

Repositioning Family Planning: Rwanda's No-Scalpel Vasectomy Program

Daniel H. de Vries, Anne Wilson, Catherine Murphy and Joshua Davis,
IntraHealth International

Strengthening Human Resources for Health (HRH) in Family Planning

In Rwanda, unmet need for family planning (FP) remains high even in the context of the government's strong support for FP as a key element in continuing development progress. While preliminary Demographic and Health Survey data showed a dramatic increase in modern contraceptive prevalence among married women from 10% in 2005 to 27% in 2007, much work is still needed to build the capacity of district-level health care providers in FP counseling and services and ensure district hospitals and health centers have necessary equipment and supplies.

Funding from USAID's Repositioning Family Planning Global Leadership Priority area provided the Capacity Project with the opportunity to offer technical support to Rwanda's Ministry of Health to develop the capacity of the district hospital clinical workforce in order to expand client access to a full range of quality FP methods. These included long-acting and permanent methods and vasectomy in particular. The Project developed a vasectomy in-service training program at district hospitals in Gicumbi (Byumba Hospital) and Nyabihu (Shyira Hospital). The Capacity Project/Rwanda began working in these districts in 2006 to strengthen FP, emergency obstetrics and neonatal care and maternal and child health services.

The Role of Vasectomy in Rwanda's FP Program

Vasectomy is one of the safest and most effective methods of contraception (World Health Organization [WHO] et al., 2008; Sokal, 2008). Vasectomy's advantages over female sterilization include lower rates of postoperative complications, shorter recovery time, reduced costs and increased involvement of men in reproductive decision-making (Vernon et al., 2007). Still, few African men take advantage of the procedure (0.1%–0.8%) mostly due to a shortage of trained providers, provider bias, client fears and misconceptions about the method and likely—as we found in Rwanda—cost and logistics (Kols and Lande, 2008).

In Rwanda, only 0.5% of women and 0.1% of men choose long-acting and permanent methods, with less than half of the population aware of vasectomy as a method (Ministry of Health et al., 2009). Some have suggested that this situation is not due to resistance from men, but rather to the low status accorded to permanent methods by FP programs (Rakotomanga, 2006). Prior to the 1994 war, vasectomy programs—such as a 1991 AVSC International (now EngenderHealth) program (Gold, 1992)—were underway and relatively popular in Rwanda. However, emphasis waned after the war; many families had lost loved ones, and there was pressure from the Catholic Church to reject FP (Solo, 2008).

Building HRH Capacity to Increase FP Service Delivery Access

Training Physicians and Nurses to Perform No-Scalpel Vasectomy (NSV)

Prior to the intervention, providers in the two districts—Gicumbi and Nyabihu—had not been trained or equipped to provide vasectomies (Koalaga and Twahirwa, 2007), and doctors typically received only a half-day focus on theory without practical demonstration during pre-service education. The Project trained selected physicians and nurses in the NSV procedure and provided the surgical training equipment and supplies. For the first round of training, six physicians and six nurses with surgical experience (three from each of the two sites) trained in the NSV technique with an external senior clinical vasectomy expert (one of the six physicians did not achieve competency in the NSV procedure). They used a training curriculum based on established procedures (EngenderHealth 2003, 2007a, 2007b; WHO et al., 2008) and a skills checklist to standardize the procedure and assure quality delivery of service. Ensuring an adequate volume of clients for the clinical practicum was key to the success of the training.

After completing the training, the providers developed action plans for continuing to offer vasectomy services. Two of the five physicians who achieved competency performed extra cases and became coaches. The coaching period lasted three months and included a

Men's Perceptions of Vasectomy

In cultures that encourage high birth rates, loss of the ability to procreate has generally been considered a social handicap and cause for stigma, motivating men who undergo vasectomy to keep it a secret for fear of being ostracized as eunuchs/castrated (Koalaga and Twahirwa, 2007). Men are further discouraged from seeking FP by the perception that health clinics are primarily for maternal and child health services. Economic or health concerns are the main reasons cited for uptake of vasectomy in Rwanda, while opposition is commonly due to lack of information, fear of the consequences, traditional ties between marriage and procreation and lack of trust within the couple (ibid).

"I knew about vasectomy from our community leader when he as well had gone for a meeting with the mayor of the district. The mayor requested local leaders to spread the message on the vasectomy initiative."

