assessment in Myanmar. Yangon: Ministry of Health and UNFPA, 1999.
- Turkish Family Planning Association. Telephone hotlines on RH. Istanbul: Turkey, 1998.
- UNFPA. Technical Support Division (TSD), UNFPA. BCC Tools No. 2: Communication/Behaviour change. New York: UNFPA, 2002.
- United States Agency for International Development (USAID), Bureau for Global Health. AIDS hotline reaches youth in Jordan. Washington, DC: USAID, Bureau for Global Health, 2004 April 7: 2.