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Unmet sexual and reproductive health needs of women aged 50 to 64 years in rural China

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Abstract

Objective: China's family planning program focuses on younger women. Women older than 50 years, especially those in rural areas, are ineligible for free services and often have few other care options. Few studies have examined the sexual and reproductive health demands and unmet needs of these women.

Methods: This cross-sectional, interviewer-administered survey included 1,652 rural women aged 50 to 64 years from seven provinces in China. We examined women's sexual and reproductive health status, knowledge, and service demands, and whether they still had an intrauterine device (IUD).

Results: Educational levels were low, and most were rural farmers or housewives. The mean age at menopause was 48.9 years, and 52.4% reported climacteric symptoms. The mean frequency of sex in the last month was 1.8 times. About 47.4% of women had undergone a gynecological examination during the past 2 years. The first choice for care was family planning clinics (31.2%) followed by township hospitals (28.4%). Identified service needs included women's health check-ups (56.5%), sexual health knowledge (54.4%), women's health knowledge (35.4%), menopause counseling (34.8%), and IUD removal after menopause (17.0%). Among 519 postmenopausal women who used an IUD, 19.1% had not had it removed. On multivariate regression, awareness of correct time for IUD removal, beliefs about sex after menopause, receiving formal health education, and undergoing gynecological examination were significantly associated with having had IUD removal.

Conclusions: A large proportion of middle-aged women in rural China lack sexual and reproductive health services, including IUD removal after menopause. A comprehensive program of sexual and reproductive health services is needed for middle-aged women in rural China.

Key Words: Unmet needs – Sexual and reproductive health – Middle-aged women – Intrauterine device – China.

China has been implementing its national family planning program since the beginning of the 1980s, and the total fertility rate has fallen far below the replacement level, resulting in a special population structure with a massive proportion of middle-aged women, particularly women aged 50 to 64 years, who nowadays greatly outnumber women in early reproductive ages. In 2010, there were an estimated 76.7 million women aged 50 to 64 years, who had made great contributions to the national family planning movement when they were younger. They now represent about 11.8% of the total 650 million female population in

China, and the size of this age group is continuously growing.¹ China's family planning program mainly focused on married women aged 15 to 49 years, providing contraceptive services only. After reaching age 50 years, Chinese women are no longer eligible for free sexual and reproductive health services under this program, and many women, especially those in rural areas, have limited access to health care from other sources. These circumstances result in two challenges to the care of Chinese middle-aged women: serving a rapidly expanding segment of the population and integrating sexual and reproductive services into the existing healthcare system. Our previous qualitative research on middle-aged women in rural China found unmet sexual and reproductive health needs, including safe intrauterine device (IUD) removal and sexual functioning during menopause.²

Previous studies of this Chinese population have focused on the treatment of gynecological diseases,³⁻⁹ but little is known about their sexual and reproductive health demands and unmet needs associated with past contraceptive use and menopause-related problems¹⁰⁻¹³ and how they relate to the existing maternal and child health and family planning service system in China. This lack of research is unfortunate because China's systems for family planning and maternal and child health services, which have functioned separately since the

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early 1980s, have left coverage gaps that may exclude women aged 50 to 64 years from needed services. Alternative sources of care are limited because the government's rural medical insurance does not cover outpatient gynecology and women's health services.

We therefore undertook this large population-based survey in seven provinces in China to examine sexual and reproductive health demands and unmet needs among women aged 50 to 64 years in rural China. This study asked women about sexual and reproductive health issues, sources of information, current health status, service needs, access to health services, and quality of services. The purposes of this study were to identify unmet needs and to provide information for improving services for this important and growing population segment.

METHODS

Study site and sample

This cross-sectional questionnaire-based study was conducted in a representative sample of women aged 50 to 64 years from rural areas in seven provinces in China: Jiangsu, Liaoning, Jiangxi, Chongqing, Hainan, Guizhou, and Qinghai. These provinces were selected to represent different geographic, socioeconomic, and cultural spectra. Jiangsu and Liaoning are among the most economically progressive provinces located in the east coast of China, whereas Guizhou, Chongqing, and Qinghai are among the least developed provinces located in western China; Jiangxi and Hainan are among the developing provinces located in central China (Fig.).