—NSV client (Kamanzi et al., 2009)

A key success was the adept negotiation of the hierarchal system of local government for maximum effect at securing local support for the intervention. By starting at the top and working down, involving the district-level officials at every step, lower-level functionaries did not need to be convinced of the importance of NSV in FP, as it was seen as a district initiative that the Project was supporting.

minimum of three unassisted (but supervised) cases. After this period, the Project conducted a skills validation exercise to evaluate providers' progress (Twahirwa, 2008). To foster sustainability, the Project trained three of the physicians and four of the nurses as trainers, who were then able to train seven physicians and ten nurses at hospitals in four additional districts (Ngororero, Gisagara, Rulindo and Huye). As of June 2009, all 16 nurses and six of the physicians were fully validated to perform the procedure without assistance from another professional; of the remaining trained physicians, one had left the country and five were still in the process of being validated.

Extending Vasectomy Services to Health Centers

The Project supported vasectomy teams to make outreach visits from the hospital to six health centers (three each in Nyabihu and Gicumbi Districts) that were selected based on high client demand for the service in the surrounding communities (Twahirwa, 2007). Given the lengthy travel time between health centers and hospitals in some districts, sending NSV teams with surgical equipment and supplies into the health centers removed a serious logistical barrier to parts of the population. The success of this outreach strategy is reflected in Nyabihu District data; 56% of all vasectomies were done in a health center (Davis et al., 2009).

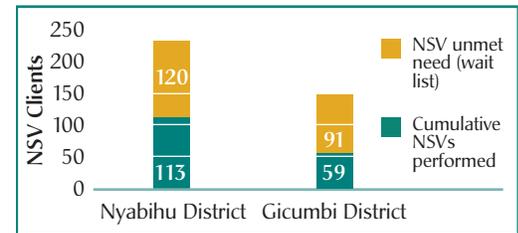
Sensitizing Local Stakeholders and Communities

Based on the results of an acceptability and feasibility study, the Project recognized the importance of involving local stakeholders in the plan to sensitize the population about vasectomy. The Project obtained approval and support from the district health directors, mayors and vice-mayors, and oriented hospital and health center staff to vasectomy to serve as points of contact. Community health leaders helped to arrange orientation for all the community health workers at the local levels and supported dissemination of informational materials, including a promotional video, an illustrated flipchart and a booklet with information about gender equity that included vasectomy. Project FP coordinators trained health center FP managers on how to talk to men and couples about vasectomy.

Stimulating Demand for Vasectomy Services

Before the program, demand for vasectomies at Shyira Hospital was very low (five requests per month) and nonexistent at Byumba Hospital (Koalaga and Twahirwa, 2007). However, during the first phase of the program, demand for NSV became so high that clients had to be wait-listed. During a sample taken in the two districts in August 2008, 211 clients were on the waiting list; 172 clients had undergone a vasectomy (Figure 1).

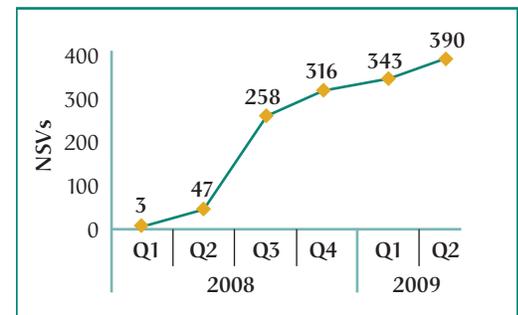
Figure 1: NSVs Performed and Unmet Need as of August 5, 2008



Success in Meeting NSV Demand

As of June 30, 2009, Project-trained physicians and nurses had performed 390 NSVs in Rwanda, 56% performed at health centers and 15% with HIV-positive clients (Davis et al., 2009). The number of NSVs peaked in the third quarter of 2008 (Figure 2). A major contributor to the program's success appears to be the logistical and financial support for NSV teams to work at health centers. Many potential clients do not live within easy walking distance of a hospital, so the financial and opportunity costs involved in getting an NSV remain a very real constraint.

Figure 2: Cumulative NSVs Performed Over Six Quarters, 2008–2009



To monitor and assure quality service delivery, the Project developed a data collection process that doubles as a client screening file and allows staff to track follow-up against a set of USAID FP quality indicators, including whether at the three-month checkup the client has had a positive or negative experience. A vasectomy is considered successful with a negative sperm test three months after the procedure. Of the men who undertook the procedure, 32% returned for follow-up. A sample from the data at the end of the Project suggests a failure rate of 4% or less, which is within the accepted norm for this method (Sokal, 2008). Nurses involved in NSVs at one of the two hospitals suggested that only one person out of a sample of 88 cases at the end of September 2008 had developed a complication (hematoma) (Kamanzi et al., 2009).

