

Achieving success with family planning in rural Afghanistan

Douglas Huber,^a Nika Saeedi^b & Abdul Khalil Samadi^c

Problem Afghan women have one of the world's highest lifetime risks of maternal death. Years of conflict have devastated the country's health infrastructure. Total fertility was one of the world's highest, contraceptive use was low and there were no Afghan models of success for family planning.

Approach We worked closely with communities, providing information about the safety and non-harmful side-effects of contraceptives and improving access to injectable contraceptives, pills and condoms. Regular interaction with community leaders, *mullahs* (religious leaders), clinicians, community health workers and couples led to culturally acceptable innovations. A positive view of birth spacing was created by the messages that contraceptive use is 300 times safer than pregnancy in Afghanistan and that the Quran (the holy book of Islam) promotes two years of breastfeeding. Community health workers initiated the use of injectable contraceptives for the first time.

Local setting The non-for-profit organization, Management Sciences for Health, Afghan nongovernmental organizations and the Ministry of Public Health implemented the Accelerating Contraceptive Use project in three rural areas with different ethnic populations.

Relevant changes The contraceptive prevalence rate increased by 24–27% in 8 months in the project areas. Men supported modern contraceptives once they understood contraceptive safety, effectiveness and non-harmful side-effects. Injectable contraceptives contributed most to increases in contraceptive use.

Lessons learnt Community health workers can rapidly increase contraceptive use in rural areas when given responsibility and guidance. Project innovations were adopted as best practices for national scale-up.

Une traduction en français de ce résumé figure à la fin de l'article. Al final del artículo se facilita una traducción al español. الترجمة العربية لهذه الخلاصة في نهاية النص الكامل لهذه المقالة.

Introduction

Women in Afghanistan have a one-in-eight lifetime risk of maternal death, the second-highest in the world, resulting from a maternal mortality ratio of 1800 maternal deaths per 100 000 live births and a total fertility rate of 6.8 births.^{1,2} The potential impact of contraceptive use on maternal deaths in Afghanistan was unknown; however, global estimates are that up to 35% of maternal deaths could be averted by preventing unintended pregnancies.³

Donors and Afghan policymakers believed use of modern contraceptives would be resisted and progress would be slow. After 23 years of conflict, rural services were contracted to nongovernmental organizations in the Ministry of Public Health's new primary health-care initiative, the Basic Package of Health Services.^{4,5} Volunteer community health workers (CHWs) provided health care for women and children, including free contraceptives under Management Sciences for Health's Rural Expansion of Afghanistan's Community-based Health care (REACH) Project.

Within REACH, Management Sciences for Health initiated the small Accelerating Contraceptive Use (ACU) project, funded by the William and Flora Hewlett Foundation to strengthen contraceptive services. CHWs in REACH provided the majority of contraception under this project.^{4,6} The Ministry of Public Health encouraged us to initiate innovative measures to strengthen family planning.

Methods

For implementation of the ACU Project, we selected three REACH areas (Table 1) that had mature data reporting systems, no social marketing (such as selling contraceptives through pharmacies), good security and year-round access. Four Afghan nongovernmental organizations provided services: Coordination of Humanitarian Assistance, Bakhtar Development Foundation, STEP Health and Development Organization and the Agency for Assistance and Development of Afghanistan. One male and one female CHW served 100–150 households, each with one woman of reproductive age.

REACH baseline and end-of-project surveys used lot quality assurance sampling to generate contraceptive prevalence data from 13 provinces. Changes in contraceptive prevalence rate were compared between REACH and the ACU Project, which monitored prevalence rates only from CHWs' community maps. REACH data included women served by CHWs, clinics and a small portion served by neither.

End-of-project contraceptive use was verified by visiting 10–15 reported users for each CHW (150 users per site). We conducted sequential sampling of user households using a random start. An outside interviewer questioned each user. Injection use was verified if she could produce her client card and her next three-month injection date had not passed. Pill users needed to show a currently used pack and be able

^a Management Sciences for Health, 784 Memorial Drive, Cambridge, MA, 02139, United States of America.