We used a multistage cluster sampling design to recruit samples from these seven selected provinces. First, we purposely selected one county, based on our knowledge of these areas, that we believed to be typical of each province (for a total of seven counties): Yandu county in Jiangsu, Zhuanghe county in Liaoning, Jian county in Jiangxi, Yongchuan county in Chongqing, Chengmai county in Hainan, Danzhai county in Guizhou, and Pingan county in Qinghai. Second, two townships were randomly selected from each county, and two villages were also randomly selected from each township, for a total of 28 villages. Finally, all women aged 50 to 64 years in 28 selected villages were recruited, for a total of 1,686 study participants.

Data collection

Sixteen female family planning workers from each county (altogether 112 people in seven selected counties) were recruited as research assistants to help conduct the study. The Nanjing College for Population Program Management study staff trained these research assistants in research ethics: how to interview women in the study, how to respond to participants' questions, and how to follow confidentiality procedures.

A 30-minute 45-item questionnaire was designed for face-to-face interview administration, pretested by the research assistants, and revised. The questionnaire was finalized after extensive pretesting. From October 1, 2011 through March 31, 2012, the research assistants made home visits and interviewed all recruited participants. The survey included questions on respondents' background characteristics, fertility status,

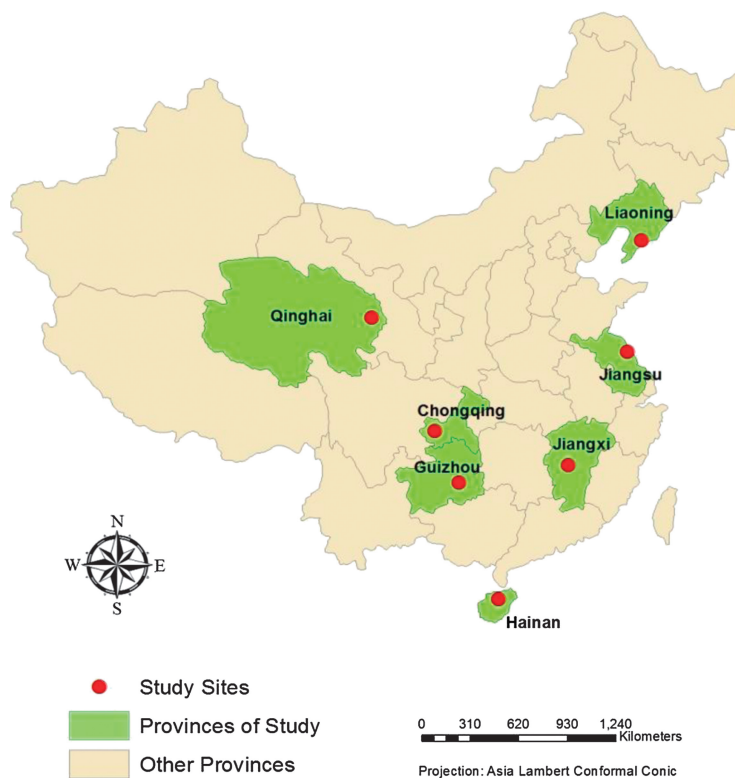


FIG. Study sites in rural China.

contraception, awareness of sexual and reproductive health matters, reproductive health status, experiences of physical change during menopause, treatment-seeking behavior, sexual behavior, and reproductive health services needs.

All participants provided a written informed consent form by signing the cover page of the questionnaire, which described the study, including the risks and benefits for participants. Those agreeing and those refusing to participate were given a small gift. A total of 1,652 individuals completed the interviews, for an overall response rate of 98%. The main reason for nonresponse was that the respondent was not at home on three contact attempts. We attribute the high response rate to a combination of the usual high response rates to survey research in China and our efforts to address sexual and reproductive health concerns, which enabled the development of trust between study communities and interview teams. The Institutional Review Board at Nanjing College for Population Program Management approved the study protocol and instruments. The local authorities of the family planning commissions also provided permission to conduct the study.

Measures

Background characteristics

We focused on women aged 50 to 64 years and refer to them here as “middle-aged women.” We collected information on participants’ age, education, household registration, previous and current vocation, and medical insurance status.

Reproductive behaviors

Participants were asked about the number of children they have had during their lifetime, the number of abortions they have had during their lifetime, the delivery place of their youngest child, and whether a health worker had visited them postpartum. All forms of contraception that the participants were currently using were marked on a checklist. The participants were also asked about their sex life after menopause and frequency of sex in the last month.