High Client Satisfaction

Of the respondents sampled in the client satisfaction survey, almost all (98%) reported satisfaction with the procedure. Respondents rated the perceived quality of the intervention high, felt well informed, participated in informed consent and trusted the caregivers (Ibid). Further

results indicated that couples had absorbed the lessons on sexually transmitted infections and irreversibility of the method. Table 1 lists clients' reasons for adopting vasectomy (Ibid.).

Table 1: Respondents' Stated Reasons for Adopting Vasectomy

Reason Mentioned	Frequency	% of Total
No negative impact on sexual intercourse	46	98
No side effects (relative to other FP methods)	44	94
No pregnancy outside marriage	42	89
Guaranteed welfare of my entire family (food, education and economy)	41	87
Relieve women from the burden caused by other contraceptive methods	39	83
Permanent method	36	77

Potential clients noted that interaction with other clients was beneficial because they could support each other through discussions on how they felt about vasectomy as a permanent contraceptive method.

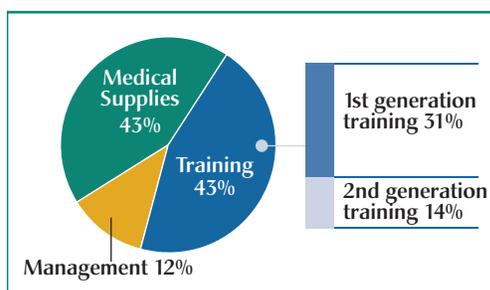
Increasing Male Involvement in FP

The community sensitization process achieved the dual goal of motivating healthy men to travel to a health facility to undergo an elective surgical procedure and increasing male involvement in FP decisions. NSV clients exhibited a strong willingness to help educate the community about vasectomy through face-to-face advocacy and media channels such as video testimonials (Ibid.). With modest assistance from the Project and support from district leaders, NSV acceptors formed associations both as a means of mutual support in the face of stigma and to encourage other couples who want to limit their family size to consider NSV. In Nyabihu District, 12 vasectomy associations with over 200 participants formed as an indirect result of the program and provided a critical role in the education and destigmatization process. (For example, groups advocated for an authenticated, standardized medical proof of having had the vasectomy procedure). As Rwanda is a densely populated country, the negative effect of rumors can be strong. As one hospital director put it, "It only takes one case (with a bad outcome) to ruin the whole program."

Cost of Capacity-Building

Cost per health worker (doctor or nurse) trained was \$4,780, and the cost per vasectomy performed was \$270. These are slightly below the average cost of \$5,000–\$7,000 of sending a doctor to be trained in other countries (Vernon et al., 2007). Figure 3 shows the breakdown by program component. Provider training accounted for 45% of the program cost, but training of the initial six doctors and six nurses (including the cost of bringing in an outside expert) was responsible for two-thirds of this. It is anticipated that the cost of training future cohorts of providers will be much less as there is now a critical mass of trained trainers in the country, eliminating the need to bring in an outside expert.

Figure 3: NSV Program Cost Breakdown



Key Successes and Recommendations

Key Successes

- Increased contraceptive options by introducing NSV—a technique that is safer and more efficient than vasectomies performed with a scalpel—with a high client satisfaction and success rate by making available trained health providers and adequate equipment through a relatively inexpensive program
- Engendered favorable attitudinal and behavior changes in the use of long-acting and permanent methods of contraception and male involvement in FP by sensitizing local stakeholders and communities
- Demonstrated that despite prevailing cultural stigma regarding long-acting and permanent methods, demand for NSVs in Rwanda is responsive to a program intervention that reduces financial and logistical constraints to access
- Helped to provide a pragmatic solution to achieve national and Millennium Development goals to contain population growth, reduce maternal and child mortality and promote gender equity.

Recommendations

Lessons learned suggest that:

- To be successful, an NSV program needs to have adequate equipment and logistical and financial support
- NSV programs should pay special attention to clients with HIV/AIDS and the creation

continued

"I chose this method because my wife and I live with HIV. I am under ARVs [antiretroviral drugs] but my wife is not. Although we have been using condoms, we decided not to take the risk of pregnancy to avoid having an infected newborn. We already have three children and all of them are HIV free."