^b Early Recovery Team, Bureau for Crisis Prevention and Recovery, United Nations Development Programme, Kabul, Afghanistan.

^c STEP Health and Development Organization, Kabul, Afghanistan.

Correspondence to Douglas Huber (e-mail: DouglasHuber777@yahoo.com).

(Submitted: 24 September 2008 – Revised version received: 13 May 2009 – Accepted: 5 June 2009 – Published online: 8 December 2009)

Table 1. Site information for the Accelerating Contraceptive Use project, Afghanistan

Nongovernmental organization	Location	CHW	Health posts	Households in health post catchment areas	Sect	Ethnicity of the majority of the population served
Agency for Assistance and Development of Afghanistan and Bakhtar Development Foundation	Tormay, Ghazni province	20	10	732	Shi'a	Hazara
Coordination of Humanitarian Assistance	Islam Qala, Herat province	15	10	840	Sunni and Shi'a	Tajik, Pashtun and other
STEP Health and Development Organization	Farza, Kabul province	30	15	2136	Sunni	Pashtun
Total		65	35	3708		

CHW, community health workers.

to describe correct use. These probing questions provided greater assurance of actual use than typical surveys. Dialogues with community leaders, families, clinic staff and religious leaders provided a solid understanding for developing innovations, which were tested and accepted in the three areas over a period of 8 months.

Many providers and community leaders believed contraception was more dangerous than pregnancy. Other misconceptions by doctors, midwives and communities included: (i) modern contraceptives cause infertility; (ii) injectable contraceptives reduce breast milk and should not be used postpartum until menstruation; (iii) women who work hard or have six or more children will expel an intrauterine device; and

(iv) progestin-only pills can be used interchangeably with combined pills.

We updated contraceptive information, used quotations from the Quran (the holy book of Islam) on birth spacing, and educated women and men about correct use and common non-harmful side-effects. Short written guidance for couples on oral and injectable contraceptives was given to all 3708 families in the project. Each method had a verse from the Quran, approved by the *mullahs* (religious leaders), advocating two years of breastfeeding/pregnancy spacing. Messages for injectables stressed their effectiveness and safety, explained changes in menstrual bleeding and pointed out that a woman's fertility returns about 7 months after the last injection.

Similarly, we communicated that oral contraceptives are safe and effective if used every day, can be used at any age, fertility returns when stopped and that menstrual bleeding is usually reduced, which is normal and healthy.

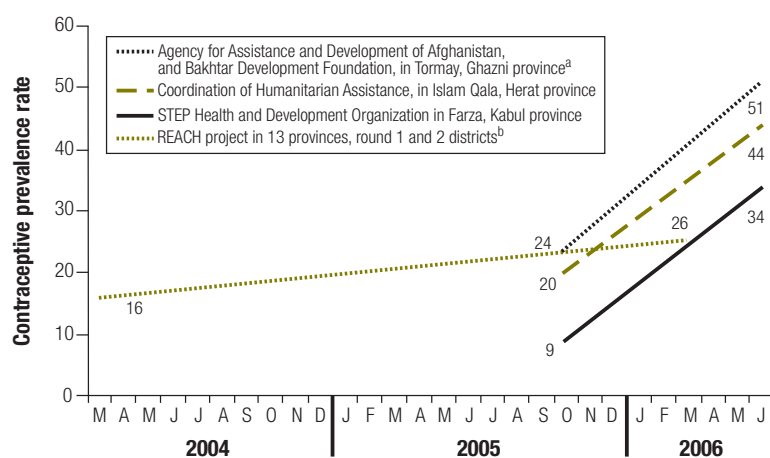
Simple instructions for use were included. Non-literate women found family members or neighbours who could read the instructions, and *mullahs* used the instructions to educate communities. Job aids for CHWs had similar information plus guidance on managing side-effects.

Our estimate that contraceptive pills and injections were about 300 times safer than pregnancy was based on documented oral contraceptive mortality compared with Afghanistan's maternal mortality ratio.^{7,8} We assumed five deaths attributable to contraceptives per 100 000 woman-years, since medical screening and follow-up were basic, and 1500 deaths per 100 000 women not using contraceptives per year, assuming 85% would become pregnant. Our risk-benefit message was easily understood by providers and communities.