Health status in perimenopause

Participants were asked about their age at menopause (if they had terminated monthly cycles), if they had ever had uncomfortable feelings during menopause, about healthcare knowledge and awareness of menopause, about the best time to have an IUD removed after menopause, and if they had had an IUD removed. Participants were also asked about their attitudes toward sexuality.

Sexual and reproductive health services needs

Participants were asked whether they had undergone a gynecological examination in the past 2 years; whether any reproductive tract infections (RTIs) had been diagnosed and treated (if not treated, the reason for nontreatment); and about the kind of reproductive health education they had obtained. Participants were also asked what type of medical institution they would go to if they experienced RTIs and what would be their expectation of reproductive health services.

Analysis

We first examined demographic characteristics, sexual and reproductive behaviors, health status around menopause, and the study population’s demands for sexual and reproductive health services. Among postmenopausal women who had used an IUD, we examined with multiple logistic regression the association of IUD removal as a dichotomous outcome with the participants’ education, vocation, knowledge of menopause, services received, and abortion experience. Analysis was performed using SPSS version 17.0.

We looked for differences in results among the seven provinces sampled and for different ages within the range studied. We found no significant differences and therefore present only the overall results for simplicity.

RESULTS

Background characteristics

A total of 1,686 women aged 50 to 64 years were asked to participate in the study. Of these, 1,652 women completed the consent procedure and the interview by a research assistant. Background characteristics are presented in Table 1. Among participants, 90.3% were currently married, 17.2%

TABLE 1. Characteristics of rural Chinese women aged 50 to 64 years ($n = 1,652$)

Characteristics	%
Marital status	
Married	90.3
Widowed or divorced	9.4
Unmarried	0.3
Education	
Illiterate	37.6
Elementary school	45.2
Junior high school	14.4
Senior high/technical school	2.7
College or beyond	0.1
Residence	
Local	99.6
Migrant	0.4
Current activity	
Farmer	63.9
Housewife	29.3
Factory worker/business	2.4
Government-employed	0.1
Retired	4.3
Ever worked as migrant	
Yes	5.8
Enrolled in rural medical insurance	
Yes	96.3
Enrolled in other medical insurance	
Yes	6.8
Pregnancies during their lifetime ($n = 1,642$)	
0	0.4
1	6.5
2	28.3
3	30.0
≥ 4	34.8
Abortions during their lifetime ($n = 1,616$)	
1	27.4
2	8.9
≥ 3	2.7
Permanent contraception ($n = 1,629$)	
Male sterilization	5.9
Female sterilization	48.1
Had ever used an intrauterine device ($n = 1,629$)	44.7

TABLE 2. Menopausal health issues among rural Chinese women aged 50 to 64 years

Characteristics	Values
Experienced menopause, % (n = 1,644)	
Yes	94.7
Menopause age, mean, y (n = 1,361)	48.9
Uncomfortable feeling during menopause, % (n = 1,434)	
None	47.6
Slightly uncomfortable	39.1
Seriously uncomfortable	13.3
Menopause symptoms (multiple choice), % (n = 663)	
Backache	53.7
Menstrual bleeding problem	46.8
Irritability	44.8
Hot flashes	30.2
Disturbed thinking	27.8
Best time for intrauterine device removal after menopause, % (n = 1,646)	
Within half a year	31.5
Within 1 y	14.2
Not required	1.3
Not sure	53.0
Had intrauterine device removed after menopause, % (n = 519)	
Yes	80.9
No	19.1
Belief about sex after menopause, % (n = 1,638)	
Required very much	2.4
Required occasionally	52.7
No need	22.6
Not clear	22.3
Had sex last month (n = 1,612)	
Mean frequency	1.78
Wash genital area, % (n = 1,637)	
Everyday	44.5
Husband washes genital area (n = 1,542) everyday	33.1

had finished junior high school, and almost all (99.6%) were local residents. Only 5.8% of the participants had working experience as migrant workers in cities when they were younger. The longest time working was 24 years, and the shortest time working was 6 months. The mean working time was 3.56 years. About 96.3% participated in the government's rural medical insurance.

Table 1 also shows fertility status and contraception status at the time of the survey. About 64.8% of participants have had three or more pregnancies during their lifetime. Two fifths of the participants had experienced induced abortion: 27.4% had one abortion, 8.9% had two abortions, and 2.7% had three or more abortions. About 48.1% of the participants used female sterilization as permanent contraception, and 44.7% had ever used an IUD.