—NSV client (Kamanzi et al., 2009)

"Meeting other people at the health facility was a good moment for us to discuss different issues as we went through the vasectomy surgical process. We supported one another as much as we could and this helped us a lot to overcome fear."

—NSV client (Kamanzi et al., 2009)

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- of a convenient space for men, as well as provide opportunities for clients to be counseled (including emphasis on dual protection) and engage in informed consent
- Effective communication about the risk of failure of the procedure and the need for follow-up is necessary
- As doctors need to have a sufficiently high volume of clients to practice and maintain their skills, generating demand for NSV in balance with the training of providers is a crucial component to any vasectomy program scale-up

- Longer-term plans for sustaining the program need to explore client and provider travel and cost reimbursements for vasectomy (e.g., in Rwanda, through community health insurance funds).

References

Aradhya KW. Vasectomy is a viable contraceptive method in Africa: evidence from Ghana. *Mera*. 2007;28. Available at: <http://www.popline.org/docs/1749/508325.html>

Davis J, de Vries DH, Twahirwa W, Sinzahera J, Sokal D. Final feasibility evaluation for no-scalpel vasectomy in Rwanda. Chapel Hill, NC: Capacity Project, 2009.

EngenderHealth. No-scalpel vasectomy: an illustrated guide for surgeons, 3rd ed. New York, NY: EngenderHealth, 2005.

EngenderHealth. No-scalpel vasectomy curriculum: a training course for vasectomy providers and assistants: trainer's manual. 2nd ed. New York, NY: EngenderHealth, 2007a.

EngenderHealth. No-scalpel vasectomy curriculum: a training course for vasectomy providers and assistants: participant handbook. 2nd ed. New York, NY: EngenderHealth, 2007b.

Gold M. AVSC helps Rwanda prepare for expansion of services. *AVSC News*. New York, NY: AVSC International, 1992.

Kamanzi D, Twahirwa W, De Vries DH, Faye O. Vasectomy client satisfaction assessment in Gicumbi and Nyabihu Districts, Rwanda. Report. Chapel Hill, NC: Capacity Project, 2009.

Koalaga A, Twahirwa W. Acceptabilité de la vasectomie dans deux districts du Rwanda. Chapel Hill, NC: Capacity Project, 2007.

Kols A, Lande R. Vasectomy: reaching out to new users. *Population Reports*, Series D, No. 6. Baltimore, MD: INFO Project, Johns Hopkins Bloomberg School of Public Health, 2008. Accessed 30 Sep 2008 at: <http://www.infoforhealth.org/pr/d6/d6.pdf>

Ministry of Health (MOH), National Institute of Statistics of Rwanda (INSR), ICF Macro. Rwanda interim demographic and health survey 2007-08. Calverton, MD: MOH, INSR, ICF Macro, 2007.

Rakotomanga J. Acceptabilité de la vasectomie à Antsirabe. Recherche opérationnelle, 2006.

Sokal DC. Vasectomy technique: does it really matter? Is there any evidence? Paper presented at the annual meeting of the Society for the Study of Male Reproduction; 20 May 2008, Orlando, FL.

Solo J. Family planning in Rwanda: how a taboo became priority number one. Chapel Hill, NC: IntraHealth International, 2008. Available at: http://www.intrahealth.org/assets/uploaded/resources_08/Family%20Planning%20in%20Rwanda%20English%20version.pdf

Twahirwa W. Report of the validation exercise for providers trained in no-scalpel vasectomy. Kigali, Rwanda: Capacity Project, 2008.

Vernon R, Solórzano J, Muñoz B. Introducing sustainable vasectomy services in Guatemala. *International Family Planning Perspectives*. 2007;35(4):182-187.

World Health Organization Department of Reproductive Health and Research (WHO/RHR), Johns Hopkins Bloomberg School of Public Health/Center for Communication Programs (CCP), INFO Project. Family planning: a global handbook for providers (2008 update). Baltimore and Geneva: CCP and WHO, 2008. Available at: <http://www.infoforhealth.org/globalhandbook/>



The Capacity Project
 IntraHealth International, Inc.
 6340 Quadrangle Drive
 Suite 200
 Chapel Hill, NC 27517
 Tel. (919) 313-9100
 Fax (919) 313-9108
info@capacityproject.org
www.capacityproject.org

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