Mullahs' concerns centred on safety and infertility, rather than religion. Through dialogue, all 37 *mullahs* in the project areas accepted the concept of birth spacing using modern contraceptives. This does not imply that all Afghan *mullahs* will quickly endorse modern contraceptives.

Birth spacing of 3–5 years compared with less than 15 months is associated with a 2.4-fold increase in child survival to 5 years and a 2.5-fold improvement in maternal survival.⁹ With this information, several *mullahs* began emphasizing the importance of birth spacing during Friday prayers.¹⁰

Fig. 1. Contraceptive prevalence rates in the Accelerating Contraceptive Use and the Rural Expansion of Afghanistan's Community-based Health care projects, Afghanistan



CHW, community health workers; REACH, Rural Expansion of Afghanistan's Community-based Health care.

^a ACU project data represent remote rural households served almost exclusively by CHWs.

^b REACH project data represent households served by CHWs or clinical staff at health facilities, and some households with no ready access to services.

The Ministry of Public Health gave permission for CHWs to give the first injection of Depo-Provera® (medroxy-progesterone acetate) on a pilot basis. CHWs were previously restricted to giving only second and subsequent injections.

Results

The REACH Project achieved an increase of contraceptive use from 16% to 26%, over a period of 2 years in 13 provinces. The ACU Project increased contraceptive use by 24–27% in its three sites over 8 months (Fig. 1). Overall, contraceptive users increased from 532 to 1469 among the 3708 women. In Farza, usage increased from 188 to 726 among 2136 women; in Islam Qala, from 168 to 370 among 840 women; and in Tormay, from 176 to 373 among 732 women.

Use of injectable contraceptives increased most, which we attribute to training CHWs to initiate their use with good counselling. People welcomed the introduction of injectables because walking to a clinic required a two-to-four-hour round trip.

Oral contraceptive use varied, decreasing slightly in Tormay, increasing substantially in Farza and changing little in Islam Qala (where injectables were popular). Condom use increased dramatically in Tormay but remained low in other areas. The Hazara ethnic group from Tormay, many of whom went to the Islamic Republic of Iran during the Taliban regime, had experience with condoms. *Mullahs* also used condoms themselves and, in Tormay, pictorial instructions for condom use were acceptable when used by CHWs for teaching correct use. For a summary of the main lessons learnt see Box 1.

Discussion

The rapid uptake of contraceptives in conservative rural communities and the endorsement of this model by the Ministry for Public Health for national scale-up were unique for Afghanistan. We attribute these achievements to: (i) crafting family planning interventions after in-depth discussion with community leaders, both men and women; (ii) engaging women in supervising CHWs and organizing women's community health committees (*shuras*);

Box 1. Summary of main lessons learnt

- Traditional rural communities will rapidly accept modern contraceptives, particularly injectables, introduced by CHWs when people are educated about common non-harmful side-effects and correct use.
- Medical misconceptions were more important than cultural and religious barriers.
- Men's involvement was vital in supporting their wives' use of birth spacing. Once educated, men demonstrated positive practices about birth spacing for maternal and child health.

CHW, community health workers.

(iii) overcoming widespread misconceptions of infertility and harm from contraceptives, some being inadvertently perpetuated by training on rare adverse effects and medical screening; (iv) using international expertise to create positive, technically sound counselling messages; (v) emphasizing contraceptive safety compared to pregnancy risk; (vi) educating people about birth spacing for child and maternal health consistent with Islamic teaching; (v) involving men, especially *mullahs*, in contraceptive education and promotion of birth spacing; (vi) ensuring abundant contraceptive supplies; and (vii) collaborating closely with the Ministry for Public Health for approval of innovations and dissemination of findings.

Meetings with religious and other community leaders, including health committees, CHWs and couples were important for developing trust and confirming acceptance of innovations, such as permitting CHWs to initiate injectable contraceptives.