Sexual and reproductive health status during the climacteric period

Table 2 shows sexual and reproductive health status around the climacteric period. About 94.7% of participants no longer had menstrual cycles. The mean age at menopause was 48.9 years. Among women who had experienced menopause, 52.4% reported experiencing climacteric symptoms, and 13.3% said the symptoms were relatively serious. Among respondents with climacteric symptoms, the most common symptoms reported were backache (53.7%), menstrual disorder (46.8%), irritability (44.8%), hot flashes (30.2%), and disturbed thinking (27.8%).

The responses to the question on sex after menopause were as follows: still need (2.4%), sometimes need (52.7%), unclear (22.3%), and no need at all (22.6%). The mean frequency of sex in the last month was 1.8 times. About 31.5% of participants correctly answered the question on the best time for IUD removal, and about half of them (53.0%) were uncertain if an IUD should be removed after menopause. Among 519 post-menopausal women who had used an IUD for contraception, 19.1% had not had the IUD removed at the time of the survey.

Reproductive health needs and services

Table 3 shows health-seeking behavior, medical services received, and services desired. On seeking treatment for menopausal symptoms, only 39.8% of participants said that treatment was required. Less than half (47.4%) of participants reported that they had undergone a gynecological examination in the past 2 years. Township hospitals (28.4%) and family

TABLE 3. Female health services and needs of rural Chinese women aged 50 to 64 years

Characteristics	%
Need to see doctor when having menopausal symptoms (n = 1,593)	
Yes	39.8
No	38.5
Not sure	21.7
Where to see doctor when having women's disease (n = 1,639)	
Village clinic	11.1
Township hospital	28.4
Township family planning clinic	31.2
County hospital	18.6
County maternal and child health center	9.3
County family planning station	1.4
Pelvic examination in the last 2 y (n = 1,647)	
Yes	47.4
No	52.6
Treatment after disease was diagnosed (n = 472)	
Yes	83.9
No	16.1
Reason for nontreatment (n = 76)	
No need	17.1
Very shy	19.7
Not serious	36.8
No money	23.7
Others	2.6
Received health education during the last 2 y (multiple choice) (n = 1,637)	
Health care for menopause	33.6
Prevention of diabetes	39.0
Prevention of hypertension	46.4
Prevention of osteoporosis	18.6
Guidance for sex and contraception	9.3
Psychological counseling	7.1
None received	31.2
Services wanted (multiple choice) (n = 1,633)	
Intrauterine device removal just after menopause	17.0
Counseling for menopause care	34.8
Sexual knowledge	54.4
Contraceptive knowledge	4.2
Women's health knowledge	35.4
Health examination for women's disease	56.5
Follow-up after contraceptive operation	4.7
Treatment of complications of contraceptive operation	7.2
Attitude toward health examination (n = 1,639)	
I definitely would do it if free of charge	48.0
Not sure if I would do it if charged	6.4
I definitely would do it whether or not charged	29.9
I definitely would do it if feeling uncomfortable	15.7

planning clinics (31.2%) were top choices as source of care for women's diseases. Among respondents who reported having experienced women's diseases, 16.1% had not sought any treatment or medication. The two leading reasons for not seeking treatment were the problem not being serious (36.8%) and having no money (23.7%). Attitudes toward health examinations were as follows: would go if free of charge (48.0%), would definitely go (29.9%), and would go if feeling symptoms (15.7%).

The participants were asked about health education associated with prevention of hypertension, diabetes, and osteoporosis; menopause health; guidance for sexuality; and psychological counseling. Among the participants, 31.2% said that they did not receive any kind of health education during the past 2 years. They were also asked about the services they wanted. The most common responses were women's health check-up (56.5%), sexual knowledge (54.4%), women's health knowledge (35.4%), menopause counseling (34.8%), and IUD removal after menopause (17.0%).

Correlates of IUD retention after menopause

Table 4 shows the results of a multivariate regression analysis of respondents who had used an IUD and had already experienced menopause. The outcome variable was still having an IUD in place (vs having used an IUD in the past but no longer having an IUD in place). Women who had never used an IUD were not included in this analysis. Four characteristics were significant negative predictors of still having an IUD in place (ie, positive predictors of having had the IUD removed):

awareness of correct time for IUD removal (odds ratio [OR], 0.1; 95% CI, 0.04-0.3), endorsing sexual needs after menopause (OR, 0.5; 95% CI, 0.3-1.0), receiving formal health education (OR, 0.4; 95% CI, 0.2-0.8), and having undergone a gynecological examination in the past 2 years (OR, 0.3; 95% CI, 0.1-0.5).