The use of injectables by CHWs has proved safe and acceptable in other rural Muslim populations.^{11,12} Recent community trials in Uganda show that CHWs compare favourably with clinics in standards of care for providing injectables.¹³

Study limitations include lack of a formal control group. However, having no competing inputs, changes can be attributed to the ACU Project. REACH provided a reasonable source for comparative data. Replication may be challenging, given the need for in-depth dialogue, international technical expertise and skilled coaching. The project's short life precluded data collection on long-term contraceptive prevalence rates. Sustainability could not be assessed, though the national expansion will produce information on future progress.

Monitoring and evaluation were ongoing to ensure accurate recording

of contraceptive users on community maps, track progress and support CHWs and communities. Skilled project managers, who related well to the community, learnt about misconceptions and devised effective interventions, contributed greatly. Sound job aids and information for households enabled rapid progress.

Contraceptive use is crucial for reaching the United Nations' Millennium Development Goals.^{3,14} Obstacles to contraception use include lack of access, misperceptions, low status of women, inappropriate standards and provider attitudes.¹⁵ This project's flexible, culturally sensitive approach will apply in many rural societies.

Conclusion

Contraceptive use increases rapidly in rural settings when CHWs receive support and guidance. Revitalizing family planning requires a new risk-benefit paradigm comparing contraceptive risks to those of pregnancy and refocusing on community needs rather than medical screening. Having seen that simplified delivery systems succeed, the Ministry of Public Health adopted the ACU Project model for scaling up contraceptive services nationwide. ■

Acknowledgements

We thank the Ministry of Public Health of Afghanistan, the implementing Afghan nongovernmental organizations (Coordination of Humanitarian Assistance, Bakhtar Development Foundation, STEP Health and Development Organization, Agency for Assistance and Development of Afghanistan) and Management Sciences for Health colleagues.

Funding: The William and Flora Hewlett Foundation.

Competing interests: None declared.

Résumé

Progrès de la planification familiale dans l'Afghanistan rural

Problématique Les femmes afghanes sont parmi les plus exposées du monde au risque de décès maternel. Des années de conflit ont dévasté l'infrastructure sanitaire du pays. Au départ du projet, la fécondité totale était l'une des plus élevées au monde, l'utilisation de moyens contraceptifs était très limitée et il n'existait pas de modèle afghan de succès de la planification familiale.

Démarche Nous avons collaboré étroitement avec les communautés, en fournissant des informations sur l'innocuité des contraceptifs et l'absence de danger de leurs effets secondaires et en améliorant l'accès aux contraceptifs injectables, aux pilules contraceptives et aux préservatifs. Des interactions régulières avec les dirigeants communautaires, avec les mollahs (chefs religieux), les cliniciens, les agents de santé communautaires et les couples ont permis de mettre en place des innovations culturellement acceptables. Une vision positive de l'espacement des naissances a été générée grâce aux messages suivants : l'usage de moyens contraceptifs est 300 fois plus sûr que la grossesse en Afghanistan et le Coran (livre sain de l'Islam) préconise deux années d'allaitement. Les agents de santé communautaires ont mis en route pour la première fois l'utilisation de contraceptifs injectables.

Contexte local L'organisation à but non lucratif Management Sciences for Health (MSH), des organisations non gouvernementales afghanes et le Ministère de la santé publique ont lancé un projet d'accélération de l'usage des moyens contraceptifs dans trois régions rurales, abritant des populations d'origines ethniques différentes.

Modifications pertinentes Le taux de prévalence de la contraception a augmenté de 24 à 27 points de pourcentage en 8 mois dans les régions bénéficiant du projet. Après avoir pris conscience de l'innocuité des moyens contraceptifs modernes, de leur efficacité et de l'absence de dangerosité de leurs effets secondaires, les hommes ont soutenu l'utilisation de ces moyens. Ce sont les contraceptifs injectables qui ont le plus contribué à l'accroissement de l'utilisation des moyens contraceptifs.

Enseignements tirés Les agents de santé communautaires peuvent rapidement faire progresser l'utilisation des moyens contraceptifs dans les zones rurales si on leur donne des responsabilités et des orientations. Les innovations appliquées dans le cadre du projet ont été adoptées comme meilleures pratiques pour un élargissement à l'échelle nationale.

Resumen

Avances en materia de planificación familiar en el Afganistán rural

Problema Las mujeres afganas sufren uno de los mayores riesgos de defunción materna de todo el mundo a lo largo de su vida. Los años de conflicto vividos por el país han devastado su infraestructura sanitaria. La fecundidad total era una de las mayores del mundo, se usaban poco los anticonceptivos, y no había modelos afganos para una planificación familiar eficaz.

Enfoque Trabajamos en estrecha colaboración con las comunidades, suministrando información sobre la seguridad y la inocuidad de los efectos secundarios de los anticonceptivos y mejorando el acceso a anticonceptivos inyectables, píldoras y preservativos. La interacción regular con líderes comunitarios, *mullahs* (líderes religiosos), médicos, agentes de salud comunitarios y parejas propiciaron innovaciones culturalmente aceptables. Se creó una percepción positiva del espaciamiento de los nacimientos difundiendo el mensaje de que el uso de anticonceptivos es una opción 300 veces más segura que el embarazo en el Afganistán, y de que el Corán (el libro sagrado del Islam) propugna un periodo de dos años de lactancia materna. Los agentes de salud comunitarios empezaron a usar los anticonceptivos inyectables por vez primera.

Contexto local La organización sin fines de lucro Management Sciences for Health, organizaciones no gubernamentales afganas y el Ministerio de Salud Pública pusieron en marcha el proyecto Acelerar el Uso de Anticonceptivos en tres zonas rurales con distintas poblaciones étnicas.

Cambios destacables La prevalencia de uso de anticonceptivos aumentó en 24–27 puntos porcentuales en 8 meses en las zonas abarcadas por el proyecto. Los hombres respaldaron los anticonceptivos modernos una vez que comprendieron su seguridad, eficacia y carencia de efectos secundarios nocivos. El incremento del uso de anticonceptivos se debió sobre todo a los productos inyectables de este tipo.

Enseñanzas extraídas Los agentes de salud comunitarios pueden extender rápidamente el uso de anticonceptivos en las zonas rurales si se les da la responsabilidad y la orientación oportunas. Las innovaciones introducidas en el marco del proyecto fueron adoptadas como prácticas óptimas para su expansión a nivel nacional.

ملخص

تحقيق النجاح في تنظيم الأسرة في المناطق الريفية في أفغانستان

القابلة للحقن، والأقراص، والعازل الذكري. وقد أدى التفاعل المنتظم مع قادة المجتمع، وعلماء الدين، والأطباء، والعاملين في صحة المجتمع، والأزواج إلى ظهور ابتكارات مقبولة ثقافياً. ونشأت نظرة إيجابية حول المبادعة بين الولادات عن طريق نشر رسائل تشير إلى أن استعمال موانع الحمل أكثر أمناً بمقدار 300 مرة من الحمل في أفغانستان، وأن القرآن الكريم يعزز الإرضاع الطبيعي لمدة عامين. وبدأ العاملون في صحة المجتمع لأول مرة في استخدام موانع الحمل القابلة للحقن.

المشكلة: تواجه المرأة الأفغانية أشد مخاطر وفيات الأمهات على مستوى العالم، وقد أدت سنوات الصراع المسلح إلى تدمير البنية الصحية الأساسية للبلد. وتعد معدلات الإنجاب الإجمالية هناك من أعلى المعدلات على مستوى العالم، كما يقل استعمال موانع الحمل، ولا توجد نماذج ناجحة لتخطيط الأسرة.

الطريقة: تعاون الباحثون مع المجتمعات، وقدموا لهم المعلومات عن السلامة والآثار غير الضائرة لموانع الحمل، وتحسين الحصول على موانع الحمل

وجود أعراض جانبية ضائرة لها. وكانت موانع الحمل القابلة للحقن هي الأكثر تأثيراً في زيادة استخدام موانع الحمل. **الدروس المستفادة:** في استطاعة العاملين في صحة المجتمع زيادة استخدام موانع الحمل على وجه السرعة في المناطق الريفية إذا أعطوا المسؤولية والتوجيه. واتخذت الابتكارات الناتجة عن المشروع كممارسات مثالية لتعميم استخدامهما على الصعيد الوطني.