DISCUSSION

This study in seven provinces in China suggests that services are insufficient to meet demands for sexual and reproductive health services among middle-aged women in rural China. The results showed that the greatest unmet needs were knowledge of sexual and reproductive health, regular physical examination during menopause, treatment of RTIs, and safe IUD removal after menopause.

Our findings showed that these middle-aged women were not highly educated. Although safe baby delivery and effective contraception had been implemented as priorities of reproductive health services, two fifths of middle-aged women had had abortions when they were young, indicating that circumstances had not yet been improved much for this generation. It is interesting that postdelivery visits to women by family planning workers were much more frequent than postdelivery visits by other health workers, reflecting a strong influence of the national family planning movement but also a lack of other basic services that should have been supplied by the maternal and child health service system.

This study showed that more than half of participants experienced menopausal symptoms but that less than half of

TABLE 4. Multivariate logistic regression analysis of intrauterine device retention after menopause among women aged 50 to 64 years in rural China

Characteristics	n ^a	Odds ratio (95% CI)	P
Education			
Illiterate (referent)	149	1.0	
Primary school or beyond	304	1.0 (0.6-2.0)	0.92
Ever been a migrant worker			
No (referent)	431	1.0	
Yes	22	0.7 (0.2-2.7)	0.65
Frequency of abortion			
0 (referent)	241	1.0	
1	163	0.6 (0.3-1.3)	0.19
≥2	49	0.6 (0.2-2.1)	0.42
Awareness of suitable time for intrauterine device removal			
Do not know (referent)	145	1.0	
Within half a year of menopause	197	0.3 (0.1-0.6)	<0.001
Within 1 y of menopause	111	0.1 (0.04-0.3)	<0.001
Know about menopause			
No (referent)	132	1.0	
Yes	321	1.4 (0.7-2.8)	0.40
Need sex after menopause			
No (referent)	176	1.0	
Yes	277	0.5 (0.3-1.0)	0.045
Aware that menopause symptoms require seeing a doctor			
No (referent)	274	1.0	
Yes	179	1.4 (0.7-2.9)	0.29
Received formal health education			
No (referent)	108	1.0	
Yes	345	0.4 (0.2-0.8)	0.015
Received gynecological examination in the past 2 y			
No (referent)	229	1.0	
Yes	224	0.3 (0.1-0.5)	<0.001

^aThis analysis included postmenopausal women who had ever used an intrauterine device.

participants said it was necessary to see doctors for treatment. In addition, these mostly married middle-aged women seemed puzzled about sexuality after menopause. Two fifths of them had negative attitudes toward sex after menopause, even though most continued to have sex, at least sometimes. This suggests an imbalance of sex needs between husband and wife that might cause marital discord. Responses to open-ended questions by these same respondents, which we have reported previously, confirmed a high level of concern and desire for information on sexuality (Sun XM, Shu XY, Zhong ZH, Mao JS. Reproductive health status and demands among middle-age and elderly women in rural China. Report to the National Health and Family Planning Commission. Unpublished manuscript; 2014). These findings are consistent with previous research studies in China and underscore this issue.^{4,6,8,11,13}

Our study addressed IUD use and demonstrates that a large number of respondents used IUDs during their reproductive ages. Since 1980, more than half of reproductive-age women received IUDs for contraception after they had had one or two children, as advocated by a fertility control-oriented national family planning policy in rural China. In 2010, 53.5% of such women used an IUD nationwide.¹ In most cases, the IUD was inserted 42 days after delivery and followed up every 3 months for the first 2 years to confirm effectiveness. However, our results also reflected the government family planning program's lack of focus on safe IUD removal in middle-aged women after menopause, as documented by past studies.⁵⁻⁷ Respondents who had not yet undergone IUD removal after menopause could no longer obtain any free services from the national family planning program after they had reached the age of 50 years. Many were not aware of the need for IUD removal, as no one had told them about it. If they wanted to have their IUD removed now, they would have to pay for it themselves because the costs are not covered by the rural medical insurance system.