الأوضاع المحلية: قامت المنظمة غير الربحية، العلوم الإدارية من أجل الصحة، والمنظمات الأفغانية غير الحكومية، ووزارة الصحة العامة بتنفيذ مشروع لتوسيع استخدام موانع الحمل في ثلاث مناطق ريفية ذات فئات سكانية من أعراق مختلفة.

التغيرات الناتجة: ازداد معدل استخدام موانع الحمل في منطقة تطبيق المشروع بمقدار 24-27 في المئة خلال ثمانية شهور. ودعم الرجال استخدام موانع الحمل الحديثة فور تفهمهم لسلامة استخدامها، وفعاليتها، وعدم

References

1. *Maternal mortality in 2005: estimates developed by WHO, UNICEF, UNFPA and the World Bank*. Geneva: World Health Organization; 2007. p. 41.
2. *World population data sheet*. Washington, DC: Population Reference Bureau; 2008.
3. Potts M, Fotso J-C. Population growth and the Millennium Development Goals. *Lancet* 2007;369:354-5. doi:10.1016/S0140-6736(07)60158-5 PMID:17276759
4. *Rural Expansion of Afghanistan's Community-based Healthcare Program (REACH): transforming a fragile health system*. Cambridge, MA: Management Sciences for Health; 2006. p. 26.
5. Palmer N, Strong L, Wali A, Sondorp E. Contracting out health services in fragile states. *BMJ* 2006;332:718-21. doi:10.1136/bmj.332.7543.718 PMID:16565130
6. *Afghanistan health sector balanced scorecard national and provincial results. Round three*. Kabul: Ministry of Public Health; 2006. Available from: http://www.jhsph.edu/publichealthnews/press_releases/2007/Burnham_afghanistan.html [accessed 11 November 2009].
7. Hatcher RA, Trussell J, Nelson AL, Cates W, Stewart FH, Kowal D. *Contraceptive technology*, 19th edn. New York, NY: Ardent Media; 2007. p. 36.
8. Schwingl PJ, Ory HW, Visness CM. Estimates of the risk of cardiovascular death attributable to low-dose oral contraceptives in the United States. *Am J Obstet Gynecol* 1999;180:241-9. doi:10.1016/S0002-9378(99)70182-1 PMID:9914611
9. Setty-Venugopal V, Upadhyay UD. *Birth spacing: three to five saves lives* [Population reports; 30(3): series L(13)]. Baltimore, MD: The Johns Hopkins University Bloomberg School of Public Health; 2002. Available from: <http://www.inforhealth.org/pr/113edsum.shtml> [accessed 11 November 2009].
10. *Innovations in family planning: the Accelerating Contraceptive Use project*. Cambridge, MA: Management Sciences for Health; 2007. Available from: <http://www.msh.org/resource-center/hewlett-acu-report.cfm> [accessed 11 November 2009].
11. Huber DH, Khan AR. Contraceptive distribution in Bangladesh villages: the initial impact. *Stud Fam Plann* 1979;10:246-53. doi:10.2307/1966398 PMID:494375
12. Khan AR, Huber DH. Safety of contraceptive practice as compared to non-contraception. *Bangladesh Med J* 1978;6:84-92.
13. Stanback J, Mboyné AK, Bekita M. Contraceptive injections by community health workers in Uganda: a nonrandomized community trial. *Bull World Health Organ* 2007;85:768-73. doi:10.2471/BLT.07.040162 PMID:18038058
14. Cleland J, Bernstein AE, Faundes A, Glasier, JI. Family planning: the unfinished agenda. *Lancet* 2006;368:1810-27. doi:10.1016/S0140-6736(06)69480-4 PMID:17113431
15. Campbell M, Nuriye NS, Potts M. Barriers to fertility regulation: a review of the literature. *Stud Fam Plann* 2006;37:87-98. doi:10.1111/j.1728-4465.2006.00088.x PMID:16832983