In rural China today, a great number of women who have used IUDs are entering middle age. The national family planning program thus faces the big challenge of providing them IUD removal services. According to the population age structure of the 2010 census¹ and the proportion of women aged 50 to 64 years who still had an IUD after menopause in our survey, an estimated 4.6 million Chinese postmenopausal women aged 50 to 64 years have not had their IUD removed. This study was not designed to examine the health consequences of IUDs remaining in place for a prolonged period after menopause. Although most women probably have no problems, previous Chinese studies have shown that postmenopausal women with IUDs in place can experience complications such as incarcerated IUD, uterine perforation, and uterine and pelvic infections.^{5,9,13}

Perhaps it is not surprising that our results from rural China show a great number of women aged 50 to 64 years still using an IUD after menopause. Family planning services in China only target married couples aged 15 to 49 years, and IUD removal is not an indicator of the quality of service facilities.

Whether local family planning programs provide this service and how much they do it depend on their own initiative.² IUD removal not being a working target of health service facilities has left an important unmet reproductive health need in current rural China.

Our study also focused on middle-aged women's access to reproductive health services (including gynecological examination), which were the country's main free program for women's health promotion. The results showed that the proportion of women who received the services was far less than the government's target (80% of women should receive a gynecological examination every 2 y), probably because the new rural medical insurance system covers mainly inpatient treatment and not outpatient services.

The separate service systems for maternal and child health and family planning in China have resulted in weak coordination for providing reproductive health services to middle-aged women. Neither system targets these women as they are not a targeted population for the objectives of either system. Ongoing reproductive health needs of women aged 50 to 64 years thus fall through the cracks of the healthcare system. No special services focused on health during menopause are included, and health education and consulting for menopause are almost absent in public maternal and child health and family planning service facilities.^{14,15} Several responses should be considered: (1) integration of maternal and child health and family planning services; (2) service capacity building for township health facilities; (3) enhancement of awareness of the reproductive health needs of middle-aged women; and (4) establishment of a stable and sustainable mechanism for free physical examination and treatment services to satisfy the needs of middle-aged women.

Our study shows that quality treatment and convenience are the respondents' top two priorities when choosing medical facilities. Both township hospitals and family planning clinics were first choices for women seeking care for reproductive health matters. Current family planning workers in rural China have played an important role in reproductive health education and promotion, having gained the trust of service recipients and having built face-to-face experiences with them.¹⁶⁻¹⁸ Expanding services to include broader reproductive health within existing family planning services could help fill the current gap in reproductive health services for rural middle-aged women. Our results also confirm that county family planning clinics did not play a key role in providing services to rural women, probably because they usually were located far away from these rural areas. However, these facilities might also have potential to expand services directly to rural areas to address the unmet needs of middle-aged women. A more in-depth exploration of middle-aged women's perspectives on ways to overcome barriers to seeking services and reasons underlying their preference for treatment rather than preventive counseling is needed. Further study is also needed to assess the capacity of facilities and providers in rural China to face barriers to providing services to middle-aged women and possible ways to overcome these barriers.

This study has limitations. The cross-sectional design does not allow for determination of cause and effect. We cannot say whether knowledge of the need for IUD removal after menopause caused women to get this done, whether the process of IUD removal educated women that it is necessary, or both. We did not examine women to confirm if they actually had an IUD in place, and other questions may also have been subject to reporting bias. Although our sample was designed to give a broad spectrum of rural environments in China, it does not provide a basis for weighting results to make them representative of rural China overall. Our results do not necessarily apply to urban China, where women have more options for health care and where fewer women had IUDs placed during their reproductive years, more often opting for condoms and oral contraceptives.

CONCLUSIONS

This study suggests that there are gaps in sexual health services for middle-aged women and that quality of life and couple relationships might be improved by providing free access to simple low-technology counseling and services. Education and service delivery for IUD removal after menopause stand out as concrete examples, but sexuality-related issues after menopause may be equally important. This cohort of women who made great contributions to China's successful family planning movement should not be forgotten now.

Specific actions that should be considered include initiating a new health service program focused on sexual and reproductive health promotion in postmenopausal women and effective inclusion in the framework of the National Rural Primary Health Care Program. An outpatient division for menopause health should be considered for all public medical facilities, particularly in the many maternal and child health centers and family planning service clinics throughout the country. Top-down initiatives also should be considered to monitor these efforts. Services should include health education, health counseling, routine health check-ups, and disease treatment to help women achieve healthy sex lives and couple relationships and, of course, access to free IUD removal.

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